



團達實業股份有限公司
DIPTRONICS MANUFACTURING INC.
24889新北市五股區五工三路110號(新北產業園區)
No.110, Wugong 3rd Rd., Wugu Dist., New Taipei City 24889, Taiwan
中文: TEL: 886-2-22989123 ENGLISH TEL: 886-2-22980981
日本語直通: 886-2-22980982 FAX: 886-2-22980866
E-Mail: sales@dip.com.tw http://www.dip.com.tw

台南辦事處 (Tainan Office)
70465台南市西門路四段271號13樓之9
TEL: 886-6-2511771 · 251-4722
FAX: 886-6-2515214

赫雅貿易(上海)有限公司
ALTA INTERNATIONAL CO., LTD.
上海市浦東新區民生路1403號信息大廈1017室 郵編:200135
TEL: 86-21-31265188 FAX: 86-21-68622506
Http://www.altacom.cn

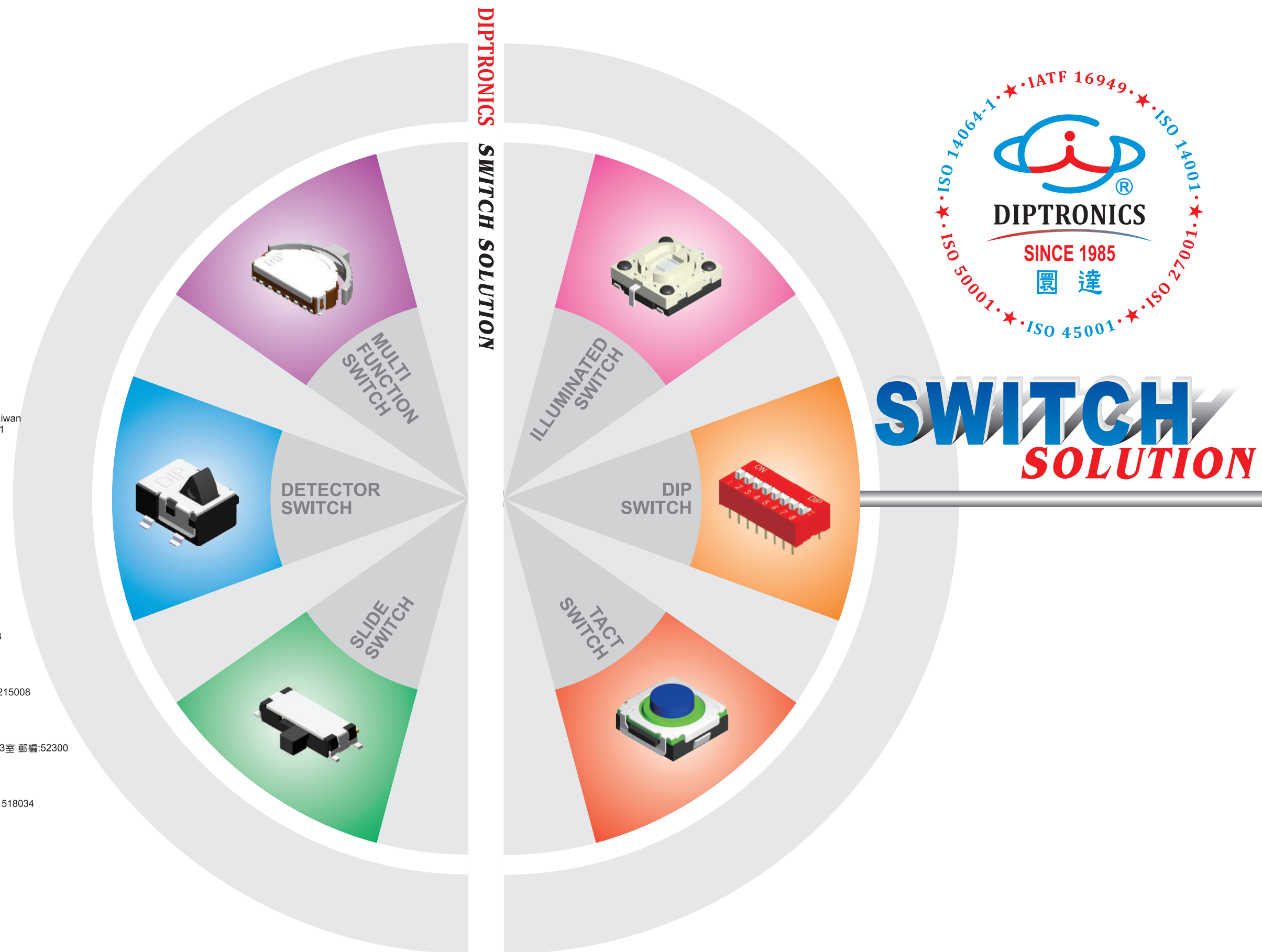
北京辦事處 (Beijing Office)
北京市海澱區知春路甲48號盈都大廈C座4單元8C室 郵編:100098
TEL: 86-10-58733091 58733092
FAX: 86-10-58731070

蘇州辦事處 (Suzhou Office)
蘇州市姑蘇區廣濟南路168號美泰美商廣場(寶座)1501室 郵編:215008
TEL: 86-512-65560590
FAX: 86-512-65560592

東莞辦事處 (Dongguan Office)
廣東省東莞市瀾滸路200號南城中心第一國際三期三號寫字樓2403室 郵編:52300
TEL: 86-769-87702150 87702151 87702158
FAX: 86-769-87702152

深圳辦事處 (Shenzhen Office)
深圳市福田區彩田路3069號星河世紀大廈A樓 2606-2607室 郵編:518034
TEL: 86-755-82964660 23985517 23985186
FAX: 86-755-82940973

重慶辦事處 (Chongqing Office)
重慶市渝北區新南路168號龍湖MOCO 1棟1209室 郵編:401147
TEL: 86-23-67390621
FAX: 86-23-67390620



DIPTRONICS MANUFACTURING INC.

A Worldwide Leading Switch Manufacturer



塑造學習、挑戰和分享的環境，不斷成長，
成為全球友善環境最佳企業之一。

To build a learning, challenging, and sharing environment to be one
of the best eco-friendly component manufacturers in the world.



圖達實業股份有限公司於1985年在台灣創立，專業研發製造各類程式開關、觸動開關、旋轉開關、微動開關、滑動開關、複合功能開關及LED開關等多項產品，並取得IATF 16949、ISO 14001、ISO 14064-1、ISO 50001、ISO 27001、ISO 45001認證，產品行銷全世界100餘國，遍及五大洲。

40年來，經由不斷地垂直整合，圖達逐步發展出強而有力的核心競爭優勢。從原物料購入到完成品供應給客戶，所有生產製程（包含金屬沖壓、塑膠射出、電鍍、設備加工、LED封裝、自動化組立等）都在廠內完成。

圖達的產品可廣泛使用在IOT相關產業：（雲端裝置、智能家居、汽車業、家電業、健康醫療產品業、工控安全系統及通訊業等）。今日，不僅Siemens、ABB、Bosch、LG、Samsung、Honeywell、HP、Delta等各產業大廠，全球近乎70%的NB產業，都使用圖達生產的開關。

秉持著「卓越與學習、創新與挑戰、團隊與熱忱」的經營理念，圖達將持續專注本業，研發新技術，並積極投入帶LED結合開關、智慧型手機開關的開發，及提供更迅速、更多樣的開關產品來滿足客戶需求。

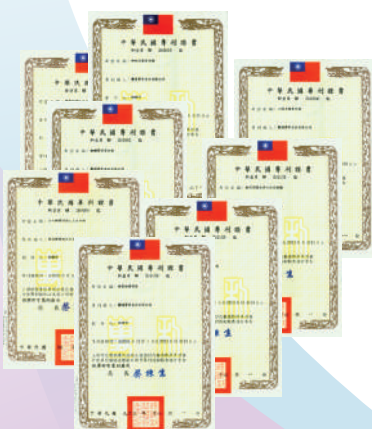
Diptronics Manufacturin Inc., founded in 1985, is an IATF 16949, ISO 14001, ISO 14064-1, ISO 50001, ISO 27001, and ISO 45001 certified manufacturer specializing in DIP, Tact, Rotary, Slide, Detector, Multi-function, Micro and Illuminated switch manufacturing. Five major production sites were established in China and one in Vietnam since 1993- Zhuhai, Jiangsu, Hunan, Zhongshan, and Hanoi. With complete production lines, from raw materials to finished products including press, injection, plating, mold processing, LED bonding, and automatic machine assembling are integrated in house. Diptronics can therefore offer customers timely delivery with superior quality. Our switches are selling to more than 100 countries worldwide.

Diptronics switches can be widely used in IOT applications, such as cloud device, smart home, automotive, white goods, health care products, industry, security telecommunication..., etc. Today, Diptronics switches account for about 70% of global notebook market switch demand. In line with market expectation, Diptronics is one of a few companies in the industry that has in-house assembly line for both LED bonding and LED switches.

Diptronics continues to focus on the switch business and commits to develop new technologies for smart phone, automotive and Illuminated switches. Our goal is to release a variety of switch products for our customers to fulfill the fast changing market demand.



專利證書(中國)
Patent Certificate(China)



專利證書(台灣)
Patent Certificate(Taiwan)



MANAGING CONCEPT

DISTINCTION **I**NNOVATION **P**ASSION

● 3C / IT Industry

● Cloud Devices

● Automotive Industry

● White Goods

● Medical Devices

● Home Automation

產品應用
Application

我們的競爭優勢：

◎ 產品線

「指撥開關」產量全球第一。

「輕觸開關、滑動開關、偵測開關、複合式開關」產量為全球前五大。

◎ 國際認證

取得 IATF 16949、ISO 14001、ISO 14064-1、ISO 50001、ISO 27001、ISO 45001，
所有產品皆符合無鉛、無鹵規範要求。

◎ 核心競爭力

※ 擁有垂直整合之核心技術力（金屬沖壓、塑膠射出、電鍍、設備加工、LED封裝、自動化組立等），
可因應客戶客製化需求，少量多樣化，快速交貨。

※ 專業經營團隊，長期穩定持續成長，迎接各種挑戰。

◎ 全球唯一

自製生產LED燈及開關，並將兩者結合成為生產LED開關的專業製造廠。

Diptronics Strengths

◎ Product Capacity:

Dip switches—Top 1 output worldwide

Tact/Slide/Detector/Multi-functional switches—top 5 output worldwide

◎ Quality Assurance:

IATF 16949、ISO 14001、ISO 14064-1、ISO 50001、ISO 27001、ISO 45001 certified.

RoHS & Halogen free compliant.

◎ Integration of core competence:

※ Expertise in complete in-house production with vertical integration. We uphold the spirit of “speed”
and “passion” by serving fast delivery with product variety.

※ Professional R&D team for constant growth and different challenges.

◎ LED Integration:

Diptronics is one of a few switch companies that make LED and switch integrated with in-house
LED assembly line.



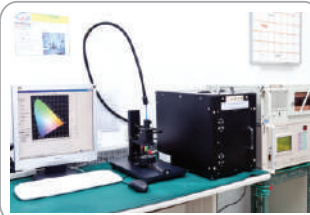
Dropping Tester



Plating Facility



LED Assembly Center



LED-38T Optic-Electrical Tester
LED Angle Tester



LED Array Spectrometer



SEM (Scanning Electron Microscopy)
EDS (Energy dispersive spectroscopy)



Press M/C



Optical Projection Grinding Machines



Automated Production Equipment



LED FT-IR



Plastic Injection Machines



CNC Milling Machines

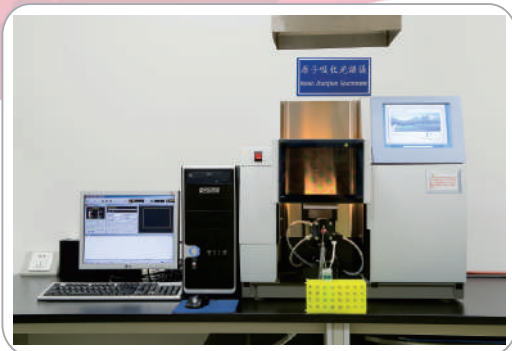


Wire-cut Electrical Discharge Machines



Precision Electric Discharge Machines

RoHS & HALOGEN FREE SUPPORT



AAS Testing Equipment



Hand-held Elemental Analyzer

所有圖達產品皆符合RoHS規範

- ◎為確保產品符合RoHS及特殊客戶要求，公司引進AAS驗證設備，掌控進料及製程之品質。
- ◎隨時收集國際法規之要求，即時修訂公司內部之文件進行管控。
- ◎「綠色採購」在圖達採購流程中，零件承認時必定請廠商提供 RoHS 檢測報告，經品保單位審核通過後始可使用；同時要求供應商每年提供RoHS更新驗證報告及定期稽核供應商RoHS管制。
- ◎為因應新一波的綠色電子浪潮「無鹵素（Halogen-free）」2009年1月份起，陸續導入無鹵素材料。

Diptroncis RoHS Implement

- ◎Is equipped with AAS validating devices for RoHS implementation.
- ◎Regularly updates internal documentation with worldwide RoHS regulation.
- ◎Produces green products with only RoHS qualified suppliers and consistently conducts factory audit for RoHS control.
- ◎Uses Halogen Free raw material since January, 2009 to promote a green Earth.



LEAD-FREE SOLDERING

ITEM	LEAD-FREE SOLDERING CONDITION
Hand Soldering	350°C±10°C /5sec max.
Wave Soldering	Pre-Heat 100°C/60sec 260°C±5°C /5sec
Reflow Soldering	A graph showing the temperature profile for reflow soldering. The y-axis represents temperature in degrees Celsius, with markers for Room Temperature, 150°, 230°, 255°, and MAX 260°. The x-axis represents time in seconds. The profile shows a ramp up from room temperature to 150°C (120-150sec), a dwell at 150°C, a ramp up to 230°C, a dwell at 230°C (60sec), a ramp up to 255°C, a dwell at 255°C (5-10sec), and a final ramp down.



RoHS COMPLIANT

※ The limit value that we declare.

Pb<100ppm
Cd<75ppm
Hg<2ppm
Cr6<2ppm
PBB<Not Detected
PBDE<Not Detected

※ Start from January 2005



HALOGEN FREE

Br<900ppm
Cl<900ppm
Br+Cl<1500ppm

※ Start from 2009

NEW!

New Products

客製模組開發

Custom Module Development

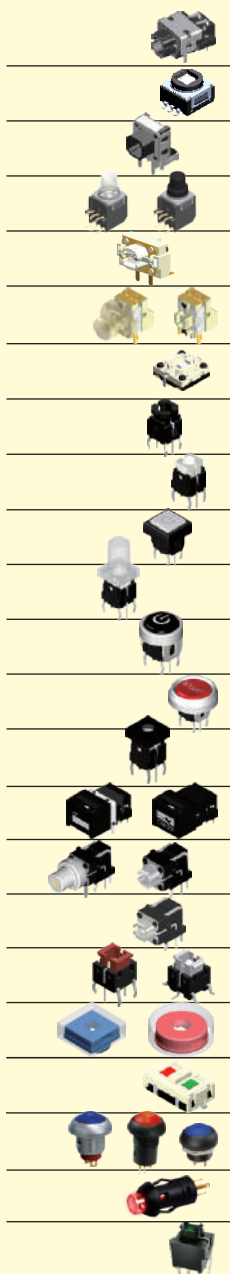
車載運用開關可客製設計模組，協助客戶完成線材焊接，增加密封保護性及提高機構搭配性，達成節省成本之效果。

Custom automotive switch modules with integrated wiring, enhanced sealing, and improved mechanical compatibility.



A

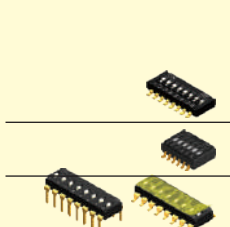
ILLUMINATED SWITCH 帶燈開關 **Featured New** ★



Series	Contact Type	Features	Dimensions(mm)	Page
MLF	Silver	Right Angle (SMT)	8.8x4.8	A-1
ML9 ★	Silver	SMT	8.0x8.4	A-2
MLC	Silver	Right Angle	6.8x7.7	A-3
MLG ★	Silver	Right Angle	8.0x9.45	A-4
MLA NEW	Silver	Horizontal Operation & Various LED colors	6.4x3.9x3.55	A-5
ML3	Gold / Silver	Right Angle	4.5x6.2	A-6
ML4 ★	Silver	SMT	4.9x4.9	A-8
ML5	Silver	Through Hole	6x6	A-9
ML6-H0	Silver	Through Hole	6x6	A-10
ML6-H1	Silver	Through Hole	6x6 / Cap:10x10	A-11
ML6-H2	Silver	Through Hole	6x6 / Cap:Ø5.5	A-12
ML6-H4	Silver	Through Hole	6x6 / Cap:Ø10	A-13
ML6-H5	Silver	Through Hole	6x6 / Cap:Ø14	A-14
ML6-H6	Silver	Through Hole	6x6 / Cap:7.5x7.5	A-15
ML8	Silver	Right Angle	8.7x9.6	A-16
TL(L)A(G)-7	Silver	Right Angle	7x7.4	A-18
TLR-7	Silver	Right Angle	6.5x7.4	A-20
TL(L)(M)-6	Silver	Through Hole & SMT	6.1x6.1	A-21
KTL		Cap Accessories for TLL-6	Square:□10.2 / Round:Ø10.2	A-23
TML-3	Silver	SMT	6.8x4.1	A-24
ZPA		Wiring	Ø12	A-25
ZPBL		Wiring	Ø5.4	A-30
ZPSD		Through Hole	8.5x7.5	A-31

B

DIP SWITCH 程式開關 **Featured New** ★

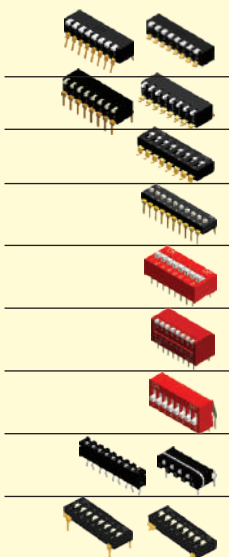


Series	Contact Type	Features	Dimensions(mm)	Page
DHN(F)	Gold	Half Pitch (H:1.6mm)	2,4,6,8,10	B-1
DHA	Gold	Half Pitch (H:2.2mm)	2,4,6,8,10,12	B-3
E(M)(I)(S)(J)	Gold	End Stackable	1-10 , 12	B-4

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B

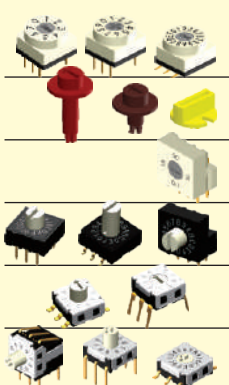
DIP SWITCH 程式開關 Featured New ★



Series	Contact Type	Features	Dimensions(mm)	Page
NP(I)(M)	Gold	Piano	2,4,6,8,10	B-7
EP(I)(M)	Gold	End Stackable Piano	2,4,6,8,10	B-9
D(M)(J)(L)	Gold	SMT	1-10 , 12	B-11
NDI	Gold	Through Hole	1-10 , 12	B-13
NDS	Gold	Through Hole	1-10 , 12	B-14
NDP	Gold	Piano	2-10, 12	B-15
NDA	Gold	Right Angle	2-10, 12	B-16
SIP	Gold	Single in Line	2,4,6,8,10	B-17
TII, TIM	Gold	Tri-State Low Profile	4,5,7,8,9,10	B-19

C

ROTARY CODED SWITCH 旋轉開關 Featured New ★



Series	Contact Type	Features	Dimensions(mm)	Page
RB	Gold	Rotary 10x10 Sealed	8, 10, 16	C-1
KRB		Cap Accessories for RB	Short/Long Spindle & Segment Wheel	C-3
SV3A-4	Gold	Rotary 10x10	4	C-4
R(H)(V)(M)(S)	Gold	Rotary 10x10	10, 16	C-5
RJ	Gold	Rotary 7x7	10, 16	C-8
R7	Gold	Rotary 7x7	10, 16	C-10

D

TACT SWITCH 觸動開關 Featured New ★

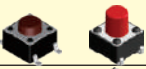


Series	Contact Type	Features	Dimensions(mm)	Page
TL()-A1	Silver	Sealed	10x10	D-1
TL()-A2	Silver	Sealed	10x10	D-3
TL()-B1	Silver	Sealed	10x10	D-5
TL()-B344	Silver	Sealed	10x10	D-7
DTSA-2	Silver	Right Angle	13.1x14.7	D-9
DTSM-2	Silver	SMT	12x12	D-11
DTS(G)(P)-2	Silver	Through Hole & Ground Terminal	12x12	D-13
DTS(G)-6	Gold / Silver	Through Hole & Ground Terminal	6.2x6.2	D-16

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D

TACT SWITCH 觸動開關 **Featured New** ★

	Series	Contact Type	Features	Dimensions(mm)	Page
	DTSA-6	Gold / Silver	Right Angle	7.4x7.1	D-21
	T7A	Silver	Double Layers Right Angle	7.3x9.66	D-24
	T7B ★	Silver	SMT	7.5x7	D-25
	DTST-6	Silver	Radial Taping	6.2x6.2	D-26
	KTSC-(6)(2)		Cap for 6x6/12x12 Tact Switch	Round / Square	D-27
	DTS()W-2	Silver	Sealed	12x12	D-28
	T5WJ ★	Silver	Long Travel	5.4x5.25	D-31
	T6VJ	Silver	Long Travel	6.2x6.2	D-32
	T6W	Gold / Silver	Long Travel SMT Sealed	6.2x6.2	D-33
	T6WA ★	Silver	Right Angle	6.4x6.55	D-35
	T8W ★	Silver	Sealed	8.5x8.5	D-36
	DTSHW-6	Gold / Silver	Sealed	6.2x6.3	D-37
	DTS(G)MW-6	Gold / Silver	Sealed	6.2x6.3	D-39
	DTSJW-6	Gold / Silver	Sealed	6.2x6.3	D-42
	DTSJW()-6	Gold / Silver	Sealed	6.2x6.3	D-44
	DTSYHL-6	Silver	Thinner Type Pitch 4.0mm	6.2x6.2	D-45
	DTS(G)ZML-6	Silver	Thinner Type Pitch 4.5mm	6.2x6	D-46
	DTS(G)(L)(F)-6	Silver	Thinner Type Pitch 4.0mm	6.2x6.4	D-48
	TA3	Gold / Silver	Right Angle (SMT)	6.3x6.18 / 7.11	D-50
	TA-6	Silver	Right Angle (SMT)	6.1x6.6	D-52
	T1A ★	Silver	H:0.60mm	2.8x1.9	D-54
	T1B ★	Silver	H:0.55mm	2.6x1.6	D-55
	T3AL ★	Silver	H:0.45mm / 0.65mm	2.6x3	D-56
	T3AL2 NEW	Silver	Low profile with 0.65mm	2.6x3.0x0.65	D-57
	T3BL	Silver	H:0.35mm	3.7x3.7	D-58
	T3C	Silver	H:0.60mm	3x2	D-59
	T4BJ	Silver	H:0.55mm	4.8x4.8	D-60
	TJ-4	Silver	H:0.55 mm	4.4x4.4	D-61

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D

TACT SWITCH 觸動開關 Featured New ★



Series	Contact Type	Features	Dimensions(mm)	Page
T()E-5	Gold / Silver	H:0.8 mm / H:1.5mm	5.2x5.2	D-62
T6H	Gold / Silver	Through Hole, Right Angle, SMT	7.4x7.4 / 8x8	D-64
1188	Silver	Side Push	3.5x7	D-66
TA(C)(2)-3	Silver	Side Push	3.95x7.3 / 4.65x7	D-68
TAF	Silver	Side Push	3.3x4.5	D-71
TCL NEW	Silver	Side Push	3.9x2.9x1.55	D-72
MTA2	Silver	Side Push	1.8x4.5	D-73
TCK ★	Silver	PCB Sealed Type Side Push	1.55x3.85	D-74
TCD ★	Silver	PCB Sealed Type Side Push	1.7x4.5	D-75
T1C ★	Silver	Side Push Mid-mount	2.8x1.95	D-76
TCF	Silver	Side Push Mid-mount	2.9x4.5	D-77
TCH	Silver	Side Push Mid-mount	4.5x2.2	D-78
THS-6 NEW	Silver	Through Hole , Silence	6.2x6.2x7.30	D-79
T6S ★	Silver	Long Travel	5.9x6.0	D-80
T6L ★	Silver	Long Travel	5.9x6.0	D-81
LTL-6	Silver	Long Travel	6.2x6.2	D-82
DTS(M)-3	Silver	Through Hole & SMT	3.5x6.0	D-83
TAE	Gold / Silver	Thinner (H:2.5mm)	3.8x6.0	D-85
T(M)(J)G-325	Silver	Thinner (H:2.5mm)	3.7x6.0	D-86
IPT	Gold / Silver	Side / Vertical Push	2.8x3.8	D-87
MPT	Silver	Side / Vertical Push	2.9x3.9	D-88
PT	Silver	Side / Vertical Push	3.5x4.7	D-89
LPT NEW	Silver	Horizontal Operation	5.0x7.05x1.8	D-91
TBF	Silver	Side / Vertical Push	2.9x3.5	D-92
TBE	Silver	Vertical Push	2.7x3.0	D-94
TAH ★	Silver	Vertical Push	3.2x4.0	D-95

E

SLIDE SWITCH 滑動開關 Featured New ★

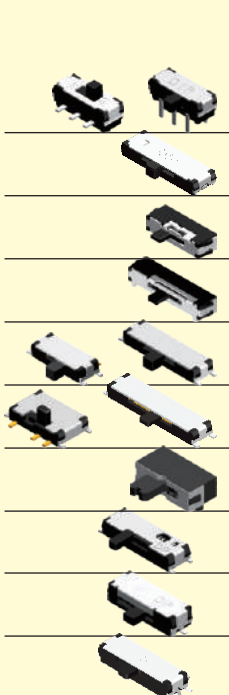


Series	Contact Type	Poles-Positions	Stroke(mm)	Page
SL6	Silver	2-2	2	E-1

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E

SLIDE SWITCH 滑動開關 **Featured New** ★



Series	Contact Type	Poles-Positions	Stroke(mm)	Page
LSS	Silver	1-2, 2-2	2	E-2
SD12	Gold	1-3	1.5	E-5
SS3	Gold	1-2	2	E-6
SS4	Gold	1-3	2	E-8
MSS(3)(4)	Gold	1-2, 1-3	1.5	E-10
MSS(6)(14)	Gold	2-2, 1-4	1.5	E-11
SC12P	Silver	1-2	2.5	E-12
SSS	Gold / Silver	1-2	2.7	E-13
NSS	Gold / Silver	1-3	2 / 4	E-14
S2S	Gold / Silver	1-2, 1-3	1.5	E-16

F

DETECTOR SWITCH 偵測開關 **Featured New** ★



Series	Contact Type	Features	Dimensions(mm)	Page
LTE ★	Silver	Vertical	8.2x5.25x7	F-1
LTEH	Silver	Long Travel	14.8x6.45x14.4	F-2
KTE ★	Gold	Vertical	5.4x13	F-3
ELH	Silver	Horizontal	3.3x3.5	F-4
ELU	Silver	Vertical	3.6x4.2	F-5
MTE ★	Silver	Vertical	13.3x5.3x10.8	F-6
ESG ★	Silver	Vertical	13.3x8.2x13.4	F-7
ESK ★	Silver	Vertical	8.25x5.25x7.85	F-8
DTE	Silver	Horizontal	4.15x5	F-9
FTE	Gold / Silver	Horizontal	4.0x5.55	F-10
HTE	Gold / Silver	Horizontal	5.6x5.7	F-12
TE-MR	Silver	Horizontal	4.7x6	F-13
TE	Silver	Vertical (H: 8.4 / 10.7 mm)	3.9x6.5	F-15
JTE	Silver	Vertical	3.5x4.7	F-17
ATE	Silver	Vertical (H:3.8 / 5.3 mm)	4.5x4.7	F-18
BTE	Silver	Vertical	2.8x3.5	F-19

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F

DETECTOR SWITCH 偵測開關 Featured New ★



Series	Contact Type	Poles-Positions	Stroke(mm)	Page
CTE	Silver	Vertical	2.98x3.5	F-20
TU	Silver	Vertical	3.6x4.2	F-21
TU-D	Silver	Vertical	3.6x4.2	F-22
ESL ★	Silver	Vertical	15.4x7.4x7.5	F-23
ESM NEW	Silver	Vertical	13.0x5.8x12.0	F-24



G

MULTI FUNCTION SWITCH 複合式開關 Featured New ★



Series	Contact Type	Features	Dimensions(mm)	Page
M2D	Silver	Double Action / H:0.6mm	4.1x4.3	G-1
PL3	Silver	Push & Lever	11.8x11.8	G-2
PL ★	Silver	Push & Lever	11.3x9.3	G-4
MT(4)(5)	Silver	4-Direction (& Center Push)	7.7x7.4	G-8
SRM	Silver	8-Direction	11x11.5	G-10



PRODUCTS

Page 4 ILLUMINATED SWITCH 帶燈開關 	Page 5 ROTARY CODED SWITCH 旋轉開關 	Page 7-8 SLIDE SWITCH 滑動開關 	Page 9 MULTI-FUNCTION SWITCH 複合式開關 
Page 4-5 DIP SWITCH 程式開關 	Page 5-7 TACT SWITCH 觸動開關 	Page 8-9 DETECTOR SWITCH 偵測開關 	

SPECIFICATION

•Contact Rating	接點額定值
•Contact Resistance	接觸電阻
•Dielectric Strength	耐電壓
•Insulation Resistance	絕緣電阻
•Operating Life	操作壽命
•Operating Force	操作力
•Operating Temp	操作溫度
•Storage Temp	儲存溫度
•Travel	行程

FEATURES

•Allow Automatic Insertion Onto PCB.	可自動插件於 PCB
•Cap Options	多種按鍵帽蓋選項
•Compact Size 4.9×4.9mm With LED	4.9×4.9mm 小型尺寸 (附 LED)
•Compact Size, Extra Thin	小尺寸、超薄型設計
•Dual LEDs	雙LED設計
•Double Switch	雙開關設計
•Focused light	聚光式發光

FEATURES

•Horizontal Operating	側向操作	•Two Circuits	雙電路設計
•Long Operating Life	高耐久壽命	•Through-Hole & SMT Type	通孔表面黏著型
•Low Profile With 0.60mm	超薄0.60mm高度	•Various LED Colors	多種LED顏色
•Mid-Mount Type	中置安裝型	•Various Actuator Lengths	多種按鍵高度
•Operating Life Cycles	操作壽命	•1 Million Operating Life Cycles	100萬次操作壽命
•Optional Ground Pin	可選接地端子	•5 Million Life Cycles	500萬次壽命
•Reflow Solderable	可回流焊接	•6x6mm, Surface Mounting Type	6×6mm 表面黏著型 (SMT)
•Radial Taping Type	編帶包裝型 (徑向編帶)		
•Sealed	密封型		
•Sharp Tactile Feeling	按壓手感清晰		

APPLICATION

•Automotive	汽車電子	•Laptop, IPC	筆電、工業電腦 (IPC)
•Audio, OA Equipment	音響設備、辦公自動化設備 (OA)	•Medical Equipment	醫療設備
•Audio, DVD Player, TV	音響設備、DVD播放器、電視	•Network Equipment	網路設備
•Communication Equipments	通訊設備	•Portable Electronic Device	可攜式電子設備
•IPC	工業電腦 (IPC)	•Server	伺服器
•Industrial	工業應用	•Set-Top Box	機上盒
•Instrumentation, Communication	儀器設備、通訊設備	•Server, Desktop	伺服器、桌上型電腦
•Instrumentation	儀器設備	•Testing Instruments	測試儀器
•Industrial Controls	工業控制設備	•Telecommunications	電信設備
•Industrial Equipment	工業控制	•White Goods	白色家電
		•White Goods, OA Equipment	白色家電、辦公自動化設備 (OA)

APPLICATION

Smart Wearable Featured New ★



Power/Camera Button/Volume Button

Tact Switch

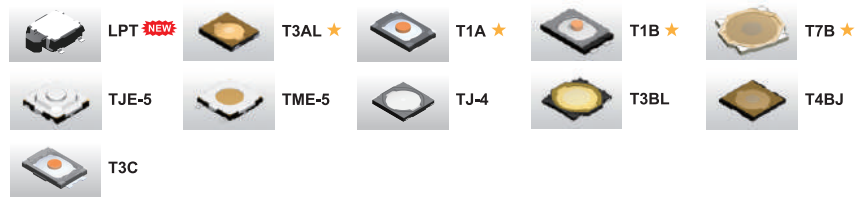


Double Action Type Tact Switch:



Function Button

Tact Switch



Mute Button

Push Lever Switch:



Slide Switch:



Cloud Devices Featured New ★



Function Setup Key

Dip Switch:



Rotary Switch:

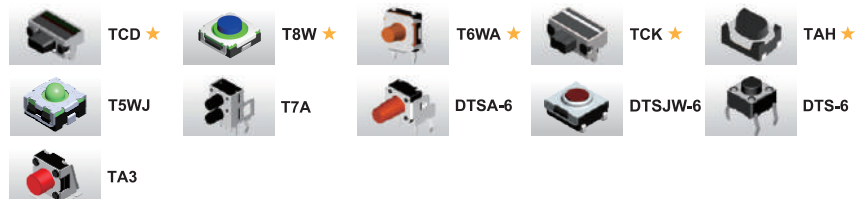


Power Key

Illuminated Switch:



Tact Switch:



Detector Switch:



Micro Switch:



APPLICATION

Automotive Industry **Featured New** ★



Charging Pile

Detector Switch:



ESL ★



LTE ★



ESG ★



MTE ★



KTE ★



LTEH



MS6 ★



MSW ★



MS5 ★



ESK ★

Micro Switch:

Steering Wheel

Tact Switch:



T8W ★



T6S ★



T6L ★



T5WJ ★



DTSMW-2



DTSL-6



DTSM-6



TME-5



TBE



T6VJ

Handle Bar

Detector Switch:



LTE ★



ESG ★



ML4 ★



ESK ★



MS7

Micro Switch:

GPS

Tact Switch:



TCD ★



TCK ★



1188



PT



TBF



MTA2



PLJG ★



SS3



SD12



MSS3

Push Lever Switch:

Slide Switch:

Dashboard

Detector Switch:



LTE ★



T6L ★



TAH ★



T5WJ ★



T6W

Dip Switch:

IT Industry **Featured New** ★



Remote Control

Tact Switch:



DTSM-3



MPT



IPT



DTSL-6



DTSGZM-6



TME-5



T4BJ



TJ-4



TBE



TBF

Dip Switch:



TDS



TIM



MSS



SS3



S2S

Push Lever Switch:



PLJG ★



PL3

Walkie-talkie

Tact Switch:



T1B ★



T1A ★



TCK ★



TAH ★



DTSM-6



T7B ★



1188



TA3



TAS-6



DTSA-6



T3AL



T3BL



T3C



TME-5

Mother Board/Modem/Nettop

Dip Switch:



NDS



NDA



NDP



DM



EI

Illuminated Switch:



MLG ★



ML4 ★



MLC



MLA **NEW**



TLA-7

LCD Panel

Tact Switch:

APPLICATION

3C Industry Featured New ★



Double Action Type Tact Switch:



M2D

4-directional Switch:



MT5

Slide Switch



SS3



SSS



S2S



MSS3



MSS4

Tact Switch:



TCD ★



T1C ★



TCK ★



TAH ★



T7B ★



T3AL ★



T1A ★



T1B ★



THS-6 **NEW**



TJE-5



T3BL



PT



IPT



TCF



TBF



T3C



TJ-4



1188



TAC-3

Detector Switch:



ATE



JTE



TU



ELH



ELU



TE-MR



DTE



TAF



TAFG

Illuminated Switch:



ML4 ★



TML-3

Micro Switch:



MS1



MS2

Slide Switch:



NSS



SC12P



SS4

Smart Home Appliances Featured New ★



I-Robot

Tact Switch:



TCK ★



TAH ★



DTSM-6



DTS-2



DTS(M)-3

Coffee Machine

Illuminated Switch:



ML4 ★



TLLA-7



TML-3



MLC

Tact Switch:



DTS(M)-2



TMG-325



MS1



MS2

Dish Washer

Tact Switch:



1188



TAC-3



TAS-6



DTSL-6

Washing Machine

Washable Tact Switch:



T6WA ★



DTSHW-6



DTSMW-2



T6W



DTS(G)MW-6

Illuminated Switch:



ML4 ★



TLLA-7



TLL-6



ML6



MLC

Vacuum

Tact Switch:



TCK ★



TAH ★



DTSL-6



MSW ★



DTSM-6



TME-5



DTSGZM-6



MS1



MS2

APPLICATION

Medical Devices **Featured New** ★



Thermometer

Tact Switch:



Illuminated Switch:



Blood Pressure Gauge

Tact Switch:



Illuminated Switch:



Slide Switch:



Ear Thermometer

Tact Switch:



Dip Switch:



Electric Toothbrush

Tact Switch:



Detector Switch:



Illuminated Switch:



Automatic Home Appliances **Featured New** ★



Security System

Detector Switch:



Rotary Switch:



Automatic Curtain

Dip Switch:



Tact Switch:



Slide Switch:



Automatic Garage Door

Dip Switch:



Tact Switch:



APPLICATION

Security Featured New ★



Smoke Detector

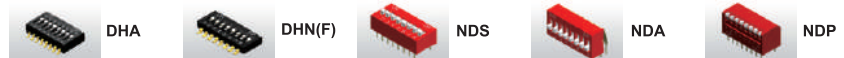
Tact Switch:



Slide Switch:



Dip Switch:



Rotary Switch:



GAS Alarm

Slide Switch:



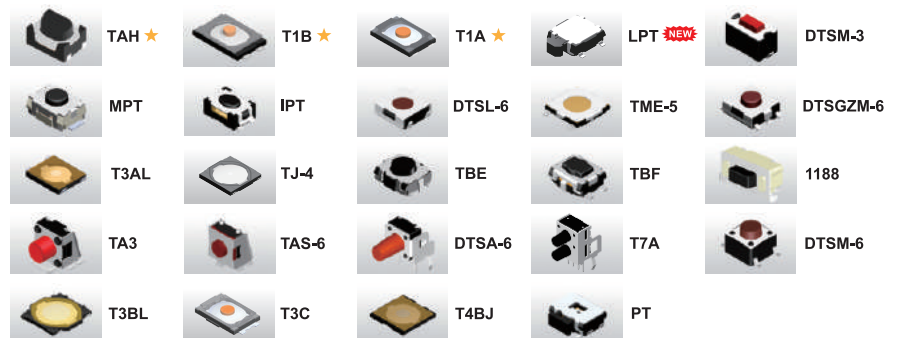
Detector Switch:



Industrial Control Field Featured New ★



Tact Switch:



Slide Switch:



Rotary Switch:



Dip Switch:

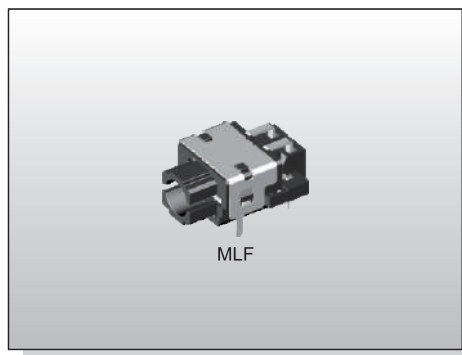


Micro Switch:



Illuminated Switch:





MLF

HOW TO ORDER

MLF - 3 **QR**

Operating Force:
200gf

Package:
Tape & Reel

Halogen Free

LED Color:
□=Without LED
AW=Amber/White

FEATURES

- ※Horizontal operating
- ※Various LED colors
- ※Mid-mount type

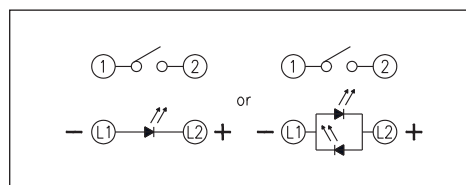
APPLICATION

- ※Server, desktop
- ※Communication apparatus
- ※IPC

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	200±70gf
Travel	1.5mm
Operating Life	100, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



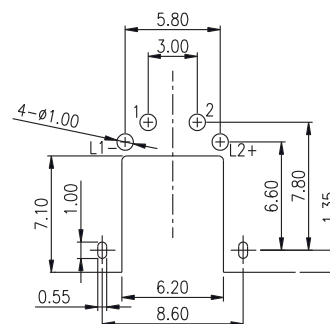
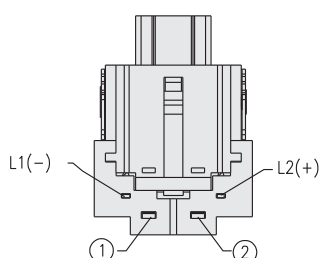
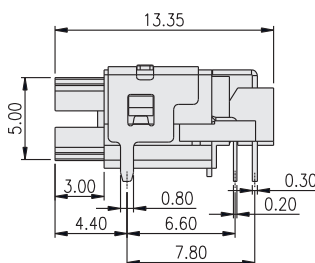
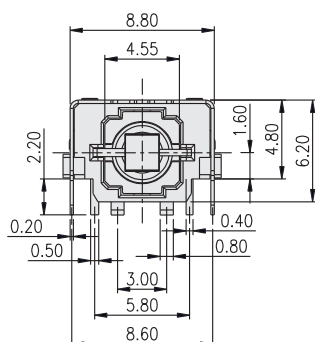
PACKAGE

<Tape & Reel>
570 pcs.

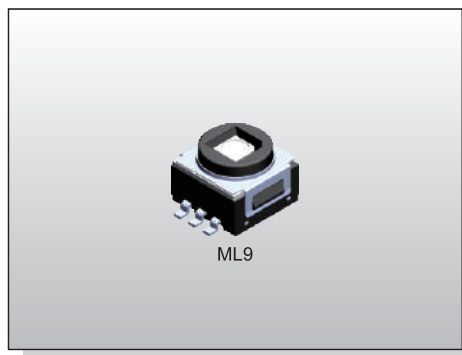
MLF

LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Deep Red	640	25	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



P.C.B. LAYOUT



FEATURES

- ※Various LED options
- ※300,000 operating life cycles

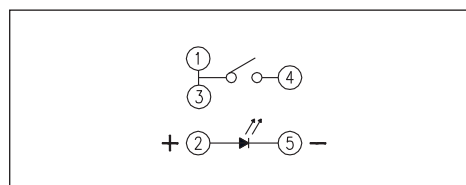
APPLICATION

- ※Automotive
- ※Network equipment
- ※Telecommunications
- ※Medical equipment
- ※Industrial controls

SPECIFICATION

Contact Rating	50mA, 32V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	400±100gf
Travel	0.45mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
650 pcs.

HOW TO ORDER

ML9 - M QR

S.M.T.

□=Without Post
P=With Post

Operating Force:
4=400gf

- Package:
Tape & Reel

- Halogen Free

LED Color:

□=Without LED

B=Blue

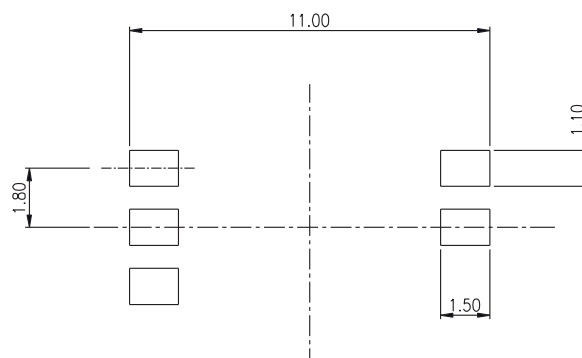
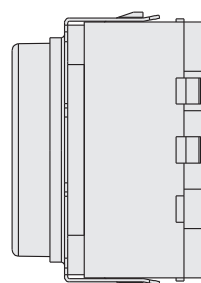
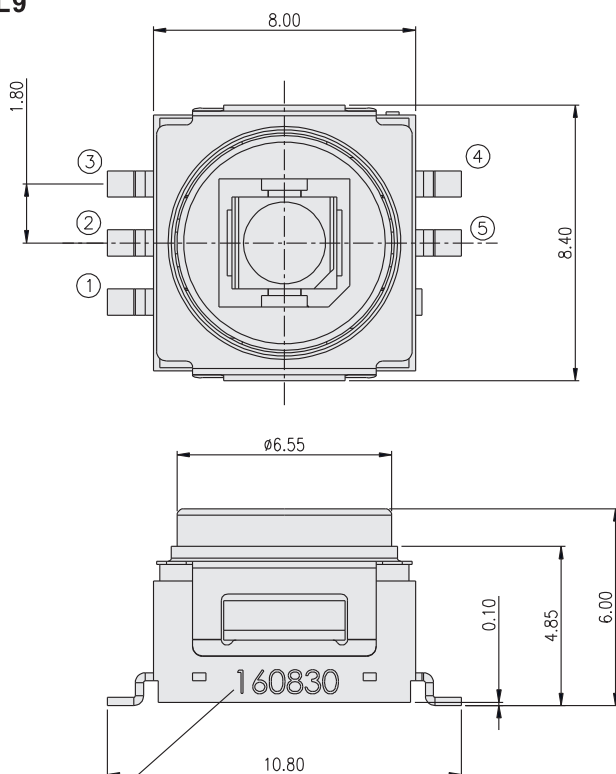
G=Green
R=Red

R=Red
W=White

W=White
Y=Yellow

F = yellow
A = Amber

A-Attbcl

ML9

P.C.B. LAYOUT

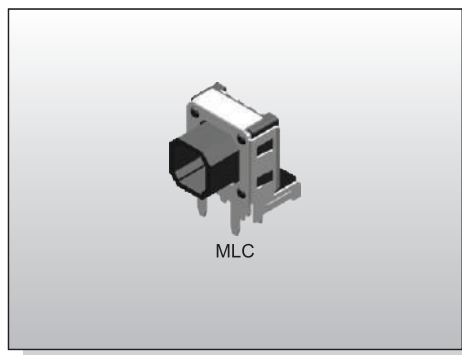
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ILLUMINATED SWITCH MLC SERIES

Tact Switch
Illuminated



ILLUMINATED SWITCH



MLC

FEATURES

- ※Horizontal operation
- ※Various LED colors
- ※Long operating life

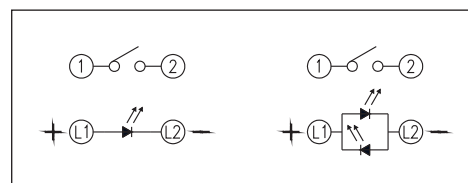
APPLICATION

- ※Automotive
- ※Server
- ※Laptop, IPC

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	220±50gf
Travel	0.25mm
Operating Life	100, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tray>

200 pcs.

<Tape & Reel>

350 pcs.

HOW TO ORDER

MLC - 6 W A Q

Operating Force:
3=220gf

Package:
A=Tray
R=Tape & Reel

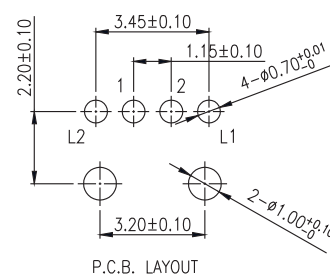
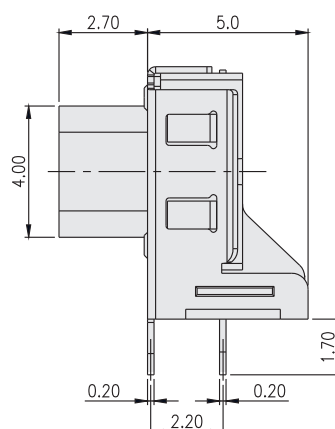
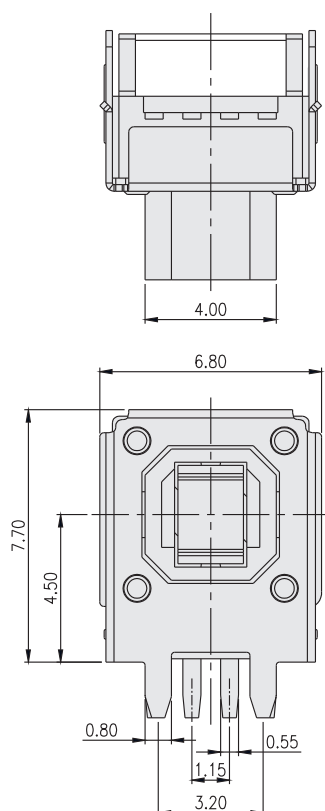
Halogen Free

LED Color:
White+Amber

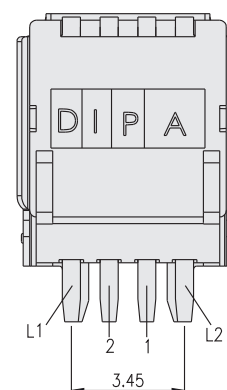
MLC

LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2-\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	200	3.1	3.4	120°
G	Yellow Green	570	70	2.0	2.3	
W	Warm White	X:0.30 / Y:0.30	1000	3.1	3.7	

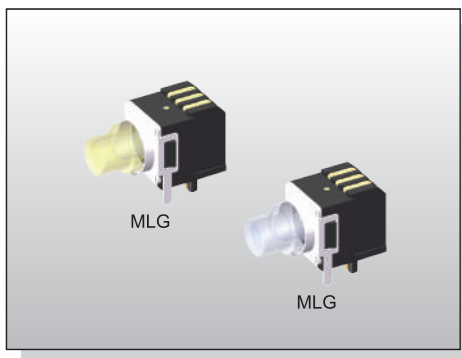


P.C.B. LAYOUT



ILLUMINATED SWITCH MLG SERIES

Tact Switch Illuminated



FEATURES

- ※Horizontal Operation
- ※Various LED colors
- ※8.0x9.45x17.1mm

APPLICATION

- ※Servers
- ※Networking Equipment
- ※Industrial Control Systems
- ※Communication Cabinets

SPECIFICATION

Contact Rating	0.1mA , 20 VDC Min. 50mA , 32VDC Max.
Contact Resistance	100mΩ Max. (initial)
Insulation Resistance	100MΩ Min. 500V DC
Dielectric Strength	250VAC /1 minute
Operating Force	400±120gf
Travel	2.4±0.3mm
Operating Life	25,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

MLG - 5G

G=With Ground Pin

Solder Type: —
H=Through Hole
L=L SMT
M=S.M.T.
A=Right Angle

Operation Force:
4=400g

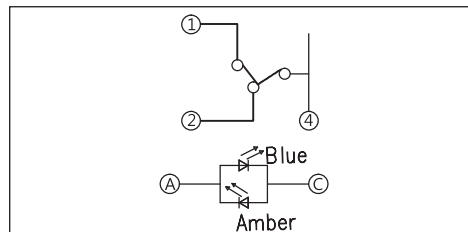
LED Color: —
☐=Without LED
 B=Blue
 A=Amber

- CAP Color:
T0=Transparent
TA=Transparent (PAR)

- Package:
Tape & Reel

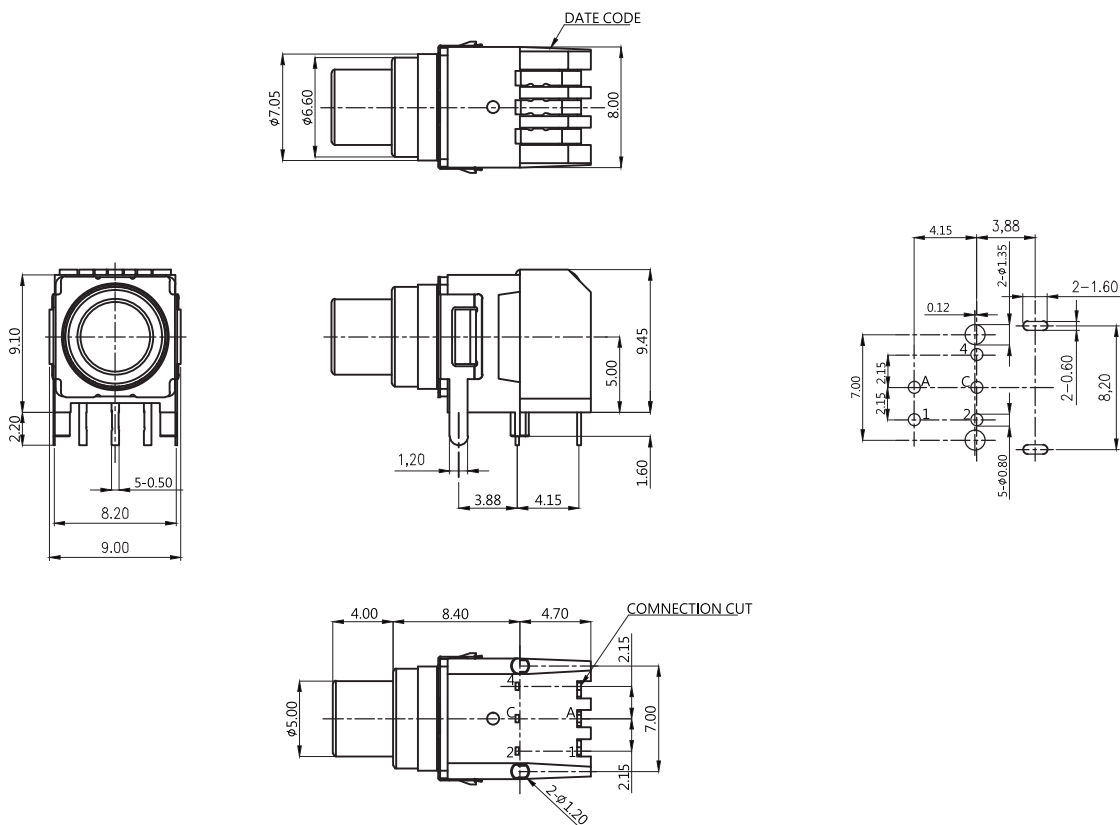
— V=RoHS & Lead Free Solderable

CIRCUIT



PACKAGE

<Tape & Reel>
290 pcs.

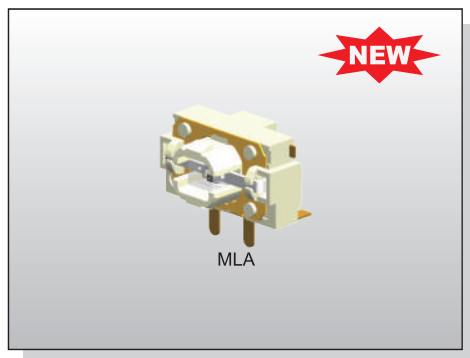
MLG

ILLUMINATED SWITCH MLA SERIES

The Switch
Illuminated



ILLUMINATED SWITCH



MLA

FEATURES

- ※Horizontal Operation
- ※Miniaturized design
- ※Various LED colors

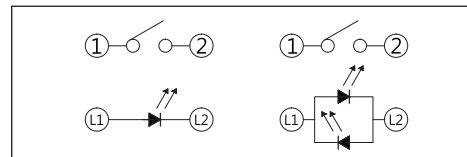
APPLICATION

- ※Servers
- ※Network Switches
- ※Data Center Equipment
- ※Communication Devices

SPECIFICATION

Contact Rating	10μA, 1V DC min. 50mA, 12V DC max.
Contact Resistance	500mΩ max.(initial)
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.20±0.10mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ + 85°C
Storage Temp.	-40°C ~ + 85°C

CIRCUIT



PACKAGE

<Tape & Reel>
1400 pcs

HOW TO ORDER

MLA-2□□QR

Operating Force:
2=160±50gf

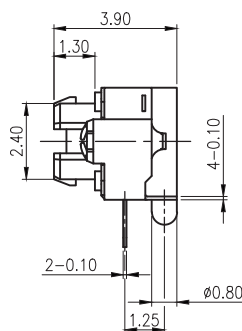
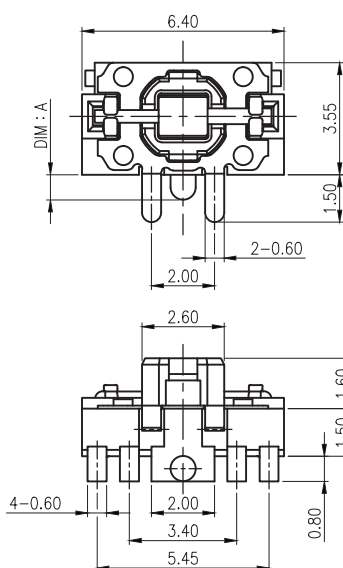
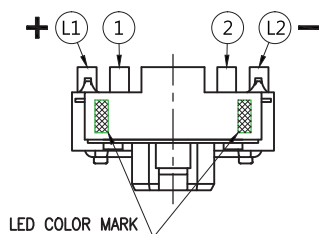
LED Color:
□=Without LED
Refer Color Options

Package:
Tape & Reel

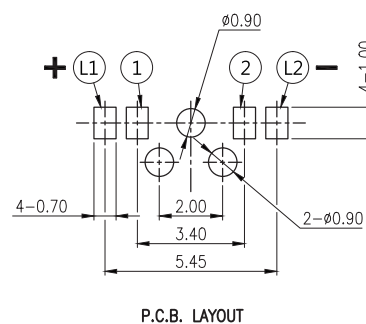
Halogen Free

Post Length:
1=0.8mm
2=1.5mm

MLA-2□□QR



PART NO.	DIM : A
MLA-2□1QR	0.8
MLA-2□2QR	1.50



ILLUMINATED SWITCH

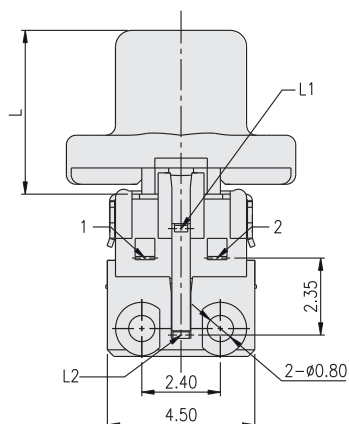
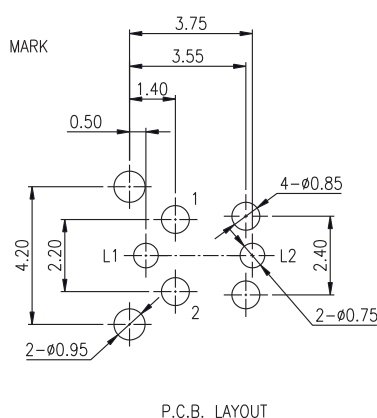
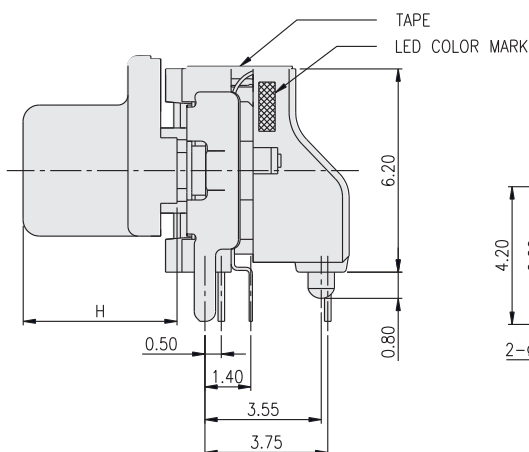
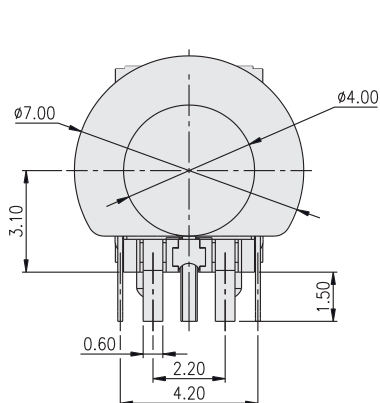


ILLUMINATED SWITCH ML3 SERIES

Tact Switch
Illuminated



ML3-AG2H



PART NO.	H	L
ML3-AG2H□-□-CT-V-R	4.7mm	5.0mm
ML3-AG2H□-□-DT-V-R	5.7mm	6.0mm

LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\cdot\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	50	3.0	3.6	140°
PB	Blue	470	70	3.0	3.6	
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	

ILLUMINATED SWITCH ML4 SERIES

***Tact Switch
Illuminated***



FEATURES

- ※ Compact size 4.9x4.9 with LED
- ※ Ultra-thin: a height of 2.0mm

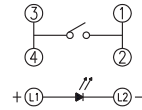
APPLICATION

- ※NB, Monitor
- ※Portable device
- ※Tablet

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf / 250gf±50gf
Operating Life	1,000,000 cycles for 160gf 100,000 cycles for 250gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
2500 pcs.

HOW TO ORDER

M L 4 - L ☐ ☐ ☐ **Q R**

S.M.T.-

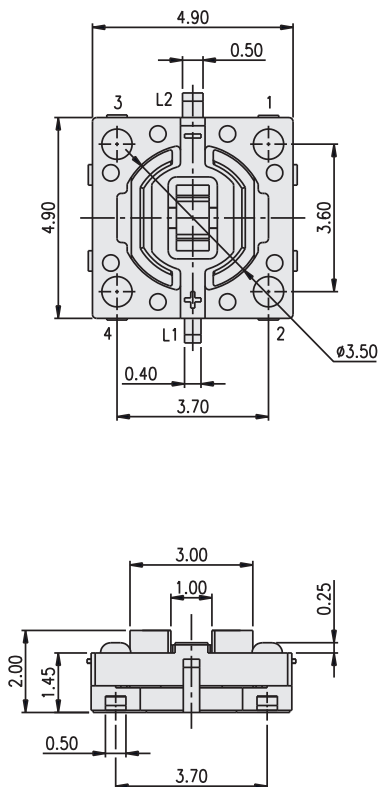
Height:—
1=2.00mm

Operating Force:
2=160gf
3=250gf

- Package: Tape & Reel

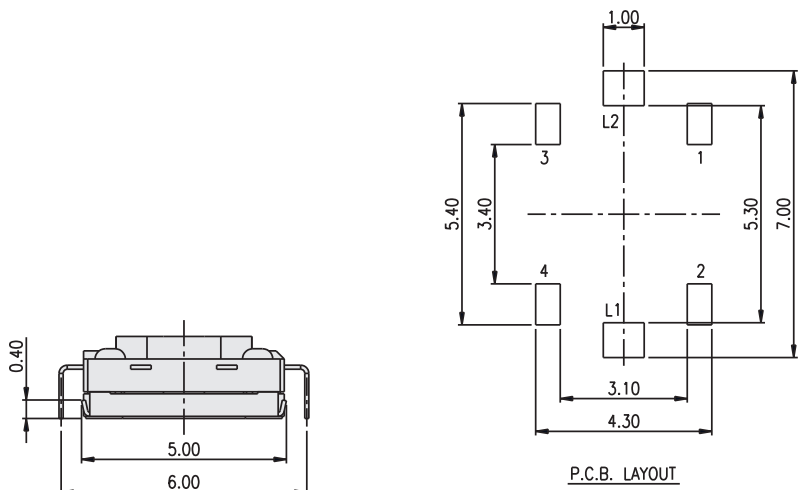
- Halogen Free

LED Color:
Refer Color Options

ML4

LED Color Options:

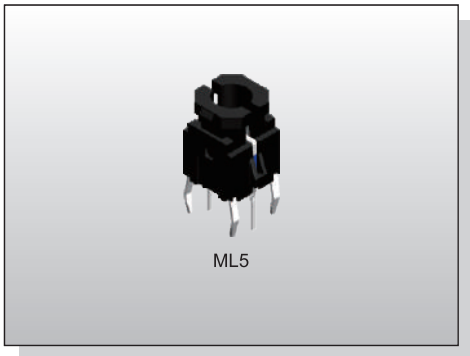
Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_f (V)		View Angle $2\cdot\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	 470	100	3.0	3.6	120°
G	Green	 570	30	2.05	2.4	
R	Red	 630	50	1.9	2.4	
W	Cold White	X:0.30 / Y:0.30	150	3.0	3.6	



ILLUMINATED SWITCH

ML5 SERIES

Tact Switch
Illuminated



FEATURES

- ※Silicone structure for low noise
- ※Long travel
- ※Options of different LED color

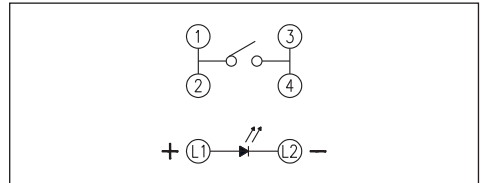
APPLICATION

- ※Audio device
- ※Office equipment
- ※Communication apparatus

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	200±70gf
Travel	1.2mm
Operating Life	50,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

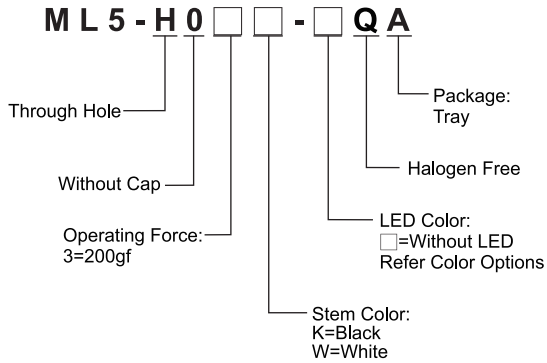
CIRCUIT



PACKAGE

<Tray>
140 pcs.

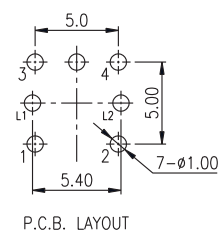
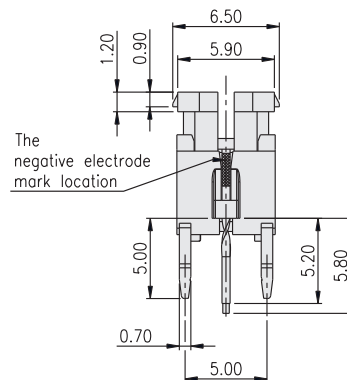
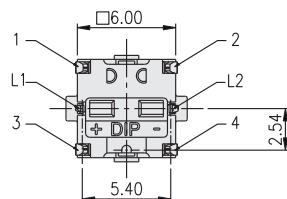
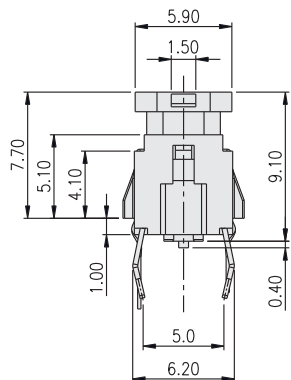
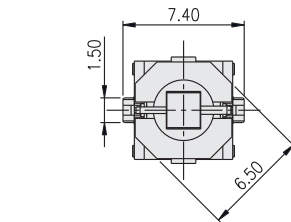
HOW TO ORDER



ML5

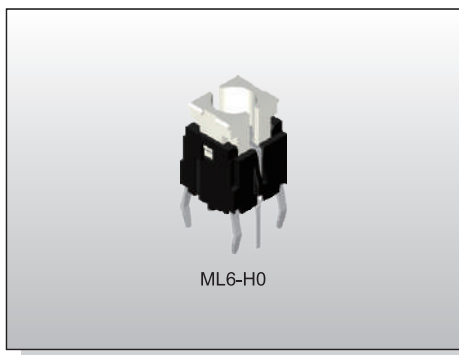
LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	80	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Deep Red	640	25	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



ILLUMINATED SWITCH ML6-H0 SERIES

Tact Switch
Illuminated



ML6-H0

FEATURES

- ※Customized cap options
- ※Bi-color LED available
- ※Long operating life

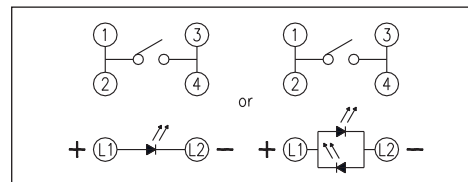
APPLICATION

- ※Sever, modem, data storage
- ※Audio module
- ※Office equipment

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf, 180±50gf
Travel	0.25mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

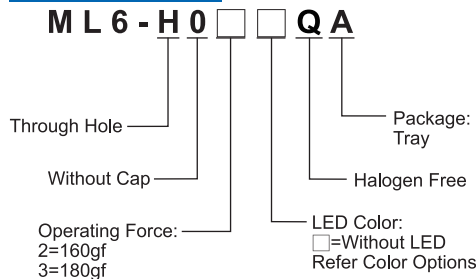
CIRCUIT



PACKAGE

<Tray>
140 pcs.

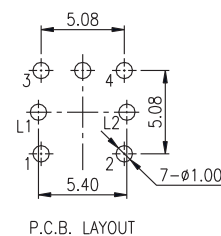
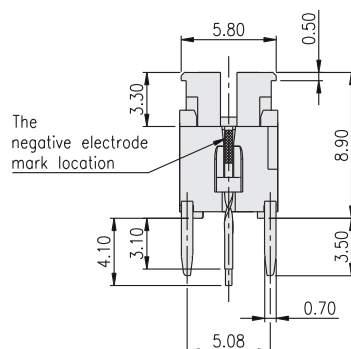
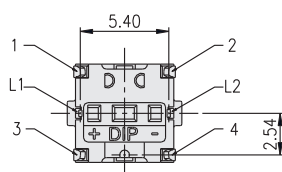
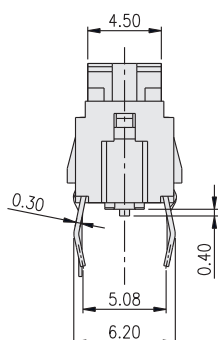
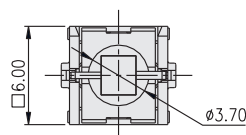
HOW TO ORDER



ML6-H0

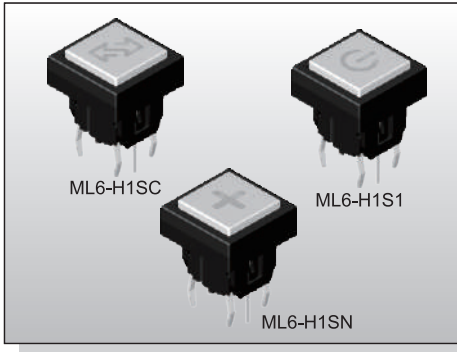
LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2-\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



ILLUMINATED SWITCH ML6-H1 SERIES

Tact Switch
Illuminated



FEATURES

- ✧ Customized cap options
- ✧ Bi-color LED available
- ✧ Long operating life

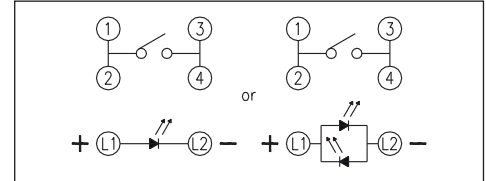
APPLICATION

- ✧ Sever, modem, data storage
- ✧ Audio module
- ✧ Office equipment

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.25mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

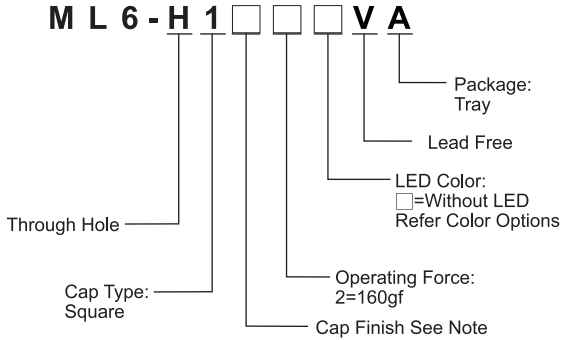
CIRCUIT



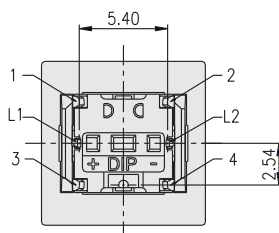
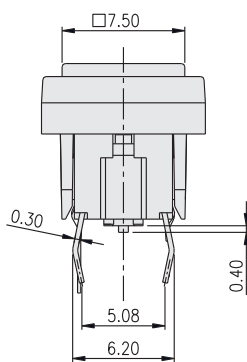
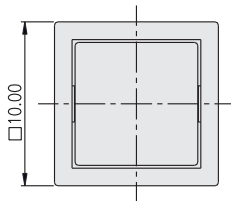
PACKAGE

<Tray>
100 pcs.

HOW TO ORDER

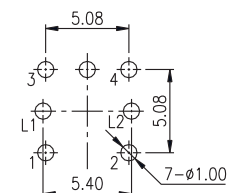
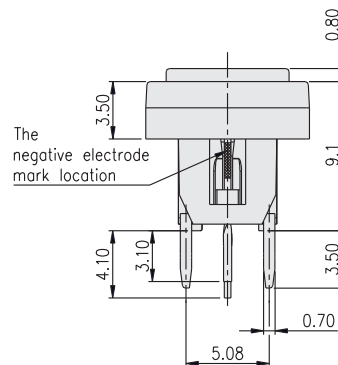


ML6-H1



LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



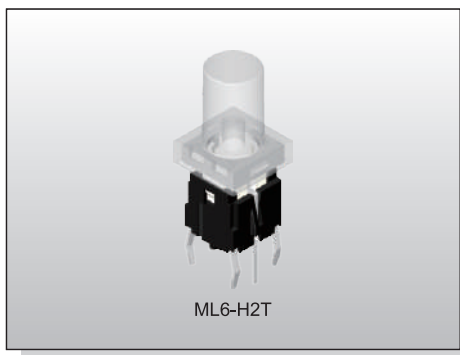
P.C.B. LAYOUT

Note :

	CAP	
	Mark	Color
S1		Silver
S2	Reset	Silver
SA		Silver
SN		Silver

ILLUMINATED SWITCH ML6-H2 SERIES

Tact Switch
Illuminated



FEATURES

- ※ Customized cap options
- ※ Bi-color LED available
- ※ Long operating life

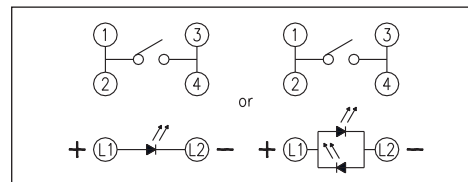
APPLICATION

- ※ Sever, modem, data storage
- ※ Audio module
- ※ Office equipment

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.25mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

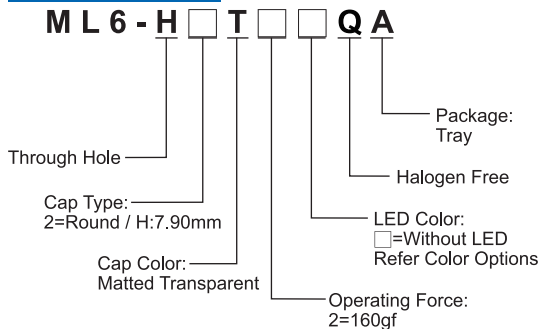
CIRCUIT



PACKAGE

<Tray>
100 pcs.

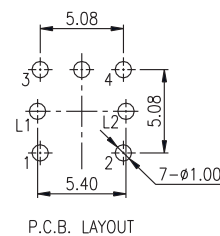
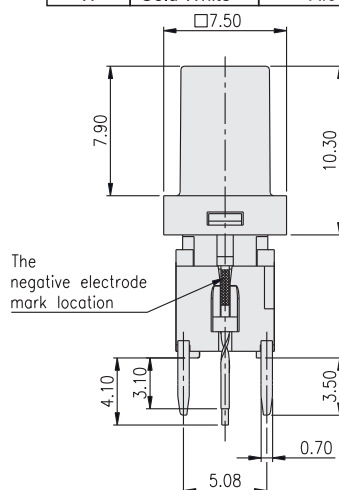
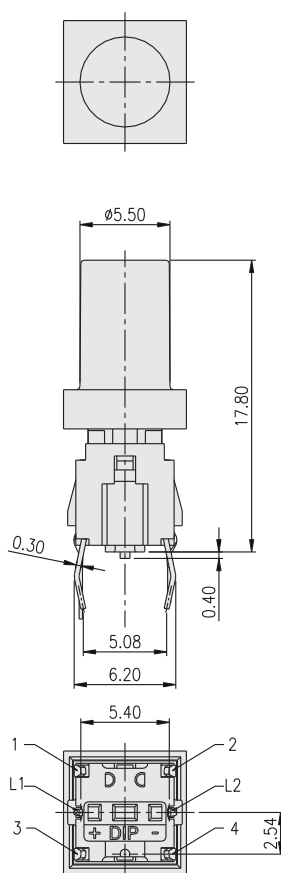
HOW TO ORDER



ML6-H2

LED Color Options:

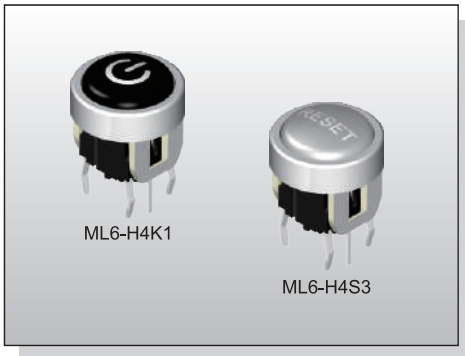
Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



ILLUMINATED SWITCH

ML6-H4 SERIES

Tact Switch
Illuminated



FEATURES

- ※Customized cap options
- ※Bi-color LED available
- ※Long operating life

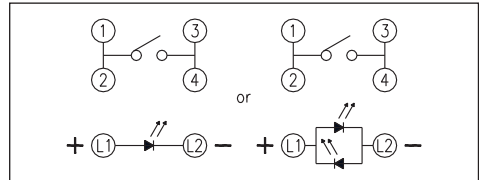
APPLICATION

- ※Sever, modem, data storage
- ※Audio module
- ※Office equipment

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.25mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

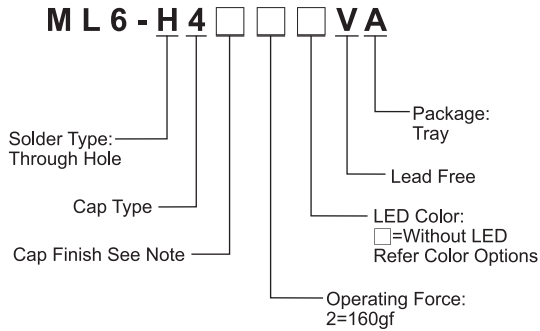
CIRCUIT



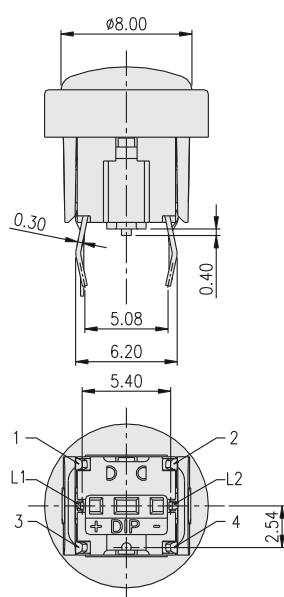
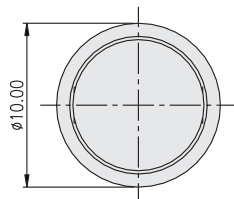
PACKAGE

<Tray>
100 pcs.

HOW TO ORDER

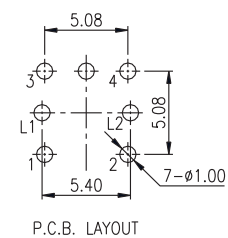
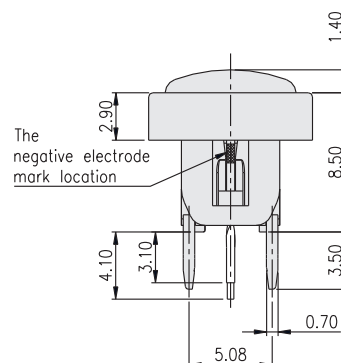


ML6-H4



LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_f (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



NOTE :

	CAP	
	MARK	COLOR
S1	⏻	SILVER
K1		BLACK
S3	RESET	SILVER
K3		BLACK
SA	—	SILVER
KA		BLACK

ILLUMINATED SWITCH ML6-H5 SERIES

Tact Switch
Illuminated



FEATURES

- ※Customized cap options
- ※Bi-color LED available
- ※Long operating life

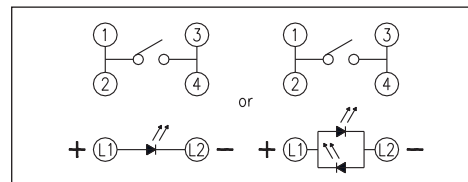
APPLICATION

- ※Sever, modem, data storage
- ※Audio module
- ※Office equipment

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.25mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

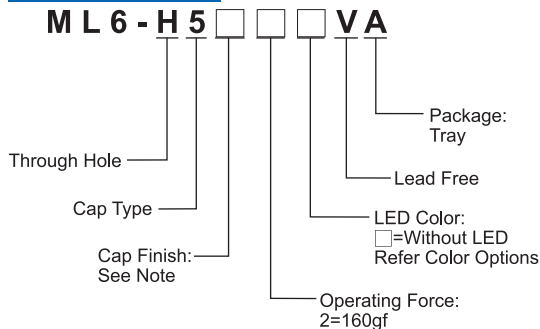
CIRCUIT



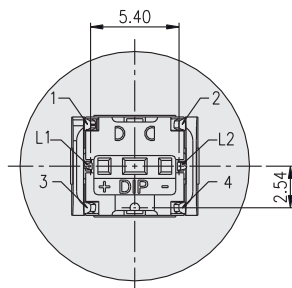
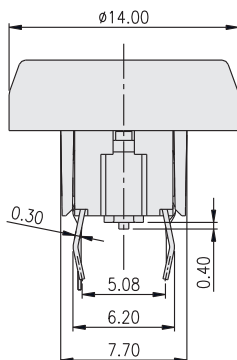
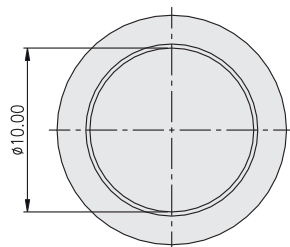
PACKAGE

<Tray>
100 pcs.

HOW TO ORDER

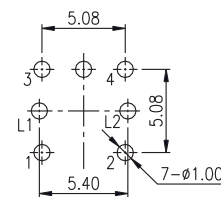
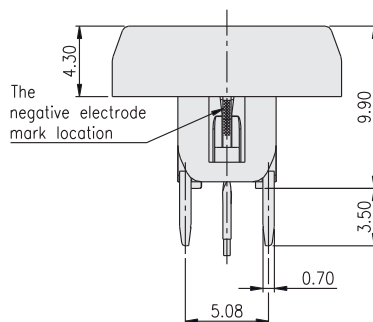


ML6-H5



LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



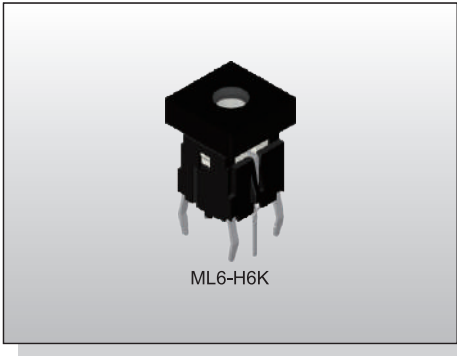
P.C.B. LAYOUT

NOTE :

	CAP	
	MARK	COLOR
R4	START	RED

ILLUMINATED SWITCH ML6-H6 SERIES

Tact Switch
Illuminated



ML6-H6K

FEATURES

- ※Customized cap options
- ※Bi-color LED available
- ※Long operating life

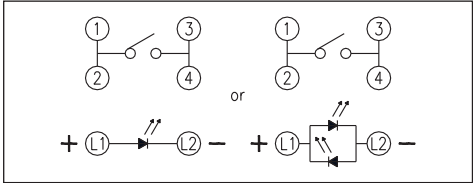
APPLICATION

- ※Sever, modem, data storage
- ※Audio module
- ※Office equipment

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	180±50gf
Travel	0.25mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

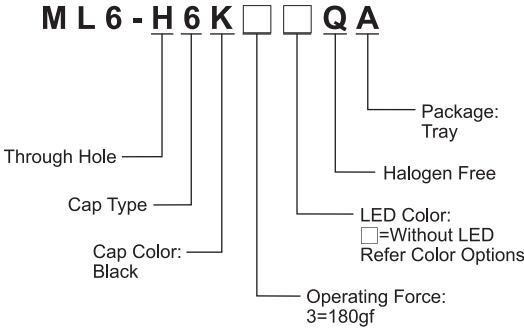


PACKAGE

<Tray>

100 pcs.

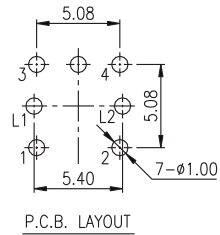
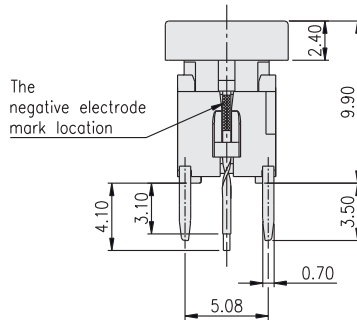
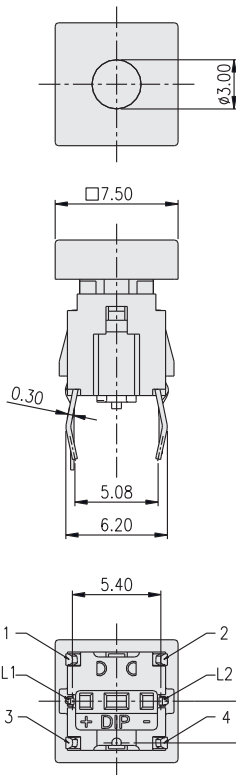
HOW TO ORDER



ML6-H6

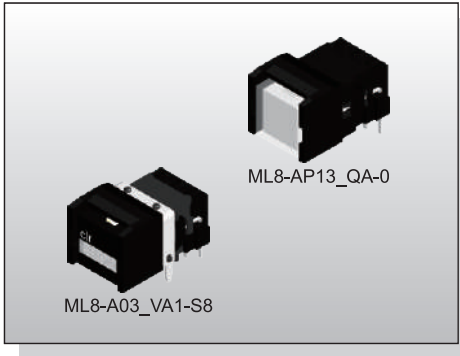
LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



ILLUMINATED SWITCH ML8 SERIES

**Tact Switch
Illuminated**



FEATURES

- ※Push to lock option
- ※Long stroke
- ※Options of different cap color & mark

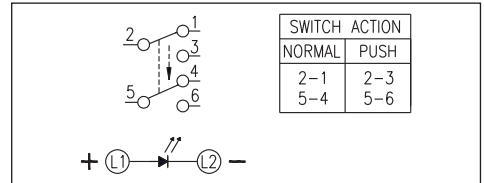
APPLICATION

- ※Audio device
- ※Office equipment
- ※Communication apparatus

SPECIFICATION

Contact Rating	0.1A, 30V DC
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	250±100gf
Travel	1.5mm
Operating Life	10, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tray>
120 pcs.

HOW TO ORDER

ML 8 - A

Right Angle -

□=Base Without Post
P=Base With Post

0=Click Type
1=Lock Type

Operation Force:-
3=250gf

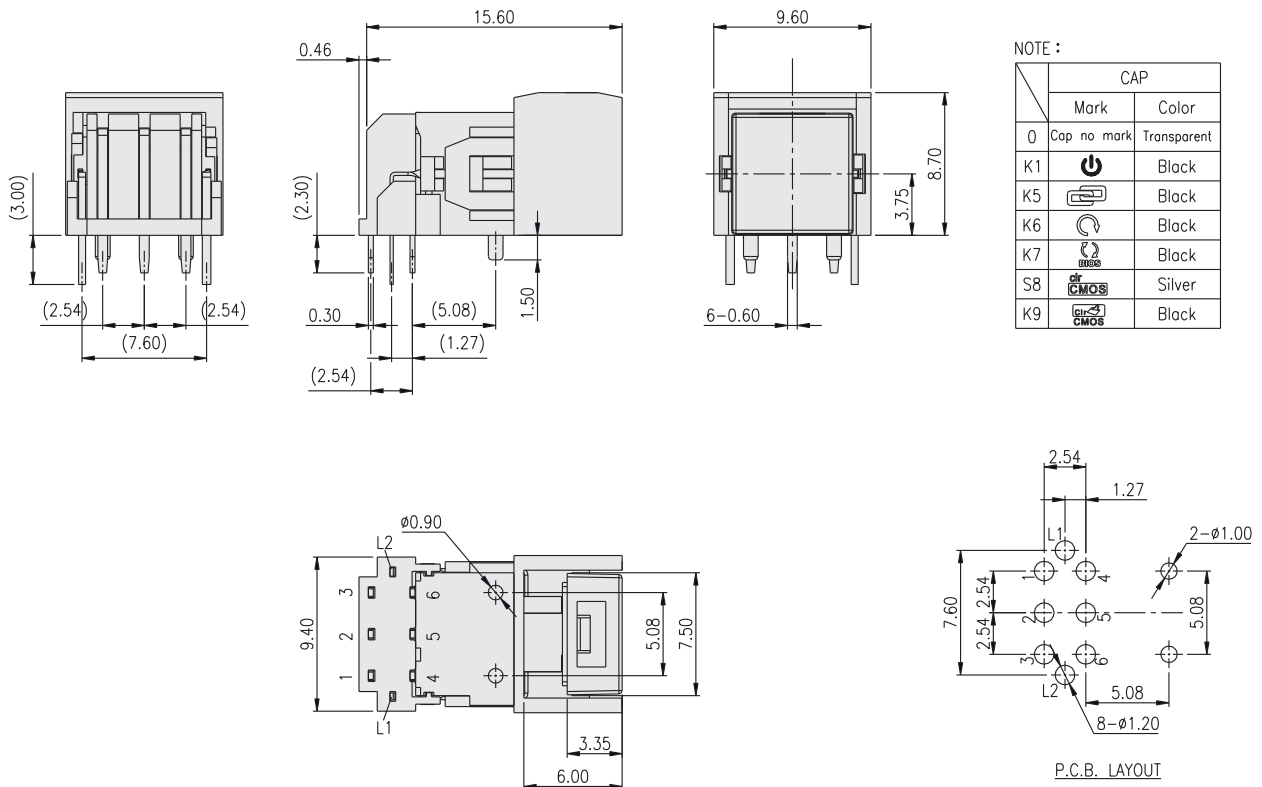
LED Color: ☐=Without LED
Refer Color Options

- Cap Color & Mark
See "NOTE"

□=Normal Type
*1= Cover Add 0.5mm
*(Only Apply For Base With Post)

- Package: Tray

-Q=Halogen Free
V=Lead Free(Only For Printed Cap Type)

ML8-AP13

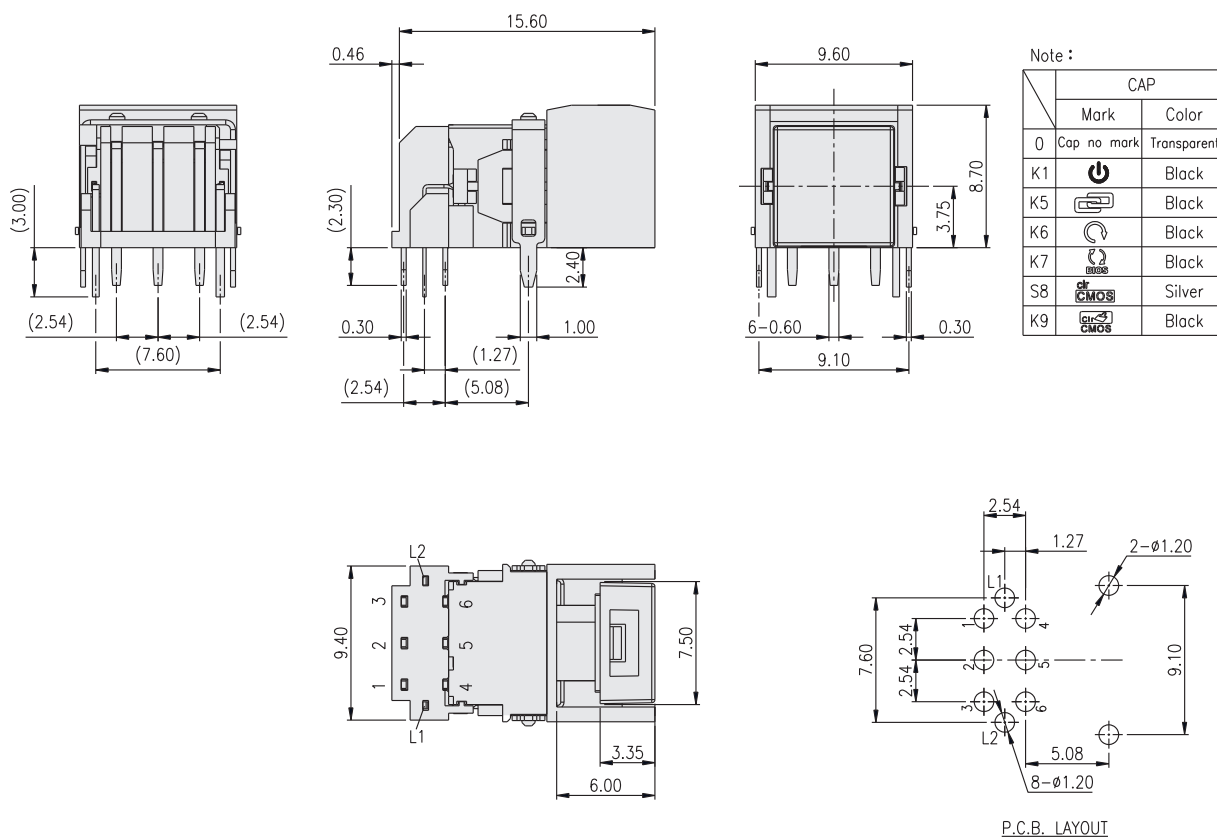
ILLUMINATED SWITCH ML8 SERIES

**Tact Switch
Illuminated**



ML8-A03

ILLUMINATED SWITCH

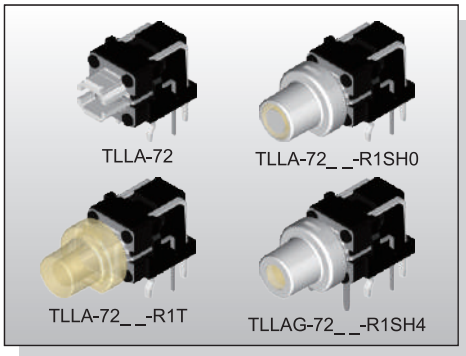


LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
PG	Pure Green	520	160	3.2	3.6	
G	Yellow Green	570	30	2.0	2.3	
Y	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Deep Red	640	25	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	

ILLUMINATED SWITCH TL(L)A(G)-7 SERIES

Tact Switch
Illuminated



FEATURES

- ※Horizontal operation
- ※Various LED colors
- ※Options of different cap color & mark

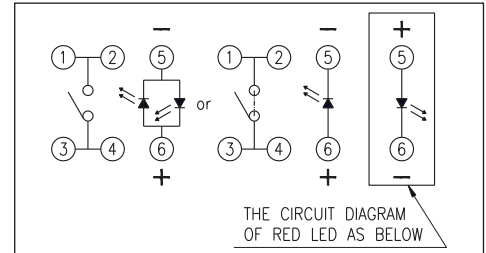
APPLICATION

- ※Automotive
- ※Server
- ※Laptop, IPC

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf / 260±50gf
Travel	0.2mm
Operating Life	500, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

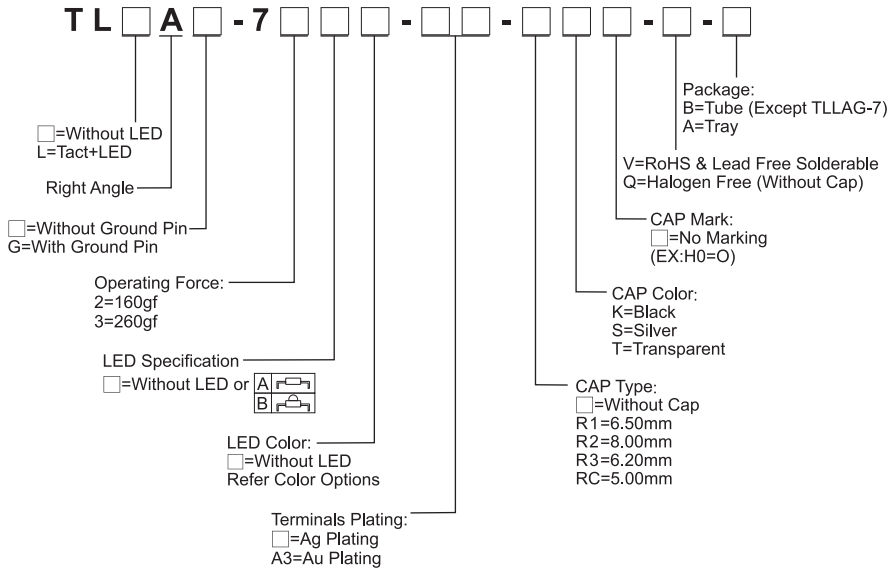
CIRCUIT



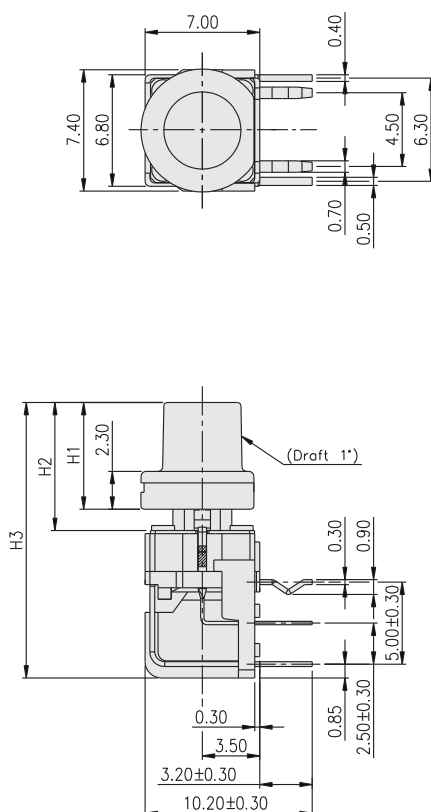
PACKAGE

- <Tray>
TLLA-7□-A: 100 pcs.
- <Tube>
TLLA-7□-B: 63 pcs.

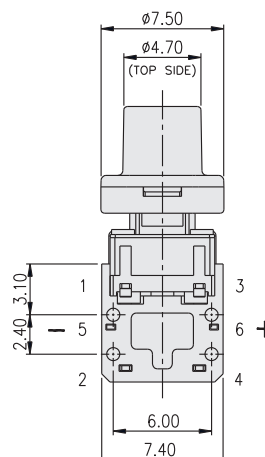
HOW TO ORDER



TLLA-72□□-R□

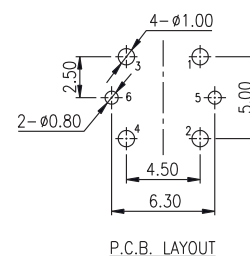


PART NO.	H1	H2	H3
TLLA□-7□□□-□-R1□	6.50	7.80	16.80
TLLA□-7□□□-□-R2□	8.00	9.30	18.30
TLLA□-7□□□-□-R3□	6.20	7.50	16.50
TLLA□-7□□□-□-RC□	5.00	6.30	15.30



NOTE :

	CAP MARK		CAP MARK
H0		H8	
H1		H9	
H2		HA	
H3		HB	
H4		HC	
H5		HF	
H7			



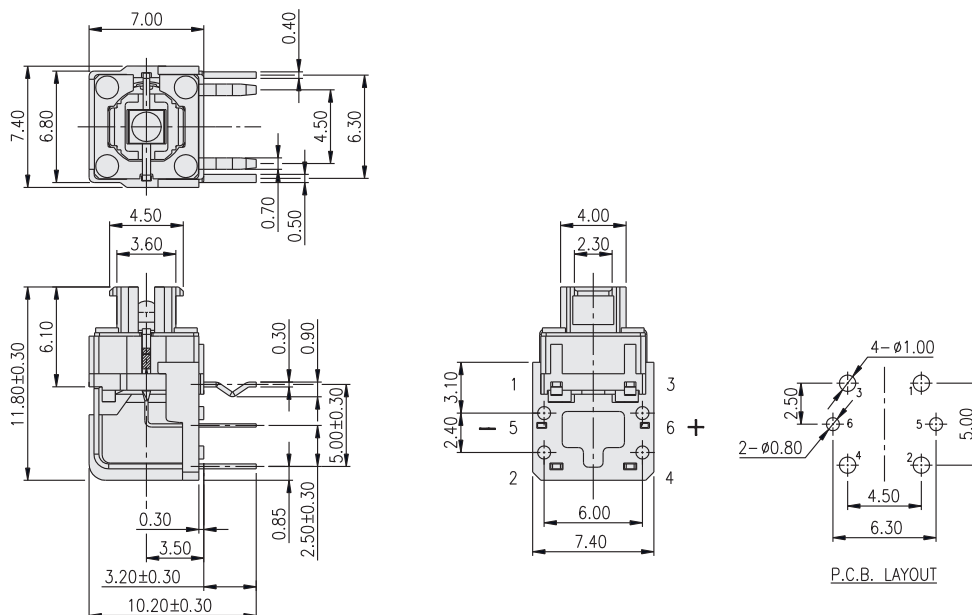
ILLUMINATED SWITCH TL(L)A(G)-7 SERIES

Tact Switch
Illuminated

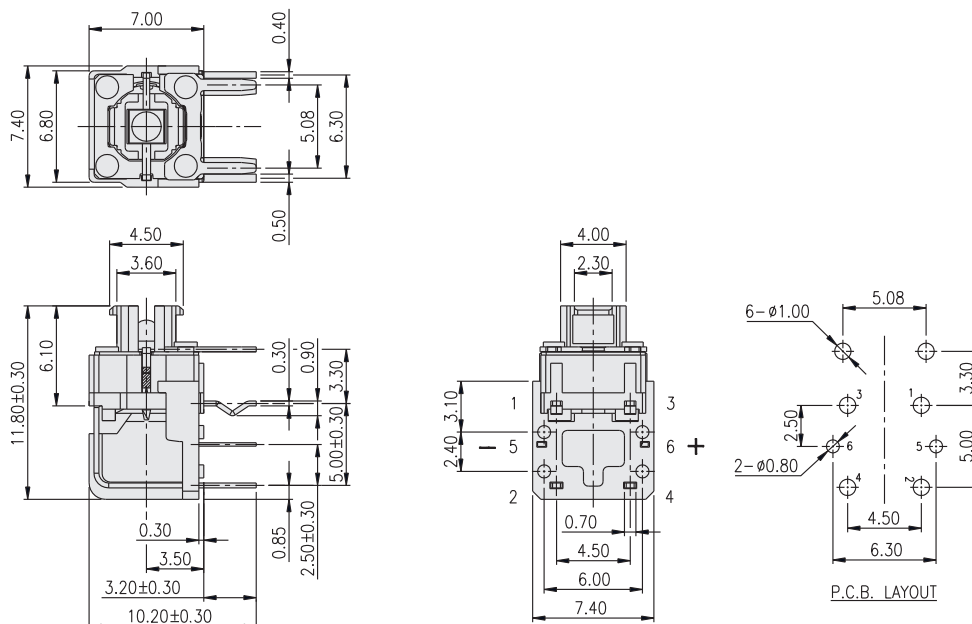


ILLUMINATED SWITCH

TLLA-72



TLLAG-7

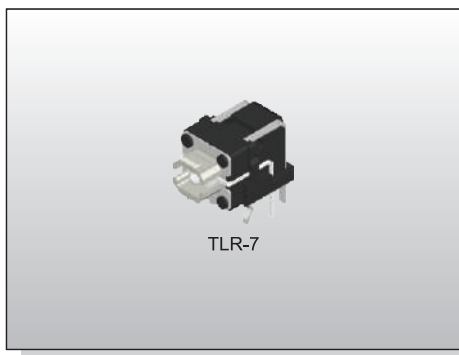


LED Color Options:

Part No.	Color	Dominant Wavelength λ_D Typ.(nm)	Luminous Intensity I_v (mcd)		Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)	
			Typ.		Typ.	Max.	A	B
			A	B				
B	Blue	470	70	1100	3.0	3.6	140°	30°
PG	Pure Green	520	160	2500	3.2	3.6		
G	Yellow Green	570	30	550	2.0	2.3		
Y	Yellow	590	60	1500	2.0	2.3		
A	Soft Orange	605	50	1500	2.0	2.3		
R	Deep Red	640	25	800	2.0	2.3		
W	Cold White	X:0.30 / Y:0.30	350	550	3.0	3.6		

ILLUMINATED SWITCH TLR-7 SERIES

Tact Switch
Illuminated



FEATURES

- ※Horizontal operation
- ※Various LED colors

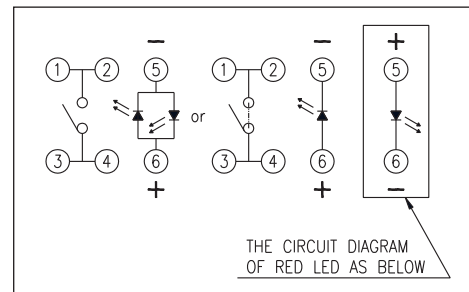
APPLICATION

- ※Automotive
- ※Server
- ※Laptop, IPC

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf / 260±50gf
Travel	0.2mm
Operating Life	500, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tray>
100 pcs.

HOW TO ORDER

TLR-7 ☐ ☐ ☐ - ☐ ☐ ☐ - **QA2**

Operating Force:
2=160gf
3=260gf

LED Viewing Angle:
A=140° ☐
B=30° ☐

LED Color:
☐=Without LED
Refer Color Options

Stem Type:
4.50mm

Package:
Tray

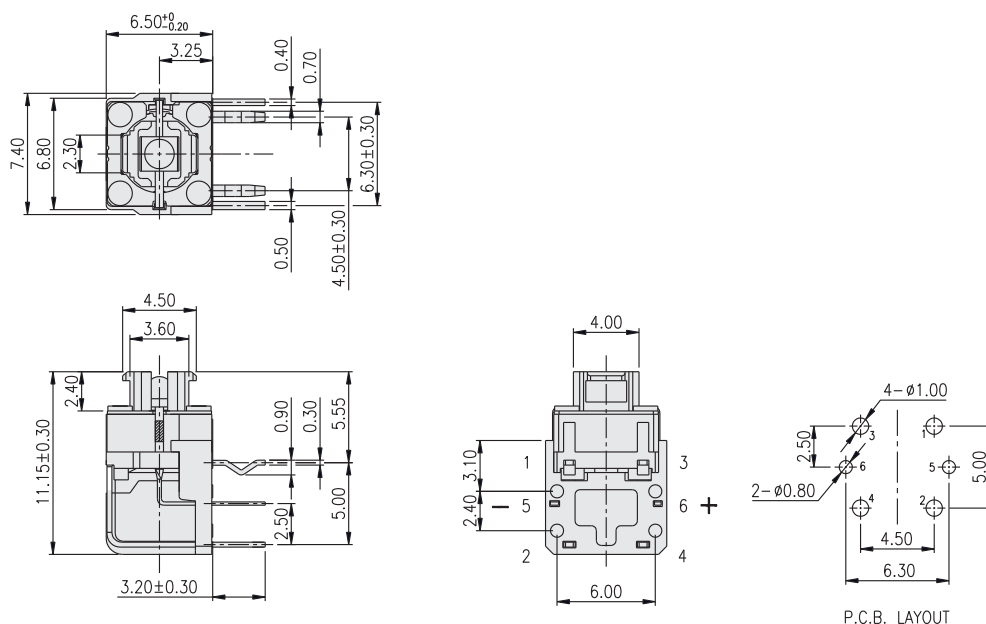
Halogen Free

CAP Mark:
☐=No Marking
(EX:H0=O)

CAP Color:
K=Black
S=Silver
T=Transparent

CAP Type:
☐=Without Cap
R1=6.50mm
R2=8.00mm
R3=6.20mm

TLR-7



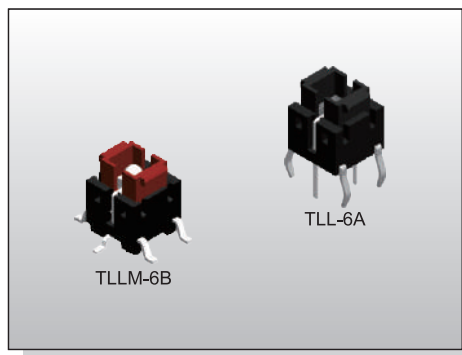
LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)		Forward Voltage V_f (V)		View Angle $2\theta_{1/2}$ (Degree)	
			Typ.		Typ.	Max.	A	B
B	Blue	470	70	1100	3.0	3.6	140°	30°
PG	Pure Green	520	160	2500	3.2	3.6		
G	Yellow Green	570	30	550	2.0	2.3		
Y	Yellow	590	60	1500	2.0	2.3		
A	Soft Orange	605	50	1500	2.0	2.3		
R	Deep Red	640	25	800	2.0	2.3		
W	Cold White	X:0.30 / Y:0.30	350	550	3.0	3.6		

ILLUMINATED SWITCH

TL(L)(M)-6 SERIES

Tact Switch
Illuminated



FEATURES

- ※Super bright LED
- ※Various LED colors
- ※Options of different cap color

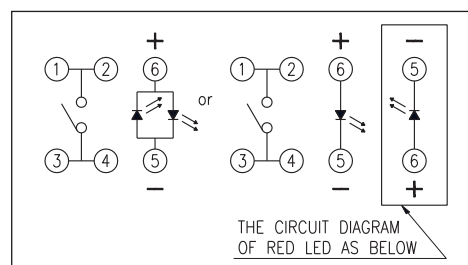
APPLICATION

- ※Server
- ※Laptop, IPC
- ※Set-top box

SPECIFICATION

Contact Rating	50mA, 12V DC	
Contact Resistance	100mΩ max.	
Insulation Resistance	100MΩ min. 500V DC	
Dielectric Strength	250V AC/1 minute	
Operating Force	100±50gf	TL(L)-61
	160±50gf	TL(L)-62
	260±50gf	TL(L)-63
	520±130gf	TL(L)-65
Travel	0.2mm	
Operating Life	200, 000 cycles for 520/260gf 500, 000 cycles for 160/100gf	
Operating Temp.	-40°C ~ +85°C	
Storage Temp.	-40°C ~ +85°C	

CIRCUIT



PACKAGE

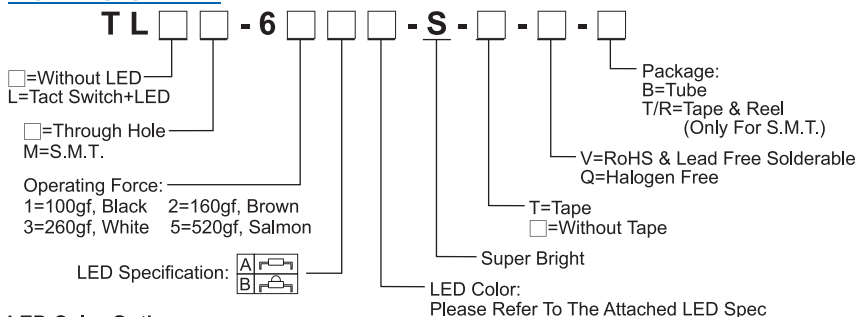
<Tube>

75 pcs. (Only for TLL-6)

<Tape & Reel>

450 pcs. (Only for TLLM-6)

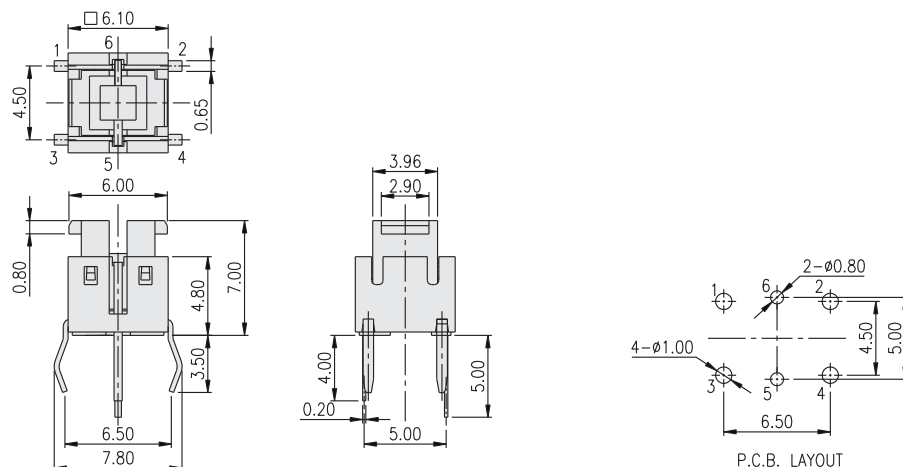
HOW TO ORDER



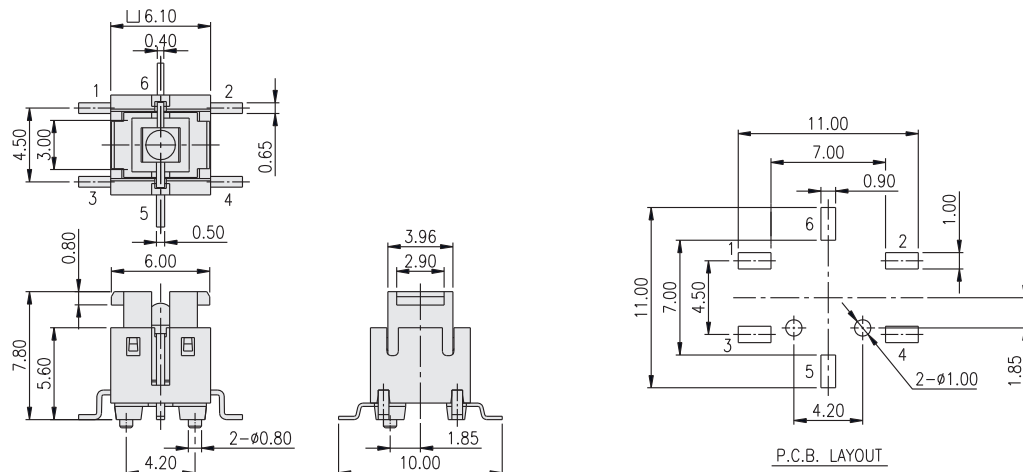
LED Color Options:

Part No.	Color	Dominant Wavelength λ_d Typ.(nm)	Luminous Intensity I_v (mcd)		Forward Voltage V_f (V)		View Angle 2- $\theta_{1/2}$ (Degree)	
			Typ.	Max.	Typ.	Max.	A	B
B	Blue	470	70	1100	3.0	3.6	140°	30°
PG	Pure Green	520	160	2500	3.2	3.6		
G	Yellow Green	570	30	550	2.0	2.3		
Y	Yellow	590	60	1500	2.0	2.3		
A	Soft Orange	605	50	1500	2.0	2.3		
O	Red Orange	620	80	3000	2.0	2.3		
R	Red	630	60	1000	2.0	2.3		
W	Cold White	X:0.30 / Y:0.30	350	550	3.0	3.6		

TLL-6 ☐ A

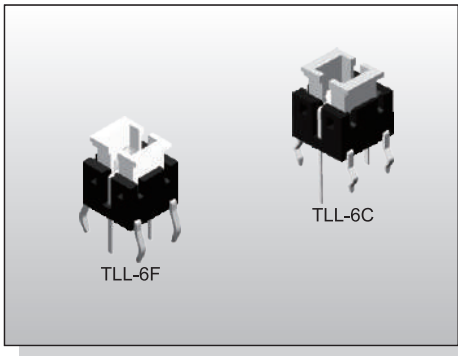


TLLM-6 ☐ B



ILLUMINATED SWITCH TL(L)(M)-6 SERIES

**Tact Switch
Illuminated**



FEATURES

- ※Super bright LED
- ※Various LED colors
- ※Options of different cap color

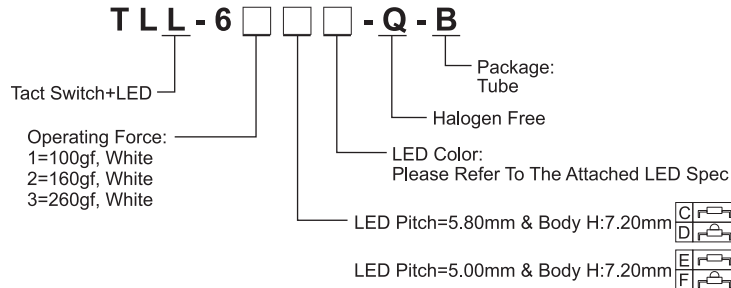
APPLICATION

- ※Server
- ※Laptop, IPC
- ※Set-top box

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf TL(L)-61 160±50gf TL(L)-62 260±50gf TL(L)-63
Travel	0.2mm
Operating Life	200,000 cycles for 260gf 500,000 cycles for 160/100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

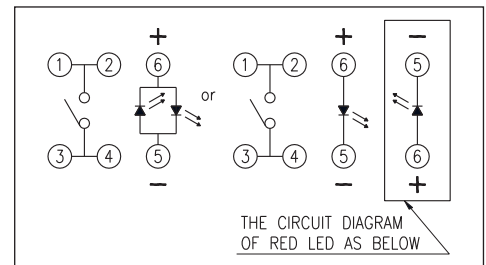
HOW TO ORDER



LED Color Options:

Part No.	Color	Dominant Wavelength λ _D Typ.(nm)	Luminous Intensity I _v (mcd)		Forward Voltage V _f (V)		View Angle 2·θ _{1/2} (Degree)	
			Typ.		Typ.	Max.	C, E, F, G	D, F, G
			C, E, F, G	D, F, G				
B	Blue	470	70	1100	3.0	3.6	140°	30°
PG	Pure Green	520	160	2500	3.2	3.6		
G	Yellow Green	570	30	550	2.0	2.3		
Y	Yellow	590	60	1500	2.0	2.3		
A	Soft Orange	605	50	1500	2.0	2.3		
O	Red Orange	620	80	3000	2.0	2.3		
R	Red	630	60	1000	2.0	2.3		
W	Cold White	X:0.30 / Y:0.30	350	550	3.0	3.6		

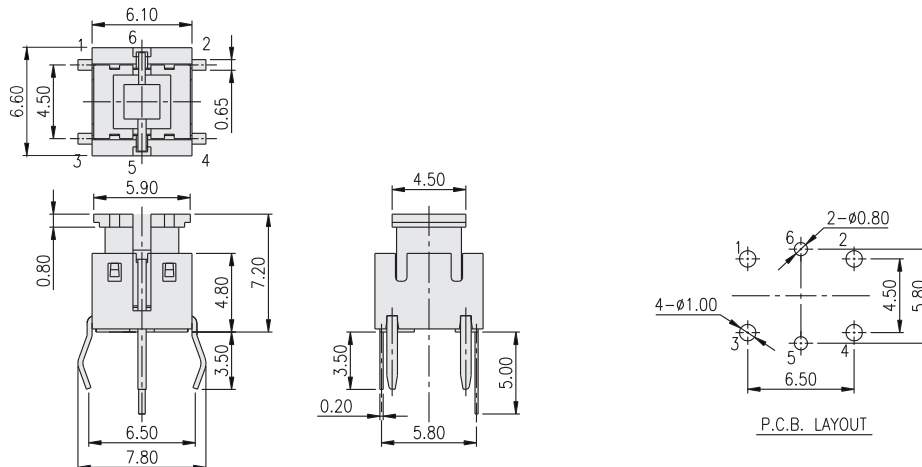
CIRCUIT



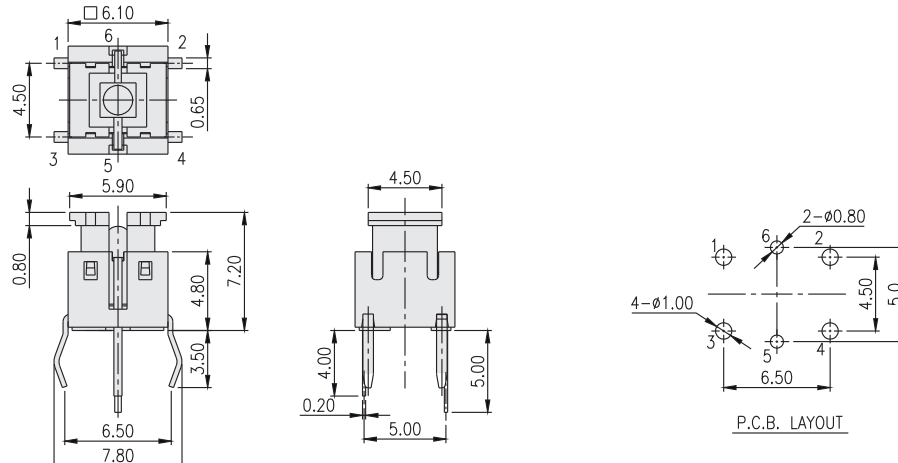
PACKAGE

<Tube>
75 pcs.

TLL-6□C



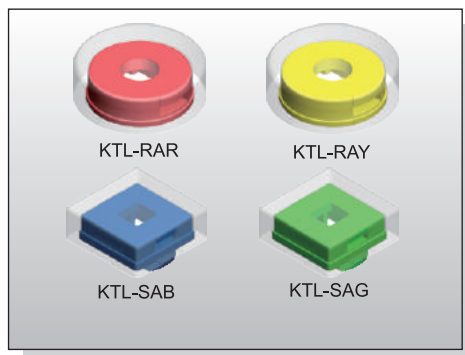
TLL-6□F



ILLUMINATED SWITCH

KTL SERIES

Cap Accessories for TLL-6



HOW TO ORDER

KTL - ☐ A ☐

R=Round
S=Square

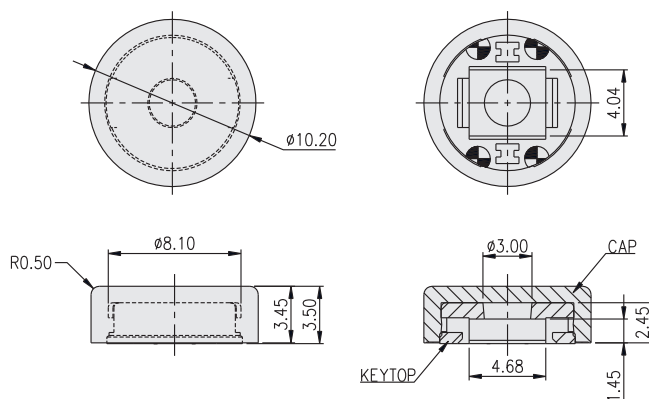
Color:
Y=Yellow
B=Blue
R=Red
I=Ivory
K=Black
G=Green
S=Salmon

Round 10.20mm or
Square 10.20mm

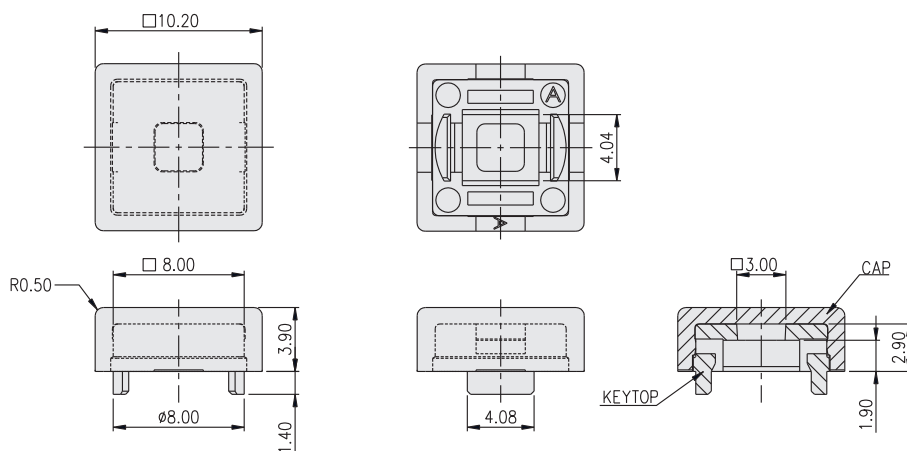
PACKAGE

<Bag>
500 pcs.

KTL-RA

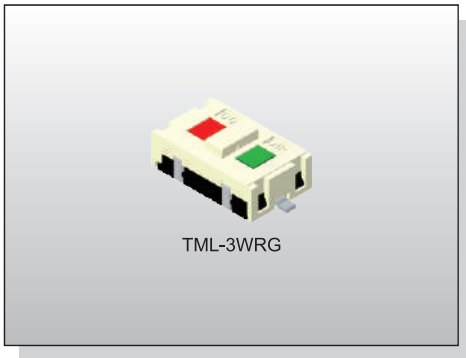


KTL-SA



ILLUMINATED SWITCH TML-3 SERIES

Tact Switch
Illuminated



FEATURES

- ※ Compact size
- ※ Bi-color LED light
- ※ Sharp click feeling

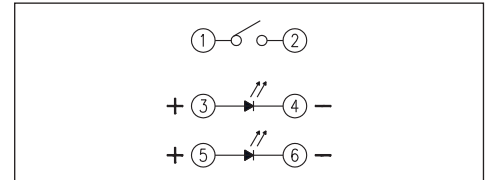
APPLICATION

- ※ Testing equipment
- ※ Industrial device
- ※ Automation

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160+80/-30gf
Travel	0.2mm
Operating Life	50, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

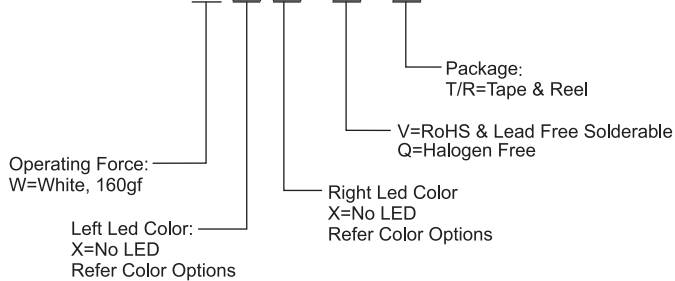


PACKAGE

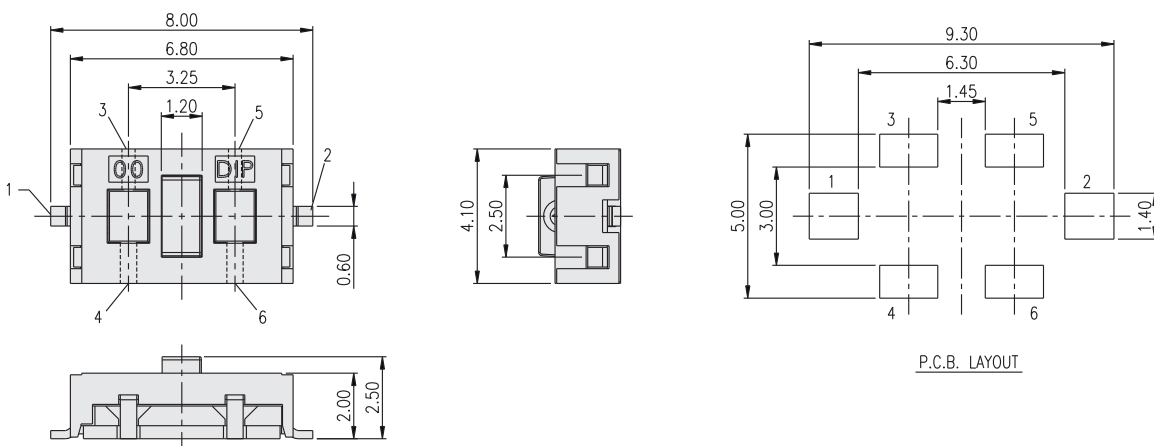
<Tape & Reel>
3000 pcs.

HOW TO ORDER

T M L - 3 W



TML-3



LED Color Options:

Part No.	Color	Dominant Wavelength λ_p Typ.(nm)	Luminous Intensity I_v (mcd)	Forward Voltage V_F (V)		View Angle $2\theta_{1/2}$ (Degree)
			Typ.	Typ.	Max.	
B	Blue	470	70	3.0	3.6	140°
G	Yellow Green	570	30	2.0	2.3	
O	Yellow	590	60	2.0	2.3	
A	Soft Orange	605	50	2.0	2.3	
R	Red	630	60	2.0	2.3	
W	Cold White	X:0.30 / Y:0.30	350	3.0	3.6	



FEATURES

- ❖ Do not have wear and damage problem by pressed contact structure
- ❖ Shock resistant switch, withstands harsh environments, Available in aluminum and plastic housings

APPLICATION

- ※Lighting, Computer peripherals
- ※Communication
- ※Medical equipment.
- ※IPC, Marine

SPECIFICATION

Contact Rating	400mA 32VAC-100mA 50VDC-125mA 125VAC 500mA 48VAC-200mA 50VDC-200mA 250VAC	ZPA S6/S7
	100mA 24VDC 2A 125VAC	ZPA L6
Contact Resistance	50mΩ max.	
Insulation Resistance	1GΩ min. 500VDC	
Dielectric Strength	1,000VAC rms. 1,500VAC rms. for metal material.	
Operating Force	2N~5N	
Travel	1.5mm	
	2.5mm	
Electrical Life at Full Load	500, 000 cycles	
Mechanical Life	1,000,000 cycles	
Operating Temp.	-30°C ~ +85°C	

HOW TO ORDER

ZPA - - - - - - - -

S6=Off-(On)
S7=On-(Off)
L6=Off-On

Bushing: _____
 B1=Snap-in
 B2=Threaded Bushing
 B3=Snap-in
 D1=Square Threaded Bushing(die-casting)
 D2=Threaded Bushing(die-casting)
 D6=Square Threaded Bushing(plastic case)

Terminations:

M1=Solder Lug
M4=PC Through Hole(ZPAS6 Only), Non-LED
M3=8.20 Solder Lug(ZPAS6 Only), Non-LED
L2 90mm wire leads 20 AWG
L3 100mm wire leads 20 AWG

Contact Material: —
C=Gold Over Silver

Seal: _____
E=EPOXY(std)

Led Color:
L1=White
L3=Red
L5=Yellow
L6=Green
L7=Blue
L36=Red+Green
L37=Red+Blue

-5= Standard hardware

– Cap Color:
1=White
2=Black
3=Red
4=Orange
5=Yellow
6=Green
7=Blue

– S=RoHS & Lead Free Solderable

PACKAGE

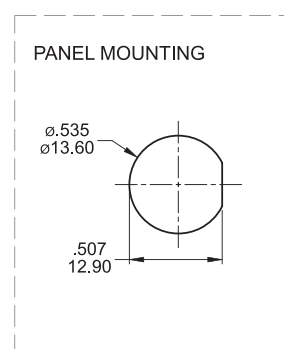
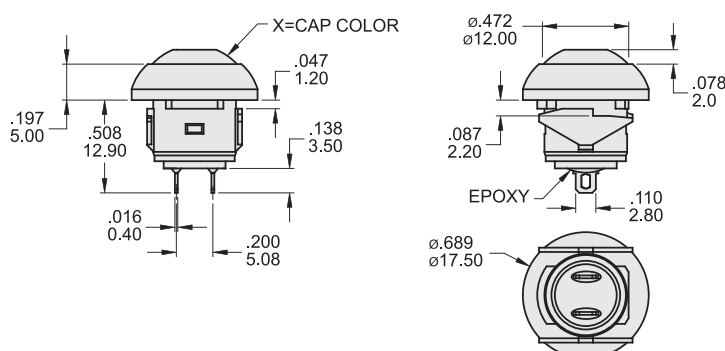
<Tray>
70 pcs.

SWITCH FUNCTION

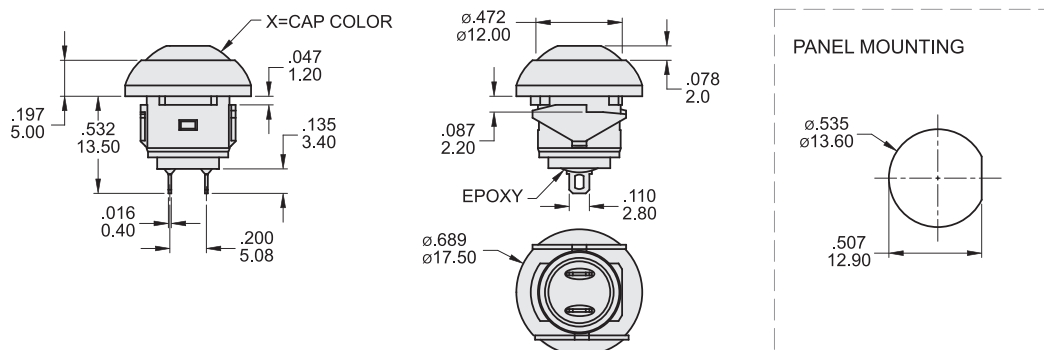
NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		
		POS.1	POS.2	POS.1	POS.2	SCHEMATIC
						
SP	ZPAS6	OFF	(ON)	OPEN	1-3	
SP	ZPAS7	ON	(OFF)	1-3	OPEN	
SP	ZPAL6	OFF	ON	OPEN	1-3	

MOM=MOMENTARY

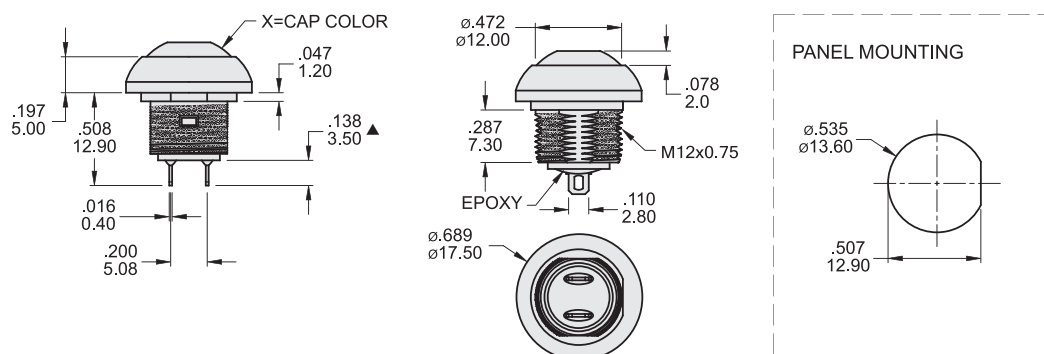
ZPAS6B1M1CESX-5



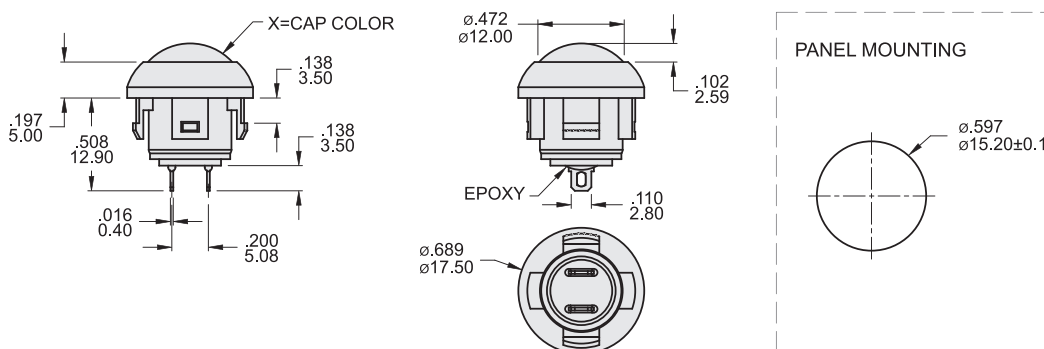
ZPAS7B1M1CESX-5



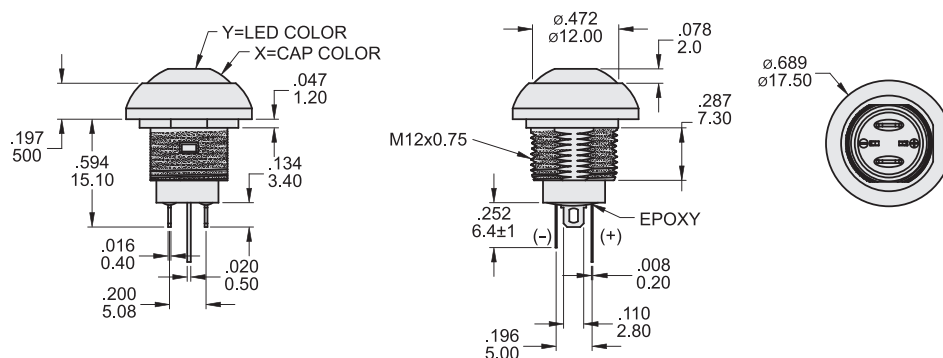
ZPAS6B2M1CESX-5



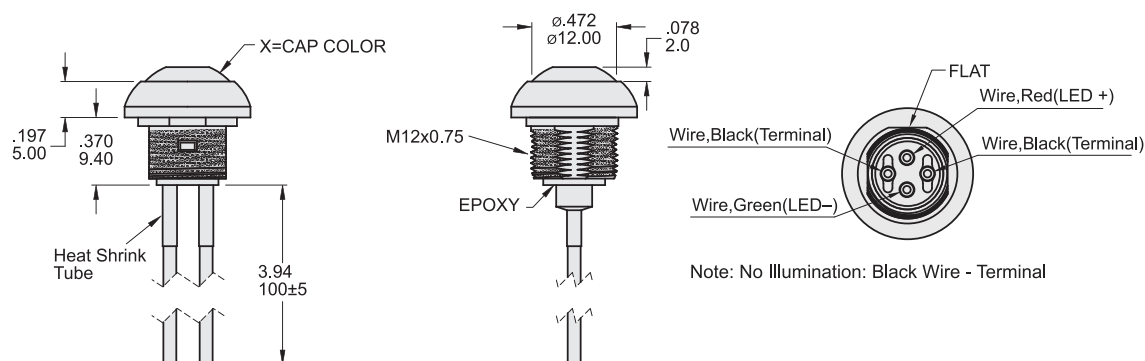
ZPAS6B3M1CESAX-5



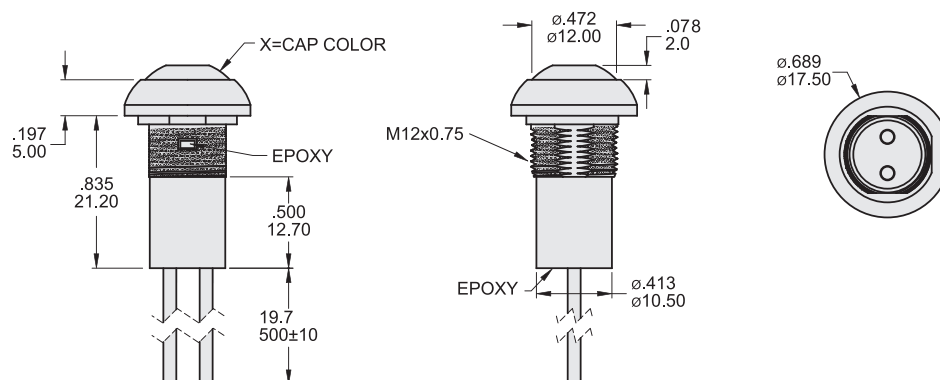
ZPAS6B2M1CESX-5LY



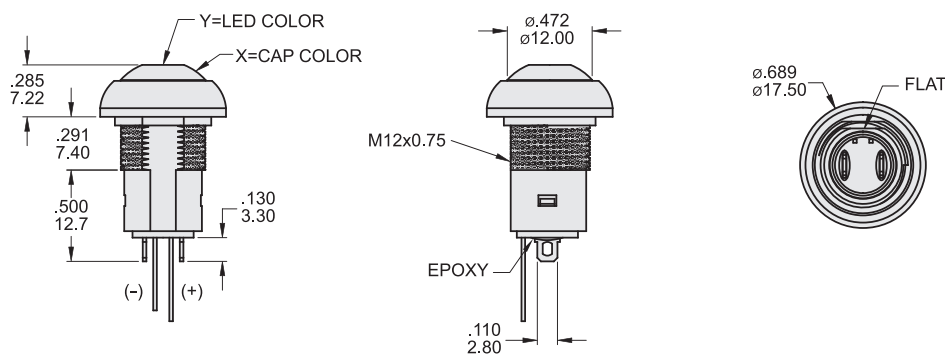
ZPAS6B2L3CESX-5



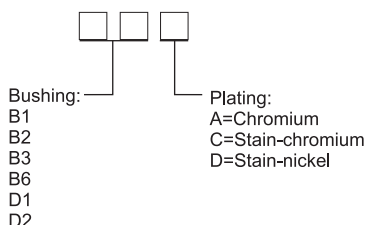
ZPAS6B2L1CASX-5



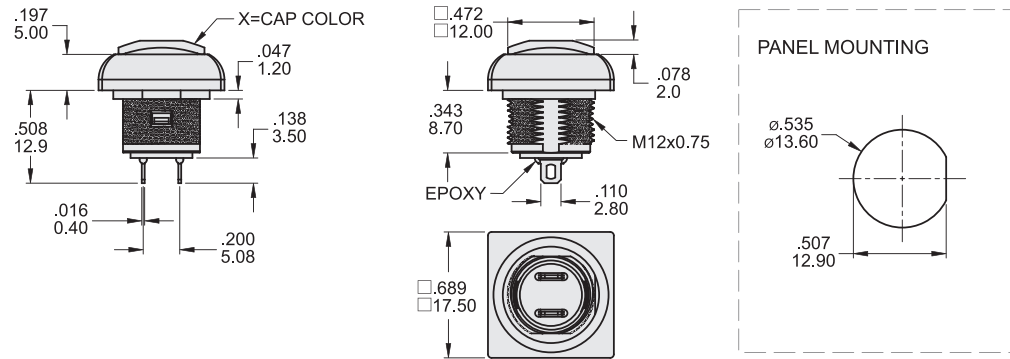
ZPAL6B2M1CESX-5LY



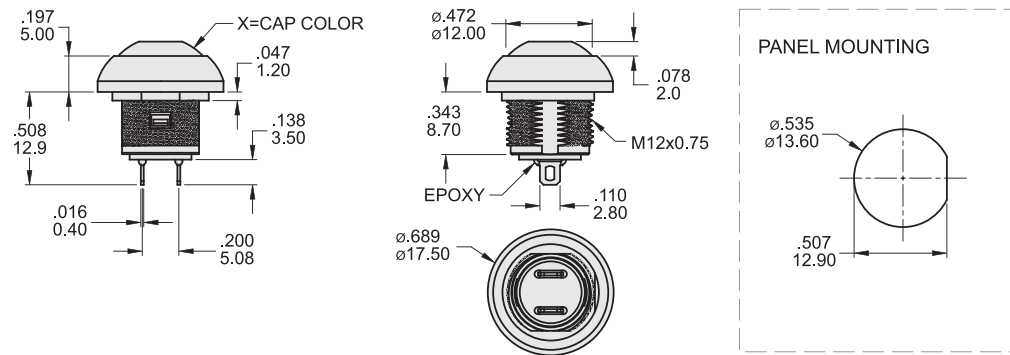
SWITCH FUNCTION



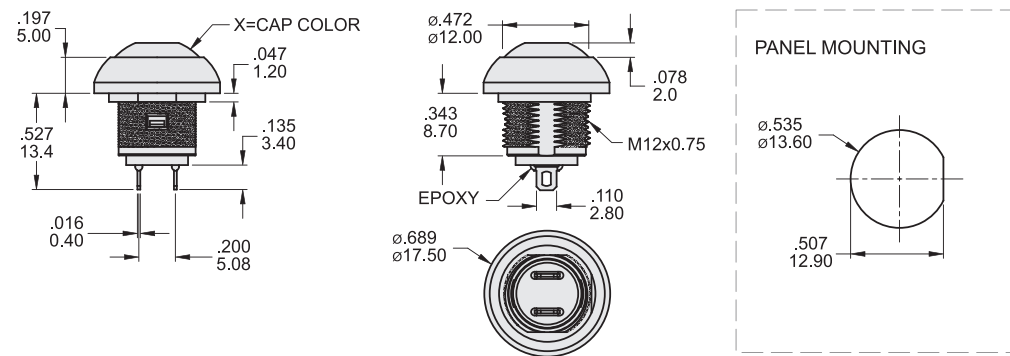
ZPAS6D1M1CESX-5



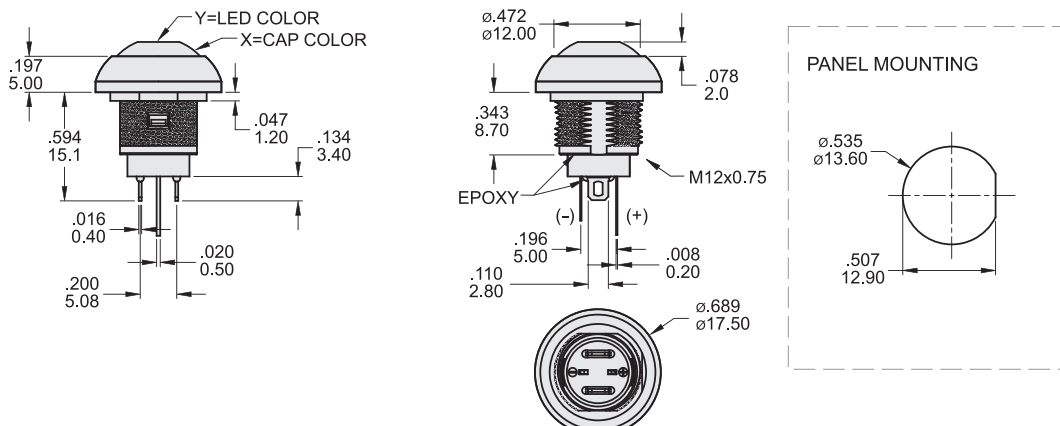
ZPAS6D2M1CESX-5



ZPAS7D2M1CESX-5



ZPAS6D2M1CESX-5LY



ILLUMINATED SWITCH

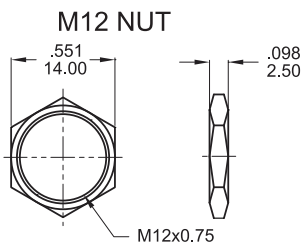
ZPA SERIES

Sub-Miniature Pushbutton Switches

Illuminated

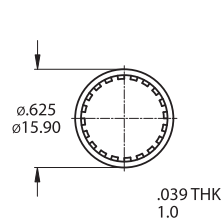


HARDWARE



MNU-PA03

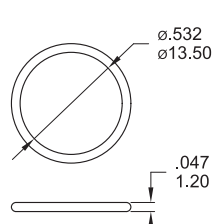
LOCK WASHER



MNU-1M09

Supplied for Threaded
bushing

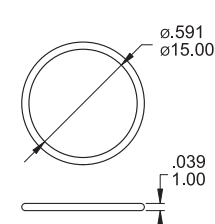
O-RING



FCP-A253

Supplied with PAL6 and
D1 / D2 / B6 options

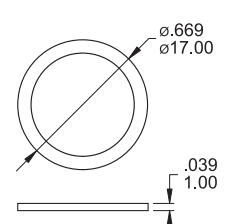
O-RING



FCP-P004

Supplied standard with
B3 options

EVA WASHER



FSU-PA01

Supplied standard with
B1 / B2 options

SOLDERING PROCESSES

MANUAL SOLDERING: Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder.

WAVE SOLDERING:

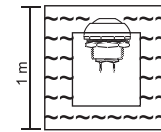
Recommended Soldering Temperature: 260 ± 5°C

Duration of Solder Immersion: Max 5 sec.

(PCB is 1.6mm in thickness)

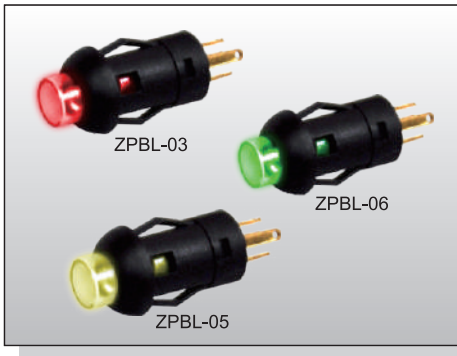
IP 67 for the whole series:

Protected against the effects of
immersion up to 1 m water(30min)



ILLUMINATED SWITCH ZPBL SERIES

Pushbutton Switches Illuminated



FEATURES

- ※ Small size
- ※ Long electrical life
- ※ High brightness LED. Button surface are illuminated and even

APPLICATION

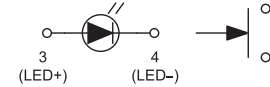
- ※ Automotive industry
- ※ Office appliance
- ※ Computer products
- ※ Communication equipments
- ※ Audio equipment

SPECIFICATION

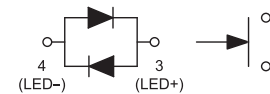
Contact Rating	0.1A, 30V DC
Contact Resistance	50mΩ max. 1.5V DC; 100mA, by Method of Voltage DROP
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	250±100gf
Travel	1.2±0.3mm
Operating Life	50, 000 cycles
Operating Temp.	-40°C ~ +85°C

CIRCUIT

Single LED



Dual Colors LED



PACKAGE

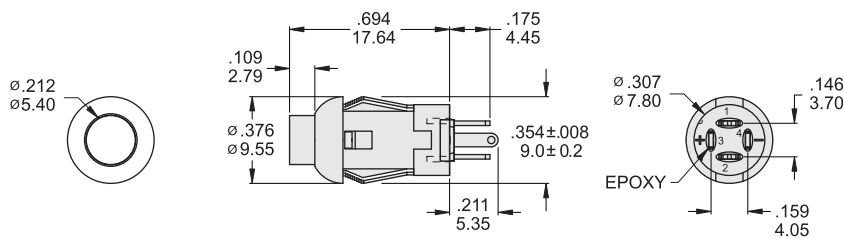
<Bag>
100 pcs.

HOW TO ORDER

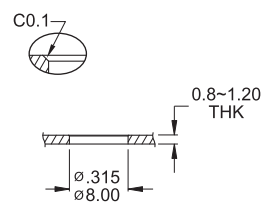
Z P B L -

Led Color:
01=White
03=Red
05=Yellow
06=Green
07=Blue
76=Blue+Green

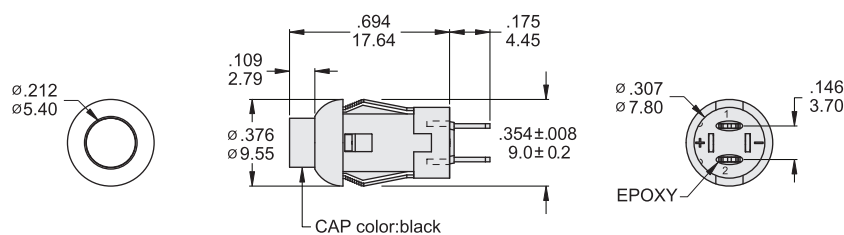
ZPBL-XX



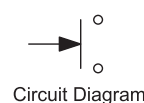
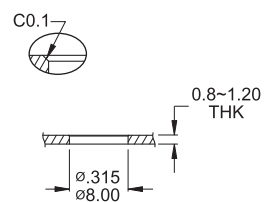
PANEL MOUNTING



ZPBL-A2



PANEL MOUNTING



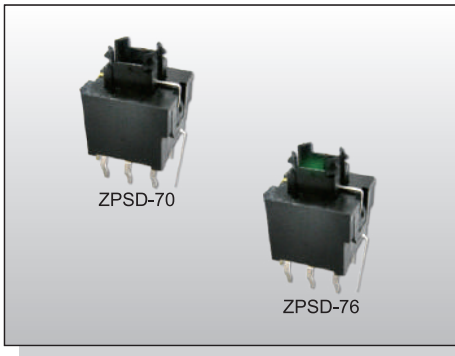
Circuit Diagram

ILLUMINATED SWITCH

ZPSD SERIES

Pushbutton Switches

Illuminated



FEATURES

- ✧ Small size
- ✧ Long electrical life

APPLICATION

- ✧ Audio equipment
- ✧ Consumer products
- ✧ Instrumentation

HOW TO ORDER

Z P S D - - + C A P

Function:
7=On-(On)
L=On-On

Led Color:
0=Without LED
3=Red
6=Green

1=White 36=Red+Green
5=Yellow
7=Blue

CAP OPTION				
DIMENSION				
COLOR	CAP CODE			
TRANSPARENT	—	H	—	—
ICE	—	—	G	D
SNOW	—	—	—	F
WHITE	C	B	—	—

SPECIFICATION

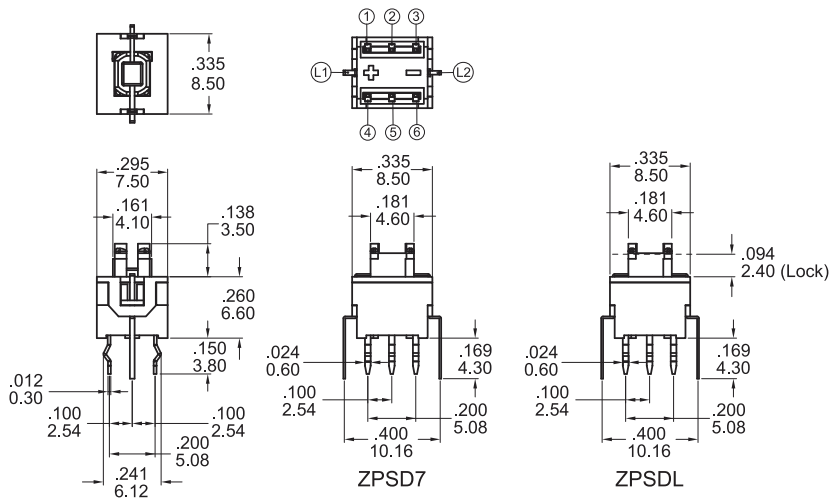
Contact Rating	0.1A, 30V DC MAX 100mA, 1.5V DC MIN
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min.
Dielectric Strength	500V AC/1 minute
Operating Force	250±100gf
Travel	1.0±0.4mm (Contact Travel) 1.5±0.4mm (Full Travel)
Operating Life	50, 000 cycles
Operating Temp.	-20°C ~ +70°C

CIRCUIT

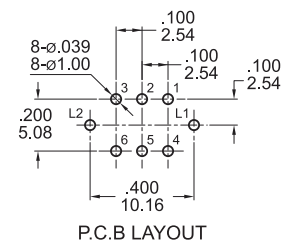
Type	Switch Action	
ZPSD7	Normal ON	Push(ON)
ZPSDL	Normal ON	LOCK ON
Connected Terminals	1-2 4-5	2-3 5-6
LED Circuit	L1 L2	

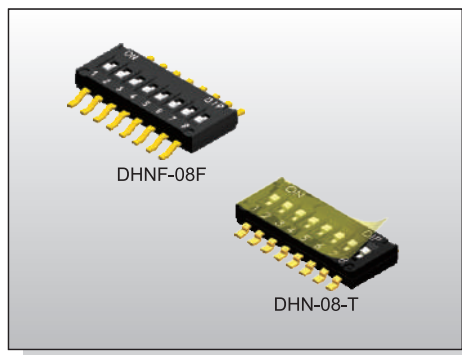
PACKAGE

<Tray>
96 pcs.



SWITCH FUNCTION





FEATURES

- ※Low profile 1.6mm height
- ※Gold contact for high reliability
- ※Top tape type for washing process

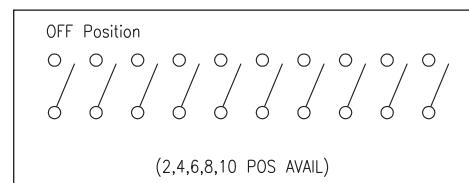
APPLICATION

- ※Industrial control
- ※Automatic machines control
- ※NB, electronic devices

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	300V AC/1 minute
Operating Force	500gf max.
Travel	0.6mm
Operating Life	1,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

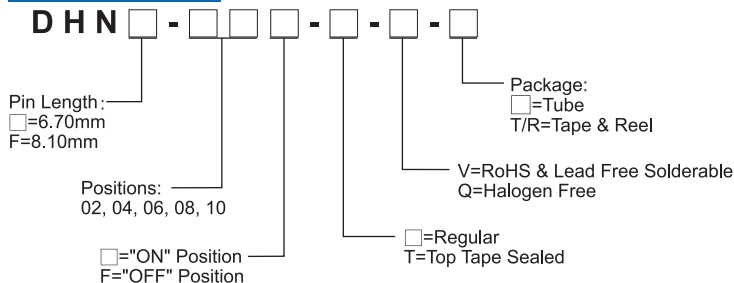
<Tube>

DHN(F)-02: 125 pcs
DHN(F)-04: 75 pcs
DHN(F)-06: 54 pcs
DHN(F)-08: 40 pcs
DHN(F)-10: 33 pcs

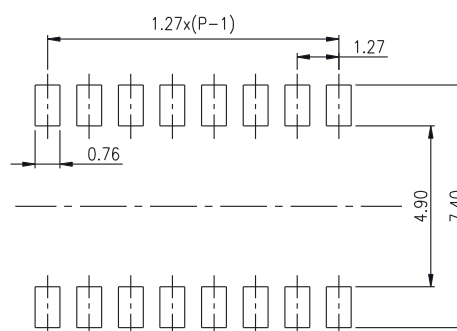
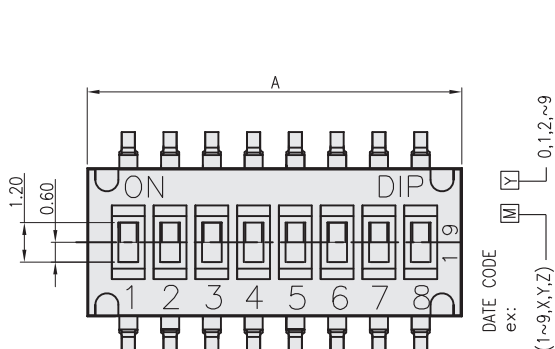
<Tape & Reel>

DHN: 4000 pcs
DHNF: 2500 pcs

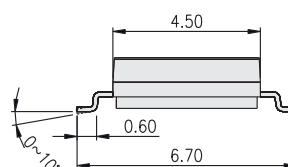
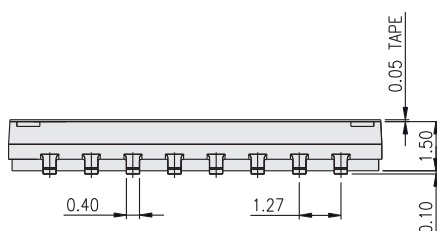
HOW TO ORDER



DHN



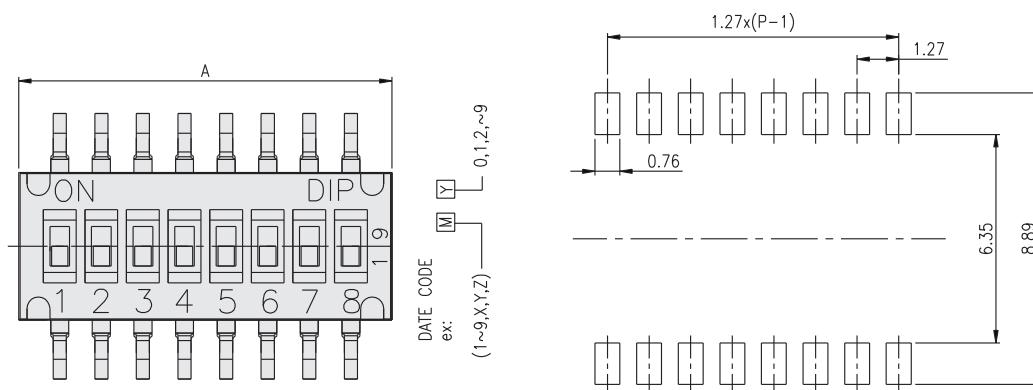
P.C.B. LAYOUT



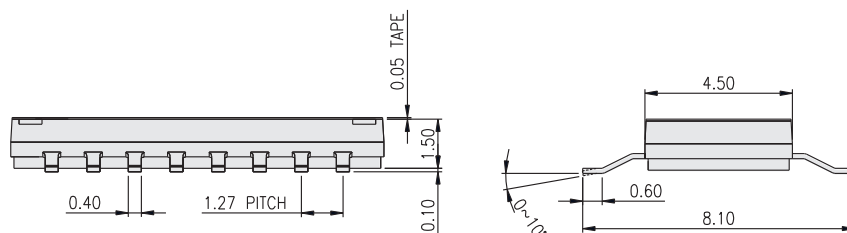
PART NO.	NO.OF POS	DIM A
DHN-02	2	3.77
DHN-04	4	6.31
DHN-06	6	8.85
DHN-08	8	11.39
DHN-10	10	13.93

DHNF

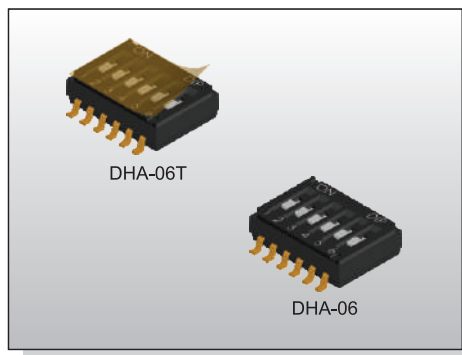
DIP SWITCH



P.C.B. LAYOUT



PART NO.	NO.OF POS	DIM A
DHNF-02	2	3.77
DHNF-04	4	6.31
DHNF-06	6	8.85
DHNF-08	8	11.39
DHNF-10	10	13.93



FEATURES

- ※Low profile 2.2mm height
- ※Gold contact for high reliability
- ※Top tape type for washing process

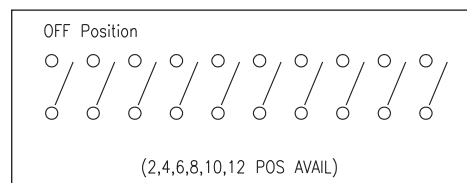
APPLICATION

- ※Industrial control
- ※Automatic machines control
- ※NB, electronic devices

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	300V AC/1 minute
Operating Force	500gf max.
Travel	0.8mm
Operating Life	1,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

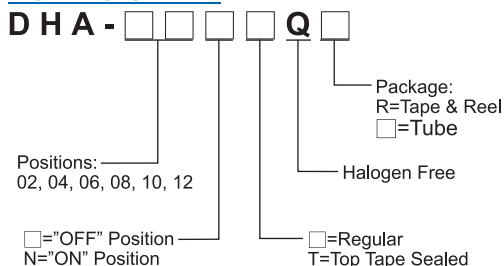


PACKAGE

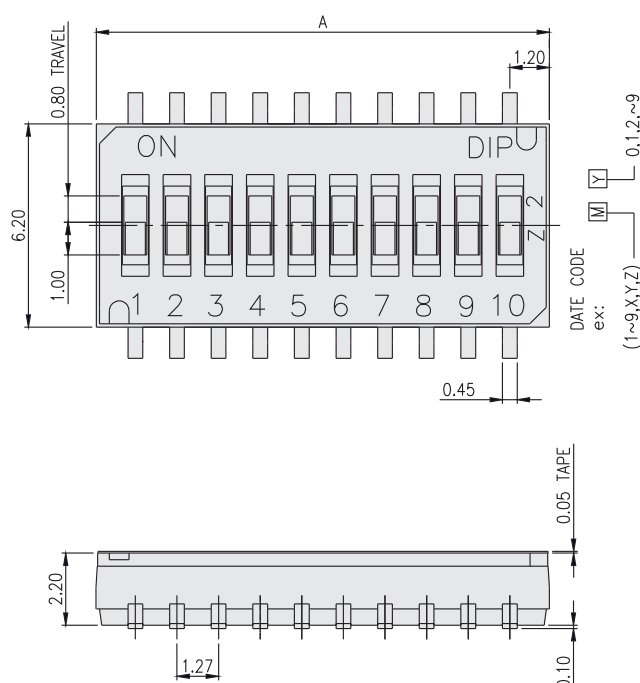
<Tape & Reel>
1800 pcs

<Tube>
DHA-02: 125 pcs
DHA-04: 75 pcs
DHA-06: 54 pcs
DHA-08: 40 pcs
DHA-10: 33 pcs
DHA-12: 28 pcs

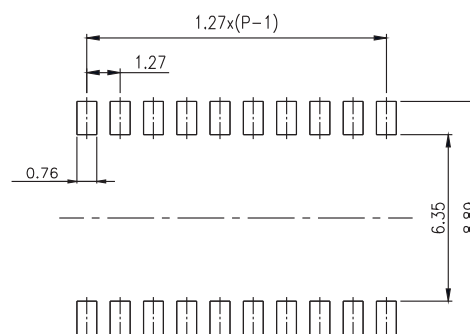
HOW TO ORDER



DHA



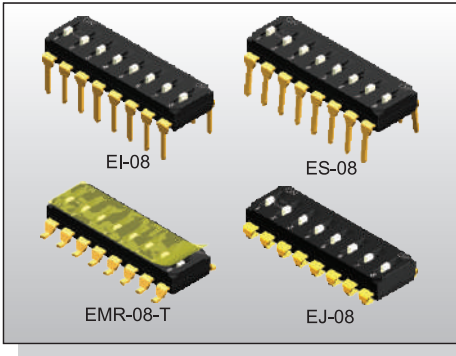
PART NO.	NO.OF POS	DIM A
DHA-02	2	3.67
DHA-04	4	6.21
DHA-06	6	8.75
DHA-08	8	11.29
DHA-10	10	13.83
DHA-12	12	16.37



P.C.B. LAYOUT

DIP SWITCH E(M)(I)(S)(J) SERIES

End Stackable /
SMT & Through Hole Type



FEATURES

- ※End stackable
- ※Through hole or SMT
- ※Gold contact for high reliability

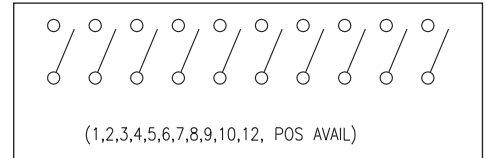
APPLICATION

- ※Industrial control
- ※Automatic machines control
- ※Telecommunication

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	1,000gf max.
Travel	1mm
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tube>

EM(R)/EI(R)/ES(R)-01: 194 pcs

E(R)-02: 95 pcs

E(R)-03: 63 pcs

E(R)-04: 47 pcs

E(R)-05: 38 pcs

E(R)-06: 31 pcs

E(R)-07: 27 pcs

E(R)-08: 23 pcs

E(R)-09: 21 pcs

E(R)-10: 19 pcs

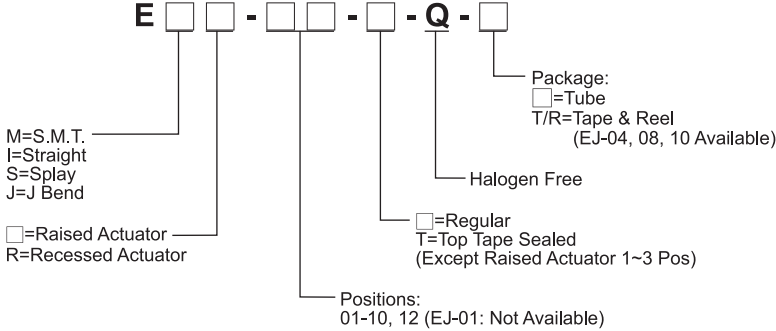
E(R)-12: 15 pcs

<Tape & Reel>

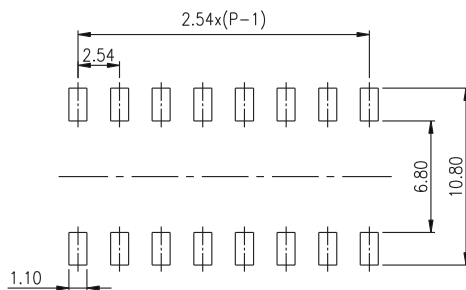
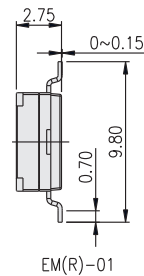
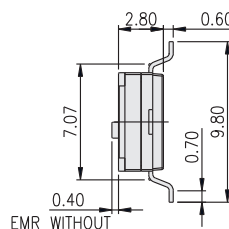
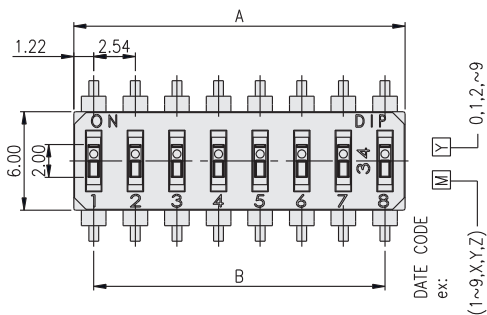
EM(R)-01~10, 12: 900 pcs

EJ(R)-04, 08, 10: 900 pcs

HOW TO ORDER



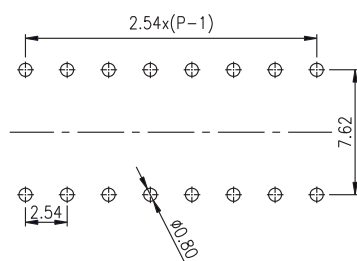
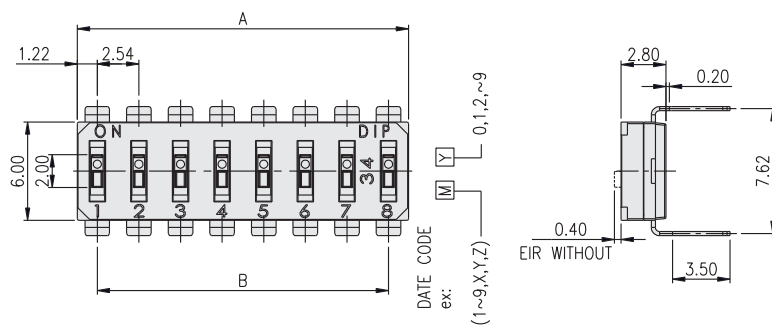
EM(R)



P.C.B. LAYOUT

PART NO.	NO.OF POS.	DIM.A	DIM.B
EM(R)-01	1	2.44	
EM(R)-02	2	4.98	2.54
EM(R)-03	3	7.52	5.08
EM(R)-04	4	10.06	7.62
EM(R)-05	5	12.60	10.16
EM(R)-06	6	15.14	12.70
EM(R)-07	7	17.68	15.24
EM(R)-08	8	20.22	17.78
EM(R)-09	9	22.76	20.32
EM(R)-10	10	25.30	22.86
EM(R)-12	12	30.38	27.94

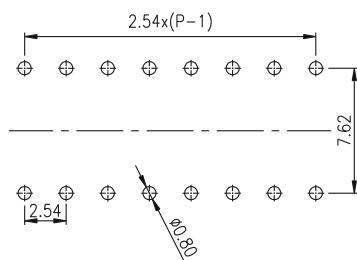
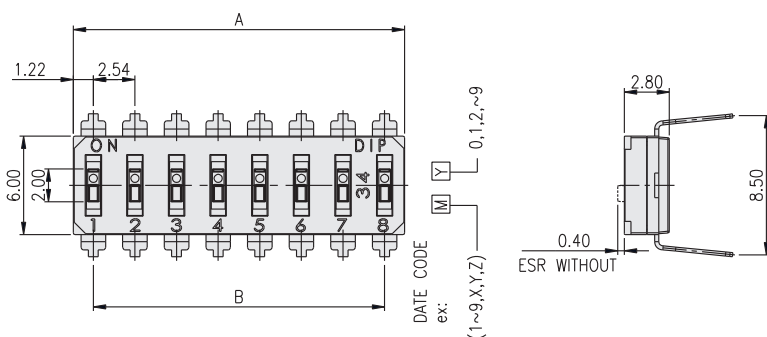
EI(R)



P.C.B. LAYOUT

PART NO.	NO.OF POS.	DIM.A	DIM.B
EI(R)-01	1	2.44	
EI(R)-02	2	4.98	2.54
EI(R)-03	3	7.52	5.08
EI(R)-04	4	10.06	7.62
EI(R)-05	5	12.60	10.16
EI(R)-06	6	15.14	12.70
EI(R)-07	7	17.68	15.24
EI(R)-08	8	20.22	17.78
EI(R)-09	9	22.76	20.32
EI(R)-10	10	25.30	22.86
EI(R)-12	12	30.38	27.94

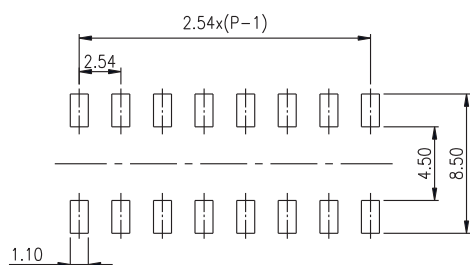
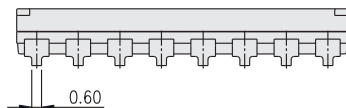
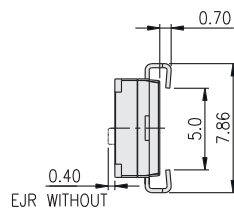
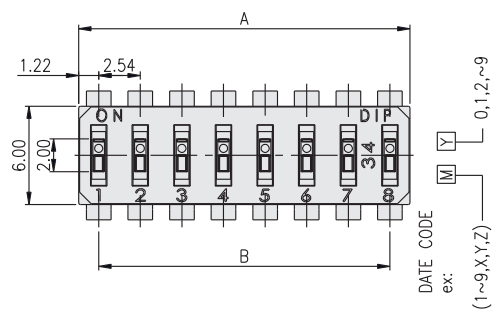
ES(R)



P.C.B. LAYOUT

PART NO.	NO.OF POS.	DIM.A	DIM.B
ES(R)-01	1	2.44	
ES(R)-02	2	4.98	2.54
ES(R)-03	3	7.52	5.08
ES(R)-04	4	10.06	7.62
ES(R)-05	5	12.60	10.16
ES(R)-06	6	15.14	12.70
ES(R)-07	7	17.68	15.24
ES(R)-08	8	20.22	17.78
ES(R)-09	9	22.76	20.32
ES(R)-10	10	25.30	22.86
ES(R)-12	12	30.38	27.94

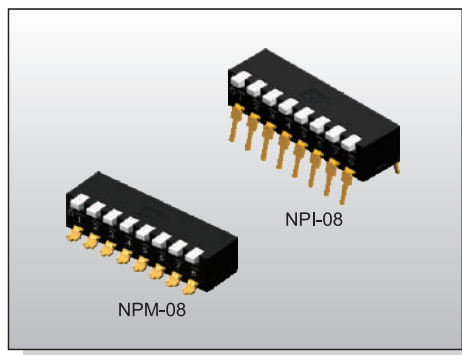
EJ(R)



P.C.B. LAYOUT

PART NO.	NO.OF POS.	DIM.A	DIM.B
* EJ(R)-02	2	4.98	2.54
EJ(R)-03	3	7.52	5.08
EJ(R)-04	4	10.06	7.62
* EJ(R)-05	5	12.60	10.16
EJ(R)-06	6	15.14	12.70
* EJ(R)-07	7	17.68	15.24
EJ(R)-08	8	20.22	17.78
EJ(R)-09	9	22.76	20.32
* EJ(R)-10	10	25.30	22.86
* EJ(R)-12	12	30.38	27.94

* Please consult DIPTRONICS



FEATURES

- ※Side actuation
- ※Wide stem for easy operating
- ※Gold contact for high reliability

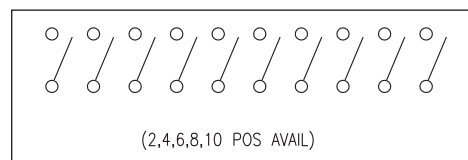
APPLICATION

- ※Industrial control
- ※Automatic machines control
- ※Telecommunication

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	800gf max.
Travel	20°
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

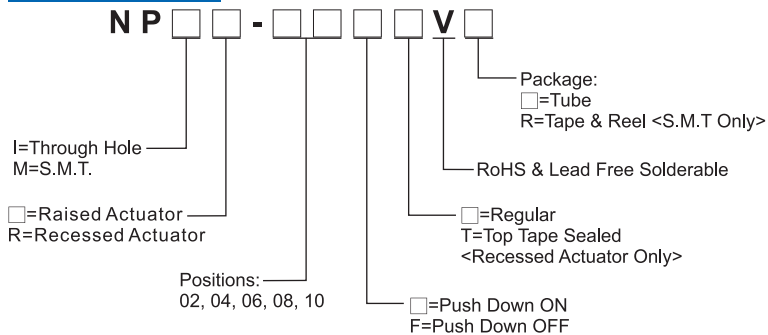
<Tube>

NPI(R)/NPM(R)-02: 70 pcs
NPI(R)/NPM(R)-04: 40 pcs
NPI(R)/NPM(R)-06: 28 pcs
NPI(R)/NPM(R)-08: 20 pcs
NPI(R)/NPM(R)-10: 16 pcs

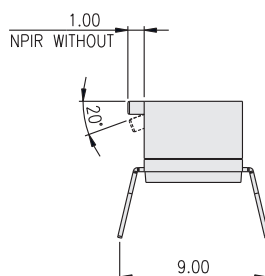
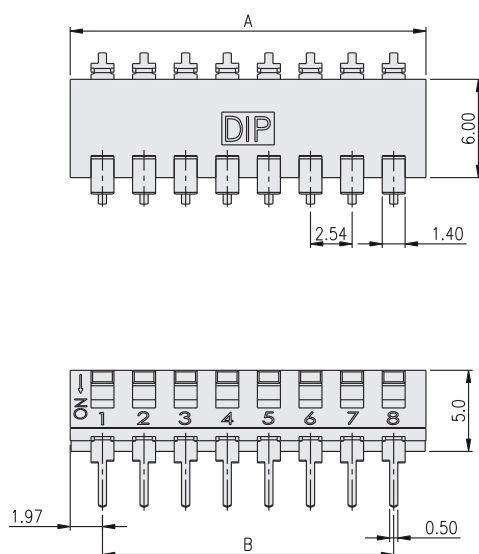
<Tape & Reel>

NPM(R)-02, 04, 06, 08, 10: 700 pcs

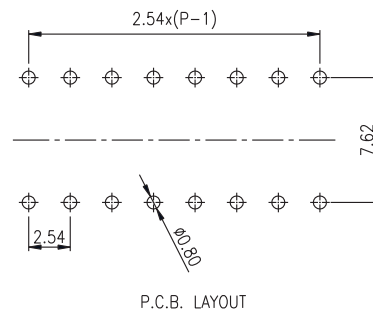
HOW TO ORDER



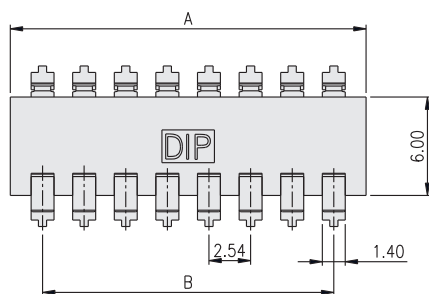
NPI



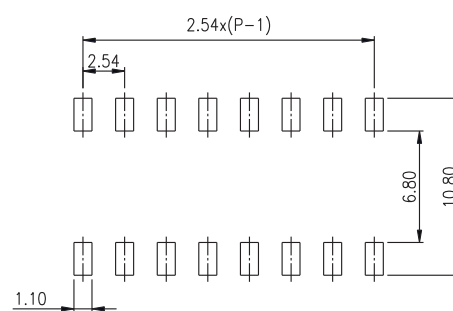
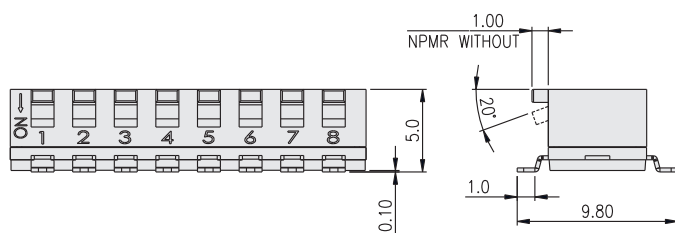
PART NO.	NO.OF POS.	DIM.A	DIM.B
NPI(R)-02	2	6.48	2.54
NPI(R)-04	4	11.56	7.62
NPI(R)-06	6	16.64	12.70
NPI(R)-08	8	21.72	17.78
NPI(R)-10	10	26.80	22.86



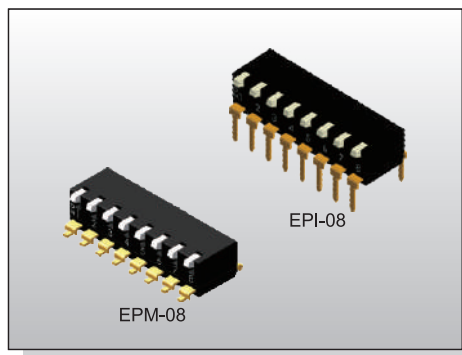
NPM



PART NO.	NO.OF POS.	DIM.A	DIM.B
NPM(R)-02	2	6.48	2.54
NPM(R)-04	4	11.56	7.62
NPM(R)-06	6	16.64	12.70
NPM(R)-08	8	21.72	17.78
NPM(R)-10	10	26.80	22.86



P.C.B. LAYOUT



FEATURES

- ※Side actuation
- ※End stackable
- ※Through hole or SMT

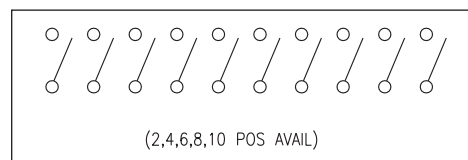
APPLICATION

- ※Industrial control
- ※Automatic machines control
- ※Telecommunication

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	800gf max.
Travel	20°
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

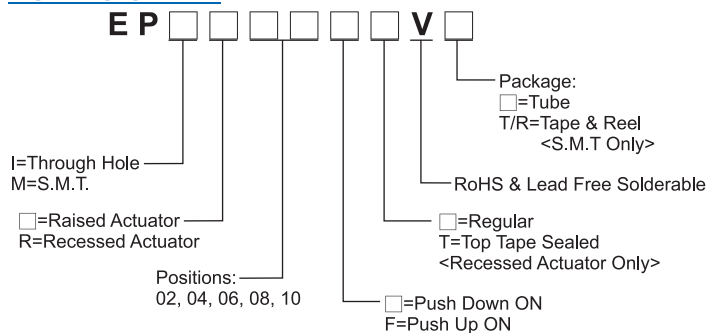
<Tube>

- EP□(R)-02: 95 pcs
- EP□(R)-04: 47 pcs
- EP□(R)-06: 31 pcs
- EP□(R)-08: 23 pcs
- EP□(R)-10: 18 pcs

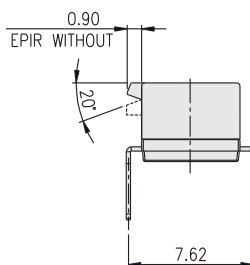
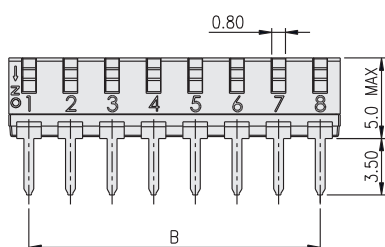
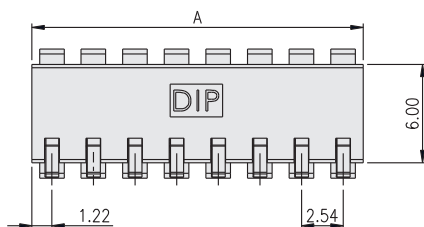
<Tape & Reel>

- EPM(R): 700 pcs

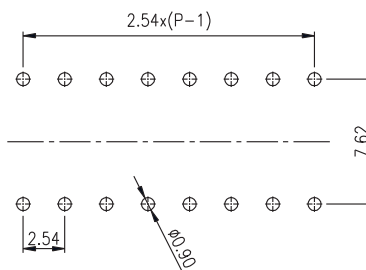
HOW TO ORDER



EPI(R)

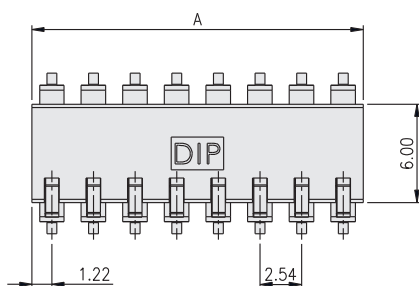


PART NO.	NO.OF POS.	DIM.A	DIM.B
EPI(R)02	2	4.89	2.54
EPI(R)04	4	10.06	7.62
EPI(R)06	6	15.14	12.70
EPI(R)08	8	20.22	17.78
EPI(R)10	10	25.30	22.86

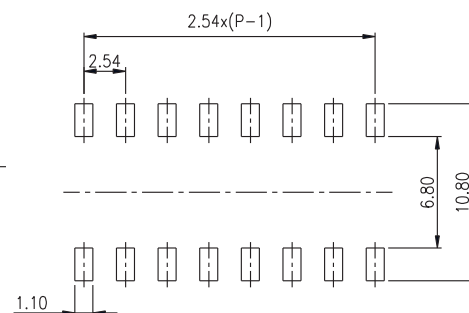
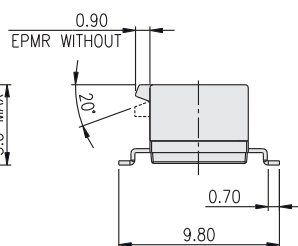
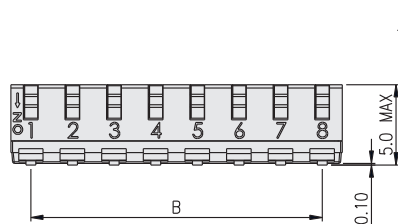


P.C.B. LAYOUT

EPM(R)

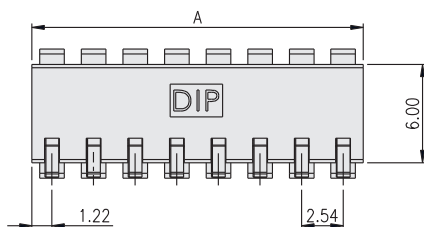


PART NO.	NO.OF POS.	DIM.A	DIM.B
EPM(R)-02	2	4.89	2.54
EPM(R)-04	4	10.06	7.62
EPM(R)-06	6	15.14	12.70
EPM(R)-08	8	20.22	17.78
EPM(R)-10	10	25.30	22.86

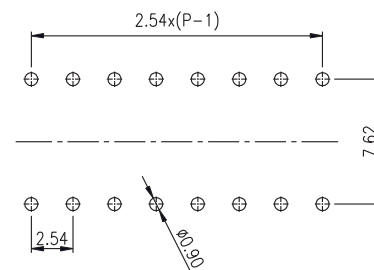
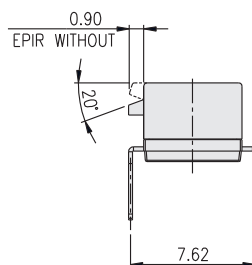
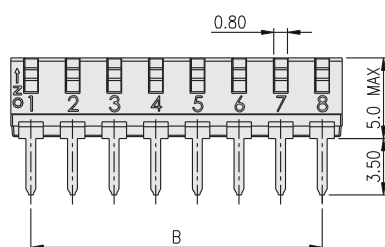


P.C.B. LAYOUT

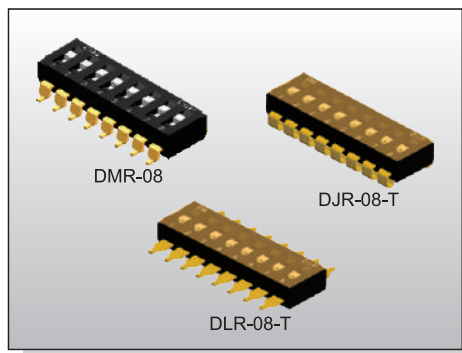
EPI(R)-F



PART NO.	NO.OF POS.	DIM.A	DIM.B
EPI(R)-02F	2	4.89	2.54
EPI(R)-04F	4	10.06	7.62
EPI(R)-06F	6	15.14	12.70
EPI(R)-08F	8	20.22	17.78
EPI(R)-10F	10	25.30	22.86



P.C.B. LAYOUT

**FEATURES**

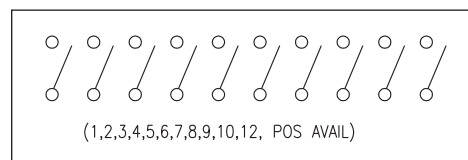
- ※Low profile for space saving
- ※Gold contact for high reliability
- ※Top tape type for washing process

APPLICATION

- ※Industrial control
- ※Automatic machines control
- ※Telecommunication

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	1,000gf max.
Travel	1mm
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT**PACKAGE****<Tube>**

DM(R), DJ(R):

01: 130 pcs 02: 76 pcs 03: 55 pcs 04: 42 pcs
 05: 35 pcs 06: 28 pcs 07: 25 pcs 08: 22 pcs
 09: 20 pcs 10: 18 pcs 12: 15 pcs

<Tape & Reel>

DM(R)-01: 800 pcs

DMR-02~DMR-12: 900 pcs

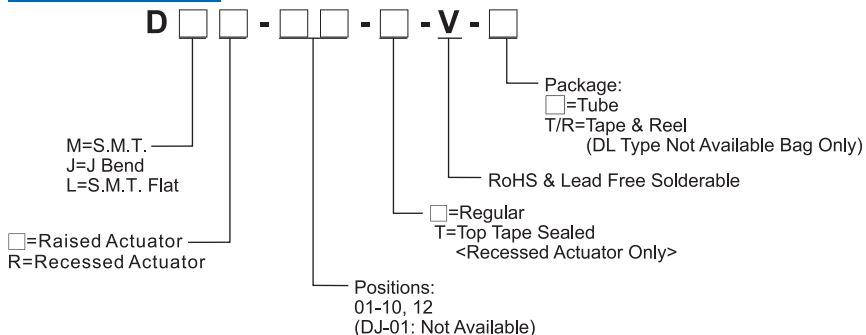
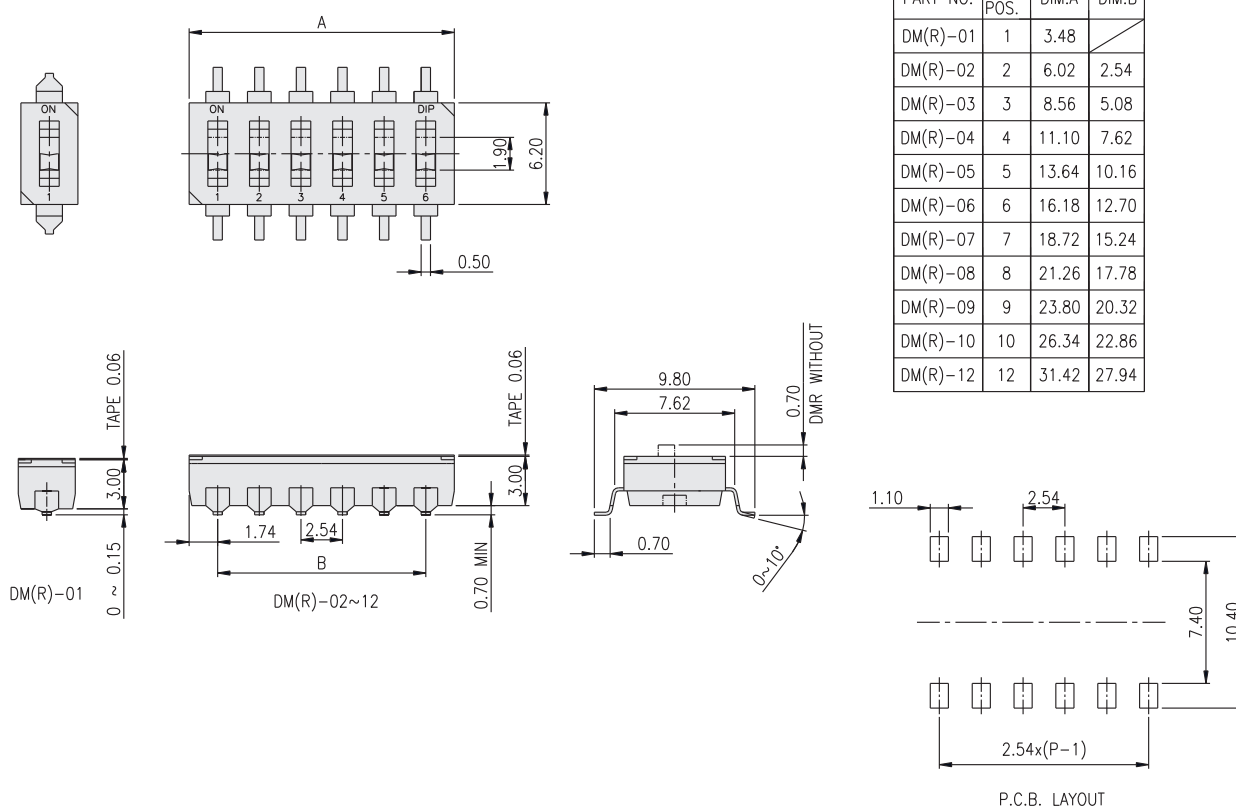
DM-(01)(05)(07): 800 pcs

DM-(02)(03)(04)(06)(08)(09)(10)(12): 700 pcs

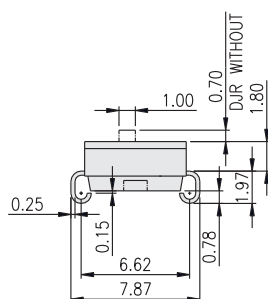
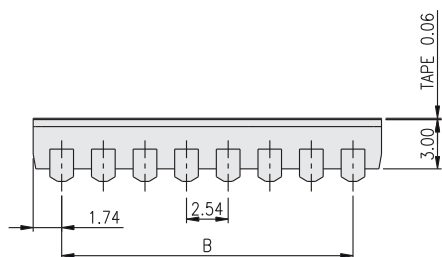
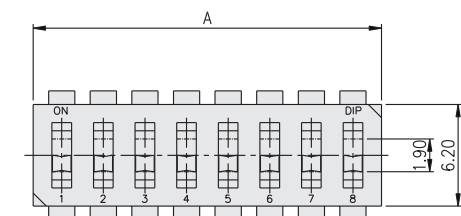
DJR-(02)(03)(04)(08)(09)(10): 1000 pcs

<Bag>

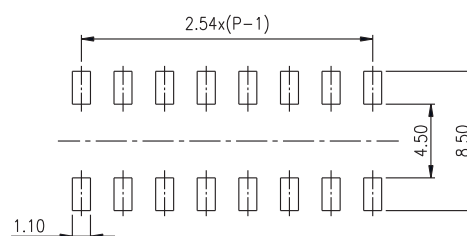
DL(R): 1000 pcs

HOW TO ORDER**DM(R)**

DJ(R)

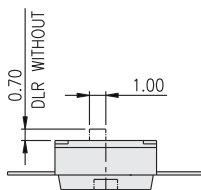
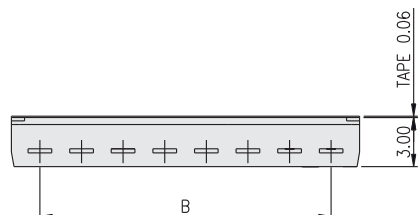
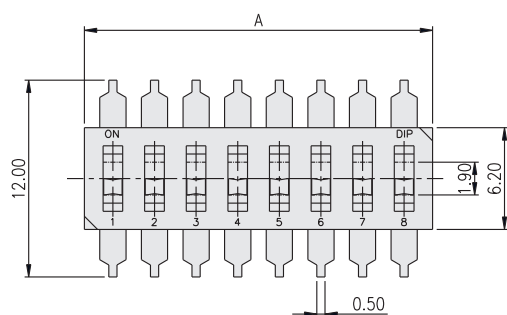


PART NO.	NO.OF POS.	DIM.A	DIM.B
DJ(R)-02	2	6.02	2.54
DJ(R)-03	3	8.56	5.08
DJ(R)-04	4	11.10	7.62
DJ(R)-05	5	13.64	10.16
DJ(R)-06	6	16.18	12.70
DJ(R)-07	7	18.72	15.24
DJ(R)-08	8	21.26	17.78
DJ(R)-09	9	23.80	20.32
DJ(R)-10	10	26.34	22.86
DJ(R)-12	12	31.42	27.94

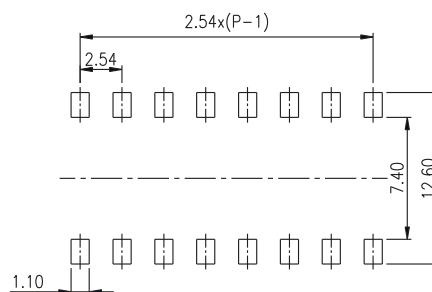


P.C.B. LAYOUT

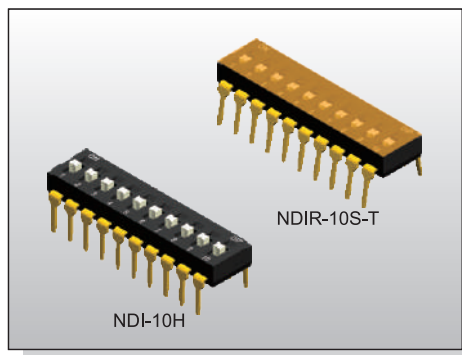
DL(R)



PART NO.	NO.OF POS.	DIM.A	DIM.B
DL(R)-01	1	3.48	
DL(R)-02	2	6.02	2.54
DL(R)-03	3	8.56	5.08
DL(R)-04	4	11.10	7.62
DL(R)-05	5	13.64	10.16
DL(R)-06	6	16.18	12.70
DL(R)-07	7	18.72	15.24
DL(R)-08	8	21.26	17.78
DL(R)-09	9	23.80	20.32
DL(R)-10	10	26.34	22.86
DL(R)-12	12	31.42	27.94



P.C.B. LAYOUT

**FEATURES**

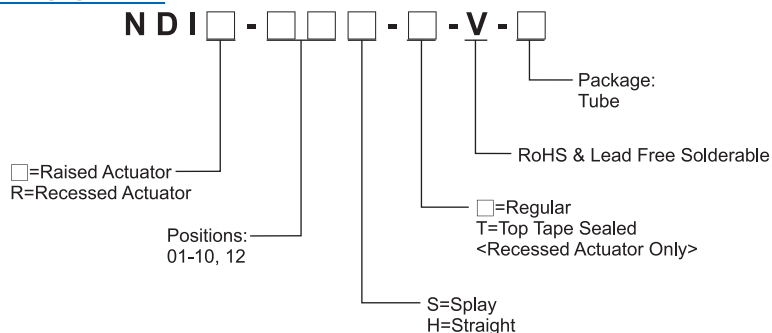
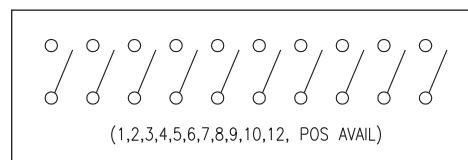
- ※Low profile for space saving
- ※Gold contact for high reliability
- ※Top tape type for washing process

APPLICATION

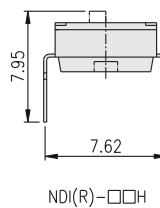
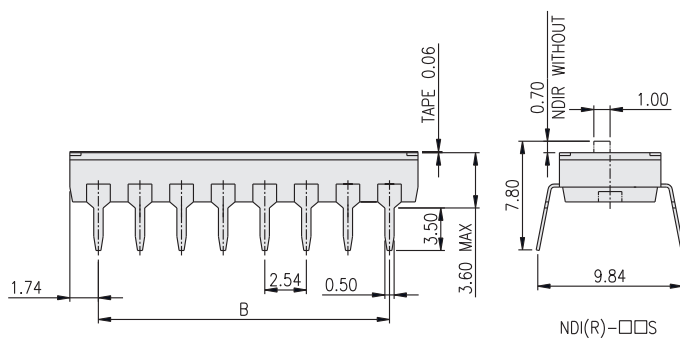
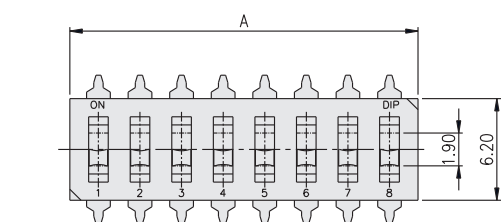
- ※Industrial control
- ※Automatic machines control
- ※Telecommunication

SPECIFICATION

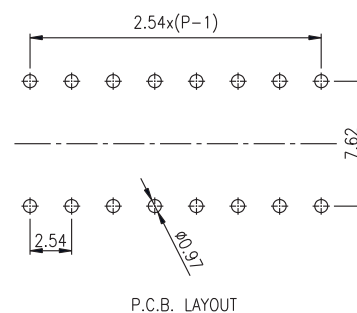
Contact Rating	25mA, 24V DC
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	1,000gf max.
Travel	1mm
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

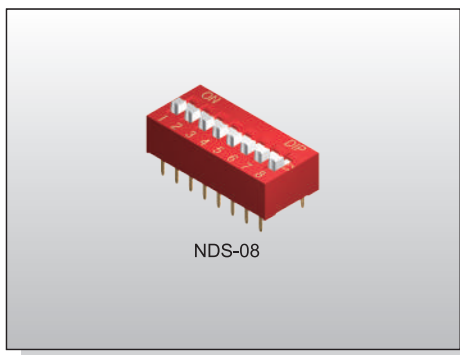
HOW TO ORDER**CIRCUIT****PACKAGE****<Tube>**

NDI(R)-01:	130 pcs
NDI(R)-02:	76 pcs
NDI(R)-03:	55 pcs
NDI(R)-04:	42 pcs
NDI(R)-05:	35 pcs
NDI(R)-06:	28 pcs
NDI(R)-07:	25 pcs
NDI(R)-08:	22 pcs
NDI(R)-09:	20 pcs
NDI(R)-10:	18 pcs
NDI(R)-12:	15 pcs

NDI(R)

PART NO.	NO.OF POS.	DIM.A	DIM.B
NDI(R)-01	1	3.48	
NDI(R)-02	2	6.02	2.54
NDI(R)-03	3	8.56	5.08
NDI(R)-04	4	11.10	7.62
NDI(R)-05	5	13.64	10.16
NDI(R)-06	6	16.18	12.70
NDI(R)-07	7	18.72	15.24
NDI(R)-08	8	21.26	17.78
NDI(R)-09	9	23.80	20.32
NDI(R)-10	10	26.34	22.86
NDI(R)-12	12	31.42	27.94





FEATURES

- ※Both ON/OFF position applicable for soldering process.
- ※Gold contact for high reliability
- ※Red, blue, and black color options.

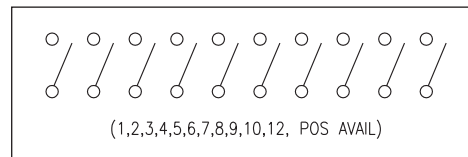
APPLICATION

- ※Industrial control
- ※Computers and peripherals
- ※Variety of function controls

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	1,000gf max.
Travel	2mm
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

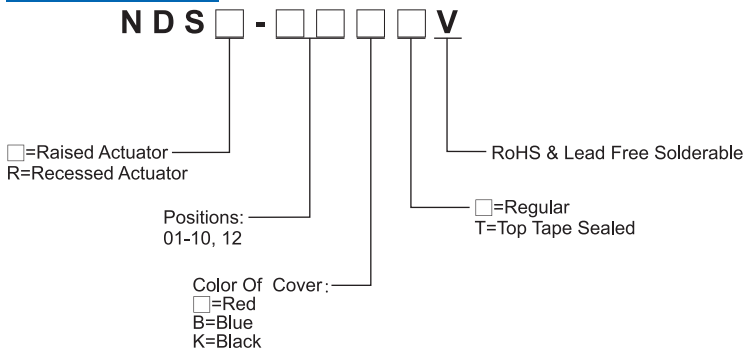


PACKAGE

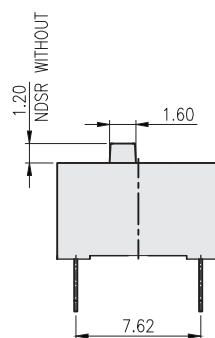
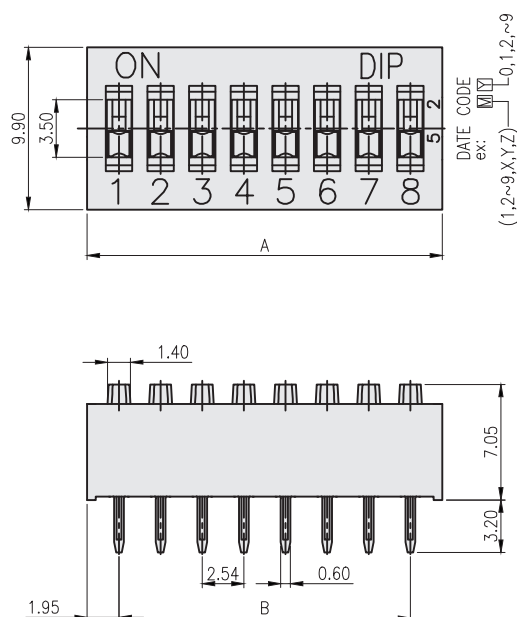
<Tube>

NDS(R)-01: 120 pcs	NDS(R)-01T: 110 pcs
NDS(R)-02: 72 pcs	NDS(R)-02T: 70 pcs
NDS(R)-03: 51 pcs	NDS(R)-03T: 50 pcs
NDS(R)-04: 40 pcs	NDS(R)-04T: 39 pcs
NDS(R)-05: 32 pcs	NDS(R)-05T: 32 pcs
NDS(R)-06: 27 pcs	NDS(R)-06T: 27 pcs
NDS(R)-07: 24 pcs	NDS(R)-07T: 24 pcs
NDS(R)-08: 21 pcs	NDS(R)-08T: 21 pcs
NDS(R)-09: 19 pcs	NDS(R)-09T: 19 pcs
NDS(R)-10: 17 pcs	NDS(R)-10T: 17 pcs
NDS(R)-12: 14 pcs	NDS(R)-12T: 14 pcs

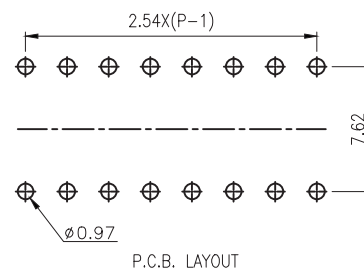
HOW TO ORDER

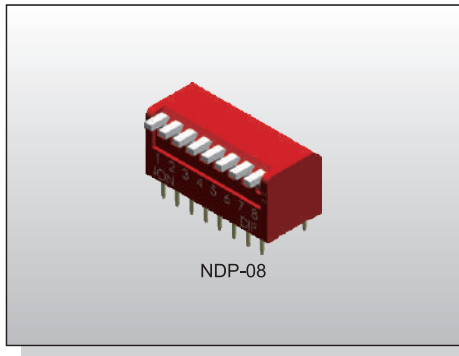


NDS(R)



PART NO.	NO.OF POS.	DIM.A	DIM.B
NDS(R)-01	1	3.90	
NDS(R)-02	2	6.44	2.54
NDS(R)-03	3	8.98	5.08
NDS(R)-04	4	11.52	7.62
NDS(R)-05	5	14.06	10.16
NDS(R)-06	6	16.60	12.70
NDS(R)-07	7	19.14	15.24
NDS(R)-08	8	21.68	17.78
NDS(R)-09	9	24.22	20.32
NDS(R)-10	10	26.76	22.86
NDS(R)-12	12	31.84	27.94





FEATURES

- ※Side actuation
- ※Gold contact for high reliability
- ※Red, blue, and black color options.

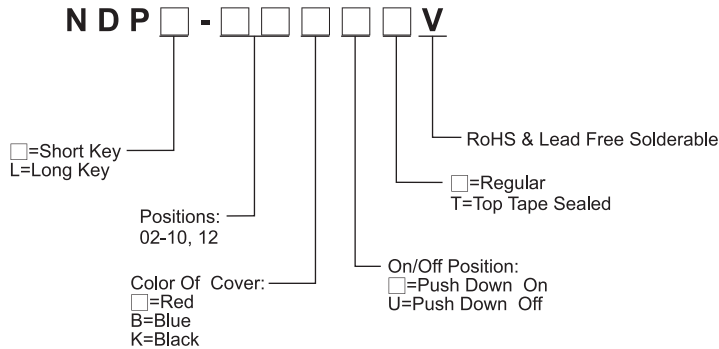
APPLICATION

- ※Industrial control
- ※Computers and peripherals
- ※Variety of function controls

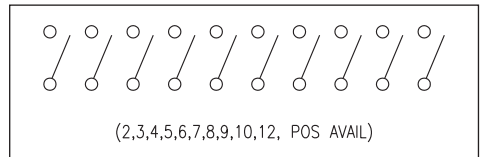
SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	600gf max.
Travel	25°
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT

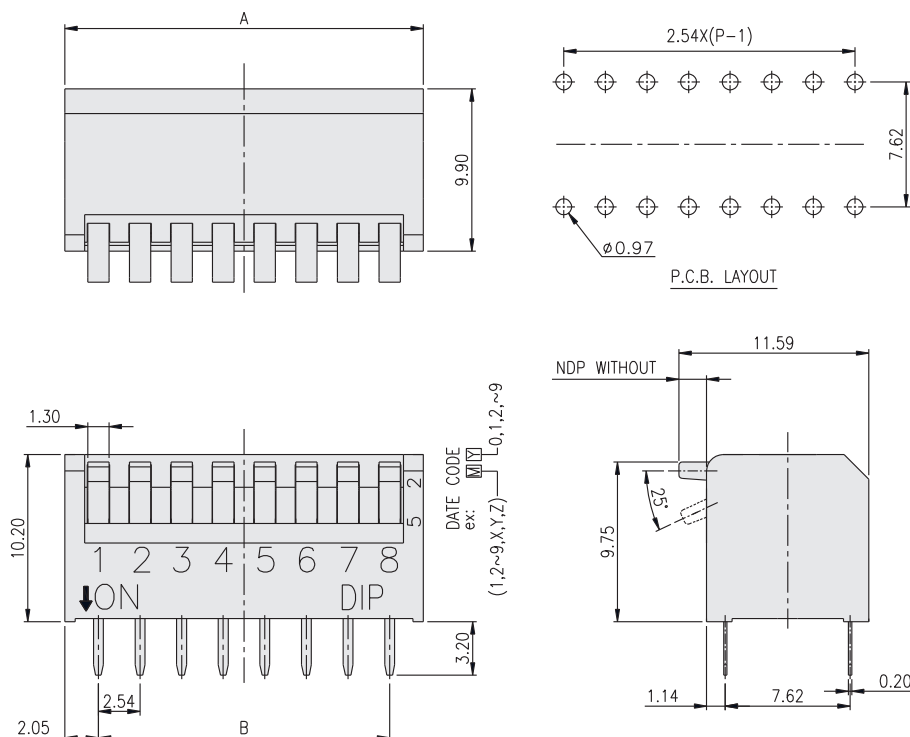


PACKAGE

<Tube>

NDP(L)-02: 70 pcs	NDP(L)-02T: 65 pcs
NDP(L)-03: 50 pcs	NDP(L)-03T: 49 pcs
NDP(L)-04: 39 pcs	NDP(L)-04T: 39 pcs
NDP(L)-05: 32 pcs	NDP(L)-05T: 32 pcs
NDP(L)-06: 27 pcs	NDP(L)-06T: 27 pcs
NDP(L)-07: 24 pcs	NDP(L)-07T: 24 pcs
NDP(L)-08: 21 pcs	NDP(L)-08T: 21 pcs
NDP(L)-09: 19 pcs	NDP(L)-09T: 19 pcs
NDP(L)-10: 17 pcs	NDP(L)-10T: 17 pcs
NDP(L)-12: 14 pcs	NDP(L)-12T: 14 pcs

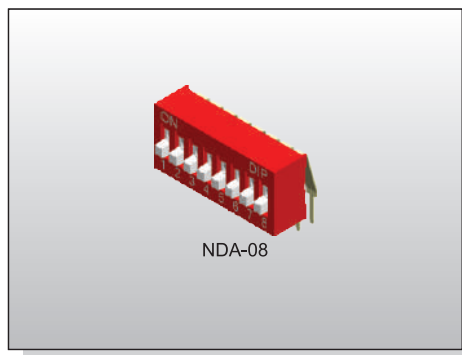
NDP(L)



PART NO.	NO.OF POS.	DIM.A	DIM.B
NDP(L)-02	2	6.64	2.54
NDP(L)-03	3	9.18	5.08
NDP(L)-04	4	11.72	7.62
NDP(L)-05	5	14.26	10.16
NDP(L)-06	6	16.80	12.70
NDP(L)-07	7	19.34	15.24
NDP(L)-08	8	21.88	17.78
NDP(L)-09	9	24.42	20.32
NDP(L)-10	10	26.96	22.86
NDP(L)-12	12	32.04	27.94

DIP SWITCH NDA SERIES

Right Angle Type



FEATURES

- ※ Side actuation
- ※ Gold contact for high reliability
- ※ Red, blue, and black color options.

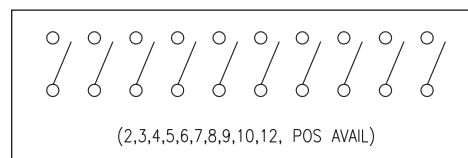
APPLICATION

- ※ Industrial control
- ※ Computers and peripherals
- ※ Variety of function controls

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	1,000gf max.
Travel	2mm
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

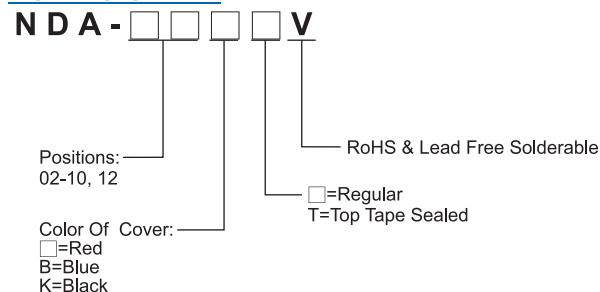


PACKAGE

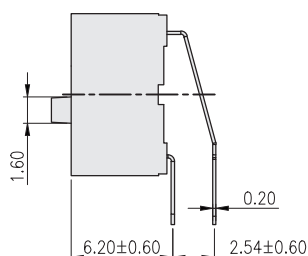
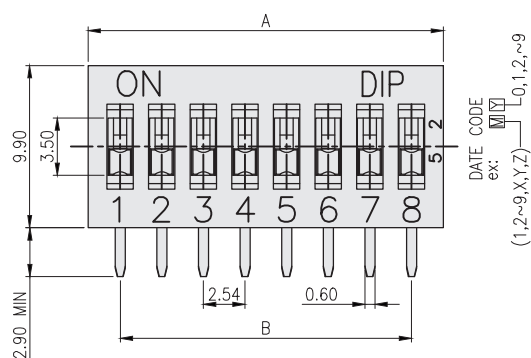
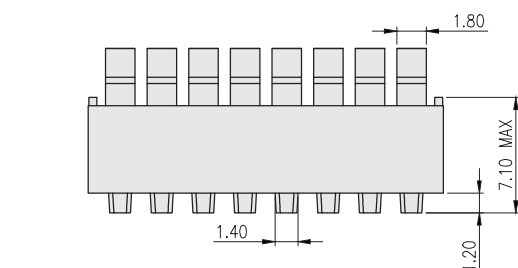
<Tube>

NDA-02: 73pcs	NDA-02T: 70 pcs
NDA-03: 52pcs	NDA-03T: 50 pcs
NDA-04: 40pcs	NDA-04T: 39 pcs
NDA-05: 33pcs	NDA-05T: 32 pcs
NDA-06: 28pcs	NDA-06T: 28 pcs
NDA-07: 24pcs	NDA-07T: 24 pcs
NDA-08: 21pcs	NDA-08T: 21 pcs
NDA-09: 19pcs	NDA-09T: 19 pcs
NDA-10: 17pcs	NDA-10T: 17 pcs
NDA-12: 14pcs	NDA-12T: 14 pcs

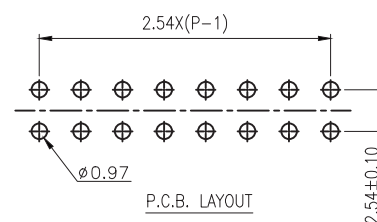
HOW TO ORDER

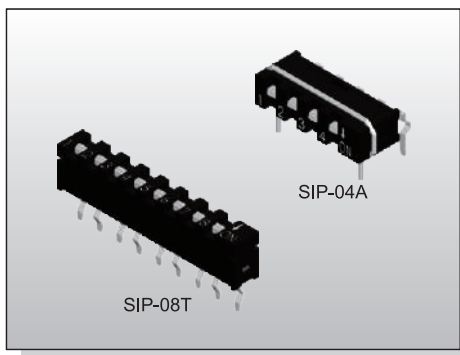


NDA



PART NO.	NO.OF POS.	DIM.A	DIM.B
NDA-02	2	6.44	2.54
NDA-03	3	8.98	5.08
NDA-04	4	11.52	7.62
NDA-05	5	14.06	10.16
NDA-06	6	16.60	12.70
NDA-07	7	19.14	15.24
NDA-08	8	21.68	17.78
NDA-09	9	24.22	20.32
NDA-10	10	26.76	22.86
NDA-12	12	31.84	27.94





FEATURES

- ※Single In-line Packaging saves PCB space
- ※Available in vertical or right angle models

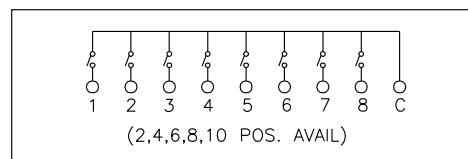
APPLICATION

- ※Industrial control
- ※Computers and peripherals
- ※Variety of function controls

SPECIFICATION

Contact Rating	10mA, 5V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	300V AC/1 minute
Operating Force	800gf max.
Operating Life	500 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

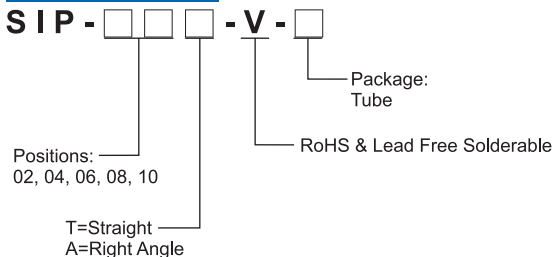


PACKAGE

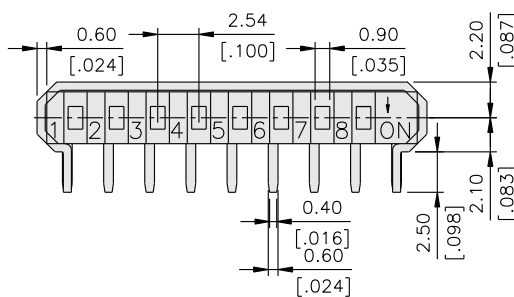
<Tube>

SIP-02A: 56 pcs	SIP-02T: 61 pcs
SIP-04A: 35 pcs	SIP-04T: 37 pcs
SIP-06A: 25 pcs	SIP-06T: 26 pcs
SIP-08A: 20 pcs	SIP-08T: 20 pcs
SIP-10A: 16 pcs	SIP-10T: 17 pcs

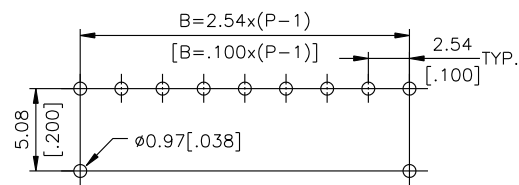
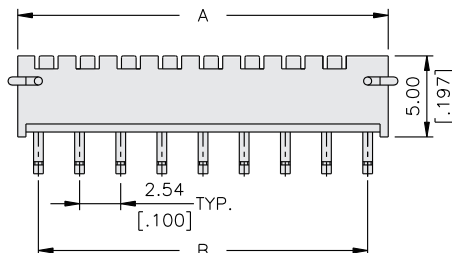
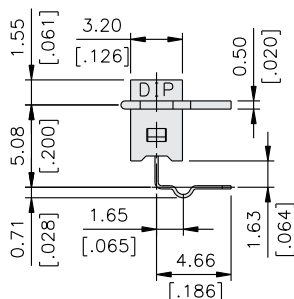
HOW TO ORDER



SIP-A

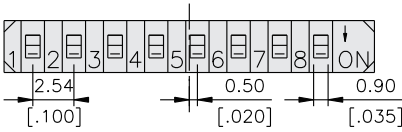


SIP-10-V	10	27.94[1.100]	25.40[1.000]
SIP-08-V	8	22.86[.900]	20.32[.800]
SIP-06-V	6	17.78[.700]	15.24[.600]
SIP-04-V	4	12.70[.500]	10.16[.400]
SIP-02-V	2	7.62[.300]	5.08[.200]
PROD. NO.	NO. OF POS.	DIM. A	DIM. B

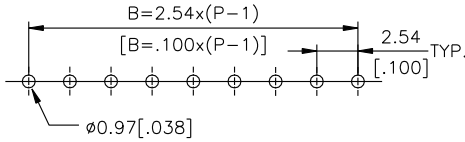
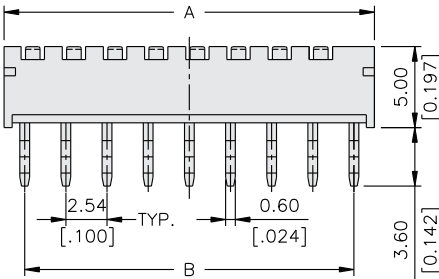
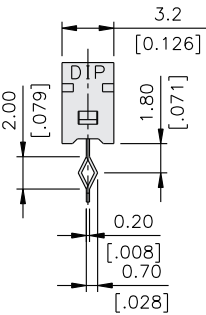


P.C.B. LAYOUT

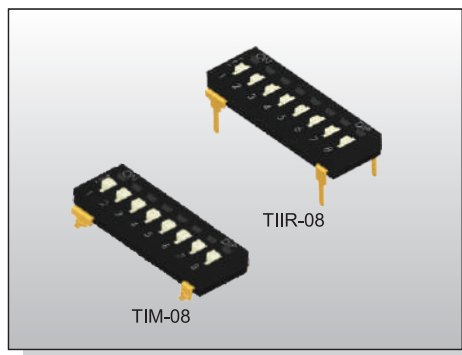
SIP-T



SIP-10-V	10	27.94[1.100]	25.40[1.000]
SIP-08-V	8	22.86[.900]	20.32[.800]
SIP-06-V	6	17.78[.700]	15.24[.600]
SIP-04-V	4	12.70[.500]	10.16[.400]
SIP-02-V	2	7.62[.300]	5.08[.200]
PROD. NO.	NO. OF POS.	DIM. A	DIM. B



P.C.B. LAYOUT



FEATURES

- ※3-state setting
- ※Low profile for space saving

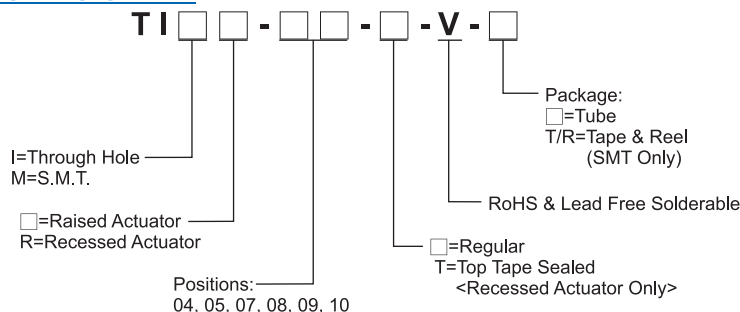
APPLICATION

- ※Remote control
- ※Home automation
- ※Telecommunication

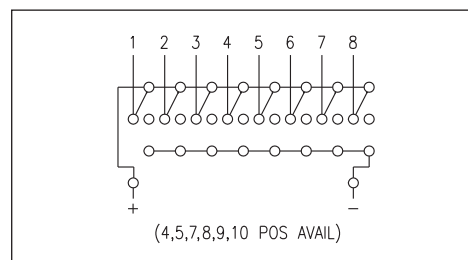
SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	1,000gf max.
Travel	0.8mm
Operating Life	2,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



PACKAGE

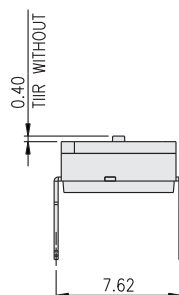
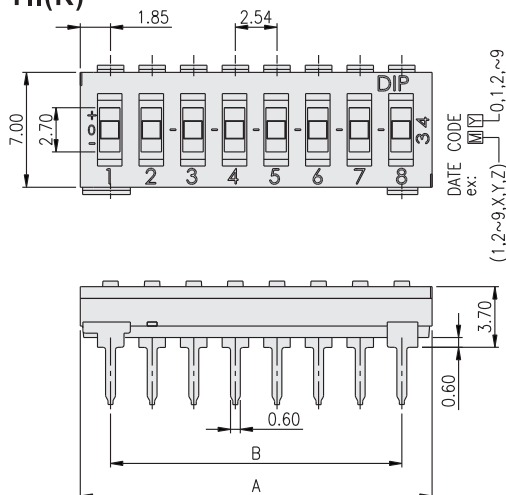
<Tube>

- TI(R)/TIM(R)-04: 41 pcs
- TI(R)/TIM(R)-05: 34 pcs
- TI(R)/TIM(R)-07: 24 pcs
- TI(R)/TIM(R)-08: 22 pcs
- TI(R)/TIM(R)-09: 20 pcs
- TI(R)/TIM(R)-10: 18 pcs

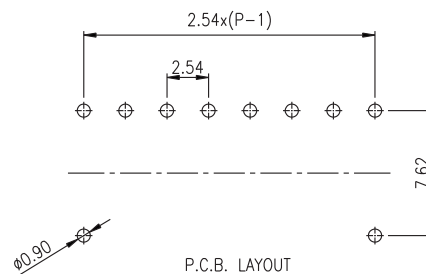
<Tape & Reel>

- TIM(R): 900 pcs

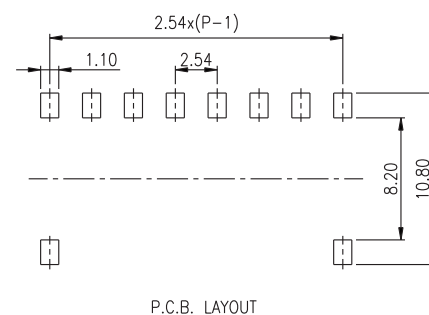
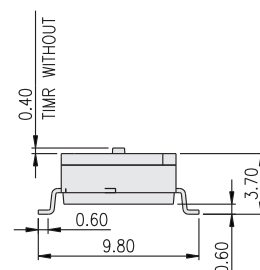
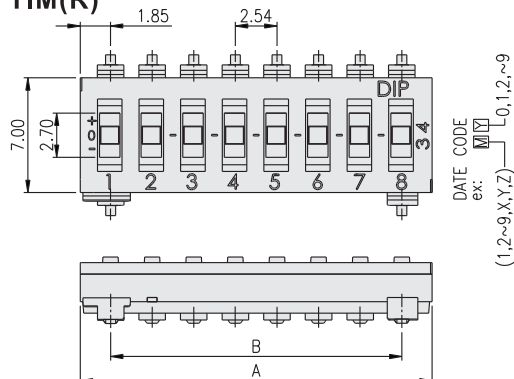
TI(R)

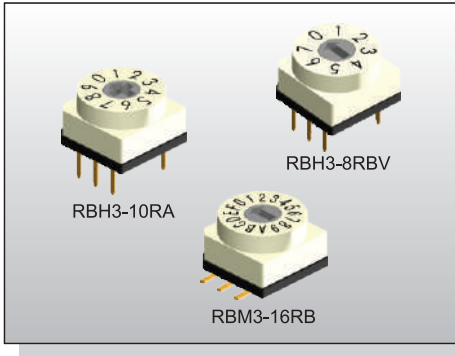


PART NO.	NO.OF POS.	DIM.A	DIM.B
TI(I)(M)(R)-04	4	11.32	7.62
TI(I)(M)(R)-05	5	13.86	10.16
TI(I)(M)(R)-07	7	18.94	15.24
TI(I)(M)(R)-08	8	21.48	17.78
TI(I)(M)(R)-09	9	24.02	20.32
TI(I)(M)(R)-10	10	26.56	22.86



TIM(R)





FEATURES

- ※BCD, Hexadecimal
- ※Cross-head & Flat-head Actuator
- ※Washable

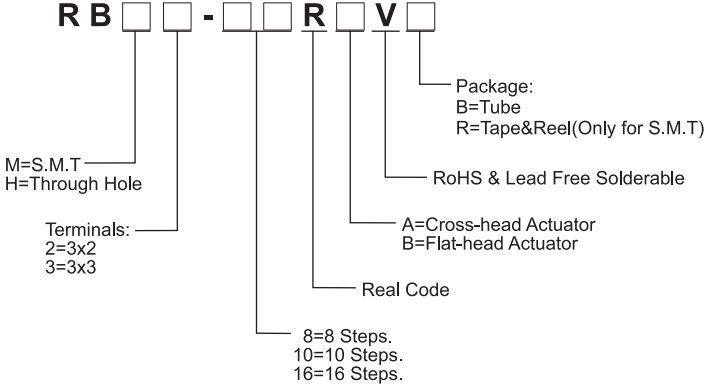
APPLICATION

- ※Security
- ※White goods
- ※Wireless microphone

SPECIFICATION

Contact Rating	150mA, 24V DC
Contact Resistance	80mΩ max.
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	400gf·cm max.
Operating Life	10,000 steps
Operating Temp.	-60°C ~ +125°C
Storage Temp.	-60°C ~ +125°C

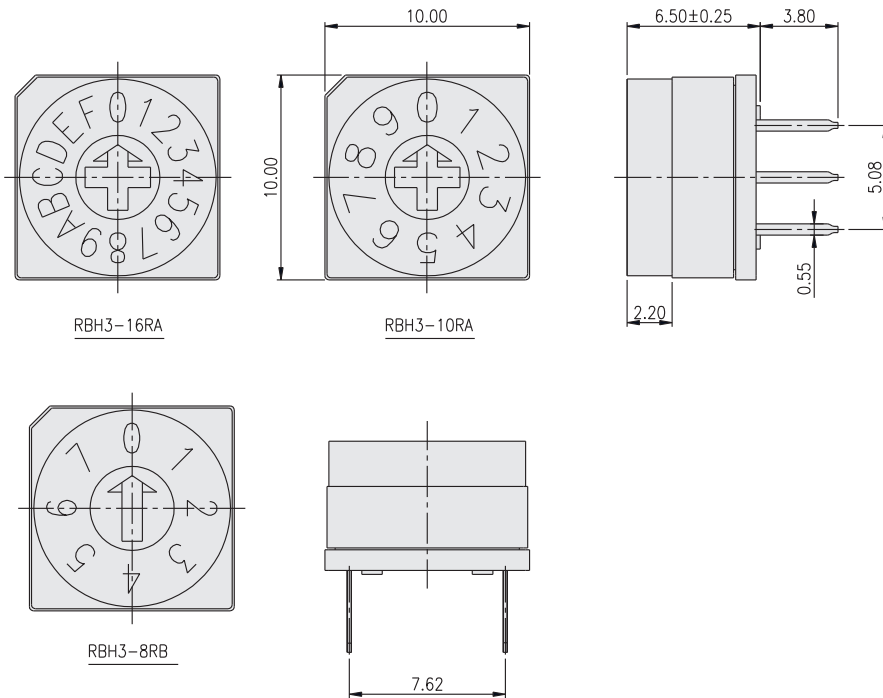
HOW TO ORDER



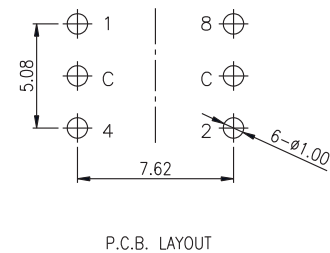
PACKAGE

<Tube>
47 pcs
<Tape & Reel>
RBM: 450 pcs.

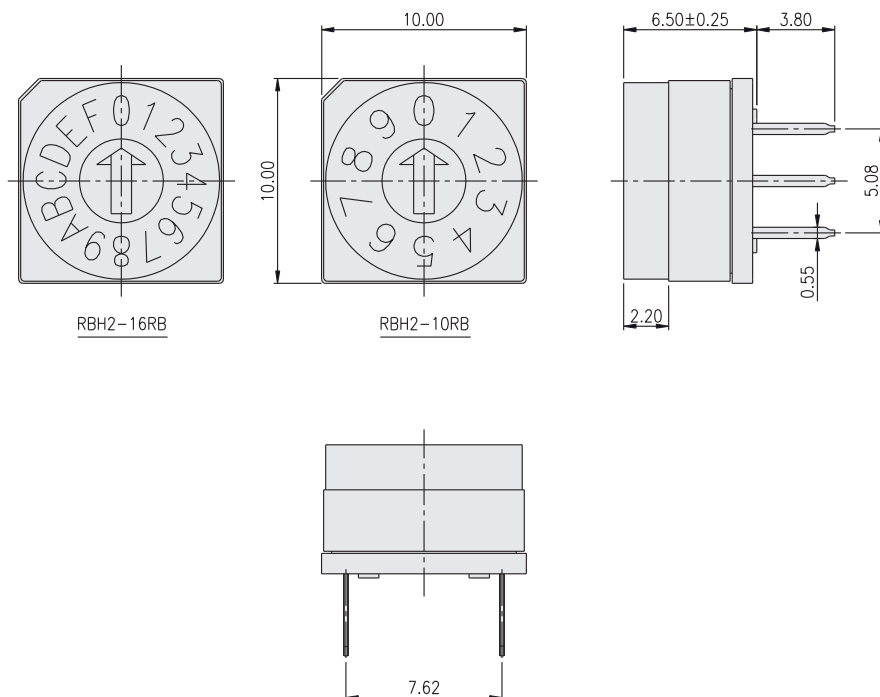
RBH3-☐☐RA



TYPE	POSITION	CODE			
		1	2	4	8
10R 08R	0	●	●	●	●
	1	○	●	●	●
	2	●	○	●	●
	3	○	○	●	●
	4	●	●	○	●
	5	○	●	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	●	●	●	○
	9	○	●	●	○
16R	A	●	○	●	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○



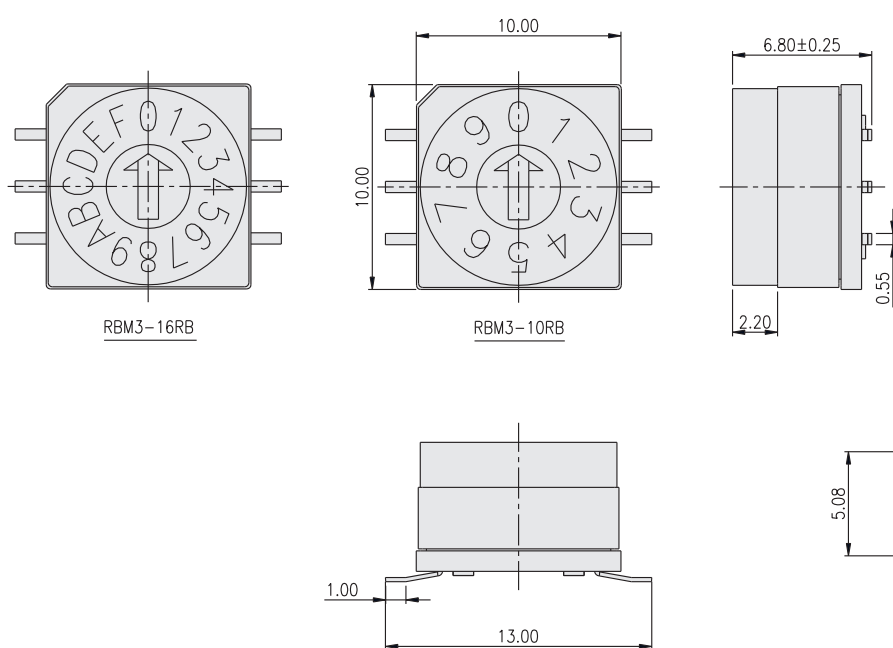
RBH2-□□RB



○ ON
● OFF

TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	○	●	●
	2	●	○	●	●
	3	○	○	●	●
	4	●	●	○	●
	5	○	○	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	●	●	●	○
	9	○	○	○	○
16R	A	●	○	●	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○

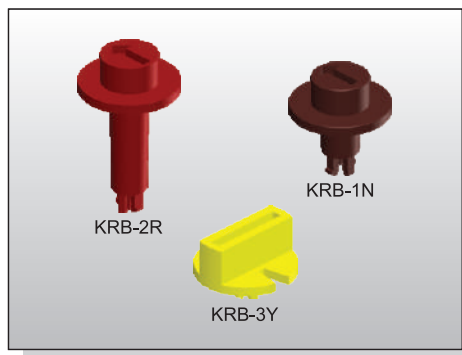
RBM3-□□RB



○ ON
● OFF

TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	●	●	●
	2	●	○	●	●
	3	○	○	●	●
	4	●	○	○	●
	5	○	●	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	○	○	●	○
	9	○	●	●	○
16R	A	○	○	●	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○

P.C.B. LAYOUT



HOW TO ORDER

KRB -

Cap Color:
K=Black
N=Brown
B=Blue
Ge=Grey
R=Red
Y=Yellow

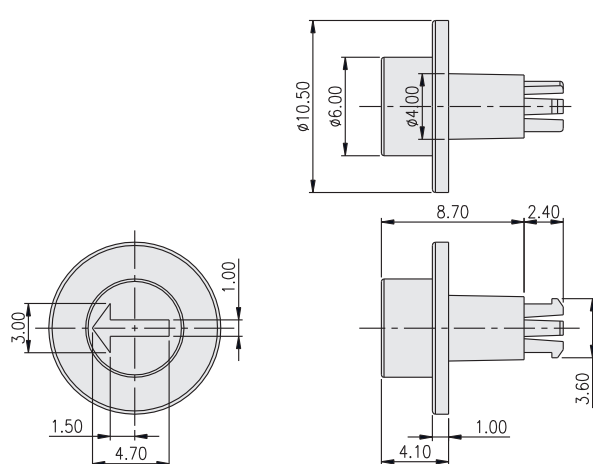
Knob Type:
1= Short Spindle
2= Long Spindle
3=Segment Wheel

PACKAGE

<Bag>

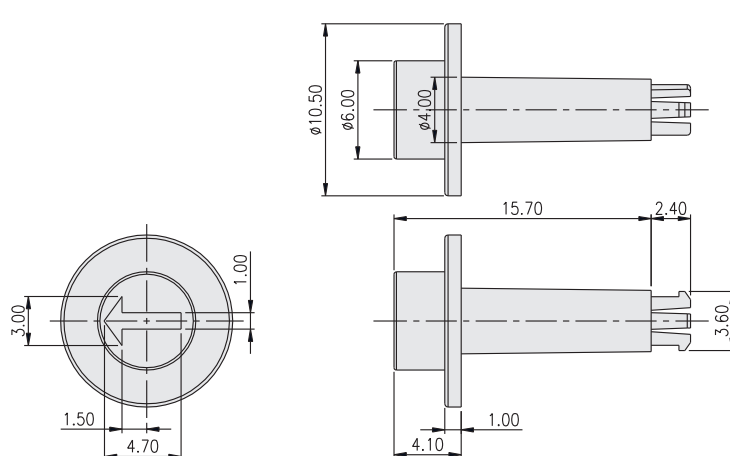
KRB-1, KRB-2: 500 pcs.
KRB-3: 1000 pcs.

KRB-1



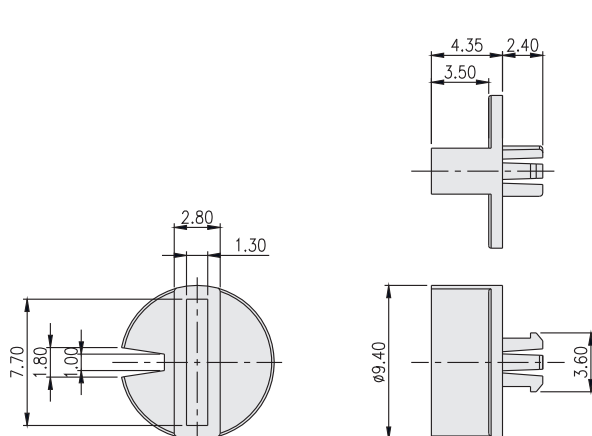
PART NO.	COLOR
KRB-1K	BLACK
KRB-1N	BROWN
KRB-1R	RED
KRB-1B	BLUE
KRB-1Y	YELLOW
KRB-1Ge	GREY

KRB-2



PART NO.	COLOR
KRB-2K	BLACK
KRB-2N	BROWN
KRB-2R	RED
KRB-2B	BLUE
KRB-2Y	YELLOW
KRB-2Ge	GREY

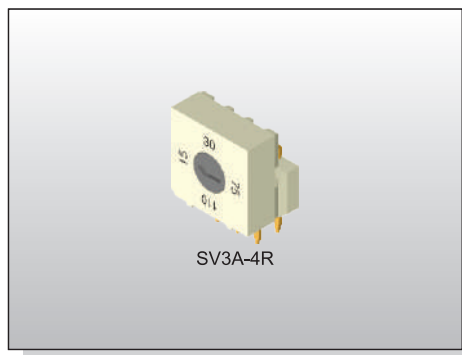
KRB-3



PART NO.	COLOR
KRB-3K	BLACK
KRB-3N	BROWN
KRB-3R	RED
KRB-3B	BLUE
KRB-3Y	YELLOW
KRB-3Ge	GREY

ROTARY CODED SWITCH **SV3A-4** SERIES

10x10mm
Selector Rotary Type



SV3A-4R

FEATURES

- ※Through hole pin type
- ※Flush Actuator
- ※20,000 steps mechanical Life

APPLICATION

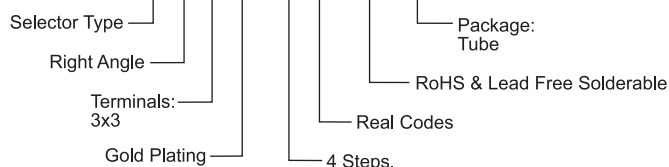
- ※Building & home automation
- ※White goods
- ※Electronic instrument

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	200gf·cm max.
Operating Life	20,000 steps
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

S V 3 A - 4 R - V - B

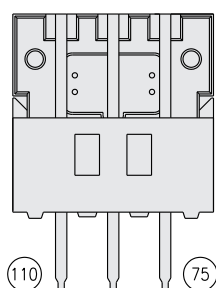
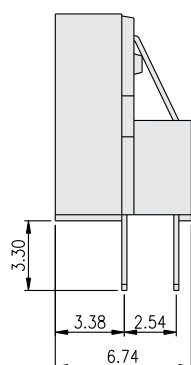
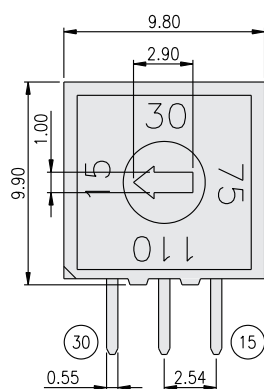


PACKAGE

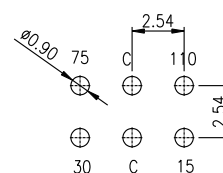
<Tube>
 48 pcs

ROTARY CODED SWITCH

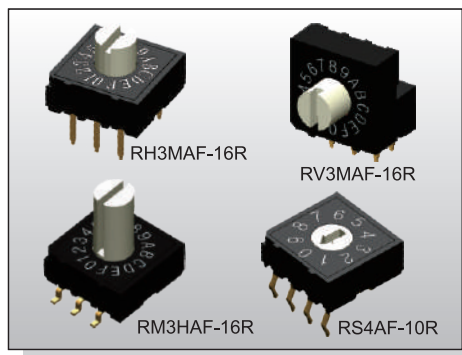
SV3A-4



○ ON ● OFF				
POSITION	CODE			
	15	30	75	110
15	○	●	●	●
30	●	○	●	●
75	●	●	○	●
110	●	●	●	○



P.C.B. LAYOUT



FEATURES

- ※Vertical and right angle type
- ※Flush & raised actuator
- ※BCD; Hexadecimal

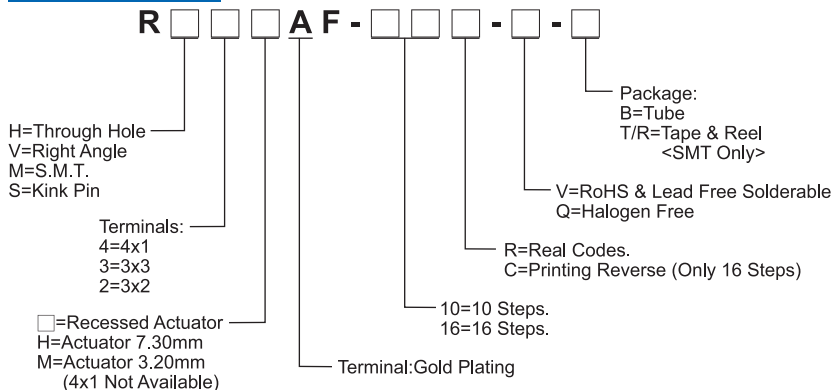
APPLICATION

- ※Building & home automation
- ※White goods
- ※Electronic instrument

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	400gf·cm max.
Operating Life	20,000 Steps
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

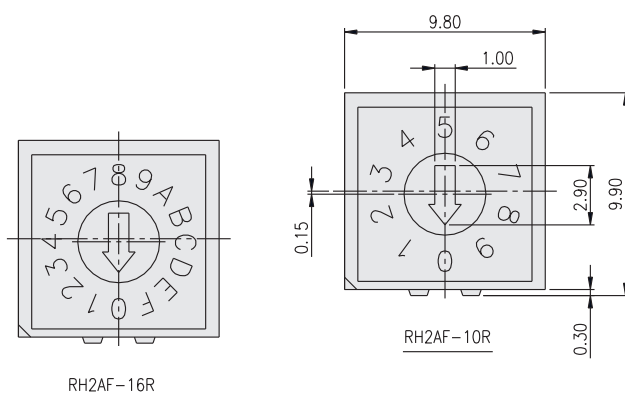
HOW TO ORDER



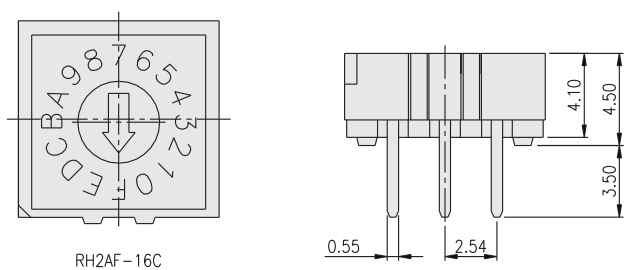
PACKAGE

- <Tube> 48 pcs
- <Tape & Reel> 750 pcs (recessed actuator), 500 pcs (3.2mm actuator), 250 pcs (7.3mm actuator)

RH2

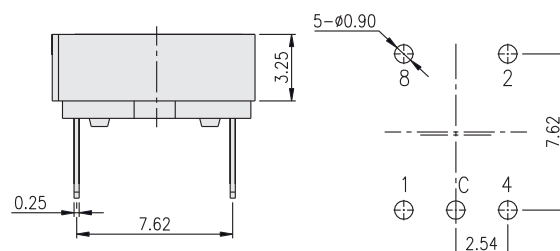


RH2AF-16R



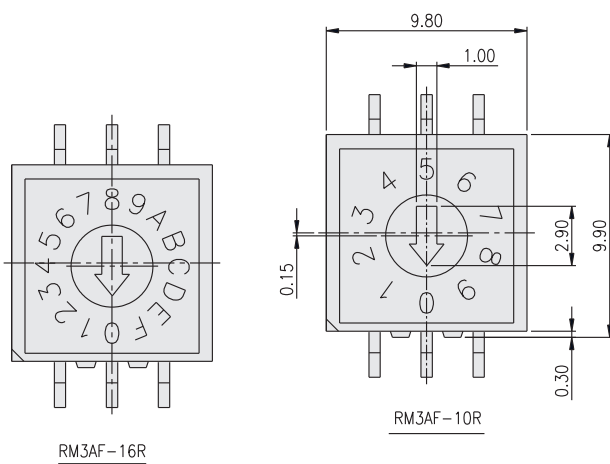
RH2AF-16C

TYPE	POSITION		CODE			
	□□R	16C	1	2	4	8
10R	0	F	●	●	●	●
	1	E	○	●	●	●
	2	D	●	○	●	●
	3	C	○	○	●	●
	4	B	●	●	○	●
	5	A	○	●	○	●
	6	9	●	○	○	●
	7	8	○	○	○	●
	8	7	●	●	●	○
	9	6	○	●	●	○
16R,C	A	5	○	○	○	○
	B	4	○	○	●	○
	C	3	●	●	○	○
	D	2	○	●	○	○
	E	1	●	○	○	○
	F	0	○	○	○	○

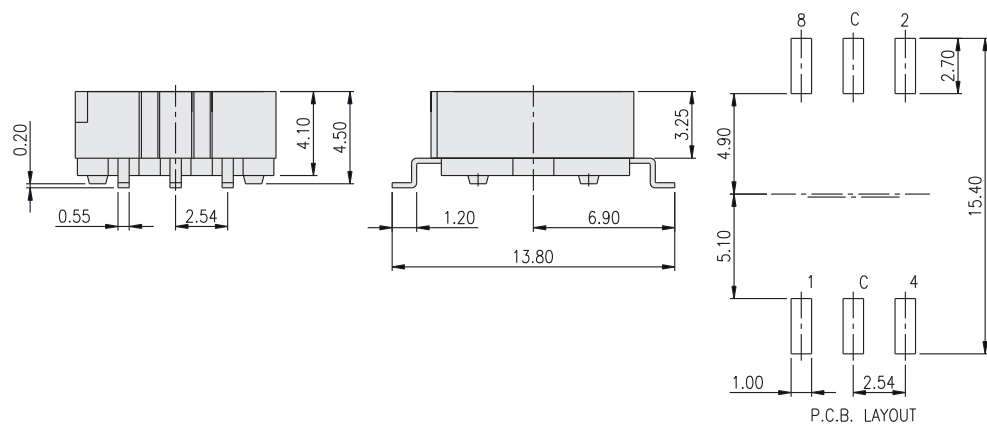
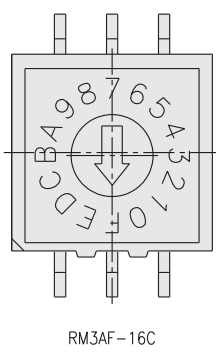


P.C.B. LAYOUT

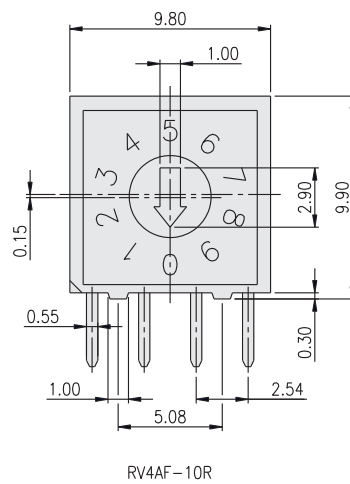
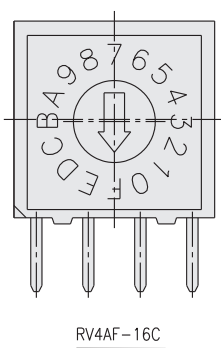
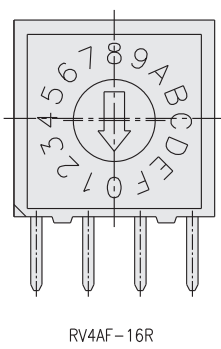
RM3



TYPE	POSITION	CODE			
		1	2	4	8
10R	0	F	●	●	●
	1	E	○	●	●
	2	D	●	○	●
	3	C	○	○	●
	4	B	●	●	○
	5	A	○	●	●
	6	9	●	○	○
	7	8	○	○	○
	8	7	●	●	○
	9	6	○	●	○
16R,C	A	5	●	○	○
	B	4	○	○	○
	C	3	●	●	○
	D	2	○	●	○
	E	1	●	○	○
	F	0	○	○	○

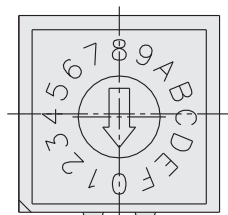


RV4

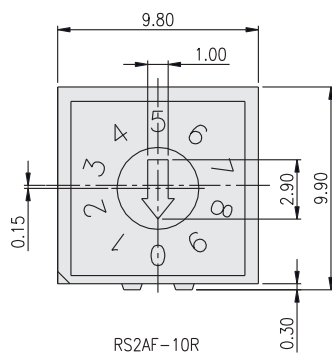


TYPE	POSITION	CODE			
		1	2	4	8
10R	0	F	●	●	●
	1	E	○	●	●
	2	D	●	○	●
	3	C	○	○	●
	4	B	●	●	○
	5	A	○	●	●
	6	9	●	○	○
	7	8	○	○	○
	8	7	●	●	○
	9	6	○	●	○
16R,C	A	5	●	○	○
	B	4	○	○	○
	C	3	●	●	○
	D	2	○	●	○
	E	1	●	○	○
	F	0	○	○	○

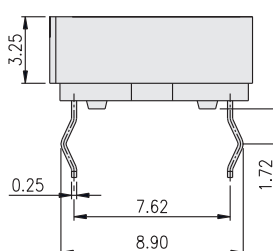
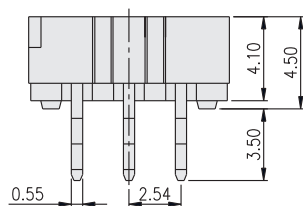
RS2



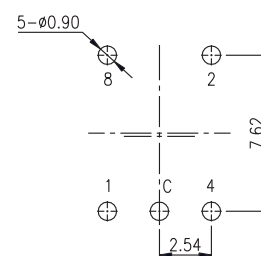
RS2AF-16R



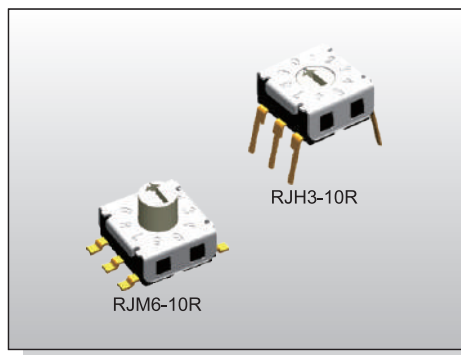
RS2AF-10R



		CODE				
TYPE	POSITION					
		1	2	4	8	
10R	0	●	●	●	●	
	1	○	●	●	●	
	2	●	○	●	●	
	3	○	○	●	●	
	4	●	●	○	●	
	5	○	●	○	●	
	6	●	○	○	●	
	7	○	○	○	●	
	8	●	●	●	○	
	9	○	○	●	○	
16R	A	●	○	●	○	
	B	○	○	●	○	
	C	●	●	○	○	
	D	○	●	○	○	
	E	●	○	○	○	
	F	○	○	○	○	



P.C.B. LAYOUT



FEATURES

- ※Center common terminal pin
- ※Through hole or SMT
- ※Flush & raised actuator

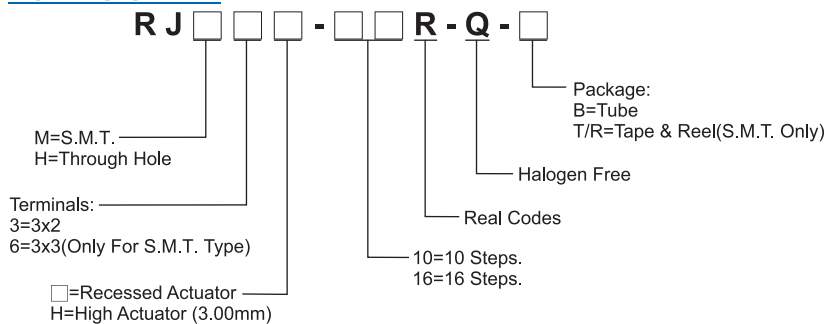
APPLICATION

- ※Industrial equipment
- ※Power supply
- ※Safety relay

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	200gf·cm max.
Operating Life	20, 000 Steps
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



PACKAGE

<Tube>

62 pcs

<Tape & Reel>

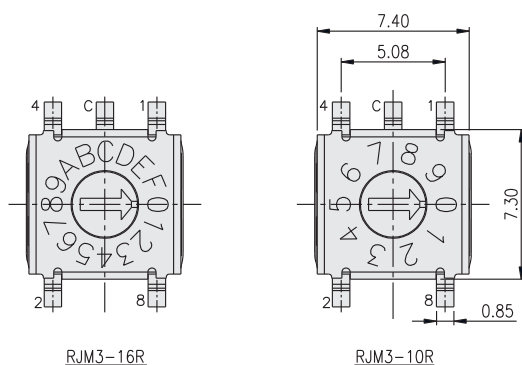
RJM3H: 650 pcs

RJM6H: 300 pcs

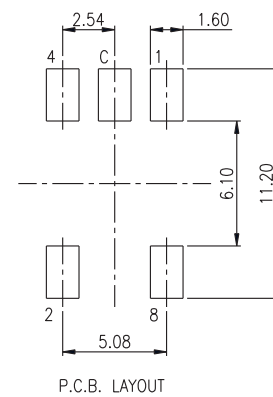
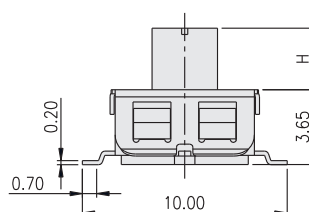
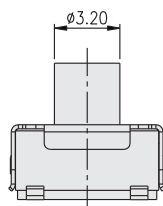
RJM3: 1200 pcs

RJM6: 950 pcs

RJM3

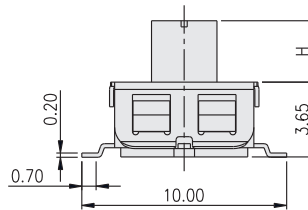
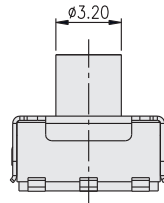
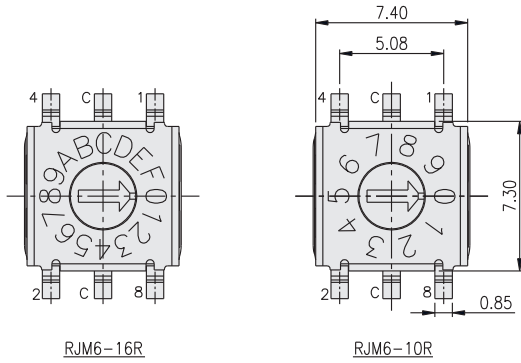


TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	○	●	●
	2	●	○	●	●
	3	○	○	●	●
	4	●	●	○	●
	5	○	●	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	○	●	●	○
	9	○	●	●	○
16R	A	●	○	●	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○

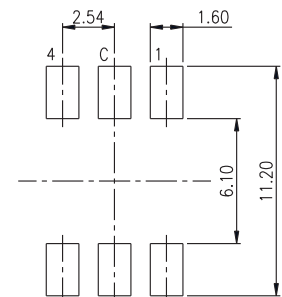


PART NO.	H
RJM3-10R	0
RJM3-16R	0
RJM3H-10R	3.00
RJM3H-16R	3.00

RJM6



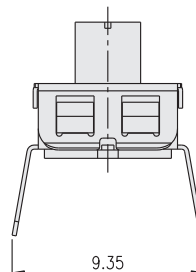
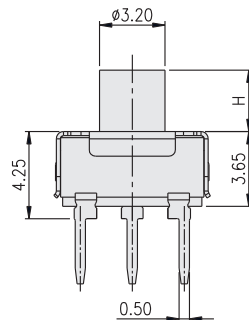
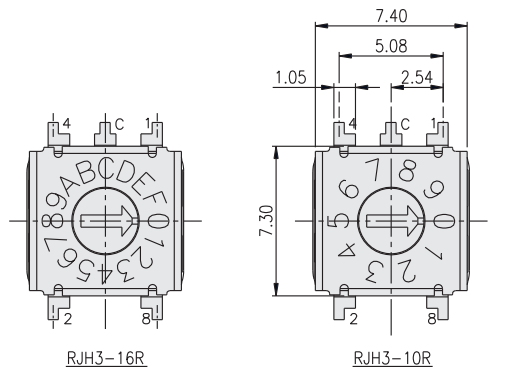
PART NO.	H
RJM6-10R	0
RJM6-16R	0
RJM6H-10R	3.00
RJM6H-16R	3.00



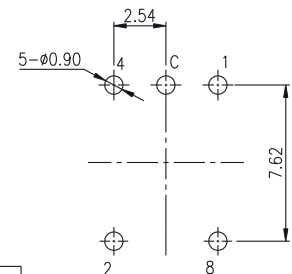
P.C.B. LAYOUT

TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	●	●	●
	2	●	○	●	●
	3	○	○	●	●
	4	●	●	○	●
	5	○	●	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	●	●	●	○
	9	○	●	●	○
16R	A	●	○	○	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○

RJH3

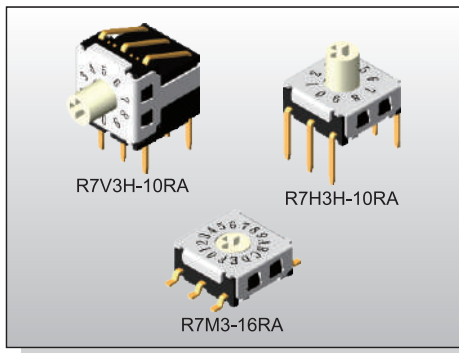


PART NO.	H
RJH3-10R	0
RJH3-16R	0
RJH3H-10R	3.00
RJH3H-16R	3.00



P.C.B. LAYOUT

TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	●	●	●
	2	●	○	●	●
	3	○	○	●	●
	4	●	●	○	●
	5	○	●	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	●	●	●	○
	9	○	●	●	○
16R	A	●	○	○	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○



FEATURES

- ※Vertical and right angle types
- ※Miniature size with stainless steel cover
- ※Low profile (3.0mm)

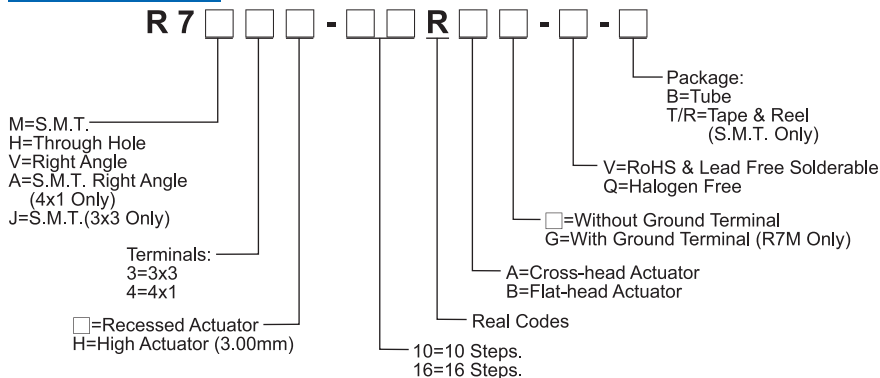
APPLICATION

- ※Instrumentation
- ※Industrial automation
- ※Building & Home automation

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	200gf-cm max.
Operating Life	10, 000 Steps
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

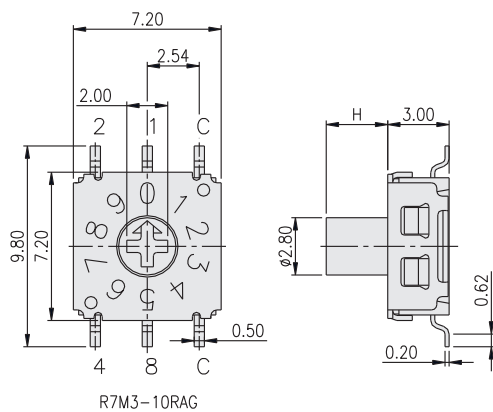
HOW TO ORDER



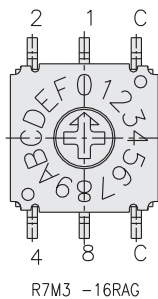
PACKAGE

<Tube>
R7H, R7M: 63 pcs
R7V: 60 pcs
R7A: 63 pcs
<Tape & Reel>
R7M*: 1450 pcs
R7M*H: 850 pcs
R7A: 750 pcs
R7A4H: 750 pcs
R7J: 1450 pcs

R7M3-10RAG



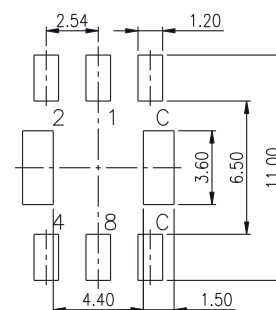
R7M3-10RAG



R7M3-16RAG

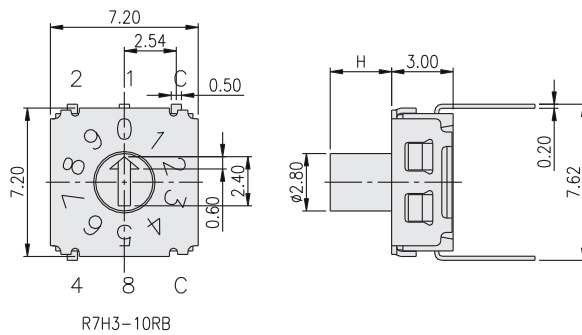
TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	●	●	●
	2	●	○	●	●
	3	○	○	●	●
	4	●	●	○	●
	5	○	●	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	●	●	●	○
	9	○	○	●	○
16R	A	●	○	●	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○

PART NO.	H
R7M3-10RAG	0
R7M3-16RAG	0
R7M3H-10RAG	3.00
R7M3H-16RAG	3.00

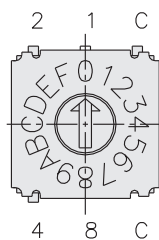


P.C.B. LAYOUT

R7H3



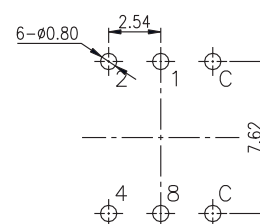
R7H3-10RB



R7H3-16RB

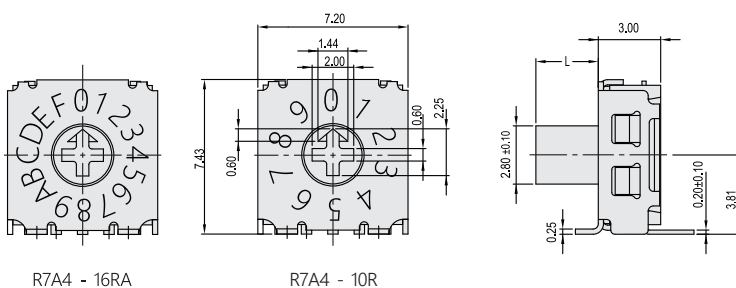
PART NO.	H
R7H3-10RB	0
R7H3-16RB	0
R7H3H-10RB	3.00
R7H3H-16RB	3.00

TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	○	○	○
	2	○	○	○	○
	3	○	○	○	○
	4	○	○	○	○
	5	○	○	○	○
	6	○	○	○	○
	7	○	○	○	○
	8	○	○	○	○
	9	○	○	○	○
16R	A	○	○	○	○
	B	○	○	○	○
	C	○	○	○	○
	D	○	○	○	○
	E	○	○	○	○
	F	○	○	○	○



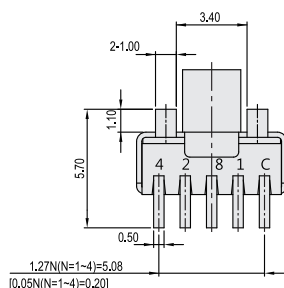
P.C.B. LAYOUT

R7A4



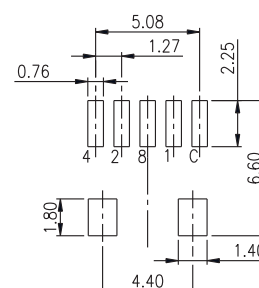
R7A4 - 16RA

R7A4 - 10R



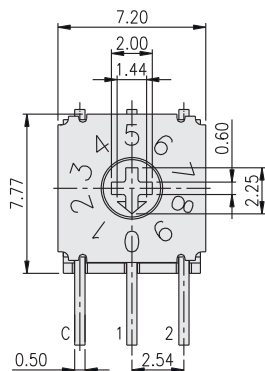
PART NO.	H
R7A4-10RA	0
R7A4-16RA	0
R7A4H-10RA	3.00
R7A4H-16RA	3.00

TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	○	○	○
	2	○	○	○	○
	3	○	○	○	○
	4	○	○	○	○
	5	○	○	○	○
	6	○	○	○	○
	7	○	○	○	○
	8	○	○	○	○
	9	○	○	○	○
16R	A	○	○	○	○
	B	○	○	○	○
	C	○	○	○	○
	D	○	○	○	○
	E	○	○	○	○
	F	○	○	○	○

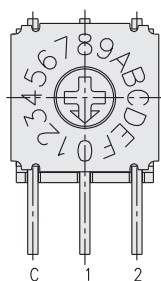
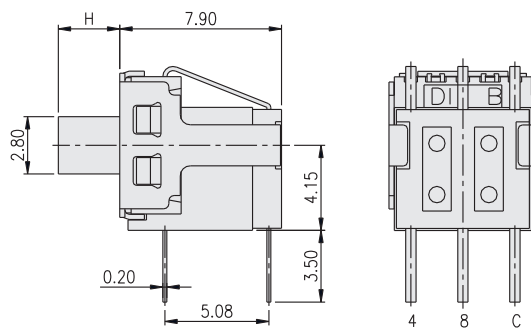


P.C.B. LAYOUT

R7V3



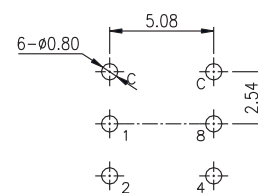
R7V3 -10RA



R7V3 -16RA

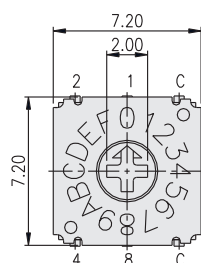
PART NO.	H
R7V3-10RA	0
R7V3-16RA	0
R7V3H-10RA	3.00
R7V3H-16RA	3.00

○ ON ● OFF					
TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	○	●	●
	2	●	○	●	●
	3	○	○	○	●
	4	●	●	○	●
	5	○	●	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	●	●	●	○
	9	○	●	●	○
16R	A	●	○	●	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	●	○	○
	E	●	○	○	○
	F	○	○	○	○

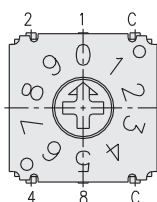
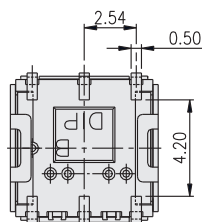
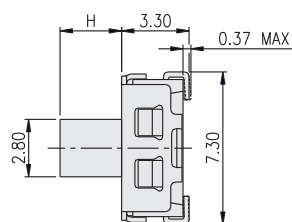


P.C.B. LAYOUT

R7J3



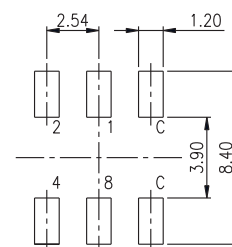
R7J3-16RA



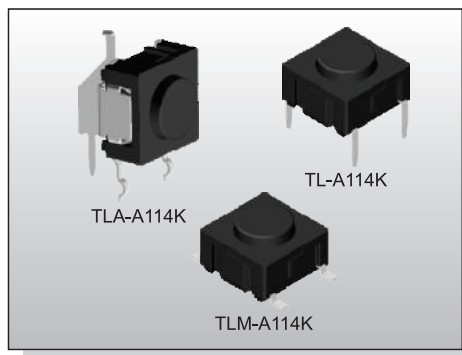
R7J3-10RA

PART NO.	H
R7J3-10RA	0
R7J3-16RA	0
R7J3H-10RA	3.00
R7J3H-16RA	3.00

○ ON ● OFF					
TYPE	POSITION	CODE			
		1	2	4	8
10R	0	●	●	●	●
	1	○	○	●	●
	2	●	○	●	●
	3	○	○	○	●
	4	●	●	○	●
	5	○	○	○	●
	6	●	○	○	●
	7	○	○	○	●
	8	●	●	●	○
	9	○	●	●	○
16R	A	●	○	●	○
	B	○	○	●	○
	C	●	●	○	○
	D	○	○	○	○
	E	●	○	○	○
	F	○	○	○	○



P.C.B. LAYOUT



FEATURES

- ※ Sealed
- ※ Long life of 10million
- ※ Variety of actuator lengths

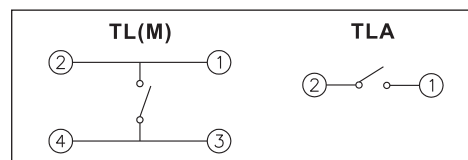
APPLICATION

- ※ Music instrument
- ※ Intercom system
- ※ Industrial

SPECIFICATION

Contact Rating	0.5~50mA, 24V DC
Contact Resistance	30mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	300±75gf
Travel	1mm
Operating Life	10,000, 000 cycles
Operating Temp.	-40°C ~ +160°C
Storage Temp.	-40°C ~ +160°C

CIRCUIT



PACKAGE

<Tube>

TL(A): 45 pcs

<Tape & Reel>

TLM: 650 pcs

HOW TO ORDER

TL ☐ - A 1 1 4 ☐ - Q - ☐

Solder Type:
☐=Through Hole
M=S.M.T.
A=Right Angle

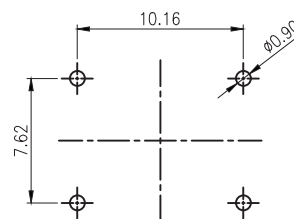
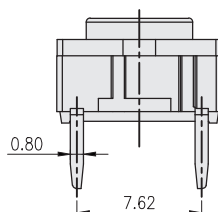
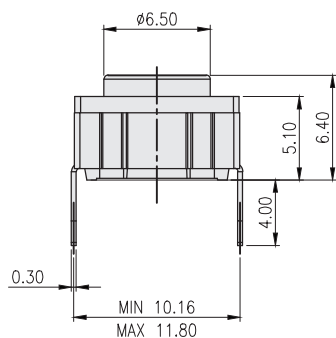
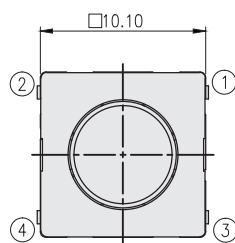
Package:
B=Tube
(For Through Hole Type)
T/R=Tape & Reel(For S.M.T. Type)

Halogen Free

Button Color:
Black & White

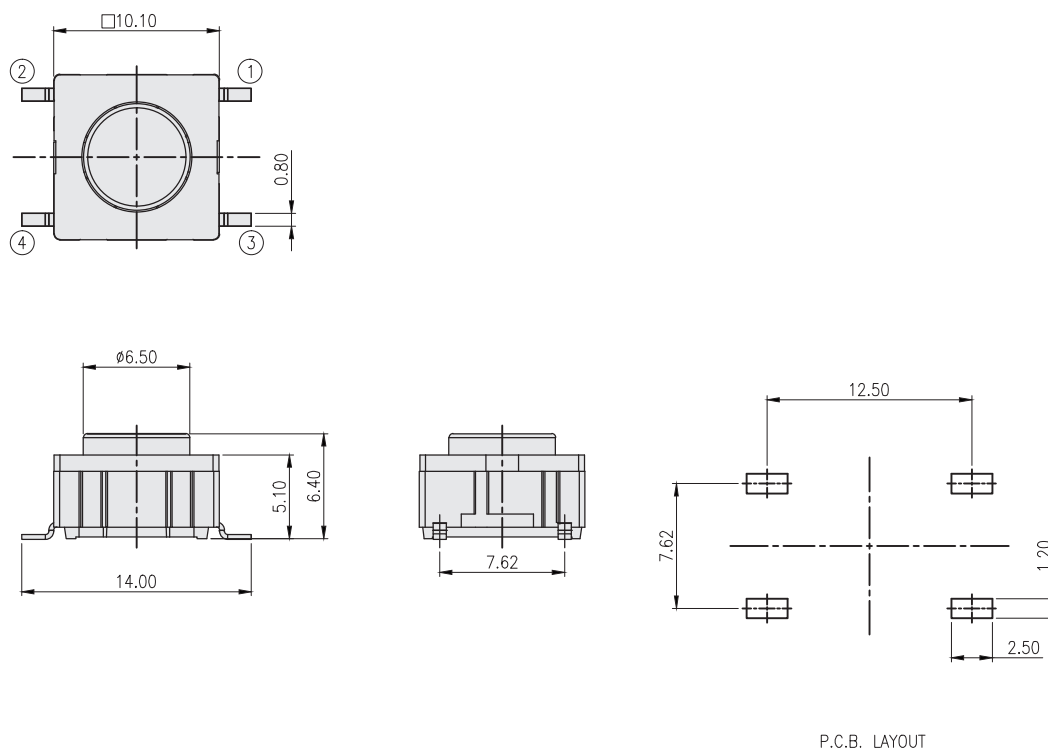
Operating Force:
300gf

TL-A114

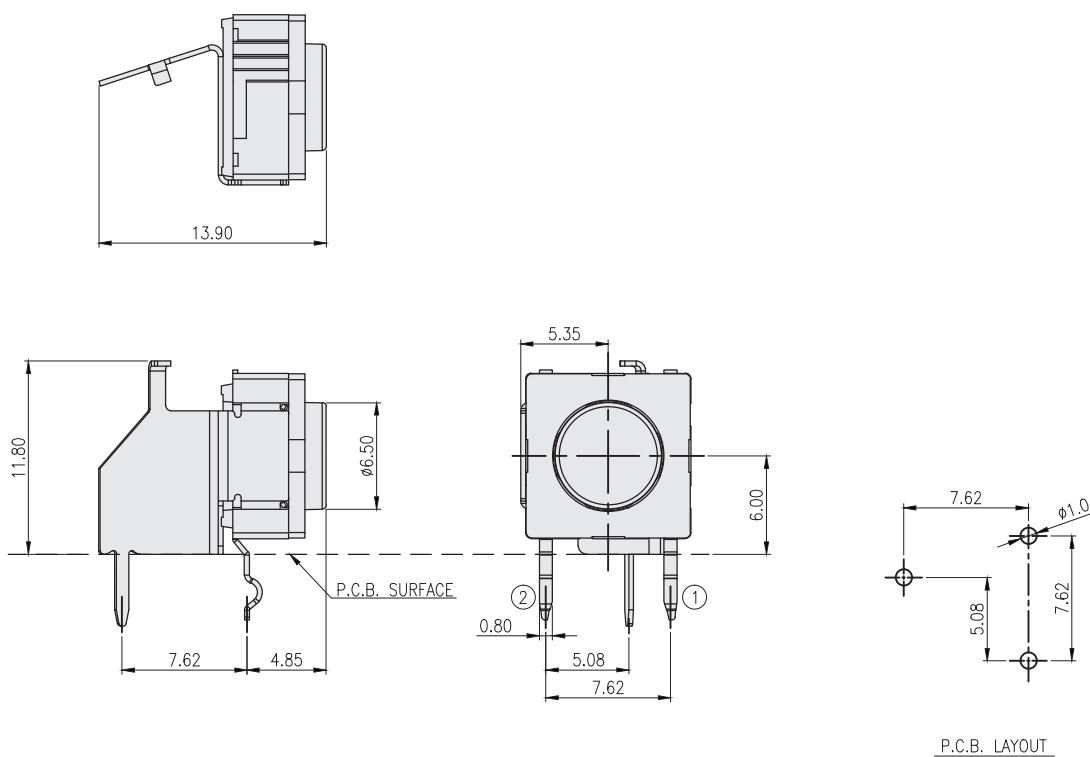


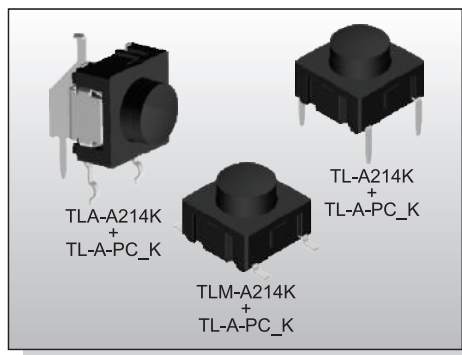
P.C.B. LAYOUT

TLM-A114



TLA-A114





FEATURES

- ※ Sealed
- ※ Long life of 10million
- ※ Variety of actuator lengths

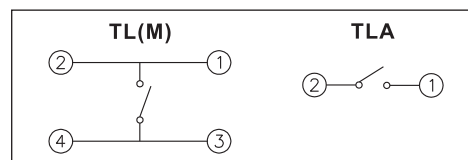
APPLICATION

- ※ Music instrument
- ※ Intercom system
- ※ Industrial

SPECIFICATION

Contact Rating	0.5~50mA, 24V DC
Contact Resistance	30mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	300±75gf
Travel	1mm
Operating Life	10,000, 000 cycles
Operating Temp.	-40°C ~ +160°C
Storage Temp.	-40°C ~ +160°C

CIRCUIT



PACKAGE

<Tube>

TL(A): 45 pcs

<Tape & Reel>

TLM: 650 pcs

HOW TO ORDER

TL ☐ - A 2 1 4 K - Q - ☐ + TL - A - PC ☐ K

☐ = Through Hole
M = S.M.T.
A = Right Angle

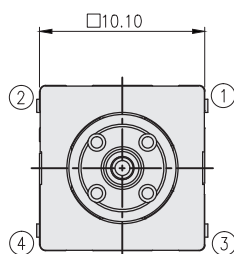
Package:
B = Tube
(For Through Hole Type)
T/R = Tape & Reel (For S.M.T. Type)

Halogen Free

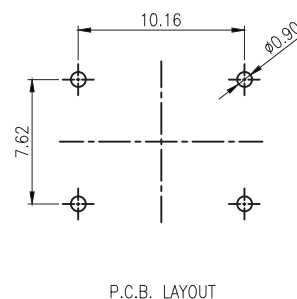
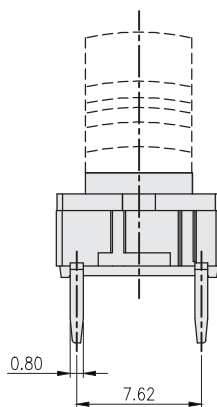
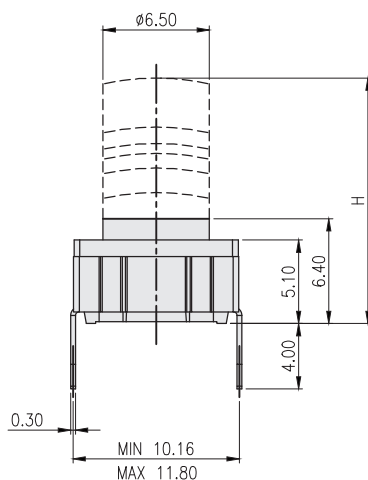
Button Color:
Black

Operating Force:
300gf

TL-A214K+TL-A-PC☐K

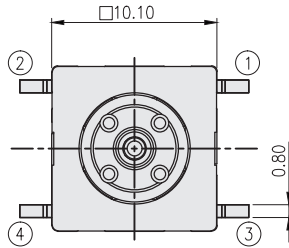


PART NO.	H
TL-A214K-Q-B+TL-A-PC1K	8.00
TL-A214K-Q-B+TL-A-PC2K	9.50
TL-A214K-Q-B+TL-A-PC3K	10.40
TL-A214K-Q-B+TL-A-PC4K	11.00
TL-A214K-Q-B+TL-A-PC5K	12.00
TL-A214K-Q-B+TL-A-PC6K	15.00

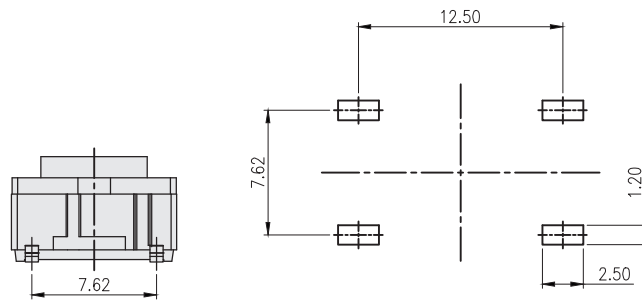
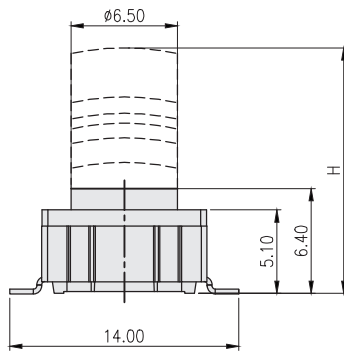


P.C.B. LAYOUT

TLM-A214K+TL-A-PC□K

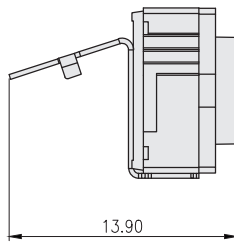


PART NO.	H
TLM-A214K-Q-B+TL-A-PC1K	8.00
TLM-A214K-Q-B+TL-A-PC2K	9.50
TLM-A214K-Q-B+TL-A-PC3K	10.40
TLM-A214K-Q-B+TL-A-PC4K	11.00
TLM-A214K-Q-B+TL-A-PC5K	12.00
TLM-A214K-Q-B+TL-A-PC6K	15.00

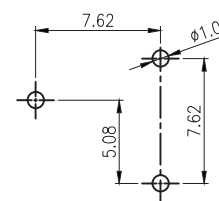
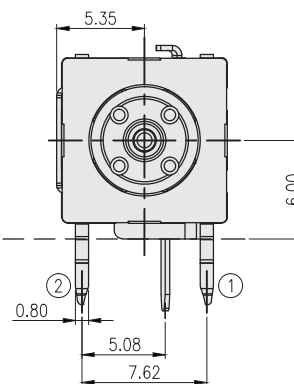
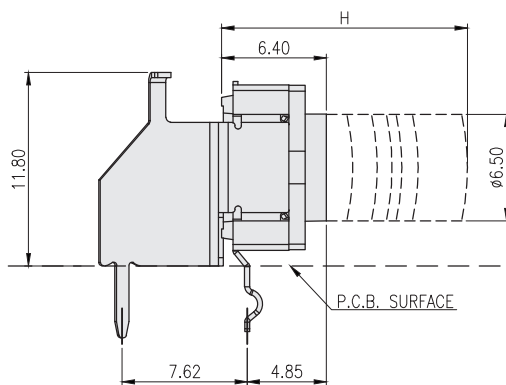


P.C.B. LAYOUT

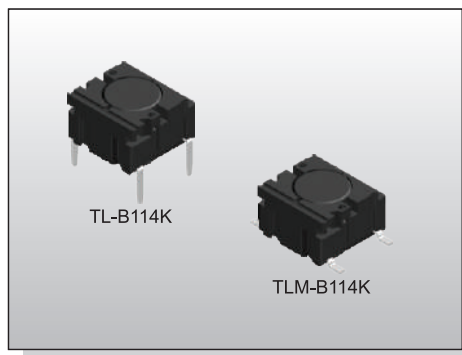
TLA-A214K+TL-A-PC□K



PART NO.	H
TLA-A214K-Q-B+TL-A-PC1K	8.00
TLA-A214K-Q-B+TL-A-PC2K	9.50
TLA-A214K-Q-B+TL-A-PC3K	10.40
TLA-A214K-Q-B+TL-A-PC4K	11.00
TLA-A214K-Q-B+TL-A-PC5K	12.00
TLA-A214K-Q-B+TL-A-PC6K	15.00



P.C.B. LAYOUT



FEATURES

- ※ Sealed
- ※ Long life of 10million
- ※ Variety of actuator lengths

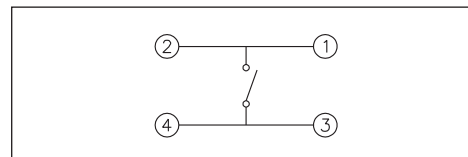
APPLICATION

- ※ Music instrument
- ※ Intercom system
- ※ Industrial

SPECIFICATION

Contact Rating	0.5~50mA, 24V DC
Contact Resistance	30mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	300±75gf
Travel	1mm
Operating Life	10,000, 000 cycles
Operating Temp.	-40°C ~ +160°C
Storage Temp.	-40°C ~ +160°C

CIRCUIT



PACKAGE

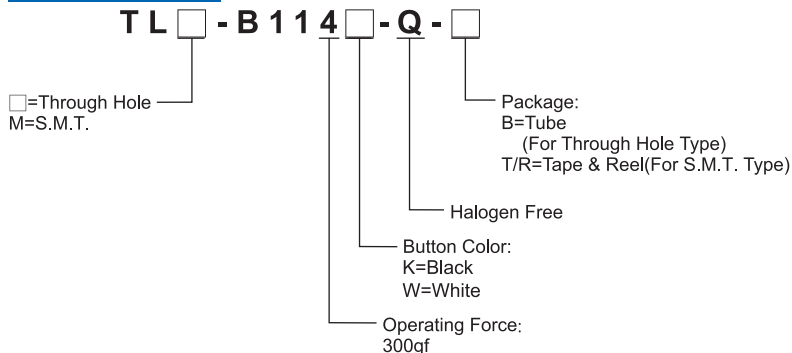
<Tube>

TL: 45 pcs

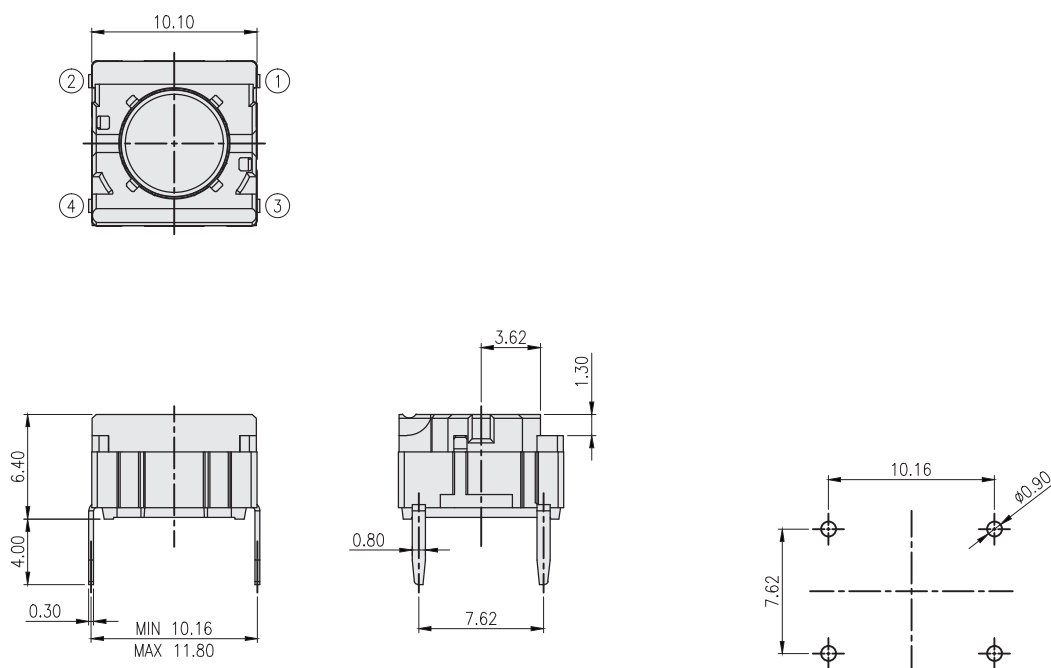
<Tape & Reel>

TLM: 650 pcs

HOW TO ORDER

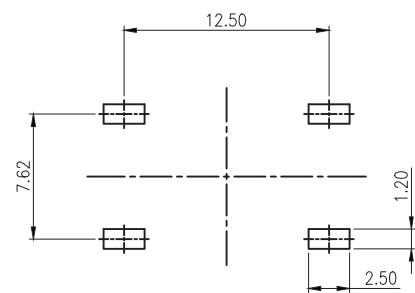
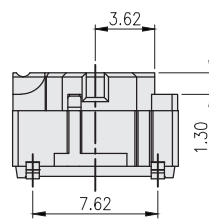
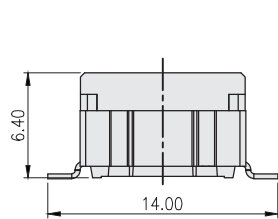
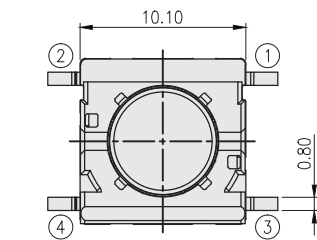


TL-B114

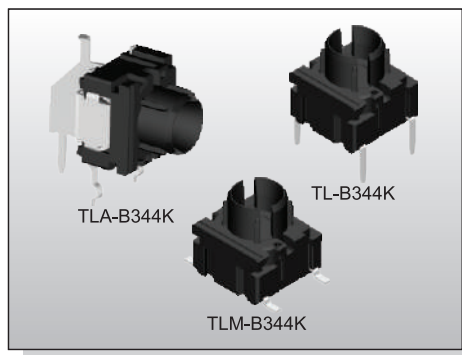


P.C.B. LAYOUT

TLM-B114



P.C.B. LAYOUT



FEATURES

- ※ Sealed
- ※ Long life of 10million
- ※ Variety of actuator lengths

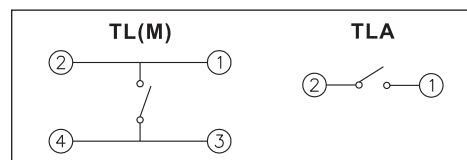
APPLICATION

- ※ Music instrument
- ※ Intercom system
- ※ Industrial

SPECIFICATION

Contact Rating	0.5~50mA, 24V DC
Contact Resistance	30mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	300±75gf
Travel	1mm
Operating Life	10,000, 000 cycles
Operating Temp.	-40°C ~ +160°C
Storage Temp.	-40°C ~ +160°C

CIRCUIT



PACKAGE

<Tube>

TL(A): 45 pcs

<Tape & Reel>

TLM: 300 pcs

HOW TO ORDER

TL - B 3 4 4 K - Q -

 = Through Hole
M = S.M.T.
A = Right Angle

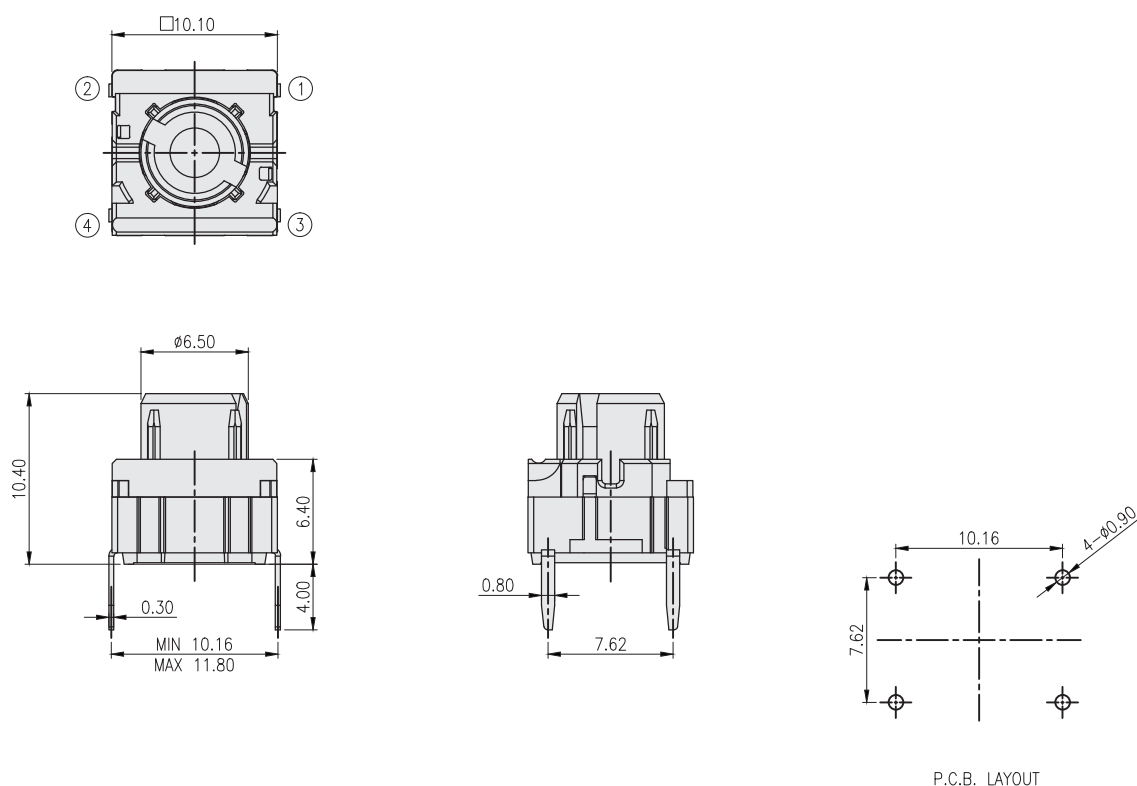
Package:
B = Tube
(For Through Hole Type)
T/R = Tape & Reel (For S.M.T. Type)

Halogen Free

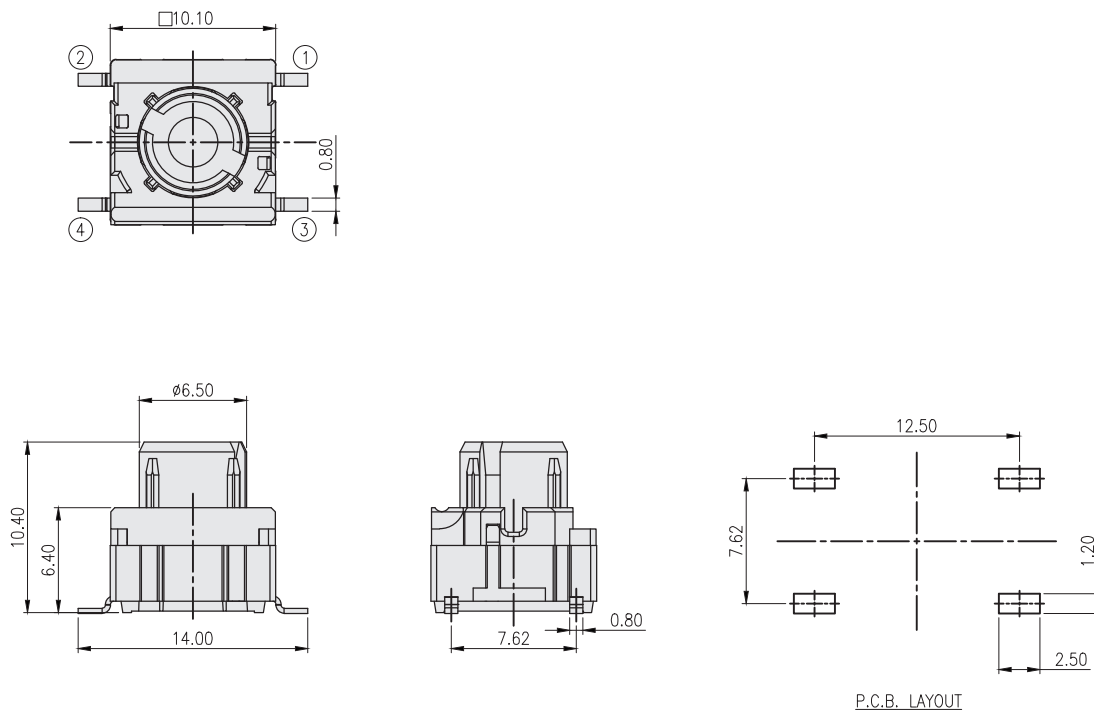
Button Color:
Black

Operating Force:
300gf

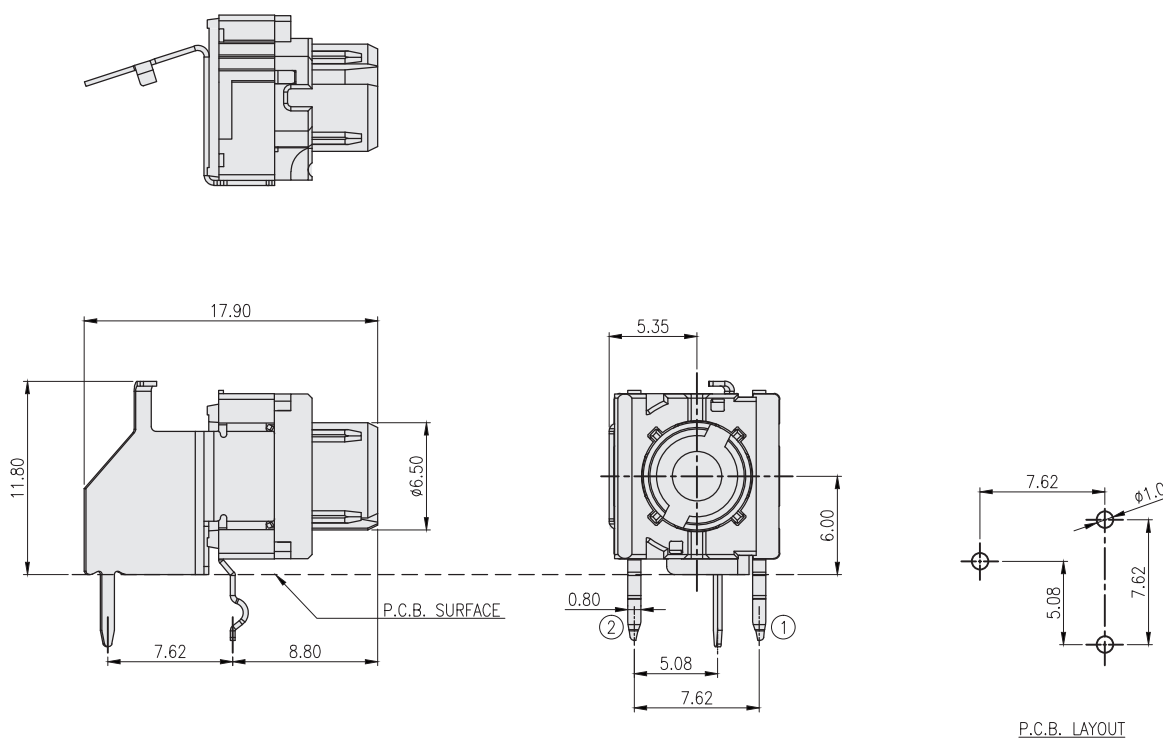
TL-B344K

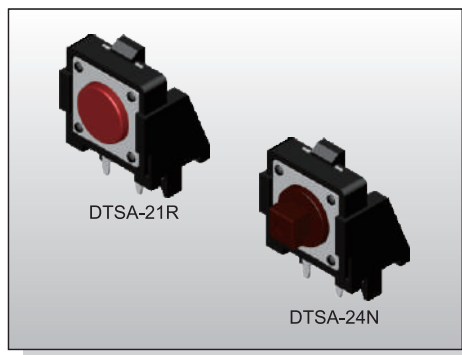


TLM-B344K



TLA-B344K





FEATURES

- ※High reliable metal contacts
- ※Vertical operating available
- ※Cap options

APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Industrial

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.35mm
Operating Life	Phosphor Bronze Dome 100,000 cycles for 520/320/260gf 200,000 cycles for 160gf Stainless Steel Dome 300,000 cycles for 520/320gf 500,000 cycles for 260gf 1,000,000 cycles for 160gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

DTSA-2□□-□-V

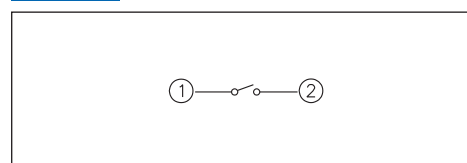
Dimension H:
1=3.65mm
4=6.45(SQ.)x3.8mm
5=7.85mm

RoHS & Lead Free Solderable

□=Phosphor Bronze Dome
S=Stainless Steel Dome

Operating Force:
N=Brown, 160gf
R=Red, 260gf
S=Salmon, 320gf
Y=Yellow, 520gf

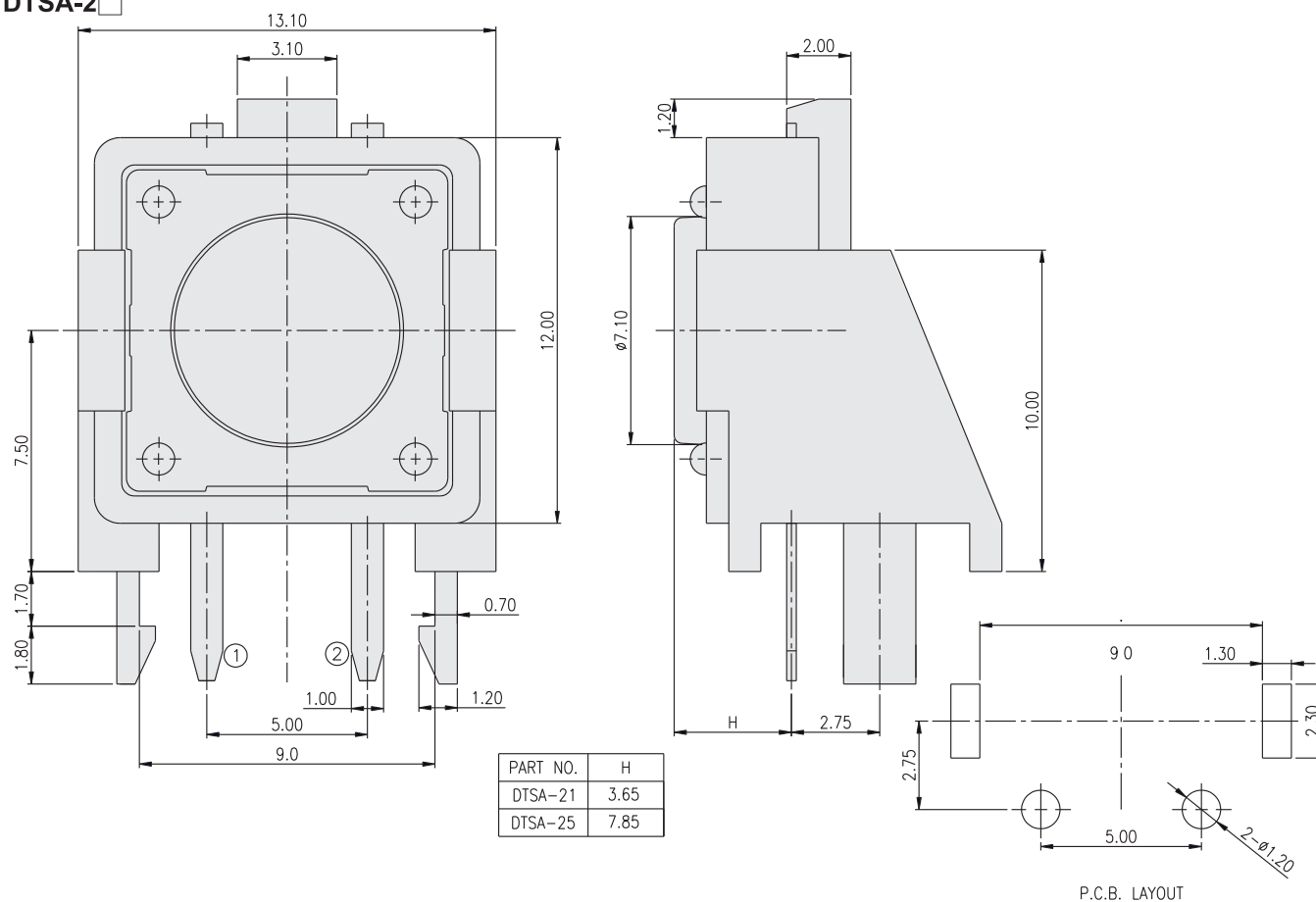
CIRCUIT



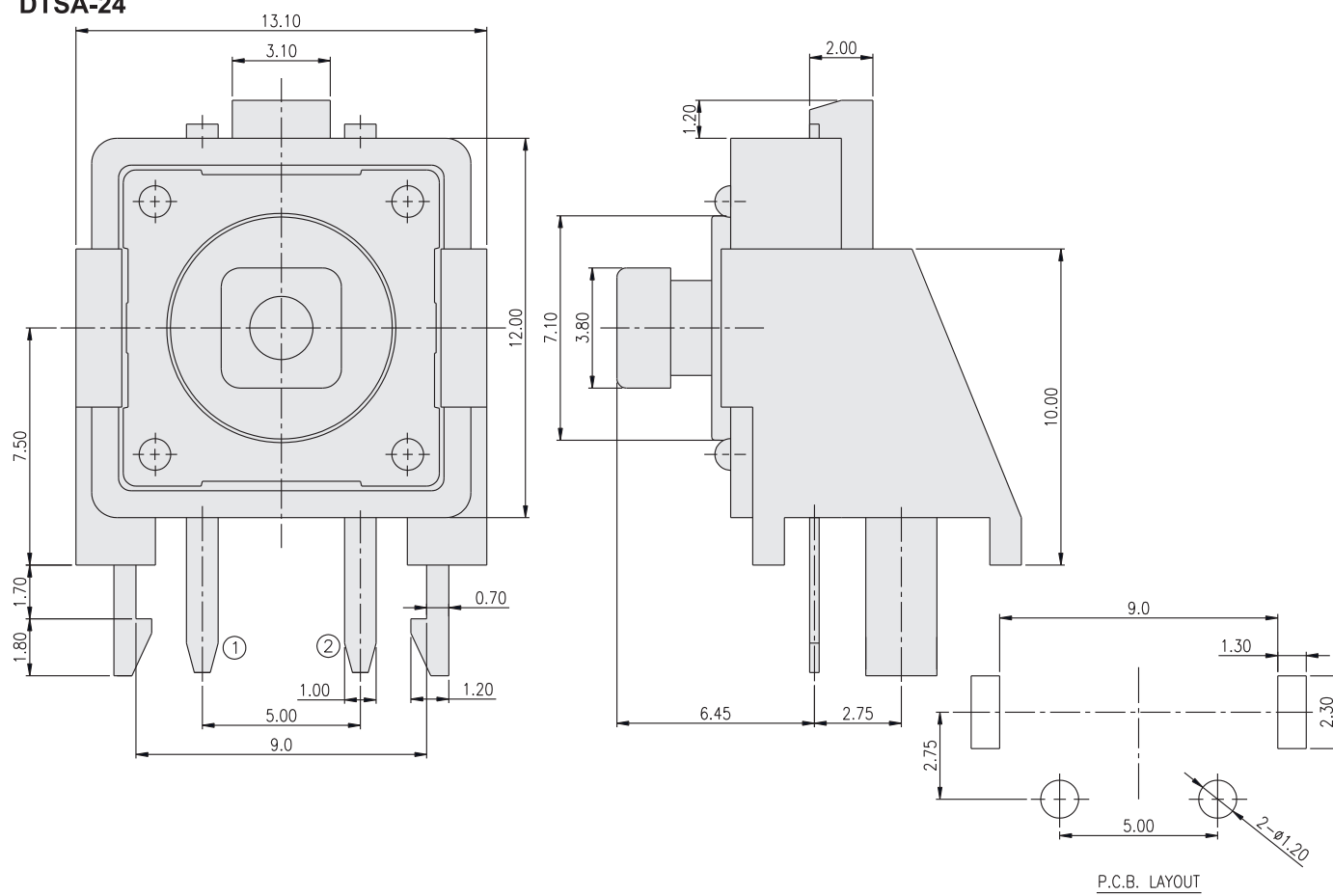
PACKAGE

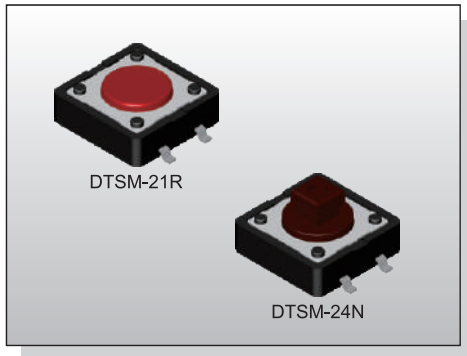
<Bag>
250 pcs

DTSA-2□



DTSA-24





FEATURES

- ※High reliable metal contacts
- ※Reflow solderable
- ※Cap options

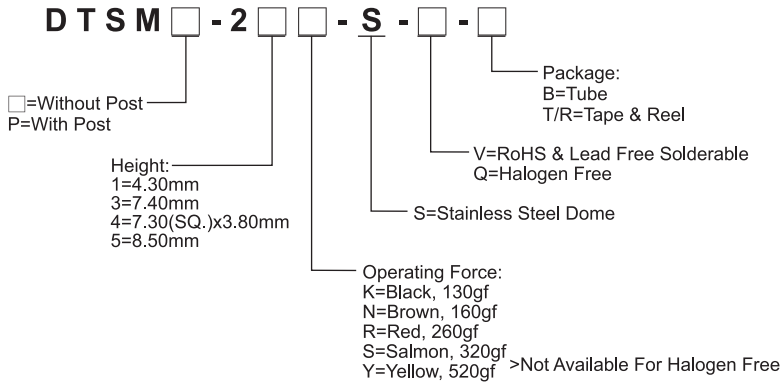
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Industrial

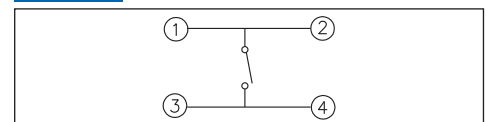
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	130±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.35mm
Operating Life	Phosphor Bronze Dome 100,000 cycles for 520/320/260gf 200,000 cycles for 160gf Stainless Steel Dome 300,000 cycles for 520/320gf 500,000 cycles for 260gf 1,000,000 cycles for 160gf 10,000,000 cycles for 130gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



PACKAGE

<Tube>

DTSM-2: 40 pcs

<Tape & Reel>

DTSM-21: 700 pcs

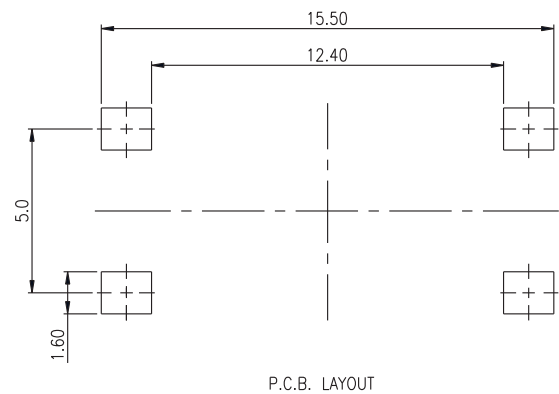
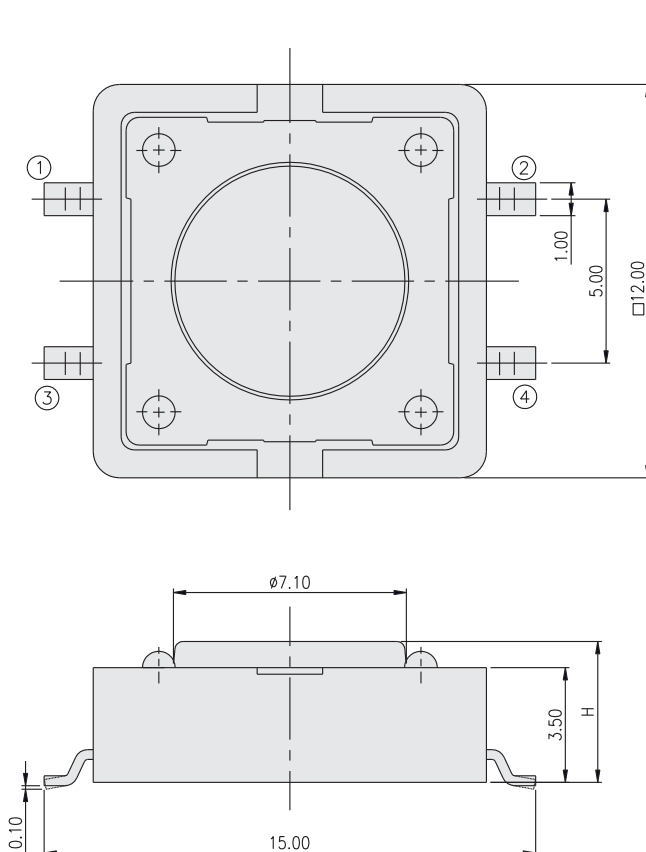
DTSM(P)-23, 24: 500 pcs

DTSM(P)-25: 400 pcs

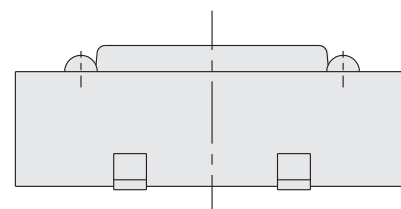
<Bag>

DTSM-21: 500 pcs

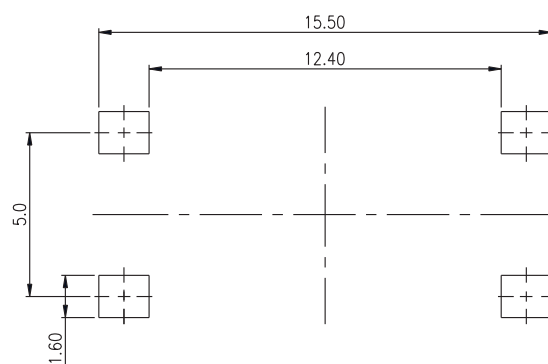
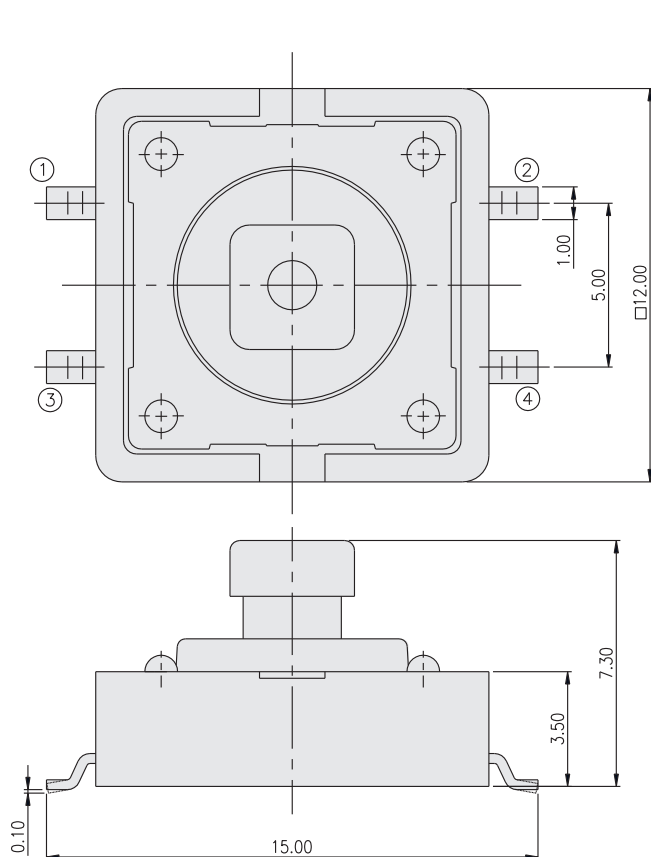
DTSM-2



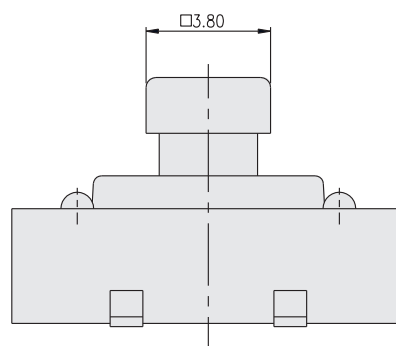
PART NO.	H
DTSM-21	4.30
DTSM-23	7.40
DTSM-25	8.50



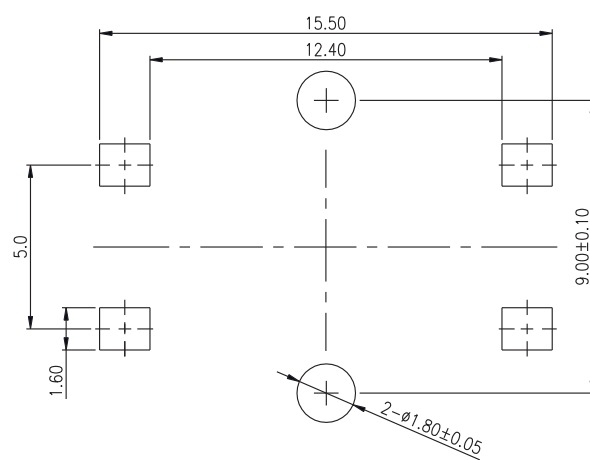
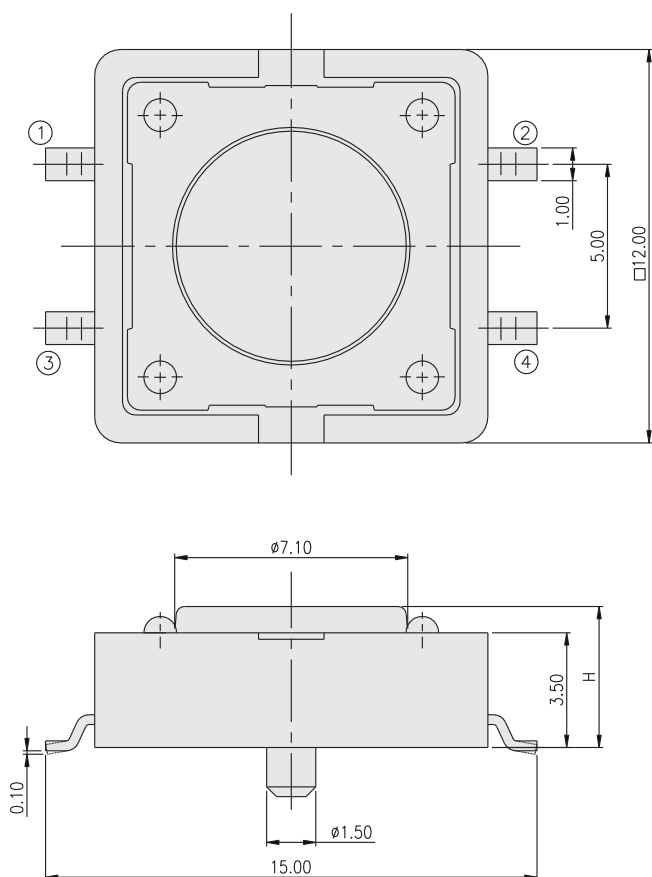
DTSM-24



P.C.B. LAYOUT

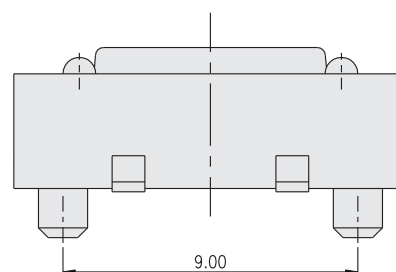


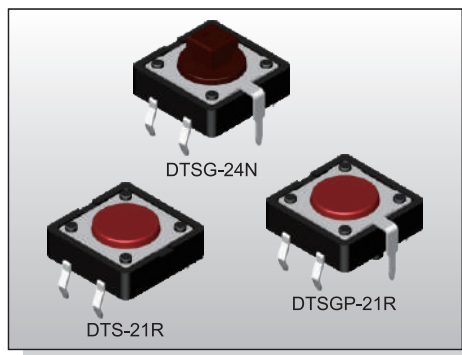
DTSMP-2



P.C.B. LAYOUT

PART NO.	H
DTSMP-21	4.30
DTSMP-23	7.40
DTSMP-25	8.50





FEATURES

- ※Snap in type with ground pin
- ※Guide bosses available
- ※Cap options

APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Industrial

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	130±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.35mm
Operating Life	Phosphor Bronze Dome 100,000 cycles for 520/320/260gf 200,000 cycles for 160gf Stainless Steel Dome 300,000 cycles for 520/320gf 500,000 cycles for 260gf 1,000,000 cycles for 160gf 10,000,000 cycles for 130gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

D T S ☐ ☐ - 2 ☐ ☐ - ☐ - ☐ - ☐

☐=Without Ground Pin
G=With Ground Pin

☐=Without Post
P=With Post

Package:
☐=Bulk pack
B=Tube (DTS-2 Only)

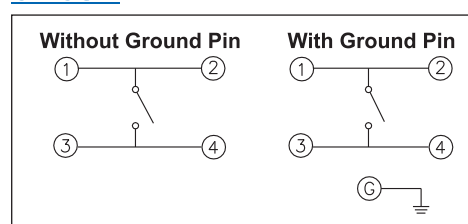
V=RoHS & Lead Free Solderable
Q=Halogen Free

☐=Phosphor Bronze Dome(Except 130gf)
S=Stainless Steel Dome

Dimension H:
1=4.30mm
3=7.40mm
4=7.30(SQ.)x3.80mm
5=8.50mm

Operating Force:
K=Black, 130g
N=Brown, 160gf
R=Red, 260gf
S=Salmon, 320gf
Y=Yellow, 520gf

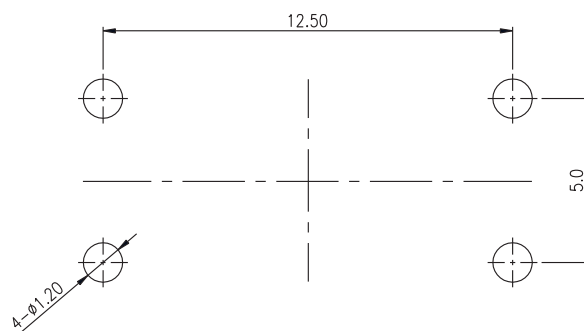
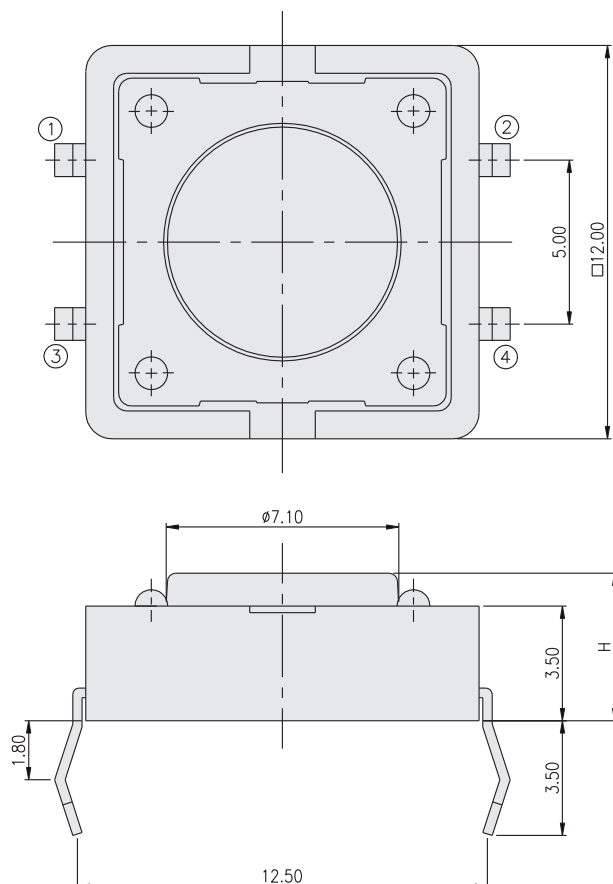
CIRCUIT



PACKAGE

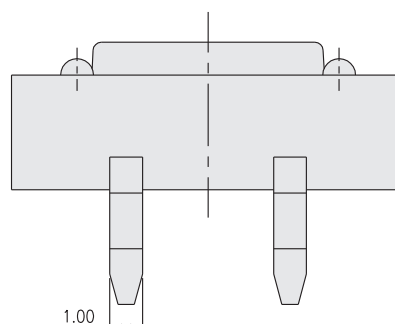
<Bag> <Tube>
500 pcs DTS-2: 40 pcs

DTS-2

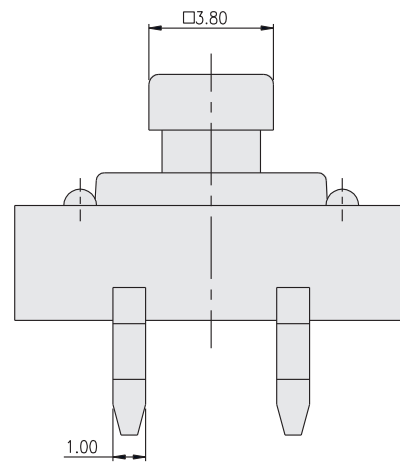
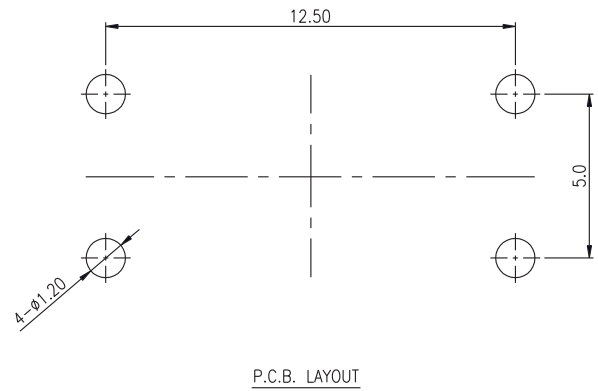
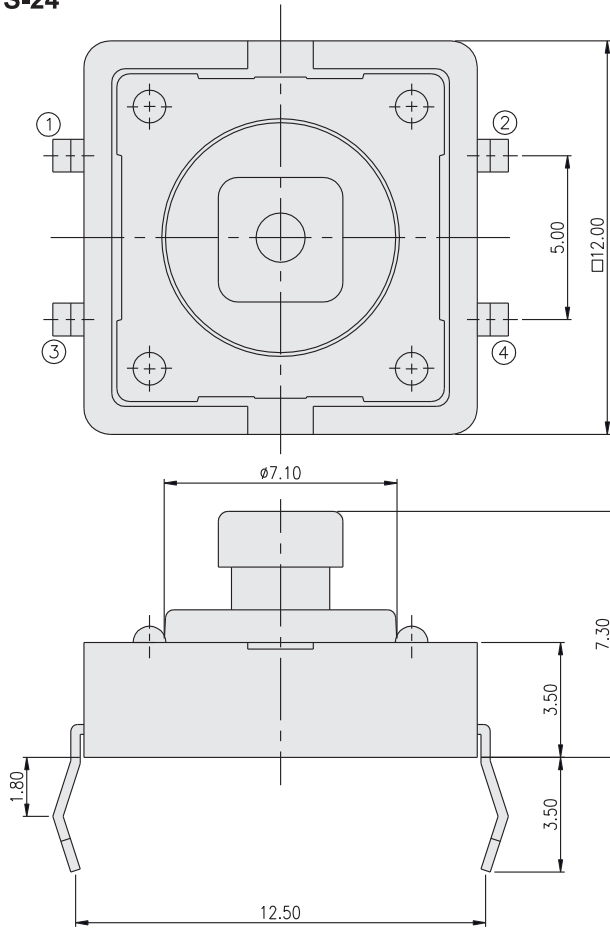


P.C.B. LAYOUT

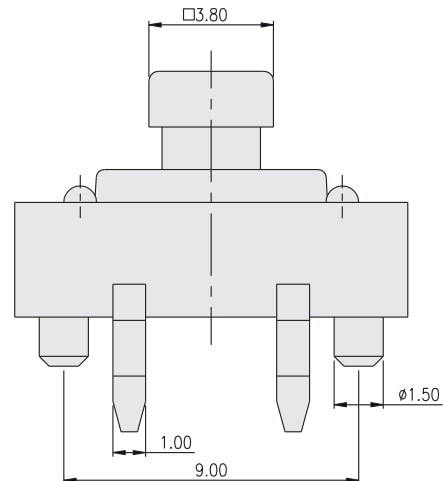
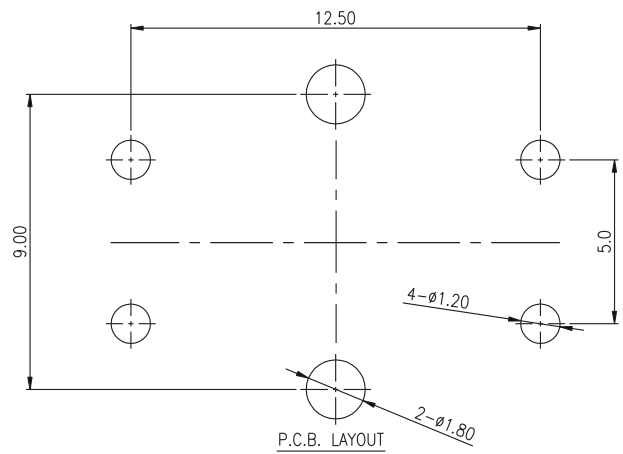
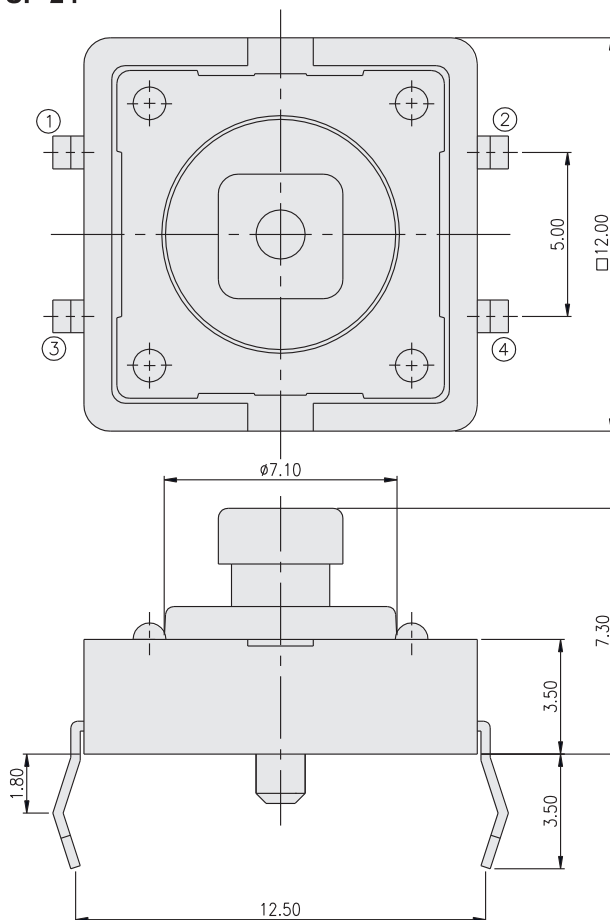
PART NO.	H
DTS-21	4.30
DTS-23	7.40
DTS-25	8.50



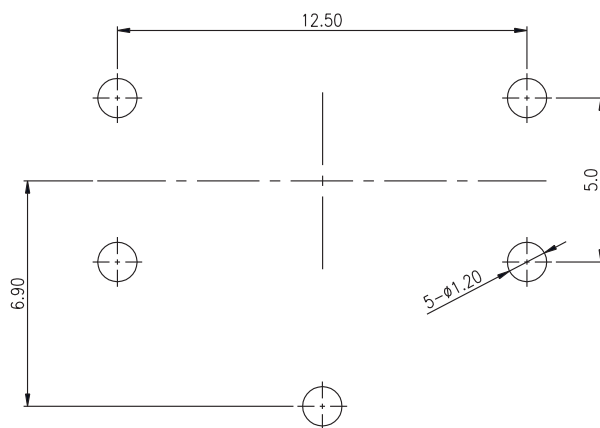
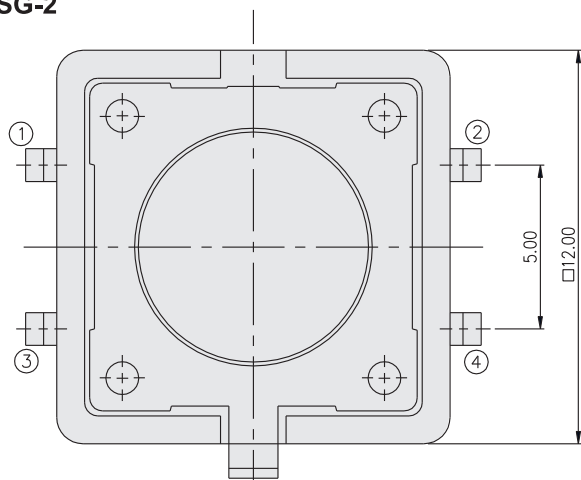
DTS-24



DTSP-24

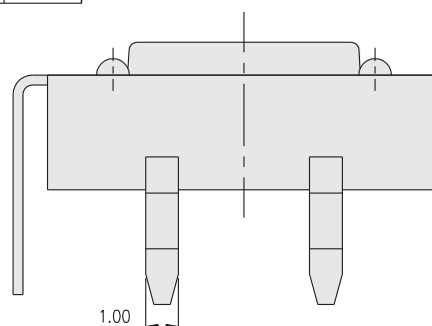
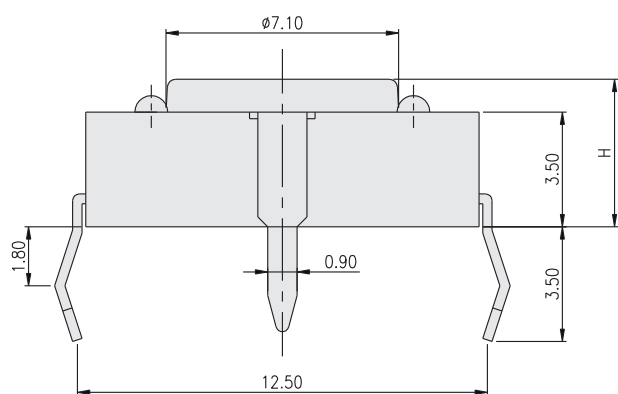


DTSG-2



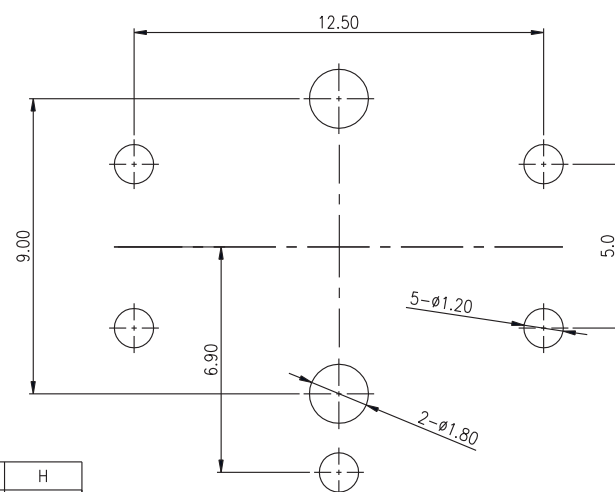
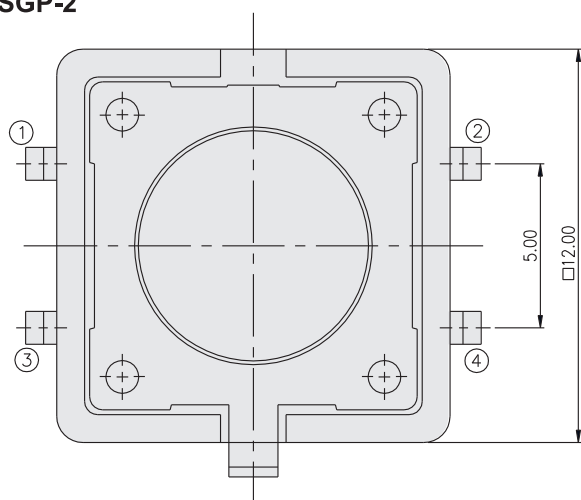
P.C.B. LAYOUT

PART NO.	H
DTSG-21	4.30
DTSG-23	7.40
DTSG-25	8.50



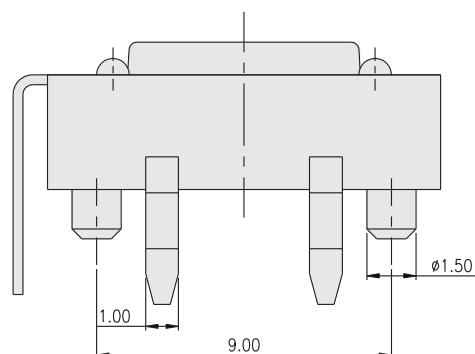
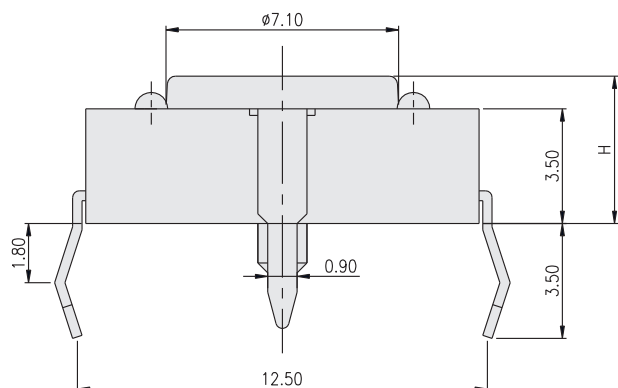
TACT SWITCH

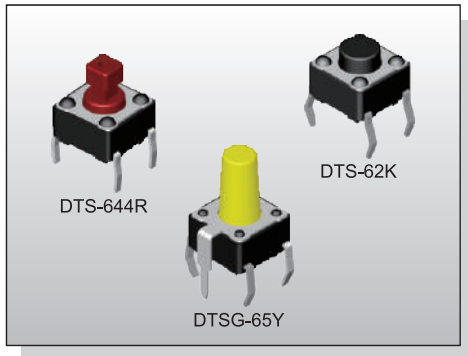
DTSGP-2



P.C.B. LAYOUT

PART NO.	H
DTSGP-21	4.30
DTSGP-23	7.40
DTSGP-25	8.50





FEATURES

- ※ Compact size 6x6mm
- ※ Sharp tactile feeling
- ※ Cap options

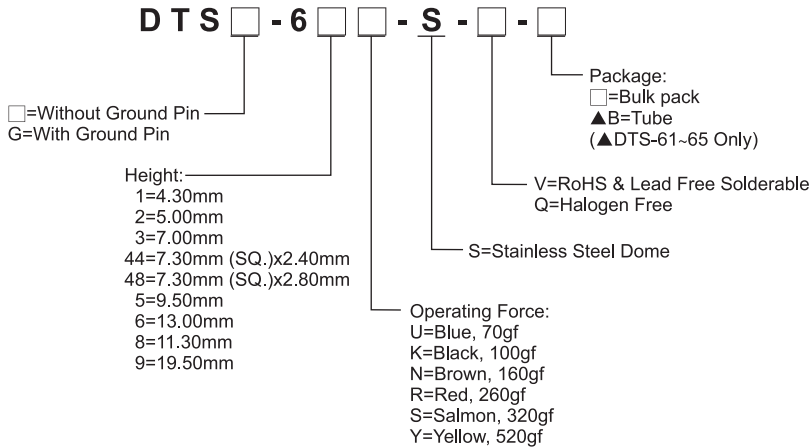
APPLICATION

- ※ Audio, OA equipment
- ※ Instrumentation
- ※ Industrial

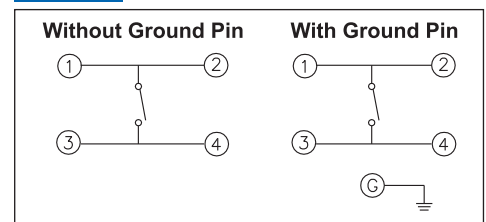
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	70±30gf, Blue(U) 100±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.25mm
Operating Life	300,000 cycles for 520/320gf 500,000 cycles for 260gf 1,000,000 cycles for 160/100/70gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



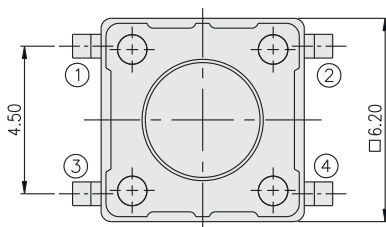
CIRCUIT



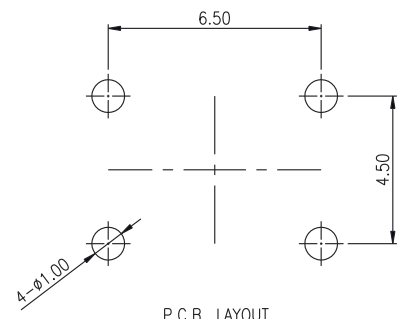
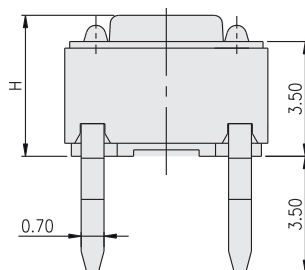
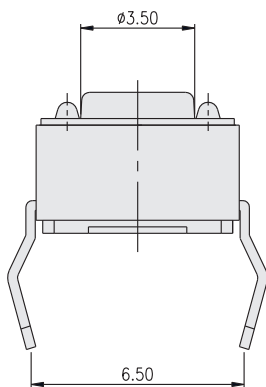
PACKAGE

<Bag>
1000 pcs
<Tube>
DTS-61~65: 75 pcs

DTS-6

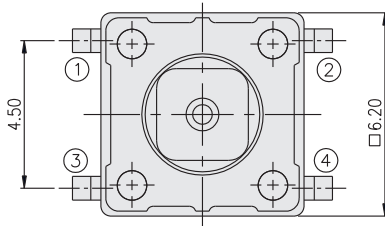


PART NO.	H
DTS-61	4.30
DTS-62	5.00
DTS-63	7.00
DTS-65	9.50
DTS-66	13.00
DTS-68	11.30
DTS-69	19.50

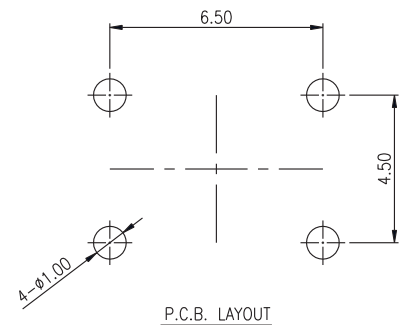
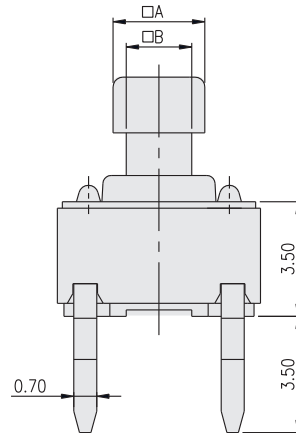
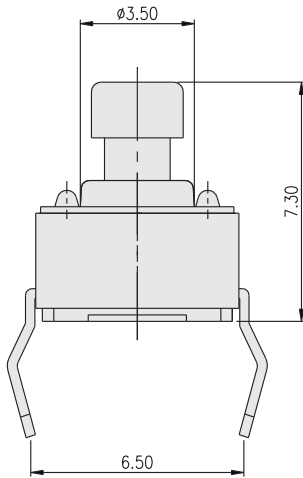


P.C.B. LAYOUT

DTS-644(8)

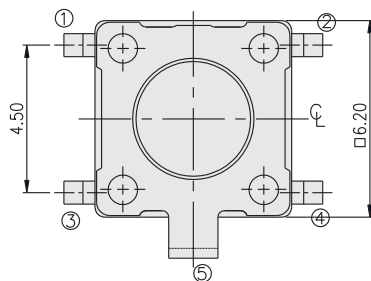


PART NO.	□A	□B
DTS-644	2.40	1.60
DTS-648	2.80	2.00

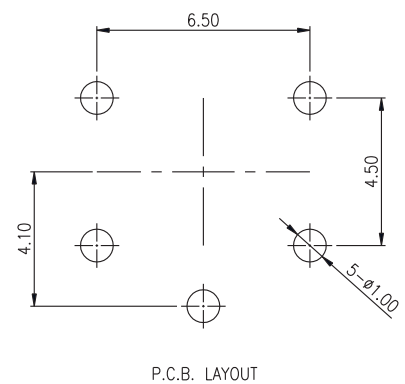
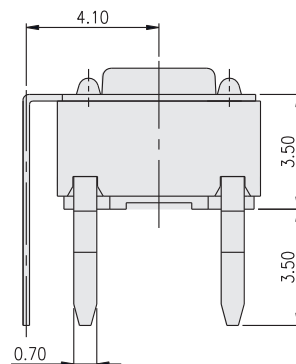
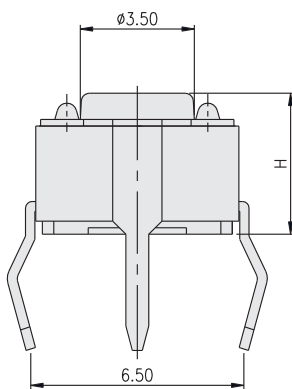


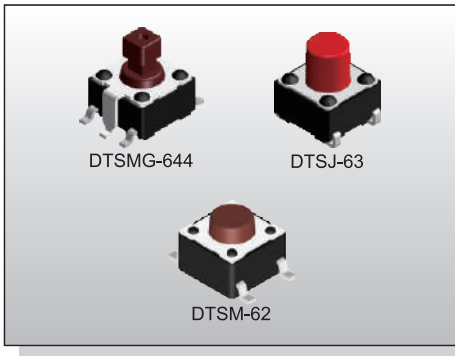
TACT SWITCH

DTSG-6



PART NO.	H
DTSG-61	4.30
DTSG-62	5.00
DTSG-63	7.00
DTSG-65	9.50
DTSG-66	13.00
DTSG-68	11.30
DTSG-69	19.50





FEATURES

- ※6x6mm, surface mounting type
- ※Optional ground pin
- ※Reflow solderable

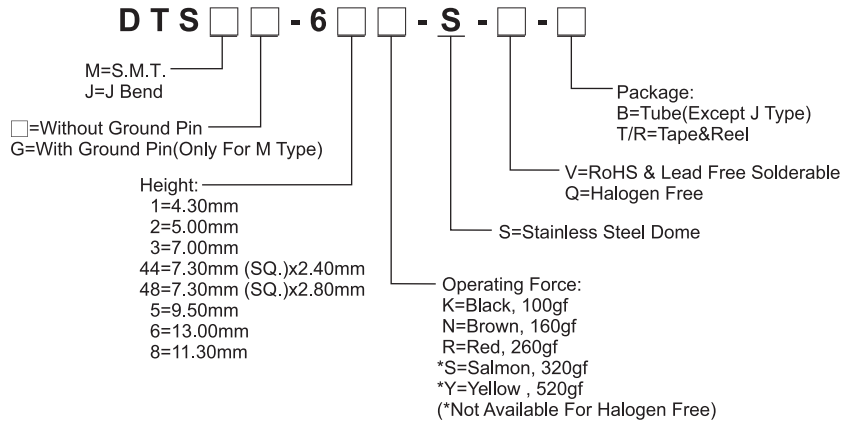
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation, Communication
- ※White goods

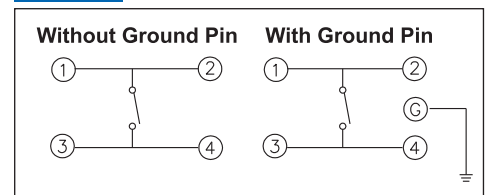
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.25mm
Operating Life	300,000 cycles for 520/320gf 500,000 cycles for 260gf 1,000,000 cycles for 160/100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



PACKAGE

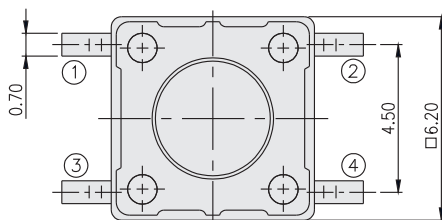
<Tube>

77 pcs

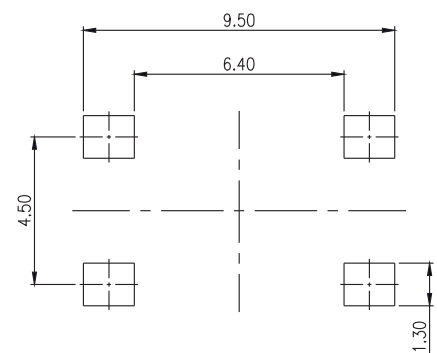
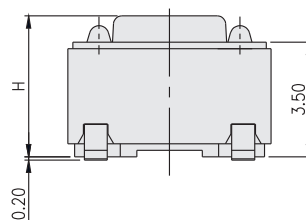
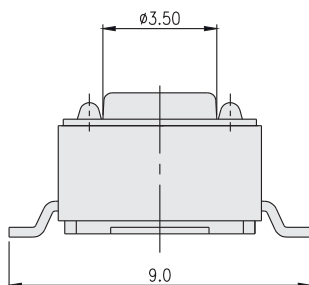
<Tape & Reel>

DTSM(G)(J)-61 / DTSMG-62:1000 pcs
DTS(M)(J)-62:900 pcs DTSM(G)(J)-63, 64:700 pcs
DTSJ-65:400 pcs DTS(M)(J)-66:200 pcs
DTSM(G)-65:380 pcs DTSM-68:300 pcs

DTSM-6

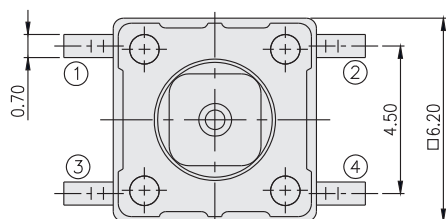


PART NO.	H
DTSM-61	4.30
DTSM-62	5.00
DTSM-63	7.00
DTSM-65	9.50
DTSM-66	13.00
DTSM-68	11.30

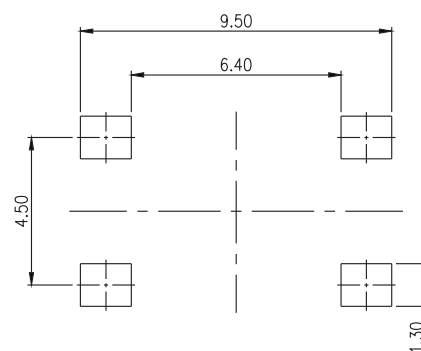
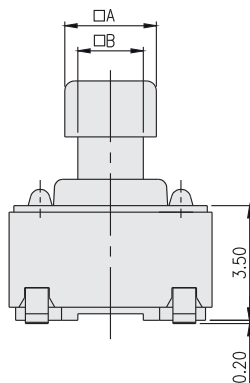
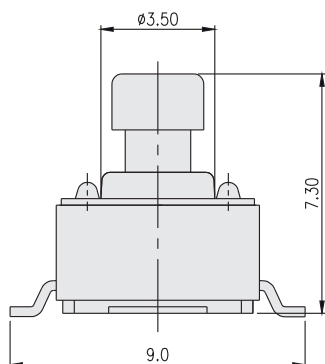


P.C.B. LAYOUT

DTSM-644(8)



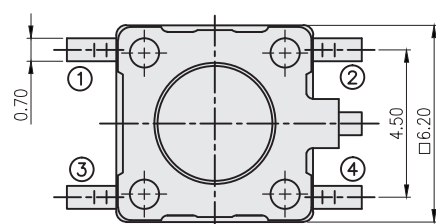
PART NO.	□A	□B
DTSM-644	2.40	1.60
DTSM-648	2.80	2.00



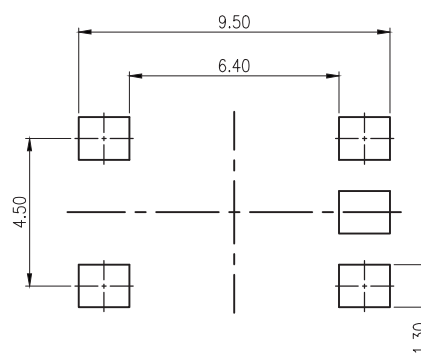
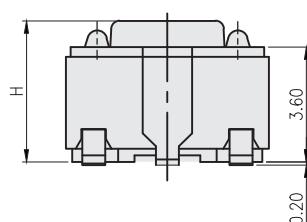
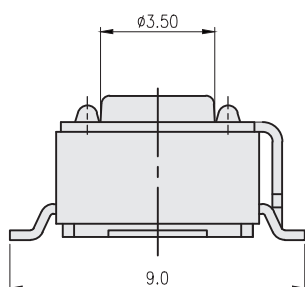
P.C.B. LAYOUT

TACT SWITCH

DTSMG-6

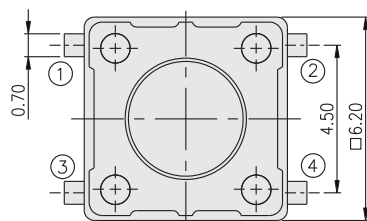


PART NO.	H
DTSMG-61	4.30
DTSMG-62	5.00
DTSMG-63	7.00
DTSMG-65	9.50
DTSMG-66	13.00
DTSMG-68	11.30

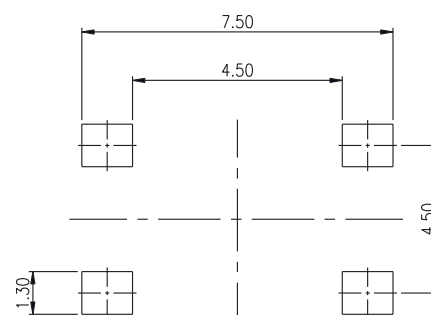
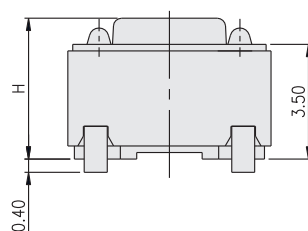
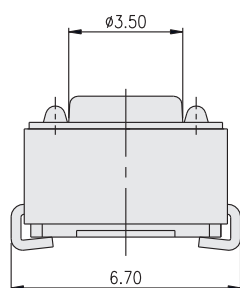


P.C.B. LAYOUT

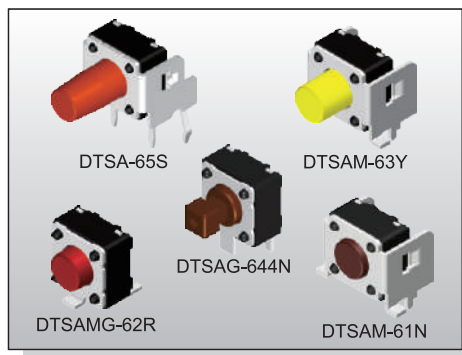
DTSJ-6



PART NO.	H
DTSJ-61	4.30
DTSJ-62	5.00
DTSJ-63	7.00
DTSJ-65	9.50
DTSJ-66	13.00
DTSJ-68	11.30



P.C.B. LAYOUT



FEATURES

- ※Variety of actuator lengths
- ※Optional ground pin
- ※Cap options

APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Set-top box

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.25mm
Operating Life	300,000 cycles for 520/320gf 500,000 cycles for 260gf 1,000,000 cycles for 160/100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

D T S ☐ - **6** ☐ - **S** - ☐ - ☐

A=Right Angle
AM=Right Angle & S.M.T.
AG=Right Angle & Ground Pin
AMG=S.M.T. & Ground Pin
(Halogen Free Only)

Dimension H: _____
*Please Refer To Drawing Below

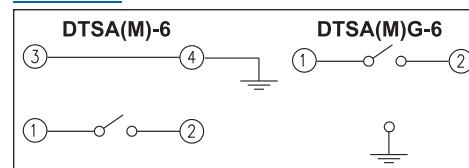
☐=Bulk Pack
T/R=Tape & Reel
(Except DTSA, DTSAG)

V=RoHS & Lead Free Solderable
(Except DTSAM, DTSAMG)
Q=Halogen Free

S=Stainless Steel Dome

Operating Force:
K=Black, 100gf
N=Brown, 160gf
R=Red, 260gf
*S=Salmon, 320gf
*Y=Yellow, 520gf
(*Not Available For Halogen Free)

CIRCUIT



PACKAGE

<Bag>

DTSA(G)-6: 500 pcs

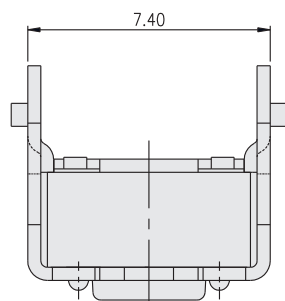
<Tape & Reel>

DTSAM-6: 500 pcs

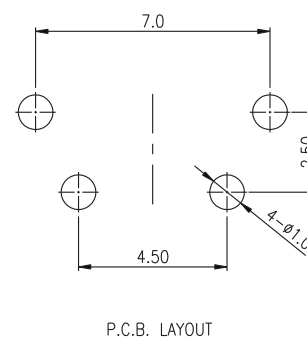
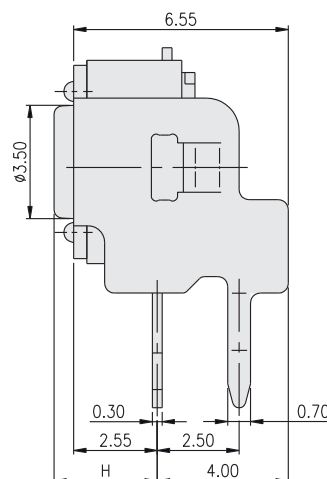
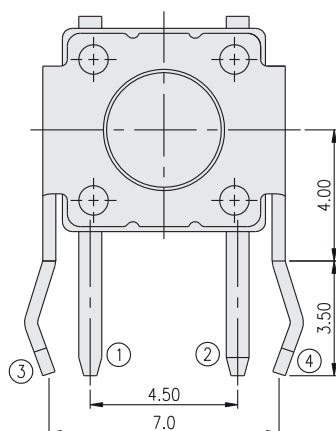
DTSAMG-61, 62: 500 pcs

DTSAMG-63, 64, 65: 380 pcs

DTSA-6

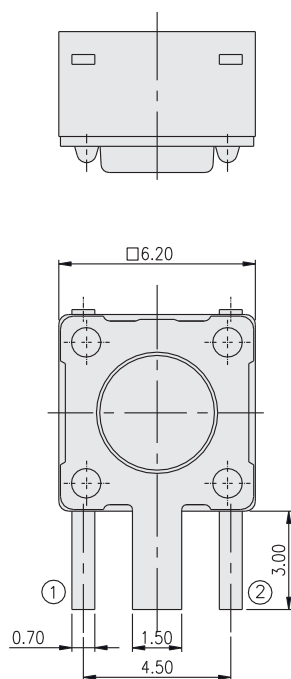


PART NO.	H
DTSA-61	3.15
DTSA-62	3.85
DTSA-63	5.85
DTSA-644	6.15(SQ.2.40)
DTSA-648	6.15(SQ.2.80)
DTSA-65	8.35
DTSA-66	11.85

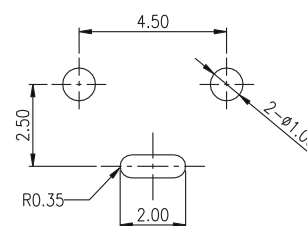
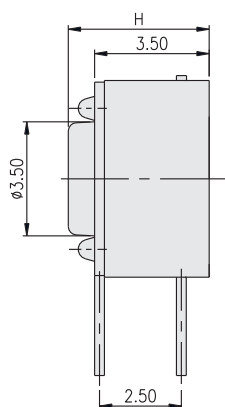


P.C.B. LAYOUT

DTSAG-6



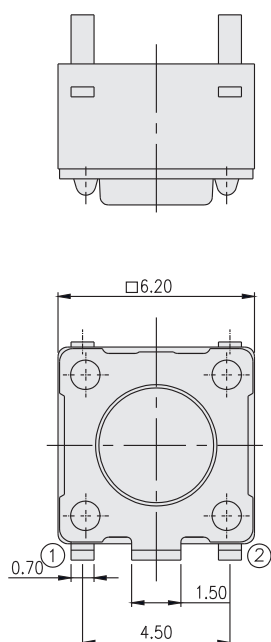
PART NO.	H
DTSAG-61	4.30
DTSAG-62	5.00
DTSAG-63	7.00
DTSAG-644	7.30(SQ.2.40)
DTSAG-648	7.30(SQ.2.80)
DTSAG-65	9.50
DTSAG-66	13.00



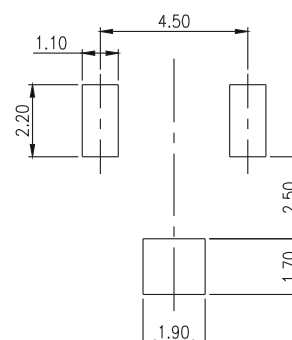
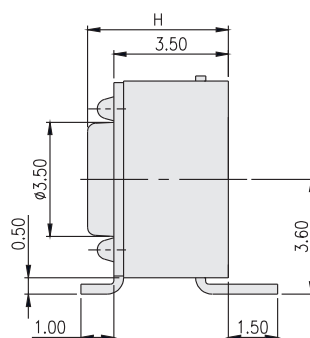
P.C.B. LAYOUT

TACT SWITCH

DTSAMG-6

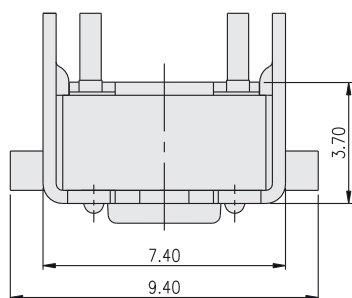


PART NO.	H
DTSAMG-61	4.30
DTSAMG-62	5.00
DTSAMG-63	7.00
DTSAMG-644	7.30(SQ.2.40)
DTSAMG-648	7.30(SQ.2.80)
DTSAMG-65	9.50
DTSAMG-66	13.00

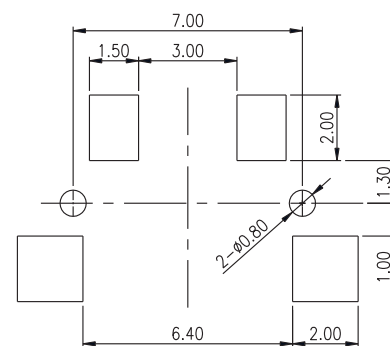
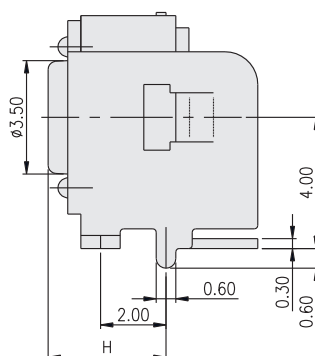
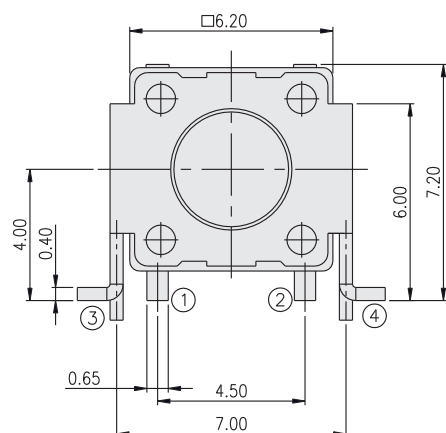


P.C.B. LAYOUT

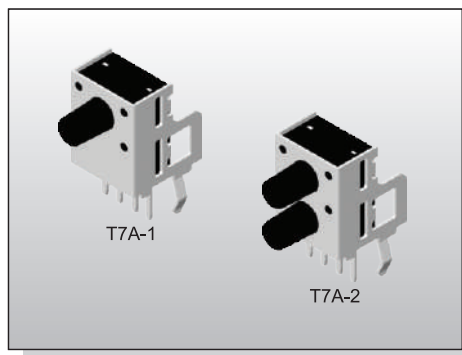
DTSAM-6



PART NO.	H
DTSAM-61	3.60
DTSAM-62	4.30
DTSAM-63	6.30
DTSAM-644	6.60(SQ.2.40)
DTSAM-648	6.60(SQ.2.80)
DTSAM-65	8.80



P.C.B. LAYOUT



FEATURES

- ※Double switch
- ※Two Circuit

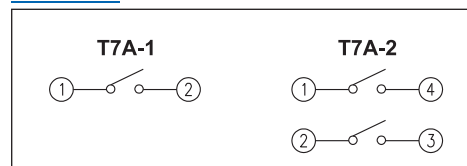
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Set-top box

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	180±50gf
Travel	0.20mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Bag>
400 pcs

HOW TO ORDER

T 7 A - 1 4 K Q P

1=Single Stem
2=Double Stem

Stem High:
3.80mm

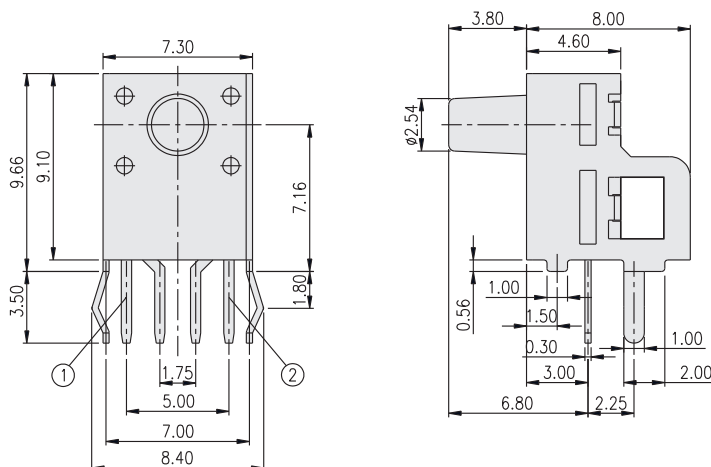
Package:
Bulk Pack

Halogen Free

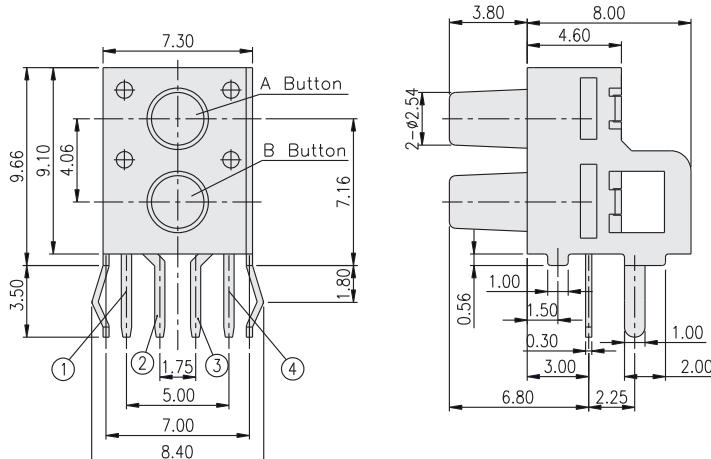
Stem Color:
Black

Operating Force:
180gf

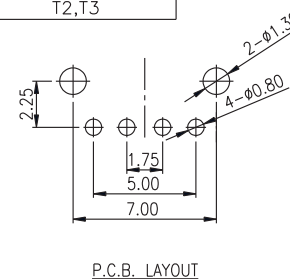
T7A-1

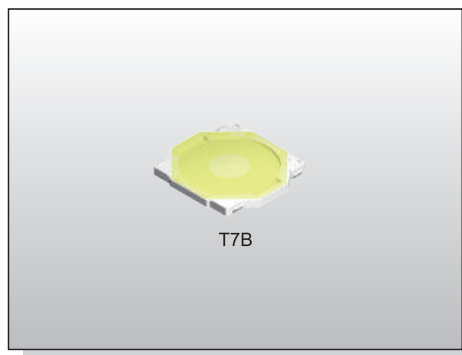


T7A-2



Button	Connected Terminal
A	T1, T4
B	T2, T3





T7B

FEATURES

- ※Long life cycles of 5 million
- ※Low profile with 0.60mm

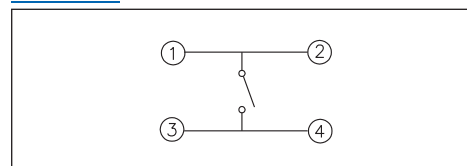
APPLICATION

- ※Automotive
- ※Industrial equipment
- ※Portable electronic device

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	500mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	100±50gf, 160±50gf, 200±50gf
Travel	0.25mm
Operating Life	5,000,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +90°C

CIRCUIT



PACKAGE

<Tape & Reel>
5200 pcs.

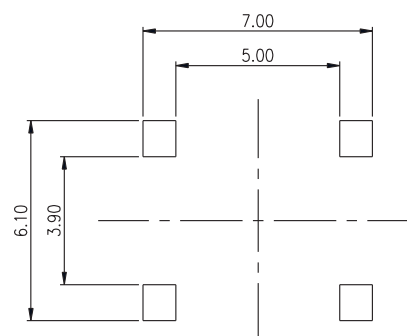
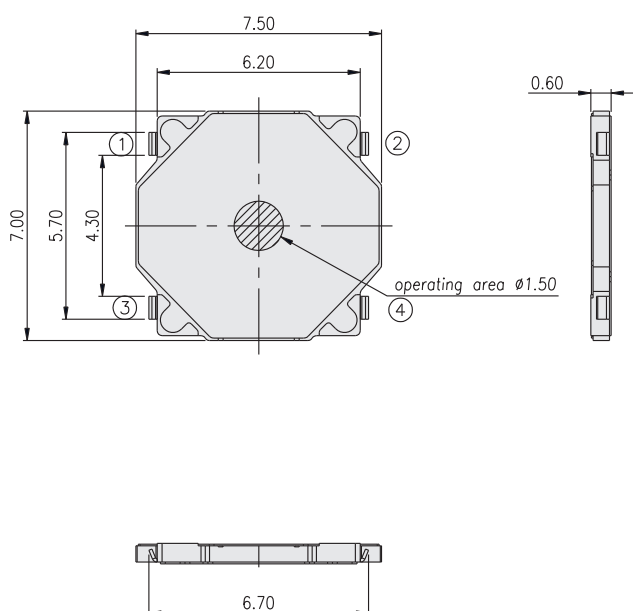
HOW TO ORDER

T 7 B □ Q R

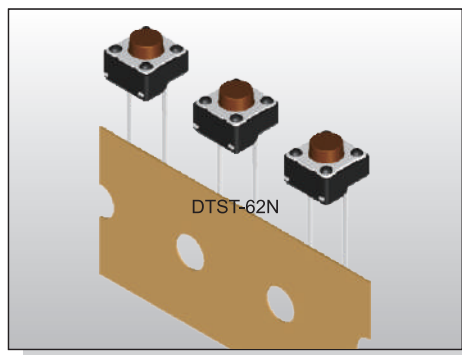
Operating Force:
1=100gf
2=160gf
3=200gf

Package:
Reel
Halogen Free

T7B



P.C.B. LAYOUT



FEATURES

- ※Radial taping type
- ※Variety of actuator lengths
- ※Allow automatic insertion onto PCB.

APPLICATION

- ※White goods , OA equipment
- ※Audio, DVD player, TV
- ※Instrumentation

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.25mm
Operating Life	300,000 cycles for 520/320gf 500,000 cycles for 260gf 1,000,000 cycles for 160/100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

DTST-6 - - -

Radial Taping Type

V=RoHS & Lead Free Solderable
Q=Halogen Free

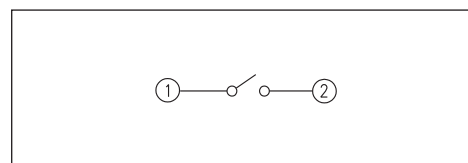
Height:

- 1=4.30mm
- 2=5.00mm
- 3=7.00mm
- 44=7.30mm (SQ.)x2.40mm
- 48=7.30mm (SQ.)x2.80mm
- 5=9.50mm
- 6=13.00mm

S=Stainless Steel Dome

Operating Force:
K=Black, 100gf
N=Brown, 160gf
R=Red, 260gf
S=Salmon, 320gf
Y=Yellow, 520gf

CIRCUIT

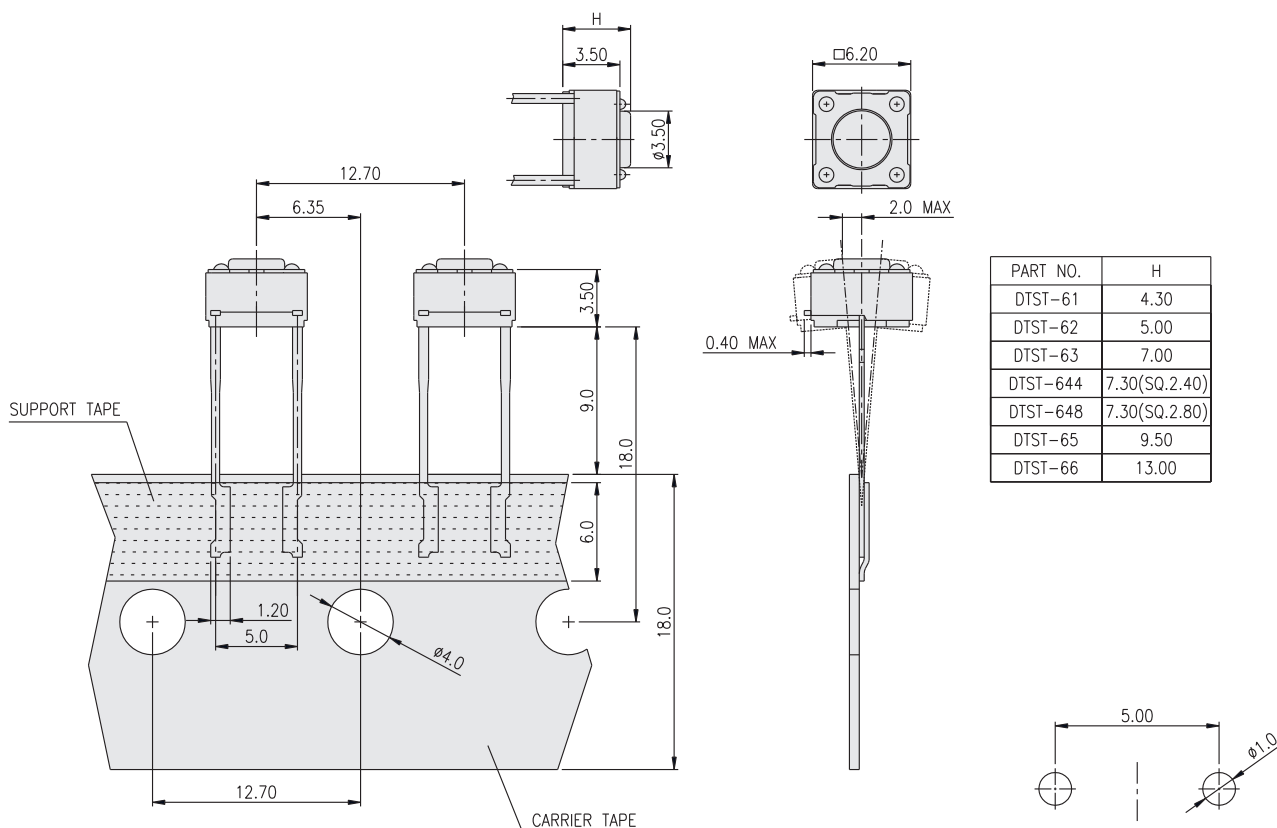


PACKAGE

<Box>
900 pcs

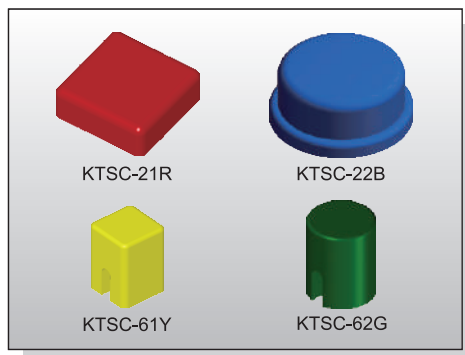
TACT SWITCH

DTST-6



TACT SWITCH KTSC-(6)(2) SERIES

Cap for 6x6 / 12x12
Tact Switch



HOW TO ORDER

KTSC - [] [] []

Prod. Size: <Tactile Switch>
2=12X12mm (Can be applied on DTS□-24)
6=6x6mm (Can be applied on DTS□-644)

Cap Type:
1=Square
2=Round

Cap color:
Y=Yellow
B=Blue
R=Red
I=Ivory
K=Black
G=Green
S=Salmon
Ge=Gray

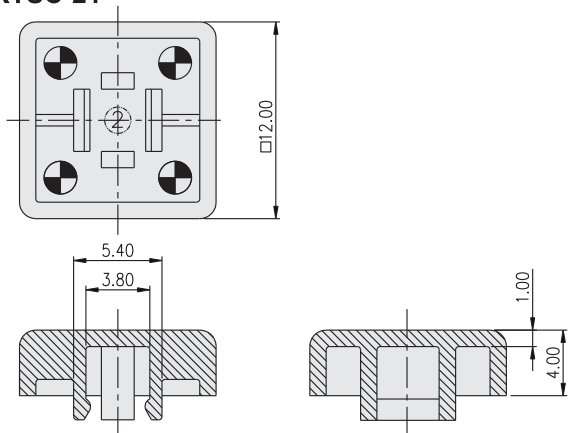
PACKAGE

<Bag>

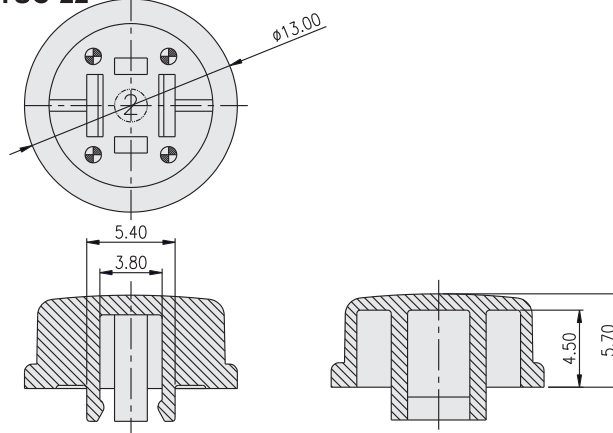
KTSC-2: 500 pcs
KTSC-6:1500 pcs

TACT SWITCH

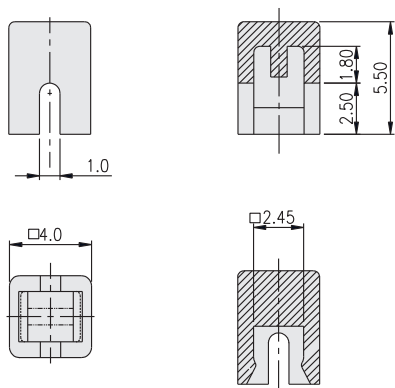
KTSC-21



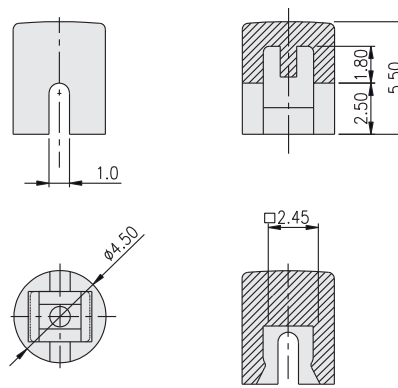
KTSC-22

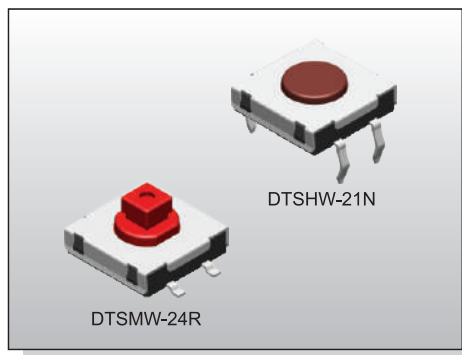


KTSC-61



KTSC-62





FEATURES

- ※Sealed
- ※Through hole & SMT type
- ※1 million operating life cycle

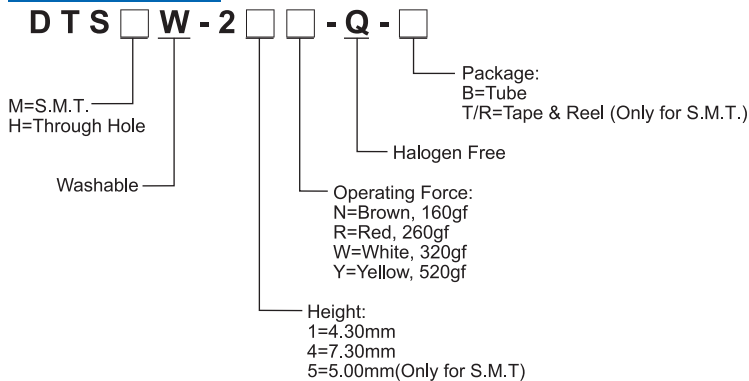
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Industrial

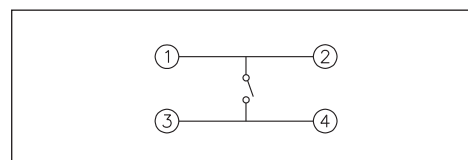
SPECIFICATION

Contact Rating	50mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, White(W) 520±130gf, Yellow(Y)
Travel	0.4mm
Operating Life	300,000 cycles for 520/320gf 1,000,000 cycles for 260/160gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



PACKAGE

<Tube>

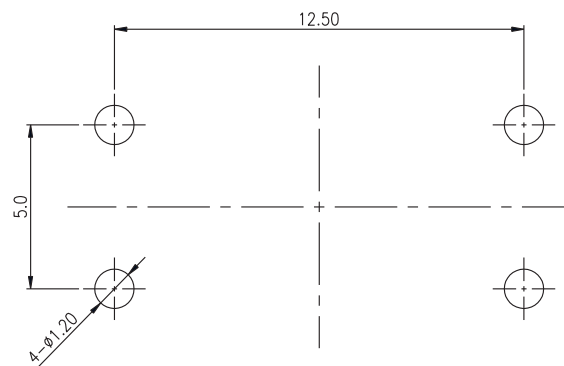
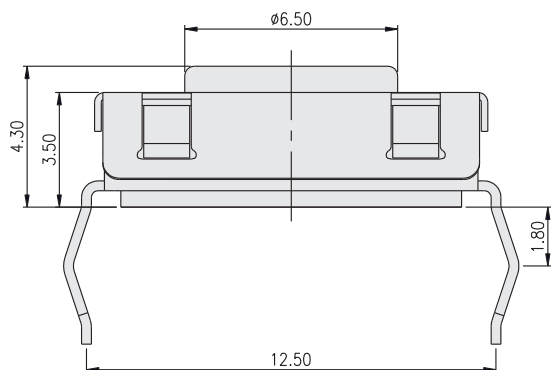
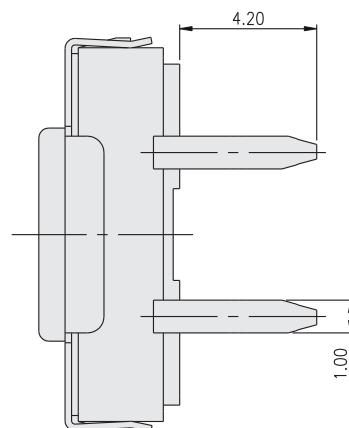
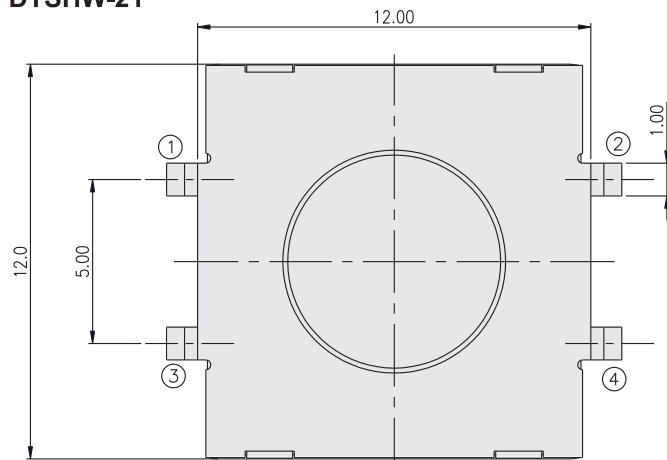
39 pcs

<Tape & Reel>

DTSMW-21(5): 700pcs

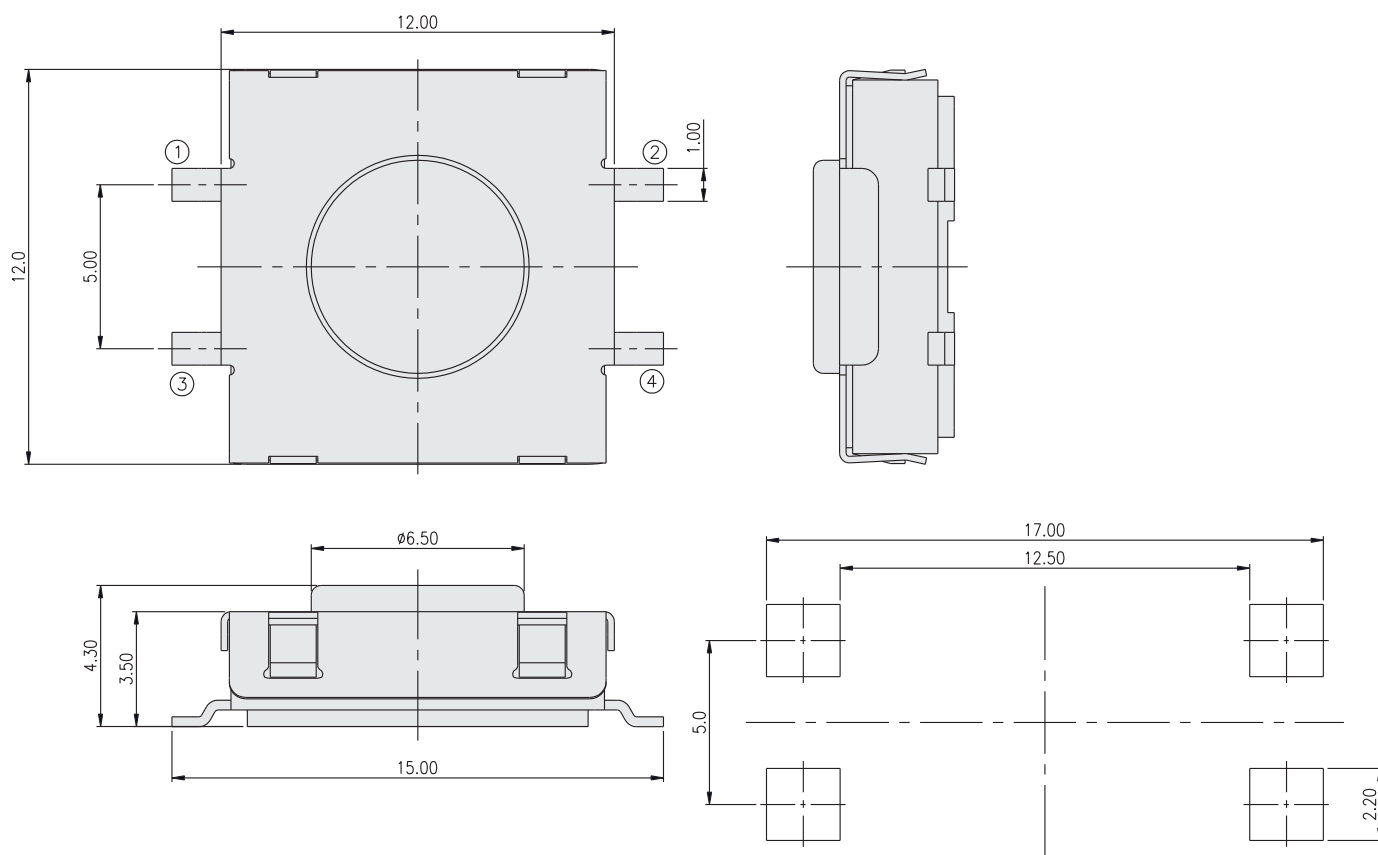
DTSMW-24: 500 pcs

DTSHW-21



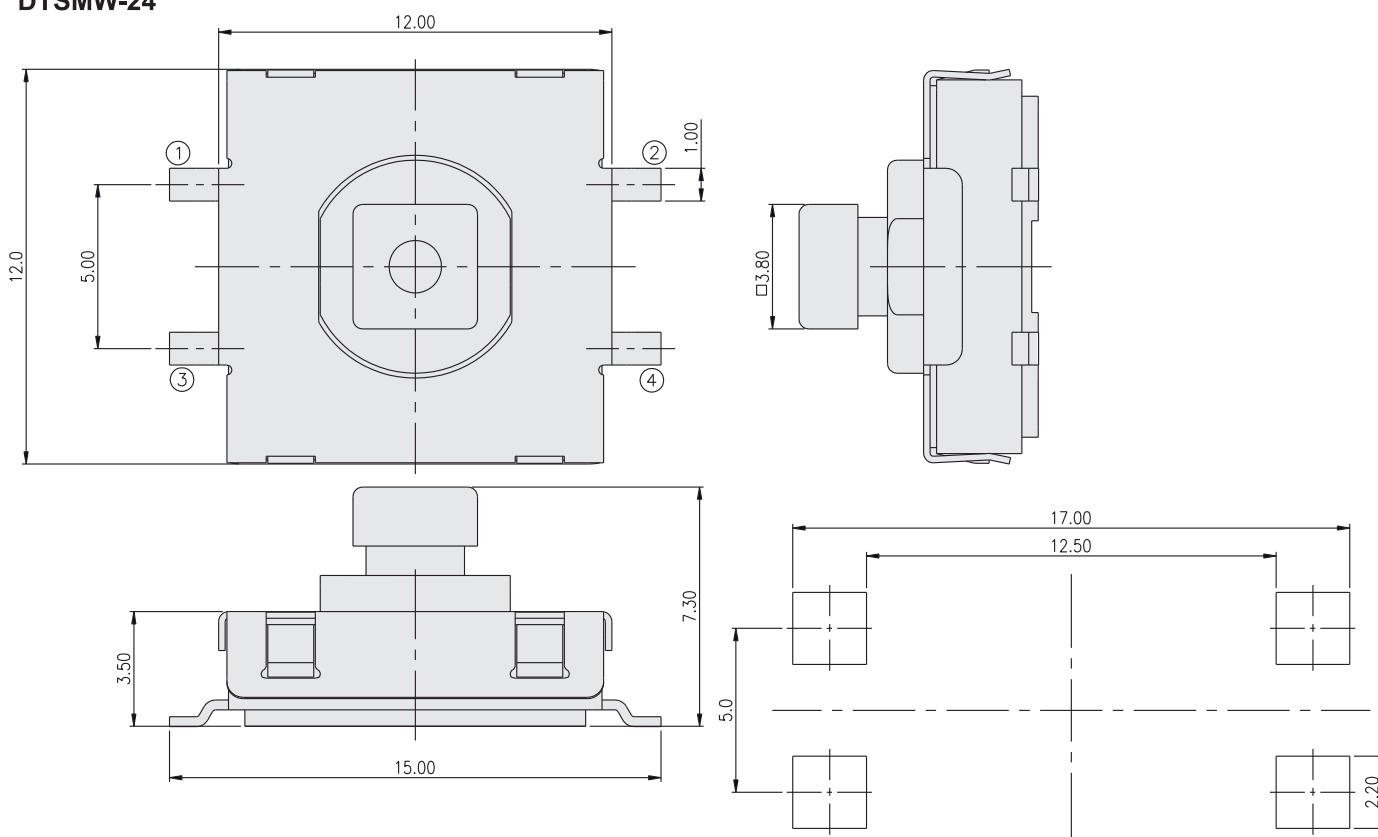
P.C.B. LAYOUT

DTSMW-21



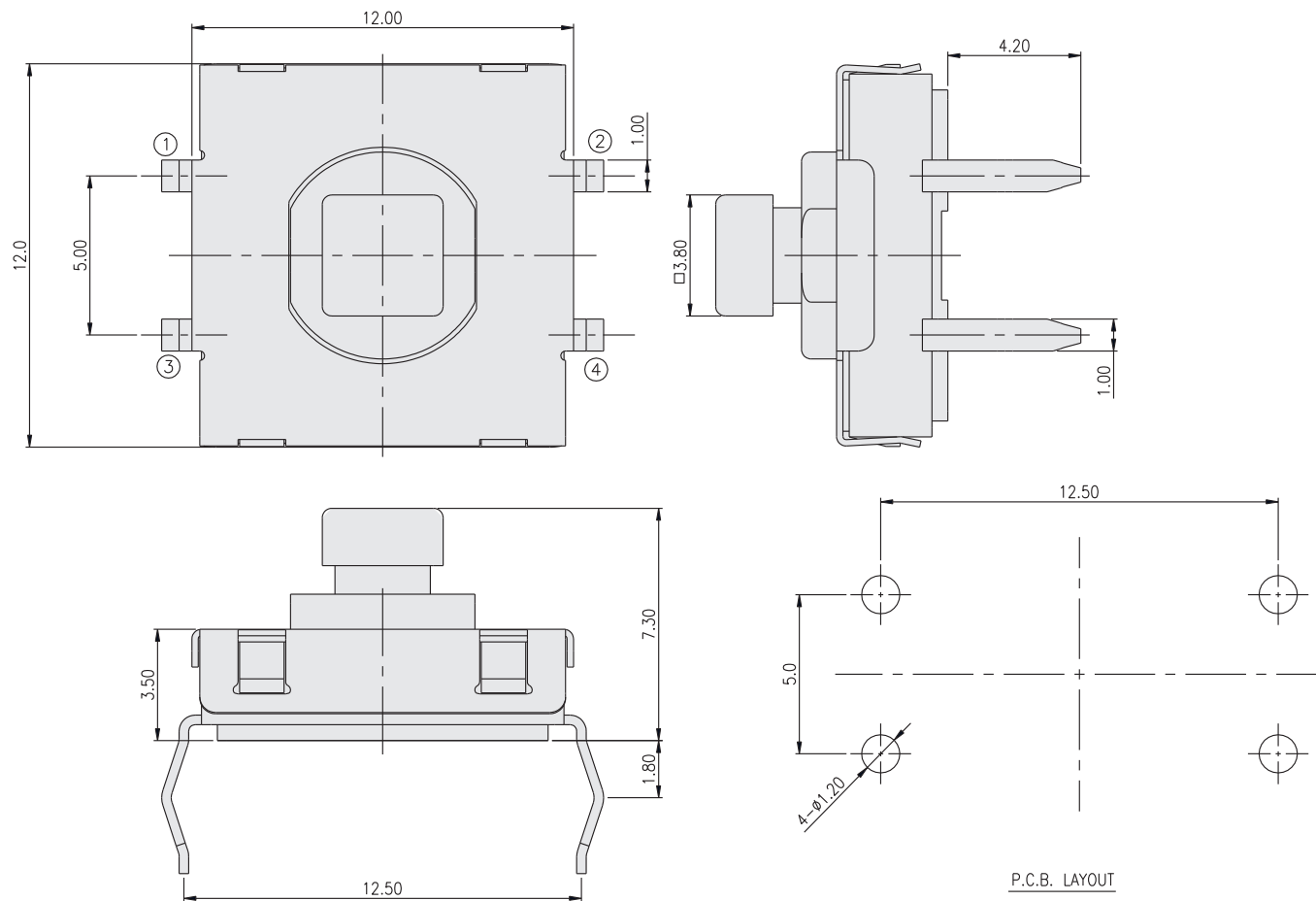
P.C.B. LAYOUT

DTSMW-24

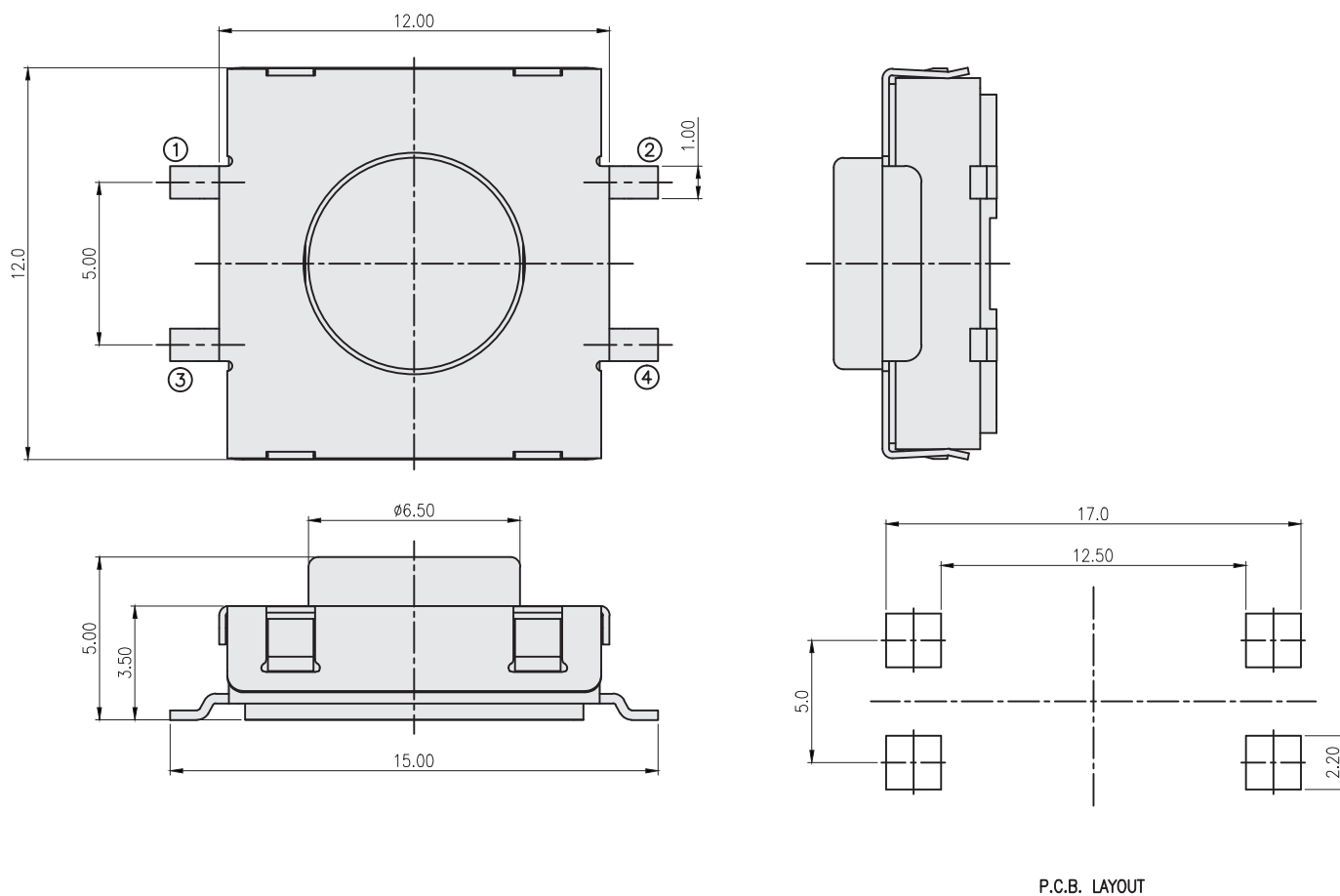


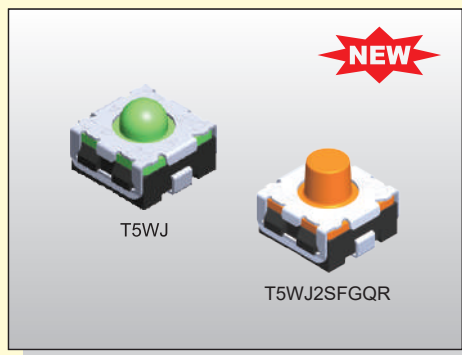
P.C.B. LAYOUT

DTSHW-24



DTSMW-25





FEATURES

- ※5.25x5.4mm with long travel
- ※Less activation sound
- ※Clear operation feeling
- ※Sealed IP67

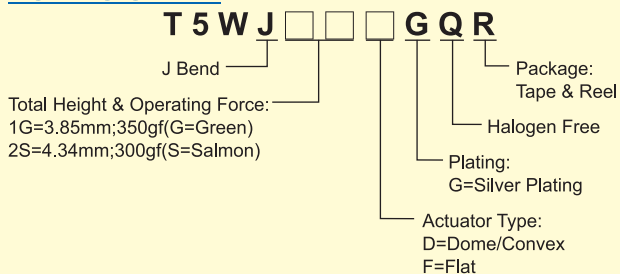
APPLICATION

- ※Automotive
- ※Gaming
- ※Smart metering
- ※Industrial

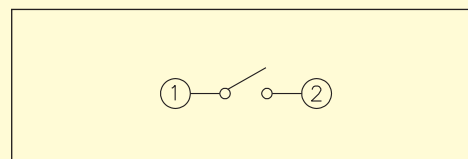
SPECIFICATION

Contact Rating	10uA, 1V DC min. 50mA, 16V DC max.
Contact Resistance	100mΩ max.(initial)
Insulation Resistance	100MΩ min.
Dielectric Strength	250V AC/1 minute
Operating Force	350±60gf
Operating Life	250,000 cycles min.
Operating Temp.	-40°C ~ +105°C
Storage Temp.	-40°C ~ +105°C

HOW TO ORDER



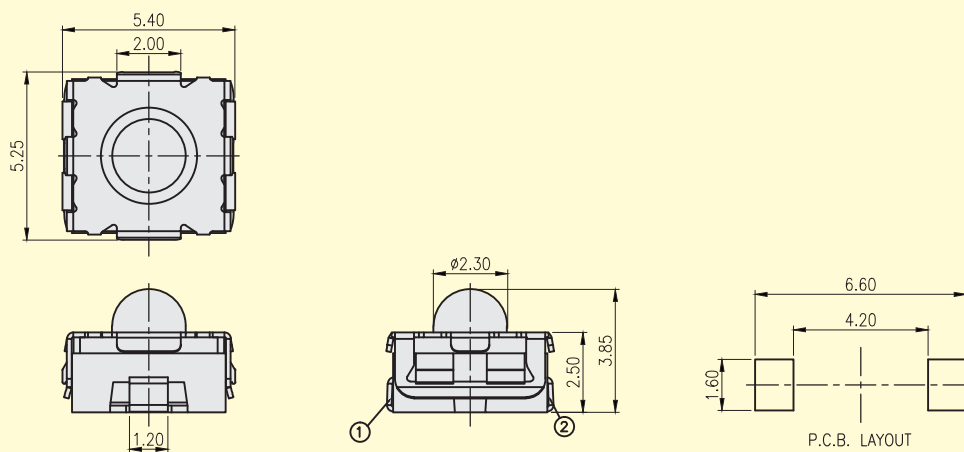
CIRCUIT



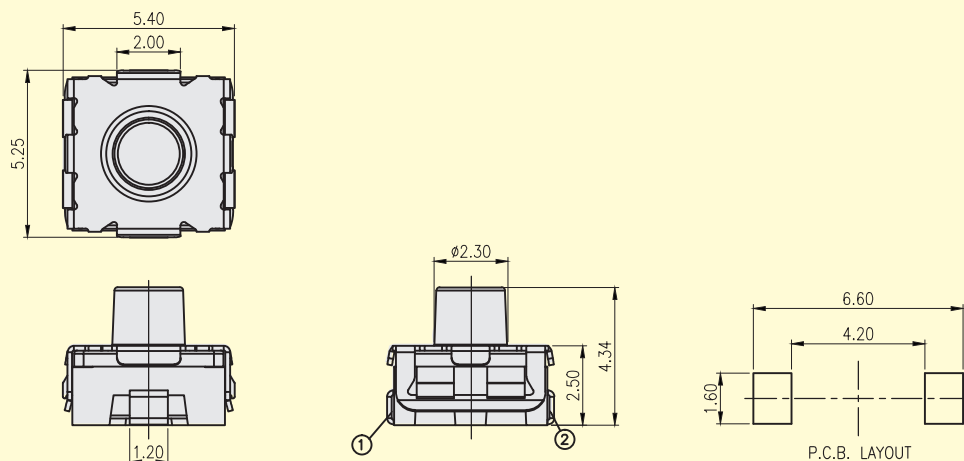
PACKAGE

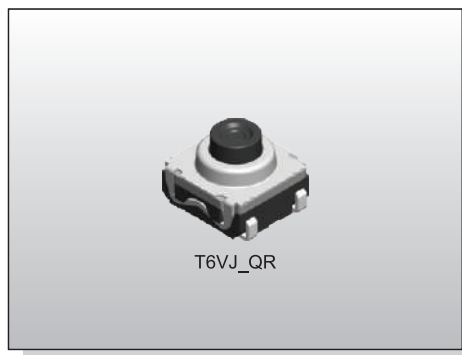
<Tape & Reel>
1900 pcs

T5WJ DGQR



T5WJ FGQR





T6VJ_QR

FEATURES

- ※Sharp click feeling with soft sound
- ※Long travel
- ※Sealed IP67

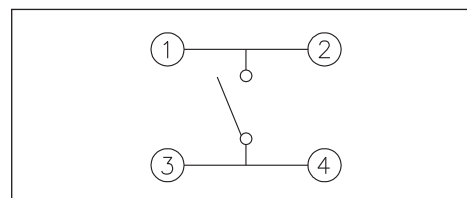
APPLICATION

- ※Automotive
- ※Instrument
- ※Industrial

SPECIFICATION

Contact Rating	10uA, 1V DC min. 50mA, 16V DC max.
Contact Resistance	100mΩ max.(initial)
Insulation Resistance	100MΩ min.
Dielectric Strength	250V AC/1 minute
Operating Force	350±90gf
Operating Life	100,000 cycles min.
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-55°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
1000 pcs

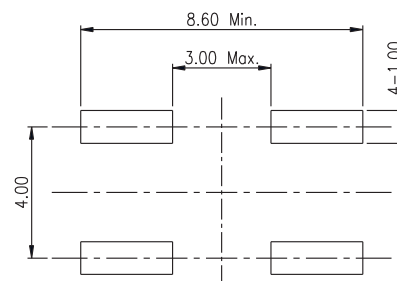
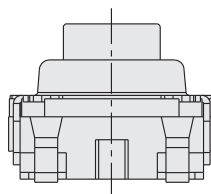
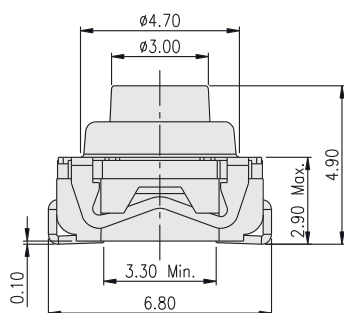
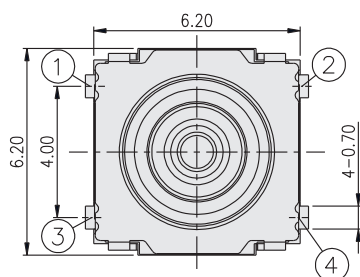
HOW TO ORDER

T 6 V J **G Q R**

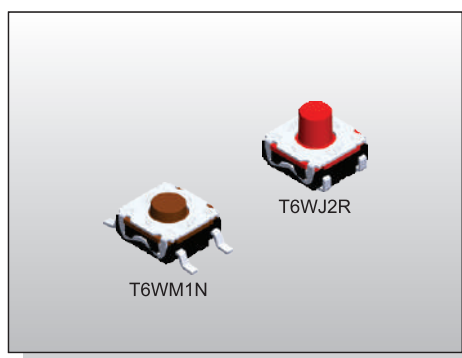
J Bend
Total Height:
1=4.9mm
Operating Force:
1=350gf

Package:
Tape & Reel
Halogen Free
Plating:
G=Silver Plating

T6VJ



P.C.B. LAYOUT



FEATURES

- ※ J or M terminations
- ※ Long Travel type
- ※ Long operating cycles
- ※ IP67

APPLICATION

- ※ Automotive
- ※ Industrial electronics
- ※ Network infrastructure and IT
- ※ Elevator

SPECIFICATION

Contact Rating	20mV DC~32V DC/1.0 mA~50 mA
Contact Resistance	100mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf, Brown(N) 200±50gf, Red(R) 350±100gf, Salmon(S)
Travel	0.3mm (160gf) 0.35mm (200gf) 0.5mm (350gf)
Operating Life	300,000 cycles (350gf) 500,000 cycles (200gf) 5,000,000 cycles (160gf)
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-55°C(10 days) ~ +85°C(4 days)

HOW TO ORDER

T 6 W Q R

M=S.M.T
J=J Bend

Height:
1=3.50mm
2=5.20mm
3=4.70mm
4=4.30mm

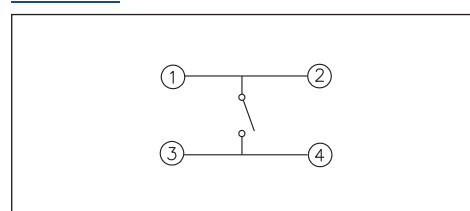
Package:
Tape & Reel

Halogen Free

Plating:
G=Silver Plating
A=Gold Plating

Operating Force:
N=Brown, 160gf
R=Red, 200gf
S=Salmon, 350gf

CIRCUIT



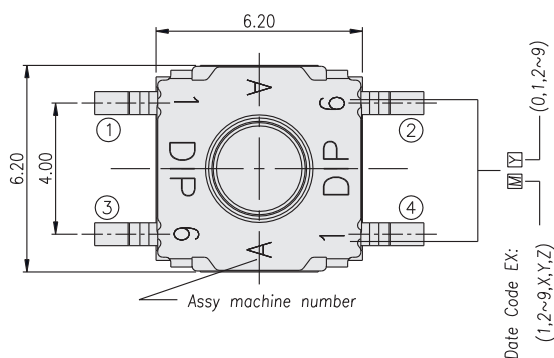
PACKAGE

<Tape & Reel>

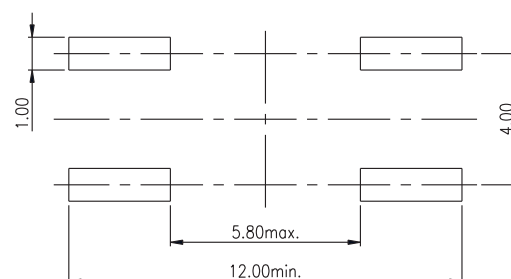
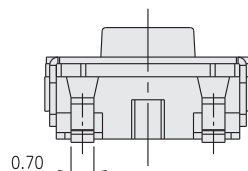
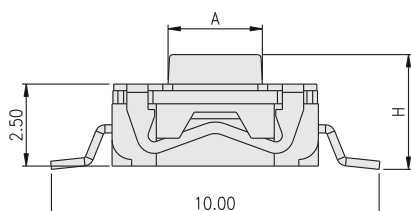
T6W 1: 2000 pcs

T6W 2, 3, 4: 1000 pcs

T6WM

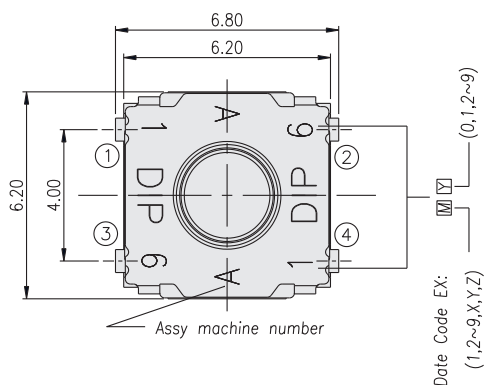


PART NO.	A	H
T6WM1	ø2.90	3.50
T6WM2	ø2.70	5.20
T6WM3	ø2.70	4.70
T6WM4	ø2.70	4.30

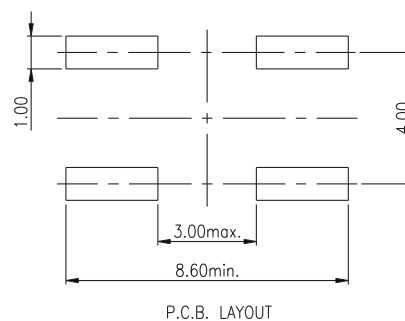
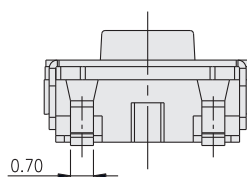
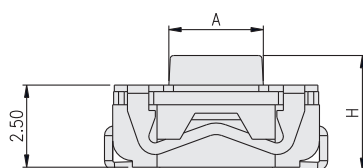


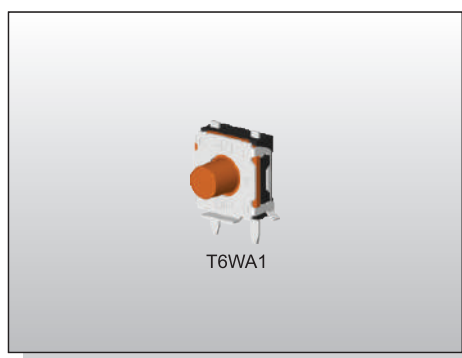
P.C.B. LAYOUT

T6WJ



PART NO.	A	H
T6WJ1	ø2.90	3.50
T6WJ2	ø2.70	5.20
T6WJ3	ø2.70	4.70
T6WJ4	ø2.70	4.30





FEATURES

- ※Pin-in-paste soldering
- ※SMD side actuator
- ※Sealed IP67
- ※Sharp click feeling

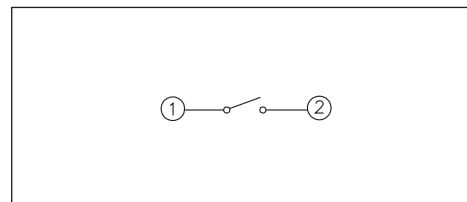
APPLICATION

- ※Automotive
- ※Industrial electronics
- ※Network infrastructure and IT
- ※Elevator

SPECIFICATION

Contact Rating	20mV DC~32V DC/1.0 mA~50 mA
Contact Resistance	100mΩ max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	350±100gf
Travel	0.7mm
Operating Life	300,000 cycles (350gf)
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-55°C(10 days) ~ +85°C(4 days)

CIRCUIT



PACKAGE

<Tape & Reel>
550 pcs

HOW TO ORDER

T 6 W A 1 **Q R**

Height: 3.90mm

Package: Tape & Reel

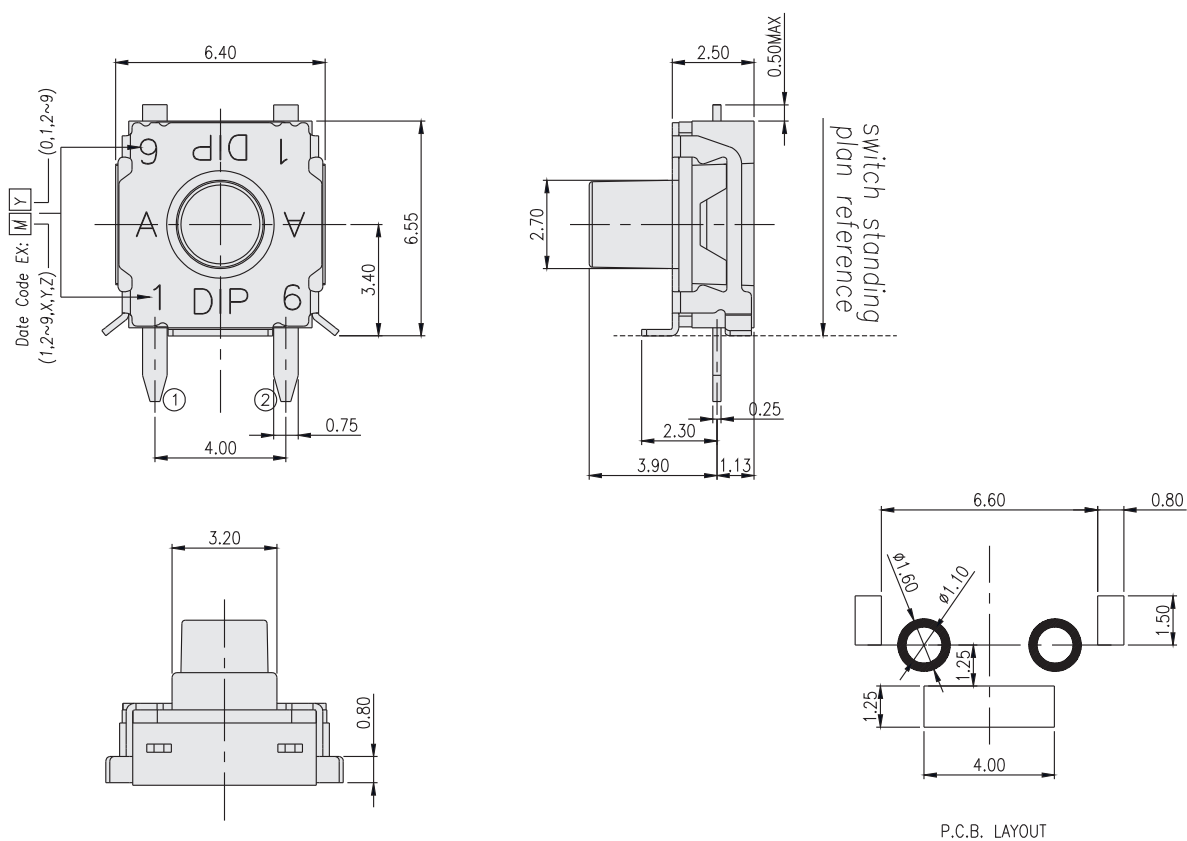
Halogen Free

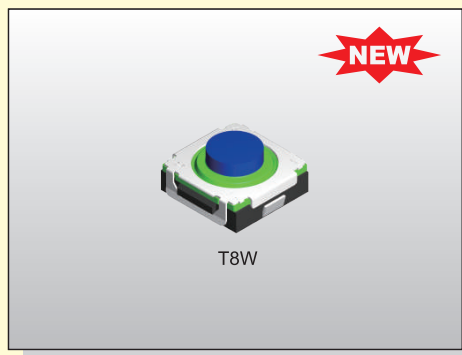
Plating: G=Silver Plating

Operating Force: S=Salmon, 350gf

TACT SWITCH

T6WA





FEATURES

- ※8.5x8.5x3.95mm
- ※Vertical
- ※Sealed type IP67

APPLICATION

- ※Automotive Electronics
- ※Wiper Controllers
- ※Power Tailgate Systems
- ※Steering Wheel Switches
- ※Center Console Controls

SPECIFICATION

Contact Rating	10μA ,1VDC Min. 50mA,16VDC Max.
Contact Resistance	100mΩ Max. (initial)
Insulation Resistance	100MΩ Min. 100V DC
Dielectric Strength	250VAC /1 minute
Operating Force	400±80gf (Red+Green) 400±100/-50gf (Iron+White) 700±150gf (Green+Green) 1000±200gf (Blue+Green)
Travel	IW:0.7mm RG、GG、BG:0.9mm
Operating Life	500,000 cycles(400g) 1,000,000 cycles(700g) 200,000 cycles(1,000g)
Operating Temp.	-40°C ~ +90°C
Storage Temp.	-40°C ~ +90°C

HOW TO ORDER

T 8 W -

J=J Bend:

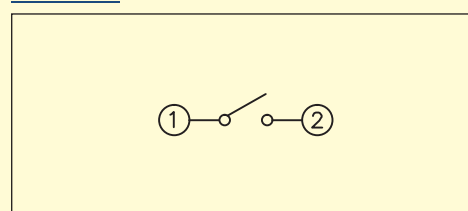
Package:
R=Tape & Reel

Q=Halogen Free

Contact Plating:
G=Plating Ag

Operating Force:
IW=400gf
RG=400gf
GG=700gf
BG=1000gf

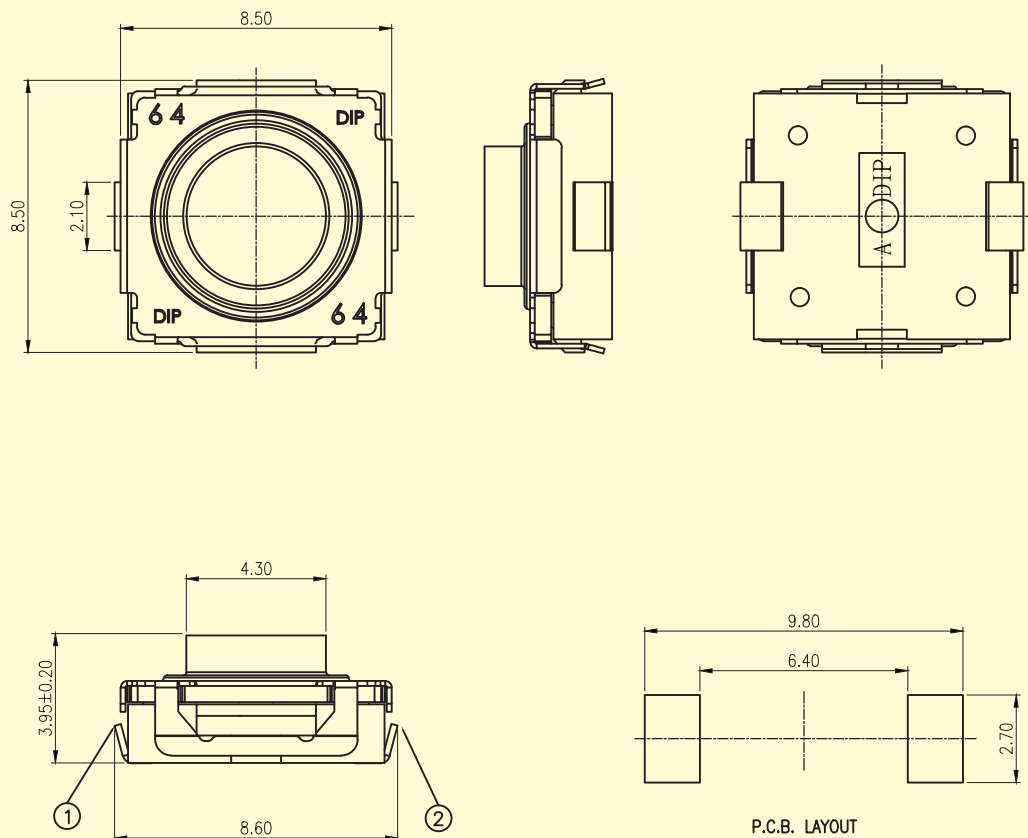
CIRCUIT

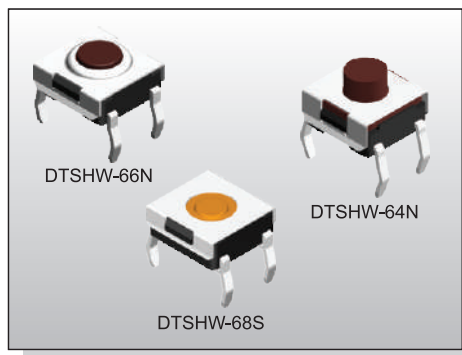


PACKAGE

<Tape & Reel>
1500 pcs

T8W





FEATURES

- ※Sealed
- ※Snap in type
- ※Dust proof with high reliability

APPLICATION

- ※Audio, OA equipment
- ※Instrumentation, Communication
- ※White goods

SPECIFICATION

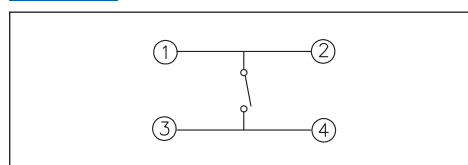
Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf, Brown(N) 66/677 160±50gf, Silver(S) 68 180±50gf, Brown(N) 69/67/65/64 260±70gf, Red(R) 69/67/66/65/64 360±90gf, Transparent(T) 69/67/65/677
Travel	0.25mm 68S/66N/66R/677 0.45mm(69/67N,R)(65/64N,R,T) 0.6mm 69/67T
Operating Life	100,000 cycles min. for 66/68/677 500,000 cycles min. for 69/67/65/64
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

DTSHW-6 ☐ ☐ - ☐ - **B**

- Through Hole
- Washable
- Package: Tube
- V=RoHS & Lead Free Solderable
Q=Halogen Free
- Dimension H:
4=4.50mm (N, R)
5=3.50mm (N, R, T)
6=3.10mm (N, R)
7=5.20mm (N, R, T)
77=7.30mm (N, R, T)
8=2.30mm (S)
9=3.80mm (N, R, T)
- Operating Force:
N=Brown, 160gf(66N, 677N)
180gf(69N, 67N, 65N, 64N)
S=Silver, 160gf(68S)
R=Red, 260gf(69R, 67R, 66R, 65R, 64R)
T=Transparent, 360gf(69T, 67T, 65T, 677T)

CIRCUIT

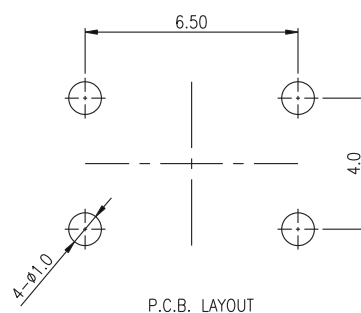
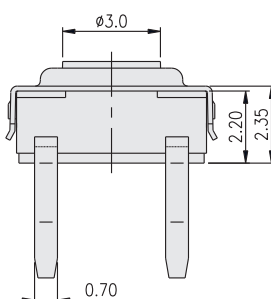
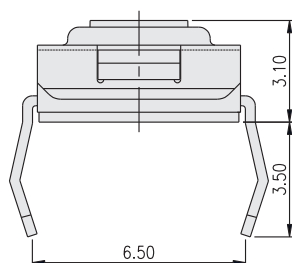
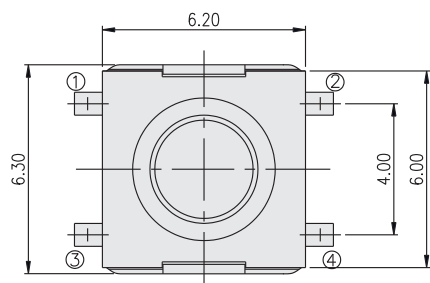


PACKAGE

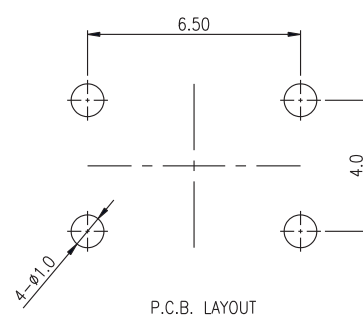
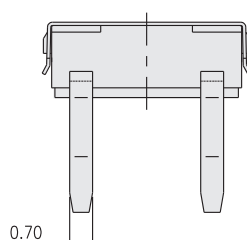
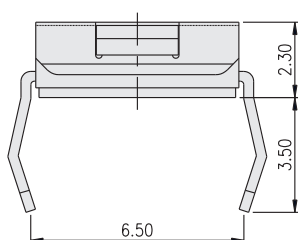
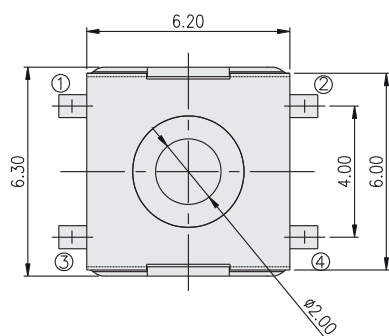
<Tube>

75 pcs

DTSHW-66

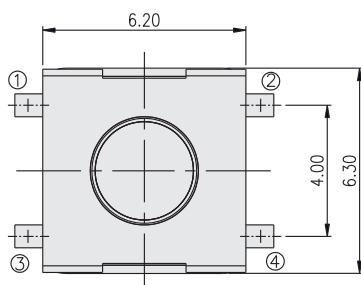


DTSHW-68

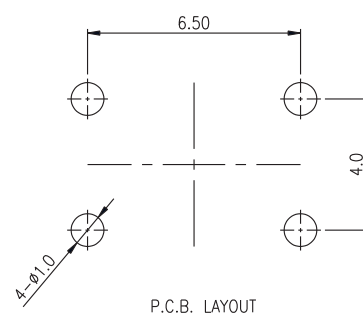
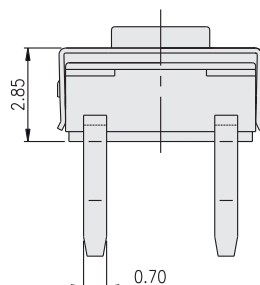
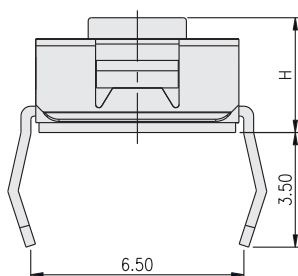


TACT SWITCH

DTSHW-6□

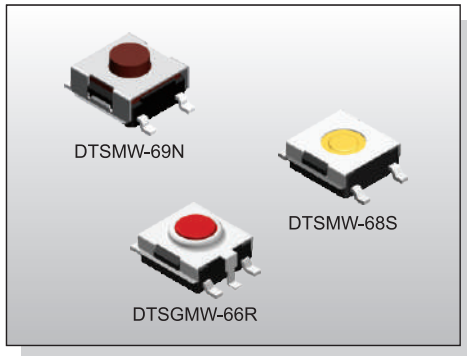


PART NO.	H
DTSHW-64	4.50
DTSHW-65	3.50
DTSHW-67	5.20
DTSHW-69	3.80
DTSHW-677	7.30



TACT SWITCH DTS(G)MW-6 SERIES

6x6 Gull-Wing SMT
Washable Type



FEATURES

- ※Sealed
- ※Reflow solderable
- ※Dust proof with high reliability

APPLICATION

- ※Audio, OA equipment
- ※Instrumentation, Communication
- ※White goods

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf, Brown(N) 66/677 160±50gf, Silver(S) 68 180±50gf, Brown(N) 69/67/65/64 260±70gf, Red(R) 69/67/66/65/64 360±90gf, Transparent(T) 69/67/65/64/677
Travel	0.25mm 68S/66N/66R/677 0.45mm (69/67N,R)(65/64N,R,T) 0.6mm 69/67T
Operating Life	100,000 cycles min. for 68/66/677 500,000 cycles min. for 69/67/65/64
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

D T S **W - 6**

M=S.M.T.
GM=S.M.T. & With Ground Pin
(66 Only)

Washable

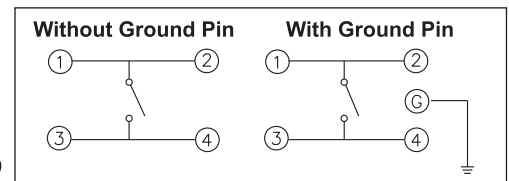
Package:
B=Tube
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

Operating Force:
N=Brown, 160gf(66N, 677N)
180gf(69N, 67N, 65N, 64N)
*S=Silver, 160gf(68S)
R=Red, 260gf(69R, 67R, 66R, 65R, 64R)
T=Transparent, 360gf(64T, 69T, 67T, 65T, 677T)
(*Not Available For Halogen Free)

Dimension H:
4=4.50mm (N, R, T)
5=3.50mm (N, R, T)
6=3.10mm (N, R)
7=5.20mm (N, R, T)
77=7.30mm (N, R, T)
8=2.30mm (S)
9=3.80mm (N, R, T)

CIRCUIT



PACKAGE

<Tube>

75 pcs

<Tape & Reel>

DTSGMW-66: 2000 pcs

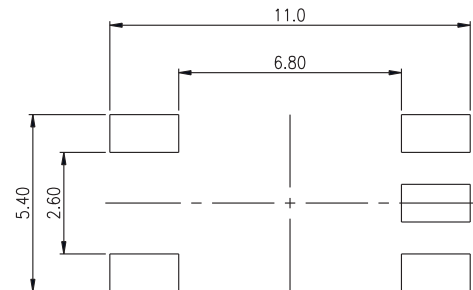
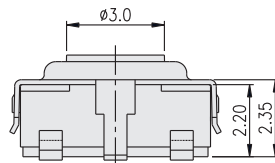
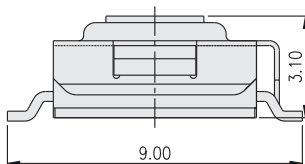
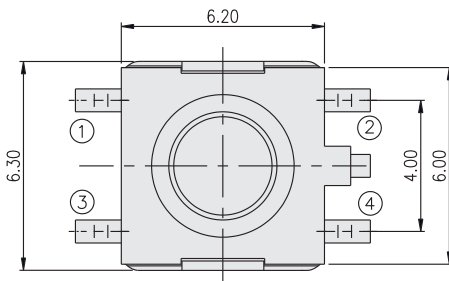
DTSMW-68, 66: 2000 pcs

DTSMW-69, 65: 1900 pcs

DTSMW-67, 64: 900 pcs

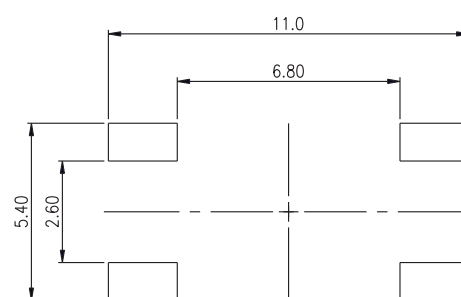
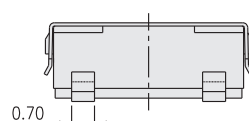
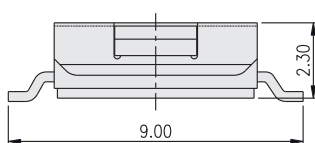
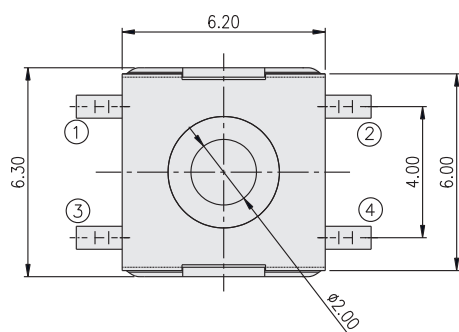
DTSMW-677: 650 pcs

DTSGMW-66



P.C.B. LAYOUT

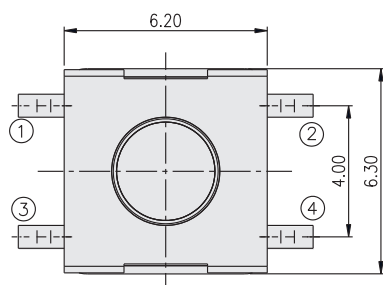
DTSMW-68



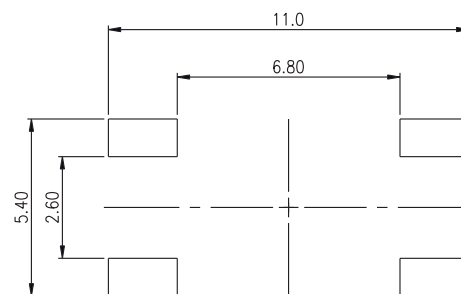
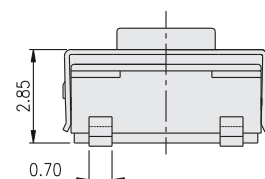
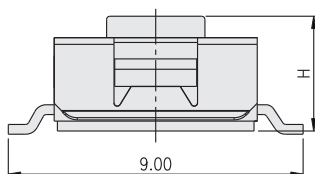
P.C.B. LAYOUT

TACT SWITCH

DTSMW-6

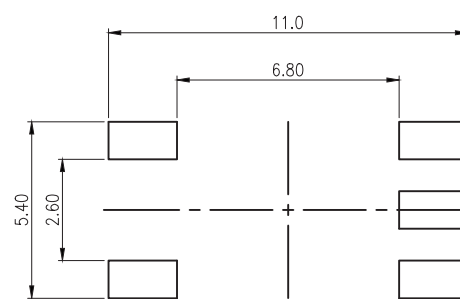
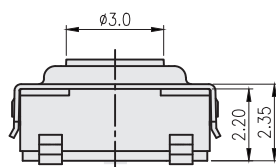
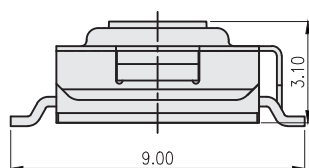
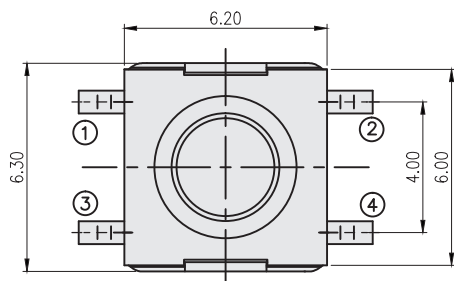


PART NO.	H
DTSMW-64	4.50
DTSMW-65	3.50
DTSMW-67	5.20
DTSMW-69	3.80
DTSMW-677	7.30

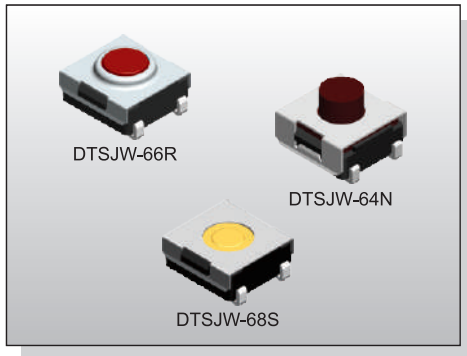


P.C.B. LAYOUT

DTSMW-66



P.C.B. LAYOUT



FEATURES

- ※Sealed
- ※Reflow solderable
- ※Dust proof with high reliability

APPLICATION

- ※Audio, OA equipment
- ※Instrumentation, Communication
- ※White goods

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf, Brown(N) 66/677 160±50gf, Silver(S) 68 180±50gf, Brown(N) 69/67/65/64 260±70gf, Red(R) 69/67/66/65/64 360±90gf, Transparent(T) 69/67/65/677
Travel	0.25mm 68S/66N/66R/677 0.45mm (69/67N,R)(65/64N,R,T) 0.6mm 69/67T
Operating Life	100,000 cycles min. for 68/66/677 500,000 cycles min. for 69/67/65/64
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

D T S J W - 6 -

J Bend
Washable

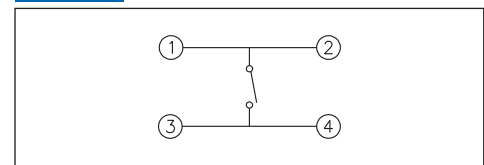
Dimension H:
4=4.50mm (N, R)
5=3.50mm (N, R, T)
6=3.10mm (N, R)
7=5.20mm (N, R, T)
77=7.30mm (N, R, T)
8=2.30mm (S)
9=3.80mm (N, R, T)

Package:
B=Tube
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

Operating Force:
N=Brown, 160gf(66N, 677N)
180gf(69N, 67N, 65N, 64N)
S=Silver, 160gf(68S)
R=Red, 260gf(69R, 67R, 66R, 65R, 64R)
T=Transparent, 360gf (69T, 67T, 65T, 677T)

CIRCUIT



PACKAGE

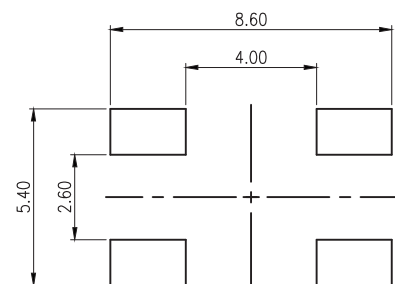
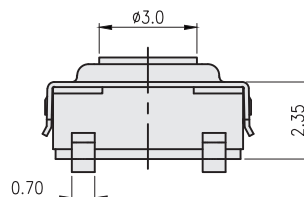
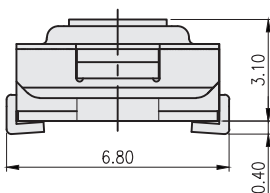
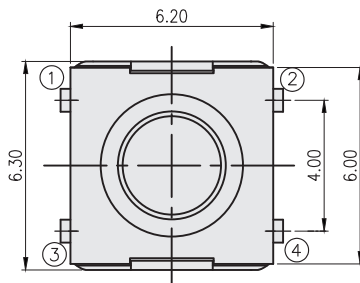
<Tube>

75 pcs

<Tape & Reel>

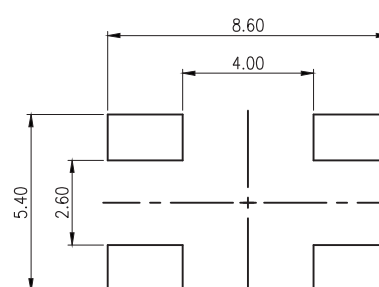
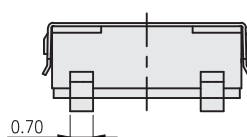
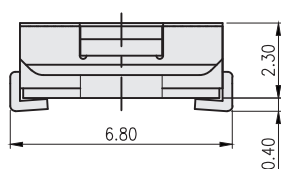
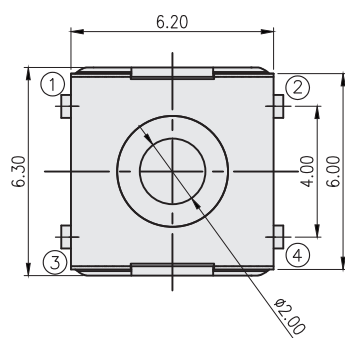
DTSJW-64, 67: 900 pcs
DTSJW-65, 69: 1800 pcs
DTSJW-66: 1900 pcs
DTSJW-68: 2000 pcs
DTSJW-677: 650 pcs

DTSJW-66



P.C.B. LAYOUT

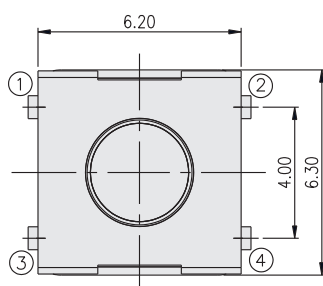
DTSJW-68



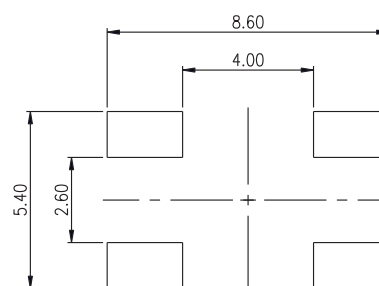
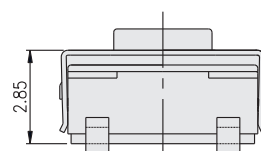
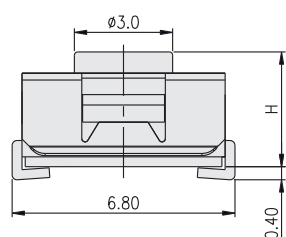
P.C.B. LAYOUT

TACT SWITCH

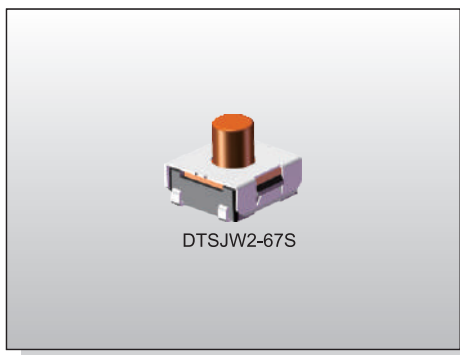
DTSJW-6□



PART NO.	H
DTSJW-64	4.50
DTSJW-65	3.50
DTSJW-67	5.20
DTSJW-69	3.80
DTSJW-677	7.30



P.C.B. LAYOUT



FEATURES

- ※Sealed
- ※Gold contact available
- ※Dust proof with high reliability

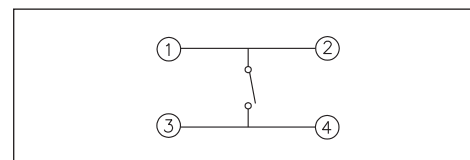
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation, Communication
- ※White goods

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	200±50gf, 400±100gf
Travel	0.4/0.6mm
Operating Life	300, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

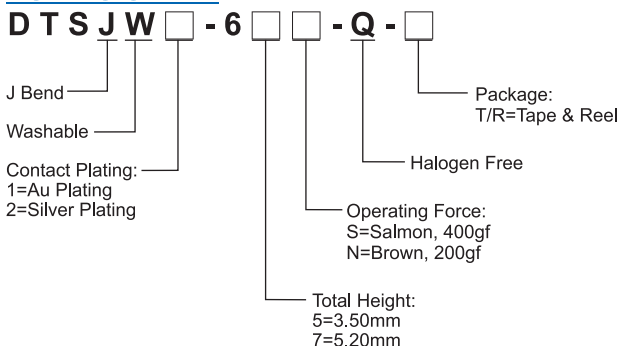


PACKAGE

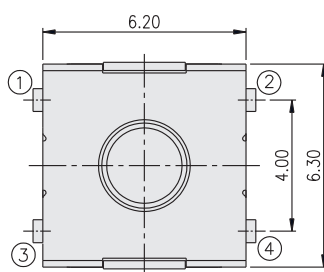
<Tape & Reel>

DTSJW□-65: 1900 pcs
DTSJW□-67: 900 pcs

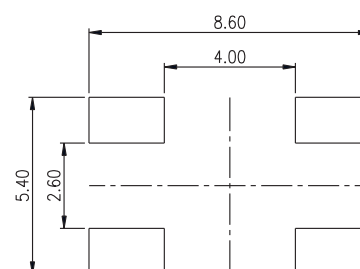
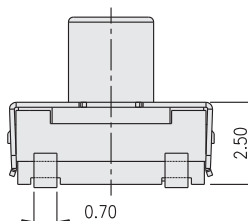
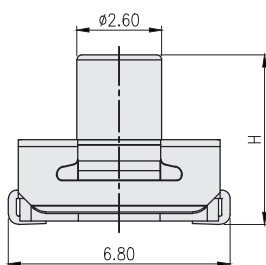
HOW TO ORDER



DTSJW□-6



PART NO.	H
DTSJW□-65	3.50
DTSJW□-67	5.20



P.C.B. LAYOUT



FEATURES

- ※Low profile with 2.5-3.5mm height
- ※Snap-in type
- ※Sharp click feeling

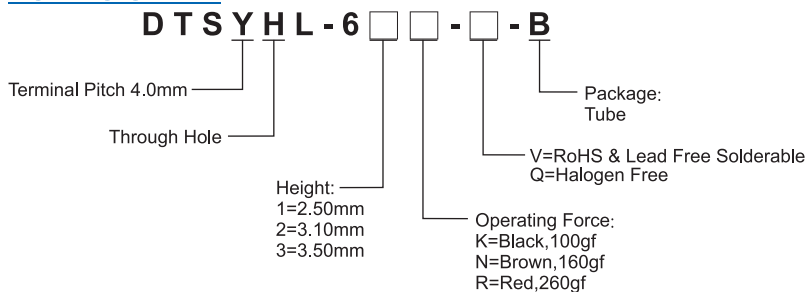
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Industrial

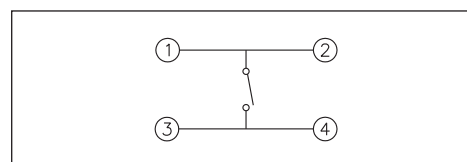
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R)
Travel	0.25mm
Operating Life	100,000 cycles for 260gf 1,000,000 cycles for 160, 100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT

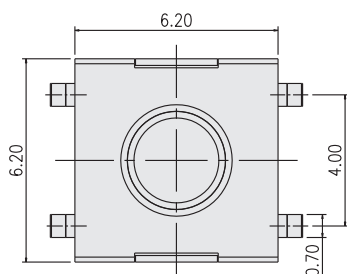


PACKAGE

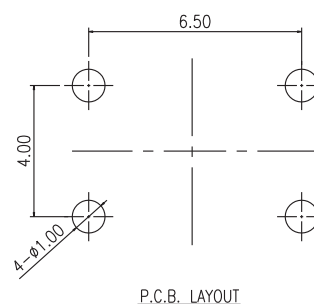
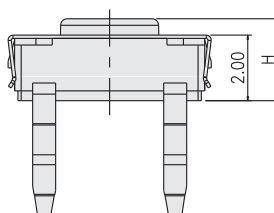
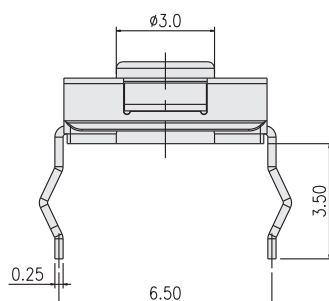
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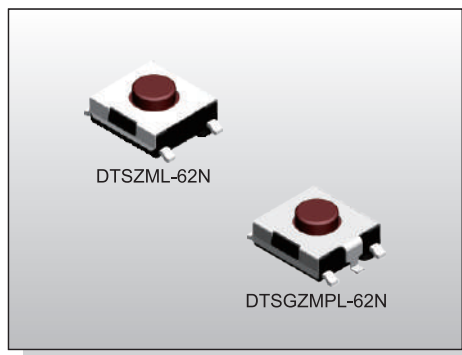
75 pcs

DTSYHL-6



PART NO.	H
DTSYHL-61	2.50
DTSYHL-62	3.10
DTSYHL-63	3.50



**FEATURES**

- ※ Thinner type with 2.5-5.25mm height
- ※ Ground terminal available
- ※ Reflow solderable

APPLICATION

- ※ Audio, OA equipment
- ※ Instrumentation
- ※ Consumer electronics

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R)
Travel	0.25mm
Operating Life	100,000 cycles for 260gf 1,000,000 cycles for 160, 100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDERD T S ☐ Z M ☐ L - 6 ☐ ☐ - ☐ - ☐

☐=Without Ground Pin
G=With Ground Pin

Terminal Pitch 4.5mm

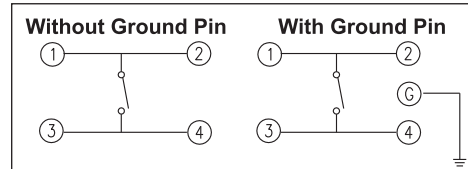
☐=Without Post
P=With Post

Package:
☐=Bag
T/R=Tape & Reel
B=Tube
(Only For Without Post)

V=RoHS & Lead Free Solderable
Q=Halogen Free

Operating Force:
K=Black, 100gf
N=Brown, 160gf
R=Red, 260gf

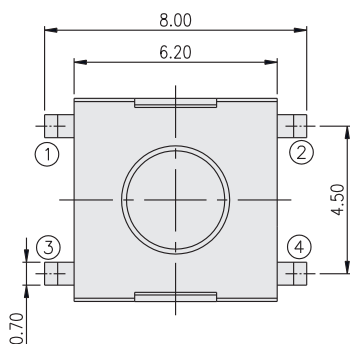
Height:
1=2.50mm
2=3.10mm
3=3.50mm
4=5.25mm

CIRCUIT**PACKAGE****<Tube>**

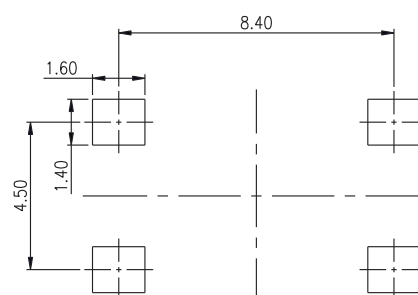
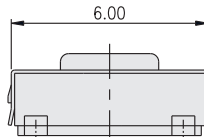
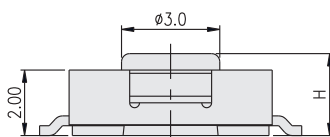
75 pcs

<Tape & Reel>

DTS(G)ZML-61☐: 2500 pcs
DTS(G)ZML-62☐: 2500 pcs
DTS(G)ZMPL-61, 62: 1200 pcs
DTS(G)ZM(P)L-63: 1200 pcs
DTS(G)ZML-64☐: 900 pcs
DTS(G)ZMPL-64☐: 800 pcs

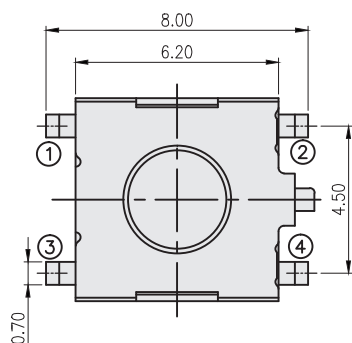
DTSZML-6

PART NO.	H
DTS ☐ ZML-61	2.50
DTS ☐ ZML-62	3.10
DTS ☐ ZML-63	3.50
DTS ☐ ZML-64	5.25

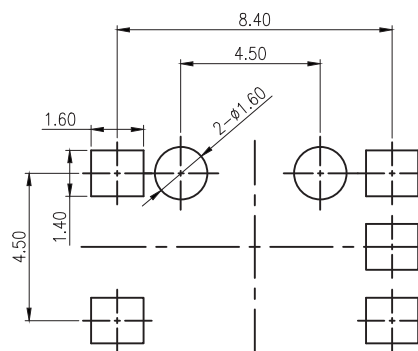
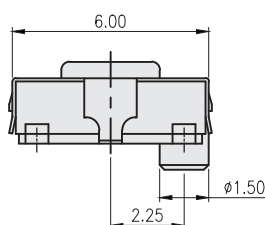
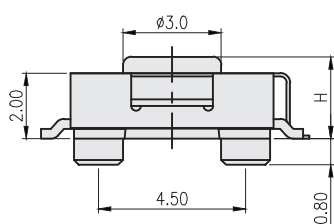


P.C.B. LAYOUT

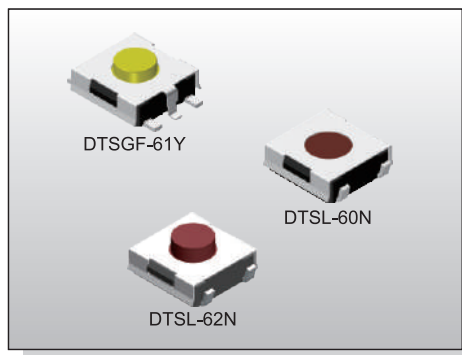
DTSGZMPL-6



PART NO.	H
DTS□ZMPL-61	2.50
DTS□ZMPL-62	3.10
DTS□ZMPL-63	3.50
DTS□ZMPL-64	5.25



P.C.B. LAYOUT



FEATURES

- ※ Thinner type with 2.0-3.1mm height
- ※ Ground terminal available
- ※ Reflow solderable

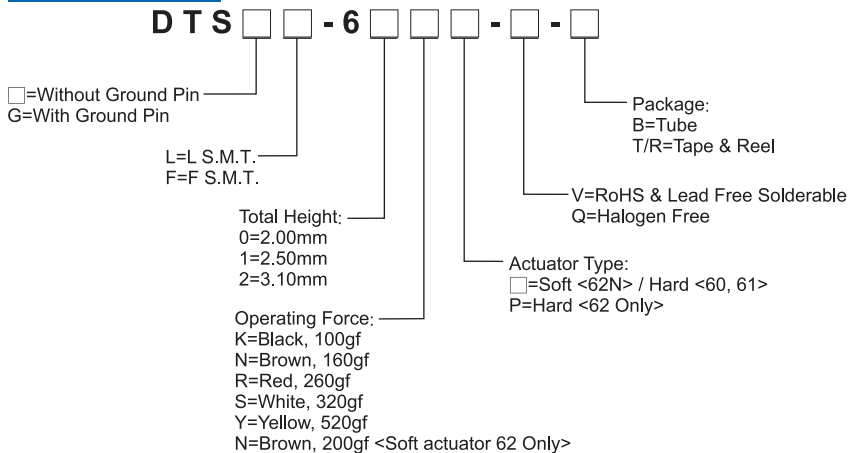
APPLICATION

- ※ Audio, OA equipment
- ※ Instrumentation
- ※ White goods

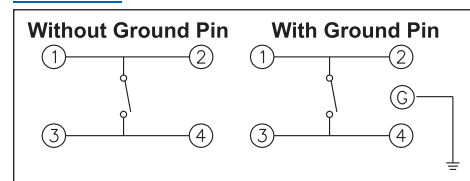
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf, Black(K) 160±50gf, Brown(N) 200±50gf, Brown(N) 62 Only 260±50gf, Red(R) 320±80gf, White(S) 520±130gf, Yellow(Y)
Travel	0.25mm
Operating Life	300,000 cycles for 520/320gf 500,000 cycles for 260/200gf 1,000,000 cycles for 160/100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



PACKAGE

<Tube>

75 pcs

<Tape & Reel>

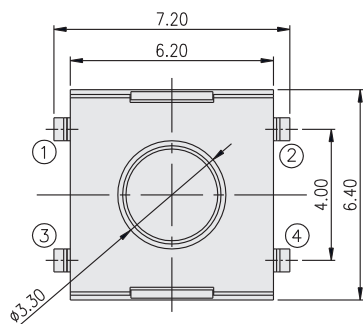
DTS(G)F-60 ☐ / DTSF-61 ☐: 3000 pcs

DTS(G)L-60 ☐ / DTS(G)L-61 ☐: 2700 pcs

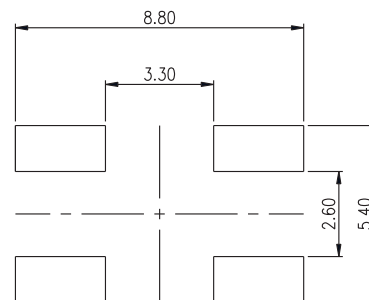
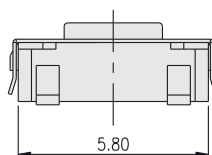
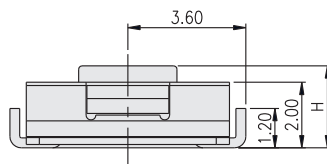
DTS(G)L-62 ☐ / DTS(G)F-62 ☐: 2500 pcs

DTSGF-61 ☐: 2500 pcs

DTSL-6

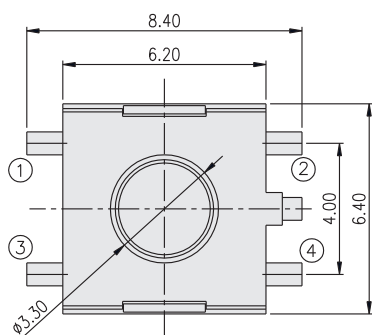


PART NO.	H
DTSL-60	2.00
DTSL-61	2.50
DTSL-62	3.10

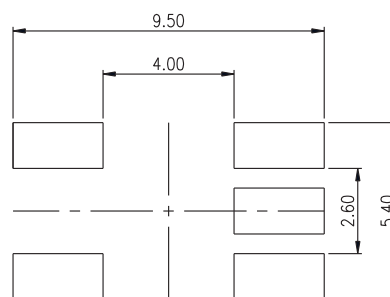
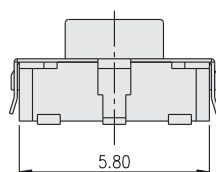
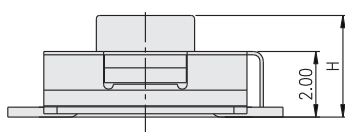


P.C.B. LAYOUT

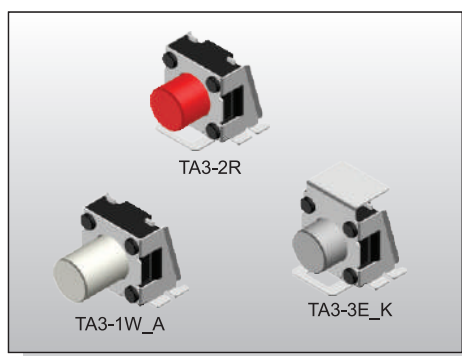
DTSGF-6



PART NO.	H
DTSGF-60	2.00
DTSGF-61	2.50
DTSGF-62	3.10



P.C.B. LAYOUT



FEATURES

- ✖Extended bracket available
- ✖Easy to pick & place with top tab

APPLICATION

- ※Data storage, Server
- ※Instrumentation
- ※Audio, OA equipment

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	10MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	185±50gf, 260±50gf
Travel	0.15mm
Operating Life	200, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

TA 3 - - - -

Stem Height:

1=4.35mm
2=2.80mm
3=2.30mm
4=4.00mm
6=1.12mm

Color Of Stem:

W=White
R=Red
E=Gray

Operating Force:

2=185gf
3=260gf

Package:
T/R=Tape & Reel

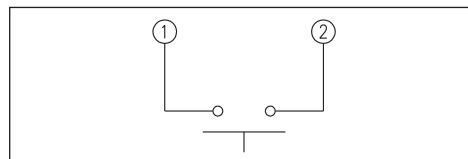
— V=RoHS & Lead Free Solderable
Q=Halogen Free

□=Silver Plating
S=Silicone Stem, Terminal Silver Plating
(For TA3-3)

- ☐=Without Tab
- K=Tab for auto-dipping

- ☐=With Solder Pad
A=Without Solder Pad

CIRCUIT

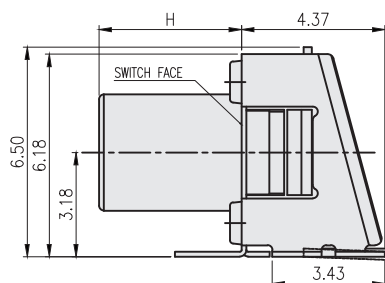
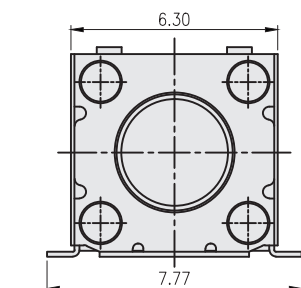


PACKAGE

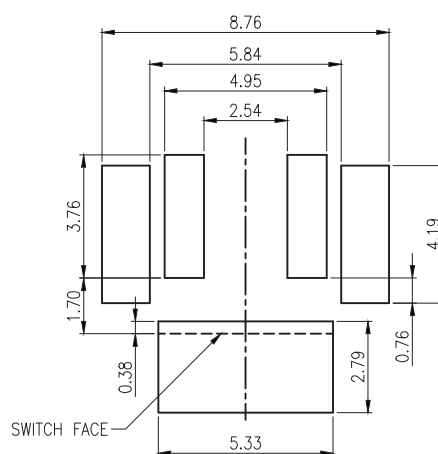
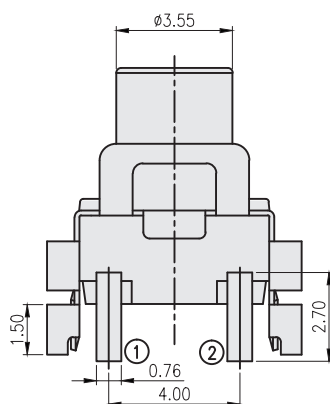
<Tape & Reel>

TA3: 600 pcs

TA3-K: 550 pcs

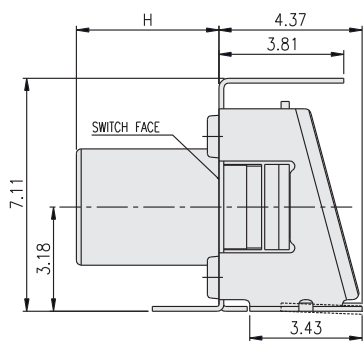
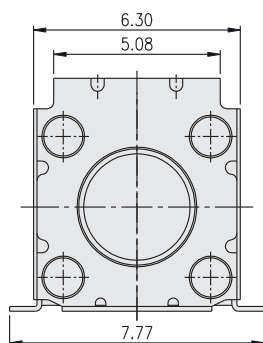
TA3-

PART NO.	H
TA3-1□□	4.35
TA3-2□□	2.80
TA3-3□□	2.30
TA3-4□□	4.00
TA3-6□□	1.12

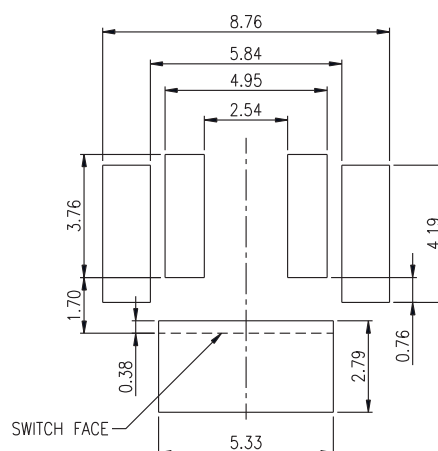
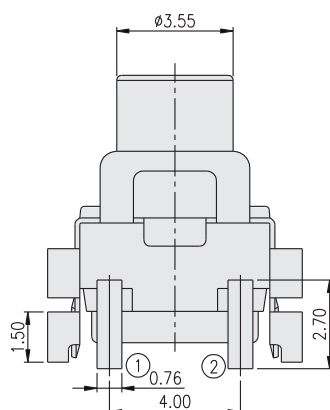


P.C.B. LAYOUT

TA3-□□K

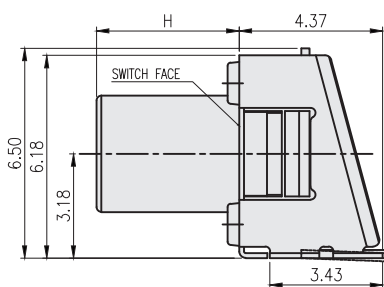
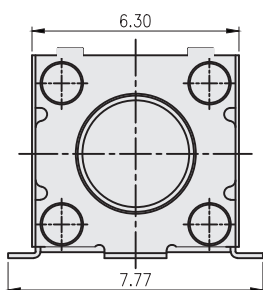


PART NO.	H
TA3-1□□K	4.35
TA3-2□□K	2.80
TA3-3□□K	2.30
TA3-4□□K	4.00
TA3-6□□K	1.12

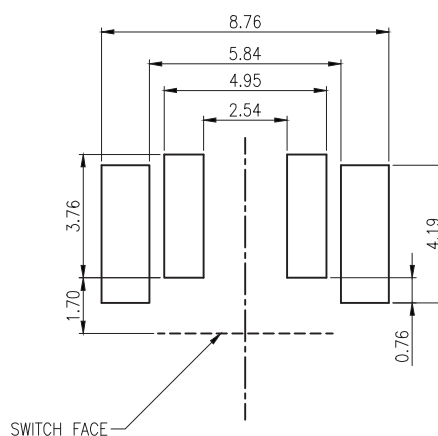
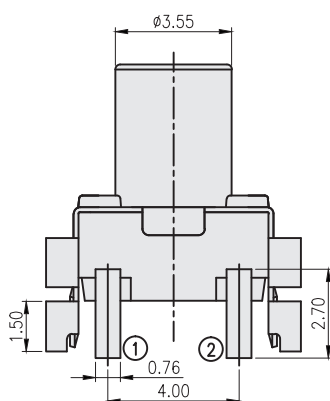


P.C.B. LAYOUT

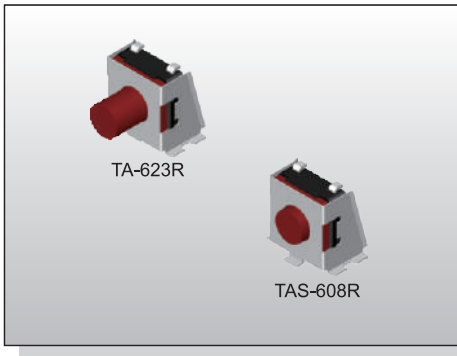
TA3-□□A



PART NO.	H
TA3-1□□A	4.35
TA3-2□□A	2.80
TA3-3□□A	2.30
TA3-4□□A	4.00
TA3-6□□A	1.12



P.C.B. LAYOUT



FEATURES

- ※Right angle (SMT type)
- ※Support terminal available
- ※Reflow solderable

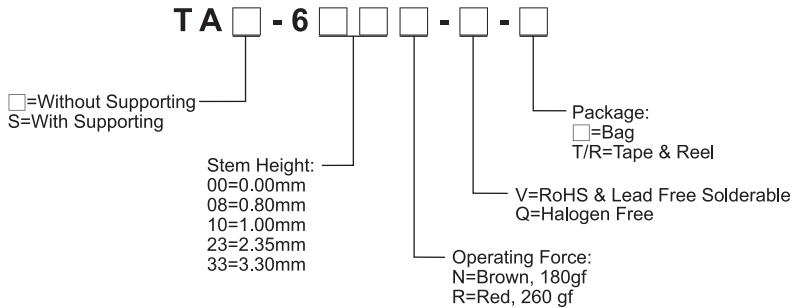
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Hair dryers

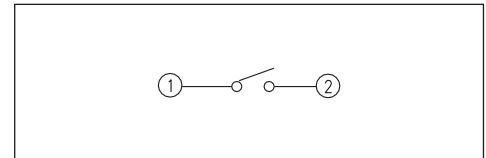
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	180±50gf, Brown(N) 260±70gf, Red(R)
Travel	0.45mm
Operating Life	500, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



PACKAGE

<Bag>

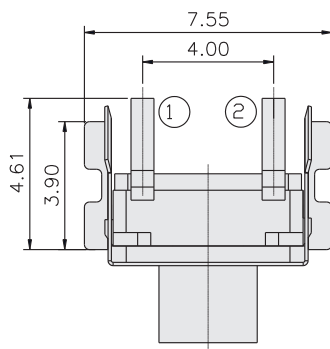
500 pcs

<Tape & Reel>

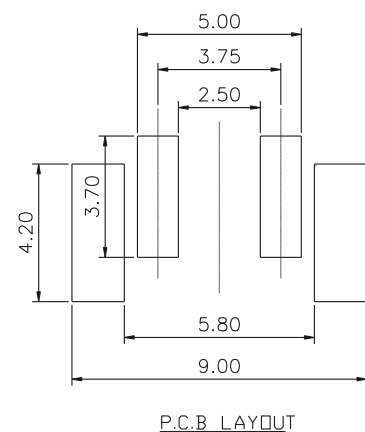
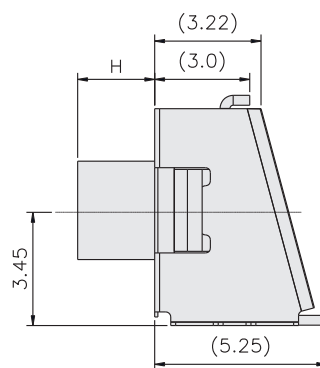
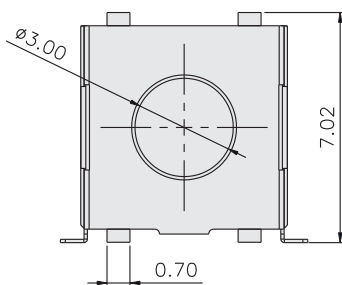
TA(S)-600 / 608 / 610 / 623: 700 pcs

TA(S)-633: 500 pcs

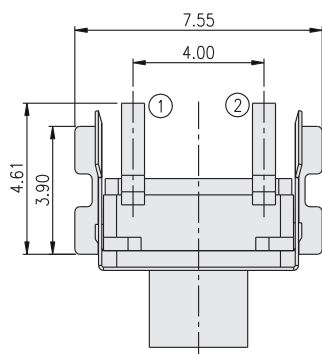
TA-6



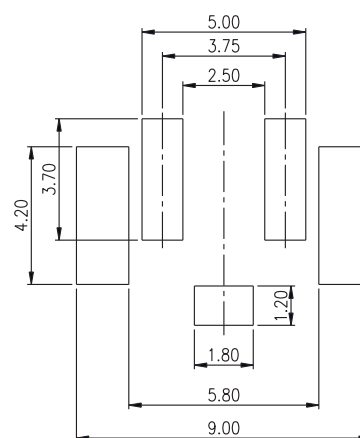
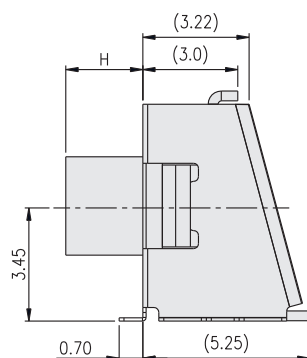
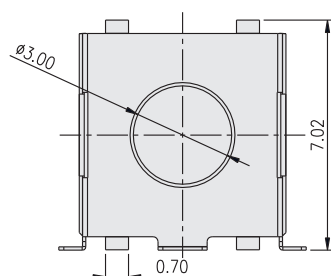
PART. NO.	H
TA-600-Q	0.00
TA-608-Q	0.80
TA-610-Q	1.00
TA-623-Q	2.35
TA-633-Q	3.30



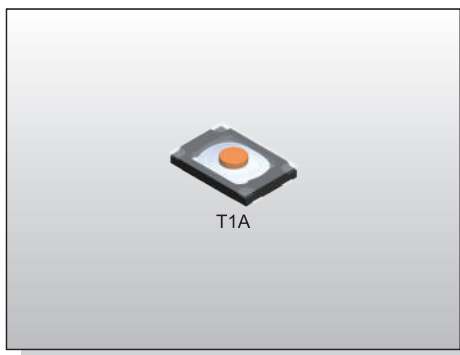
TAS-6



PART NO.	H
TAS-600	0
TAS-608	0.80
TAS-610	1.00
TAS-623	2.35
TAS-633	3.30



P.C.B. LAYOUT



FEATURES

- ※ Compact-size 2.8*1.9mm
- ※ Low profile with 0.60mm
- ※ Long operating cycles

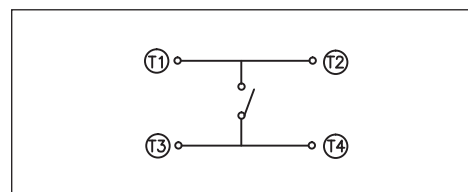
APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device
- ※ 3C products

SPECIFICATION

Contact Rating	10μA, 2V DC to 20mA, 15V DC
Contact Resistance	500mΩ max.
Insulation Resistance	50mΩ min. 100V DC
Dielectric Strength	250V AC/ 1 minute.
Operating Force	160±50gf / 200±50gf / 300±70gf
Travel	0.15±0.10mm
Operating Life	500,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
16000 pcs

HOW TO ORDER

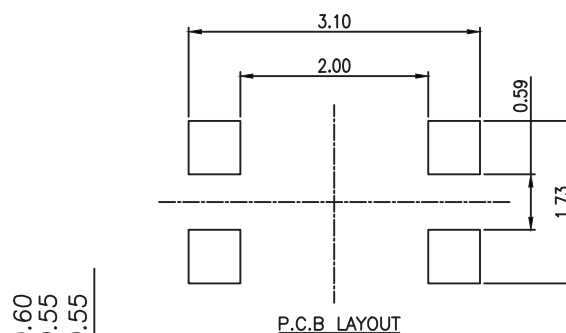
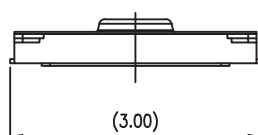
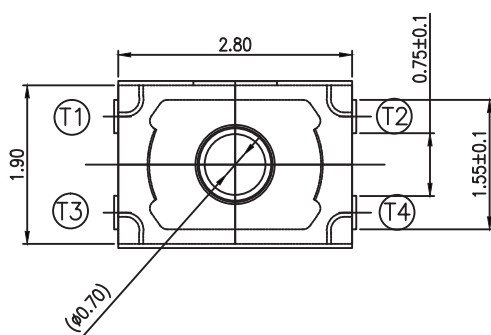
T 1 A □ Q R L

Package:
Tape & Reel

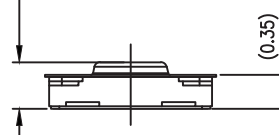
Halogen Free

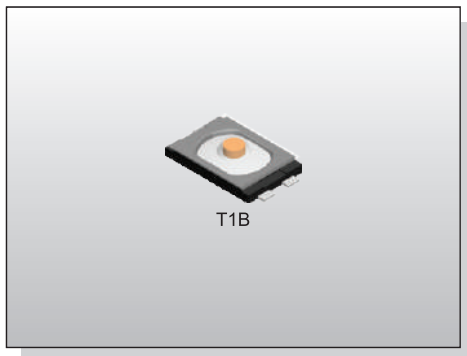
Operating Force:
2=160gf
3=200gf
5=300gf

T1A



T1A5QRL 0.60
T1A3QRL 0.55
T1A2QRL 0.55





FEATURES

- ※ Compact-size 2.6*1.6mm
- ※ Low profile with 0.55mm
- ※ 200,000 operating cycles

APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device
- ※ 3C products

SPECIFICATION

Contact Rating	10uA, 2V DC to 20mA, 15V DC
Contact Resistance	500mΩ max.
Insulation Resistance	50MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	60±30gf/100±50gf 160±50gf/240±70gf
Travel	0.11mm
Operating Life	300,000 cycles for 100/160/240gf 500,000 cycles for 60gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

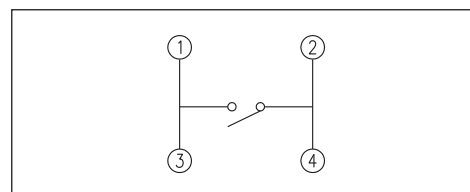
T 1 B □ Q R

Package:
Tape & Reel

Halogen Free

Operating Force:
0=60gf
1=100gf
2=160gf
4=240gf

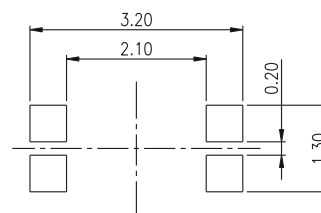
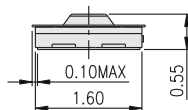
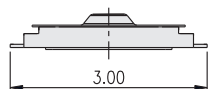
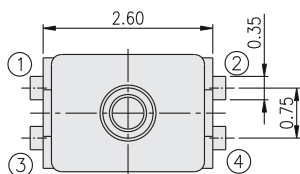
CIRCUIT



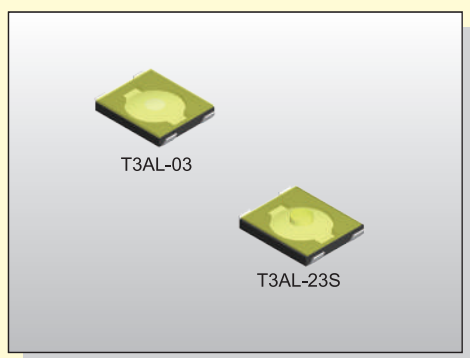
PACKAGE

<Tape & Reel>
8000 pcs

T1B



P.C.B. LAYOUT



FEATURES

- ※Compact-sized 2.6x3mm
- ※Low profile with 0.45mm / 0.65mm

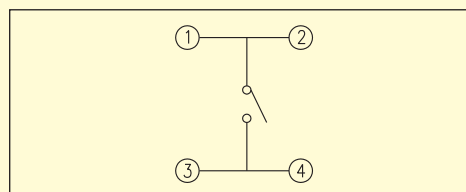
APPLICATION

- ※Smart phone
- ※Digital camera, Medical
- ※Portable electronic device

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	500mΩ max.
Insulation Resistance	50MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50gf, 160±50gf
Travel	0.15mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
8000 pcs

HOW TO ORDER

T 3 A L - □ □ □ - Q - □

Heigh: □
0=0.45mm
2=0.65mm

Operating Force:
2=100gf
3=160gf

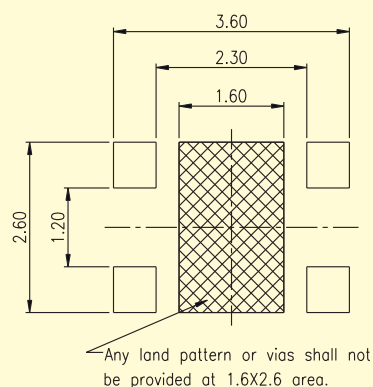
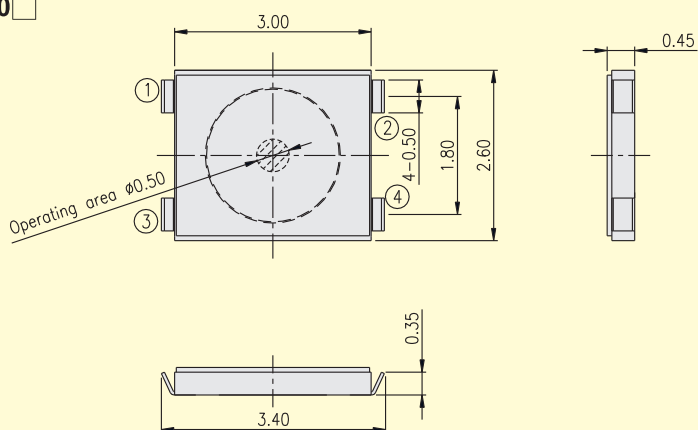
□=For T3AL-0□Type
S=For T3AL-2□Type

Package:
T/R=Tape & Reel

Halogen Free

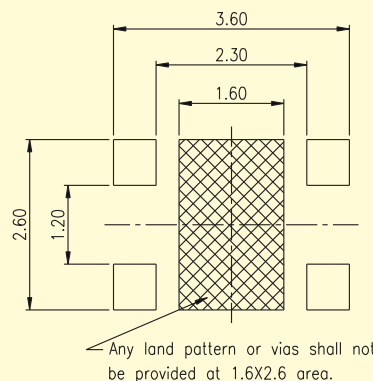
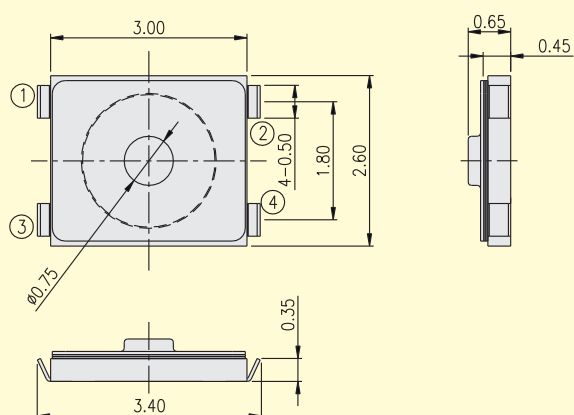
Heigh: —
0=0.45mm
2=0.65mm

- Operating Force:
2=100gf
3=160gf

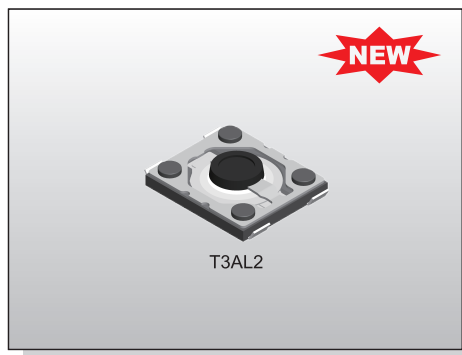
T3AL-0 ☐

P.C.B. LAYOUT

T3AL-2 ☐ **S**



P.C.B. LAYOUT



NEW

FEATURES

- ※Low profile with 0.65mm
- ※Compact-sized 2.6x3mm
- ※Sealed

APPLICATION

- ※Hearing aids
- ※Wearable devices
- ※Earbuds / audio accessories
- ※Portable medical devices

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	500mΩ max.(initial)
Insulation Resistance	50MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.15±0.10mm
Operating Life	150,000 cycles
Operating Temp.	-40°C ~ + 85°C
Storage Temp.	-55°C ~ + 85°C

HOW TO ORDER

T 3 A L ☐ **2 3 S1 Q R L**

J Bending Terminal S. M. T.

☐ =Without Ground Pin
G =With Ground Pin

Height:
2=0.65mm

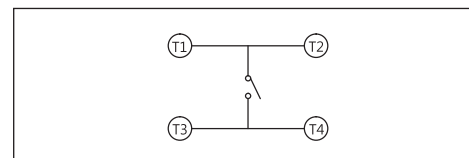
Operating Force:
3=160gf

Package:
Tape & Reel
Halogen Free

S1=For T3AL-2 ☐ Type

Laser

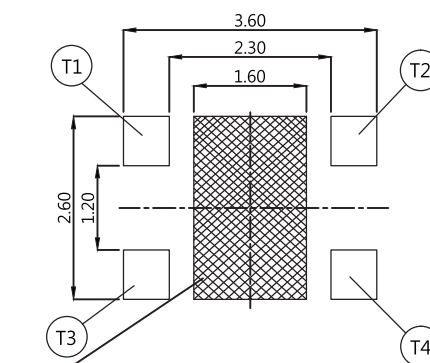
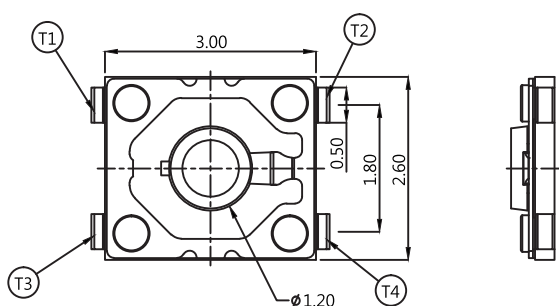
CIRCUIT



PACKAGE

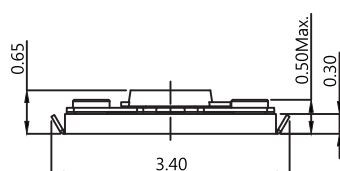
<Tape & Reel>
15000 pcs

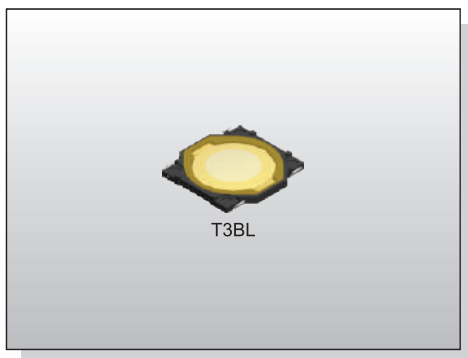
T3AL ☐ 23S1QRL



Any land pattern or vias shall not be provided at 1.6X2.6 area.

P.C.B. LAYOUT





FEATURES

- ※ Compact-sized 3.7x3.7mm
- ※ Low profile of 0.35mm height
- ※ 500,000 life cycles operating

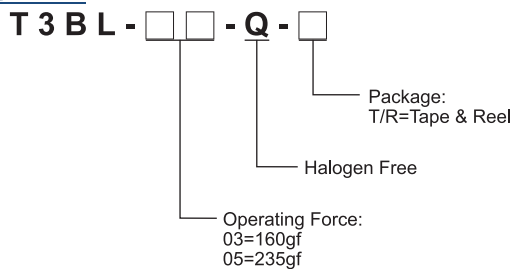
APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device

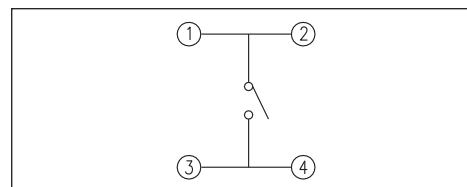
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	160±50gf/235±60gf
Travel	0.15mm
Operating Life	50,000 cycles for 235gf 500,000 cycles for 160gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



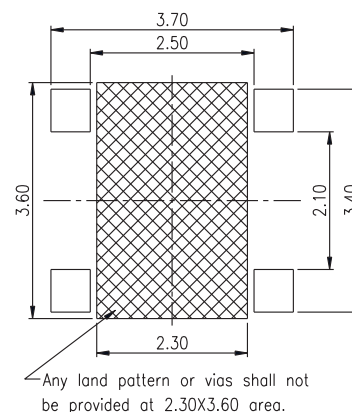
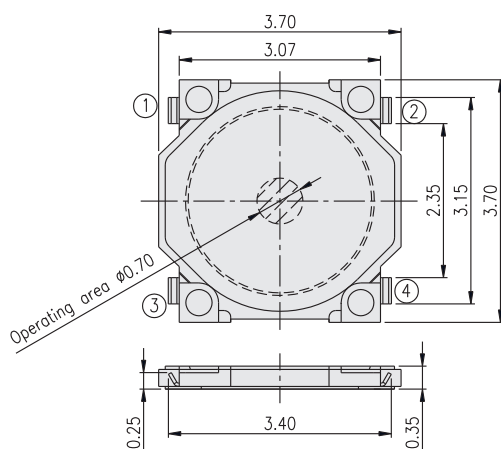
CIRCUIT



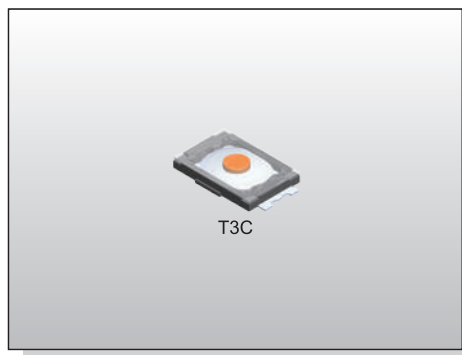
PACKAGE

<Tape & Reel>
8000 pcs

T3BL



P.C.B. LAYOUT



FEATURES

- ※ Compact-size 3.0*2.0mm
- ※ Low profile with 0.60mm
- ※ Long operating cycles

APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device
- ※ 3C products

SPECIFICATION

Contact Rating	10μA , 2 V DC to 20mA , 15V DC
Contact Resistance	500mΩ max.
Insulation Resistance	50mΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf / 180±50gf 240±70gf / 330±100gf
Travel	0.13mm / 0.15mm(for330g)
Operating Life	500,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

T 3 C ☐ G Q R L

Packaging turn 90°, pitch 4mm
Packaging Quantity : 16,000pcs

Halogen Free

Silver Plating

Operating Force:

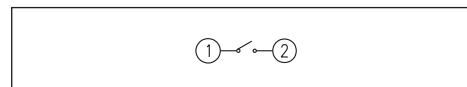
2=160gf

3=180gf

4=240gf

5=330gf

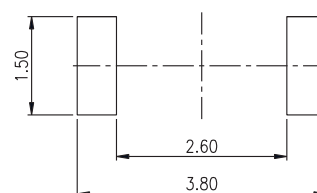
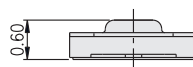
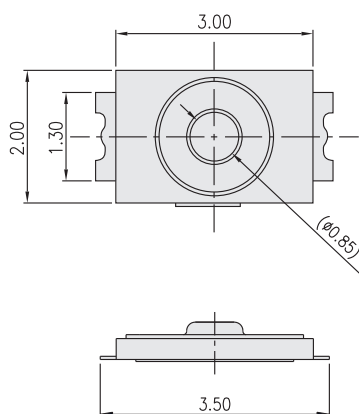
CIRCUIT



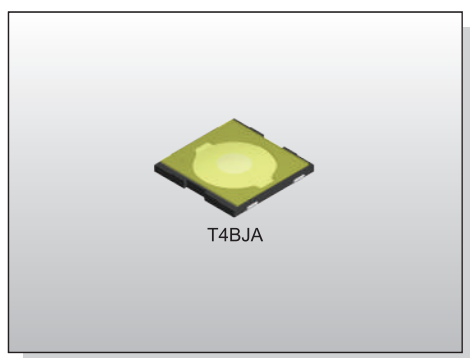
PACKAGE

<Tape & Reel>
16000 pcs

T3C



P.C.B. LAYOUT



FEATURES

- ※ Compact-sized 4.8x4.8mm
- ※ Low profile of 0.55mm height
- ※ Long operating life

APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	100±50gf/160±50gf/200±50gf 260±50gf/360±60gf
Travel	0.2mm
Operating Life	200,000 cycles for 360gf 500,000 cycles for 260/200gf 1,000,000 cycles for 160/100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

T 4 B J **B Q R**

Terminal Pitch:
A=2.80mm
B=3.70mm

Operating Force:

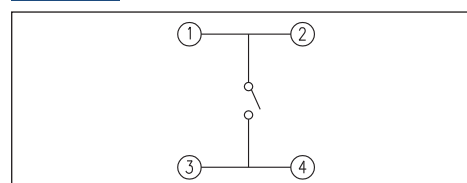
10=100gf
16=160gf
20=200gf
26=260gf
36=360gf

Package:
Tape & Reel

Halogen Free

Double Dome

CIRCUIT

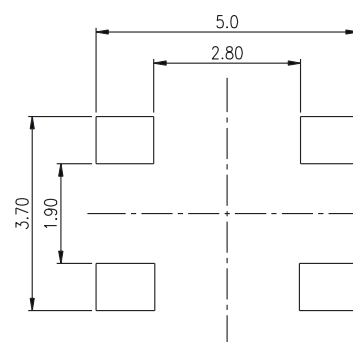
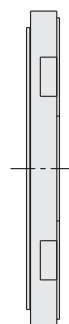
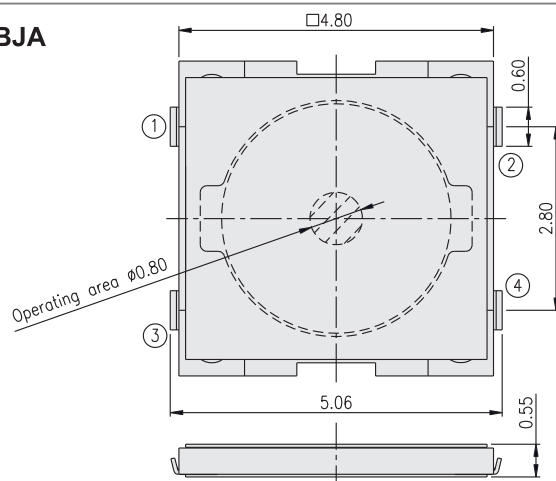


PACKAGE

<Tape & Reel>
8000 pcs

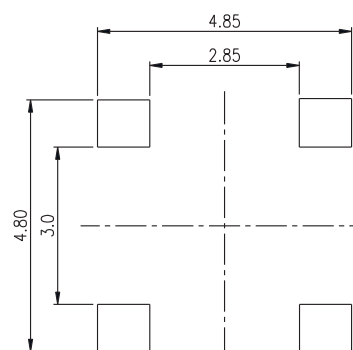
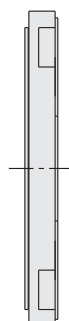
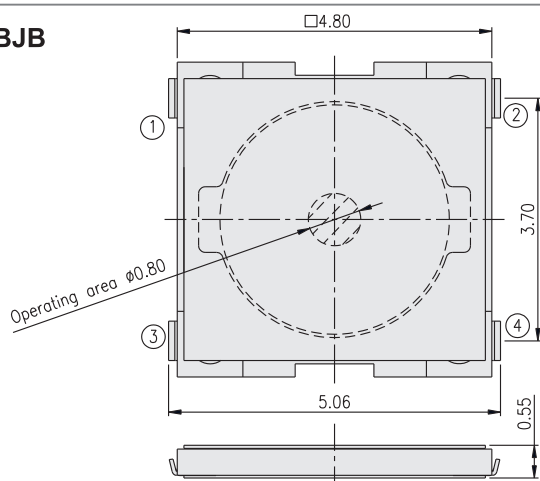
TACT SWITCH

T4BJA

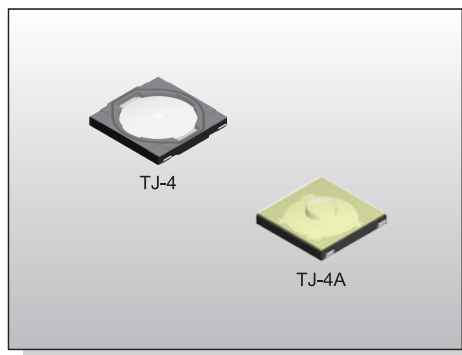


P.C.B. LAYOUT

T4BJB



P.C.B. LAYOUT



FEATURES

- ※ Compact-sized 4.4x4.4mm
- ※ Low profile of 0.55mm height
- ※ Long operating life

APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	300V AC/1 minute
Operating Force	100±50gf/160±50gf/200±50gf 260±50gf
Travel	0.2mm
Operating Life	500,000 cycles for 260/200gf 1,000,000 cycles for 160/100gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

T J - 4 ☐ ☐ Q R L

A=With Push Button
☐=Without Push Button

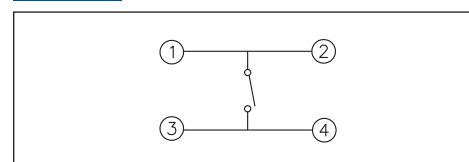
Operating Force:
10=100gf
16=160gf
20=200gf
26=260gf

(for TJ-4)

Package:
Tape & Reel

Halogen Free

CIRCUIT



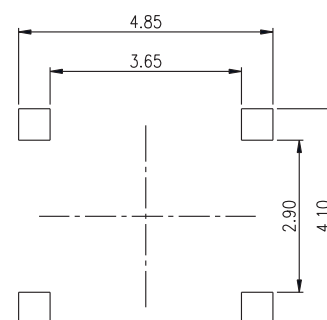
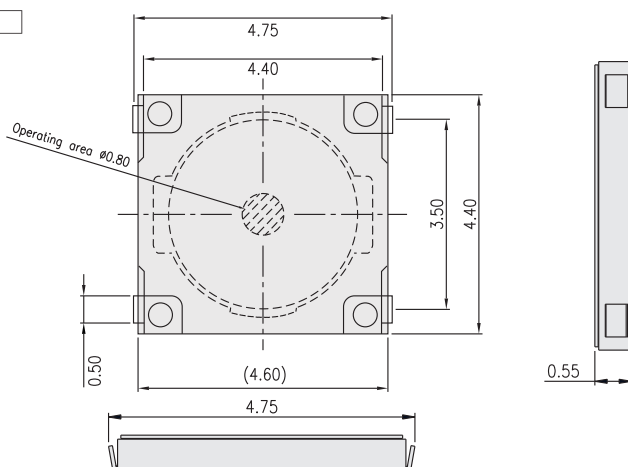
PACKAGE

<Tape & Reel>

TJ-4: 8000 pcs

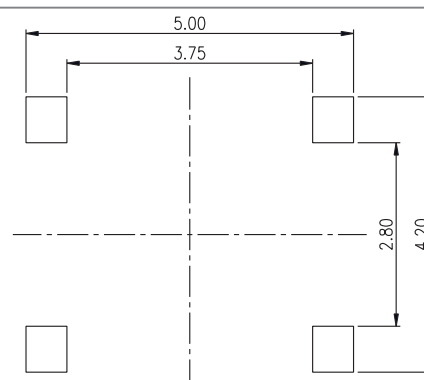
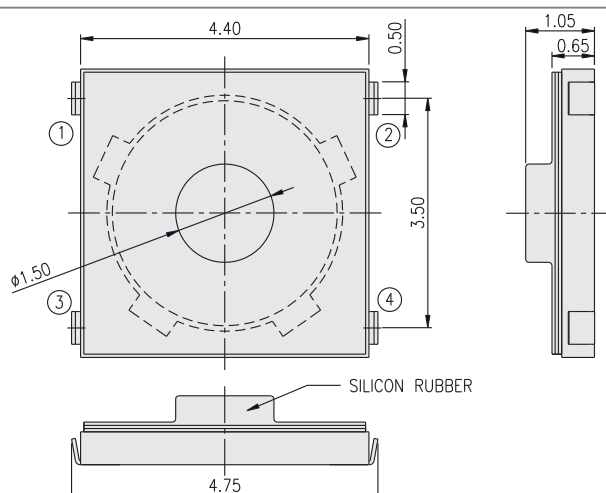
TJ-4A: 5000 pcs

TJ-4 ☐ ☐

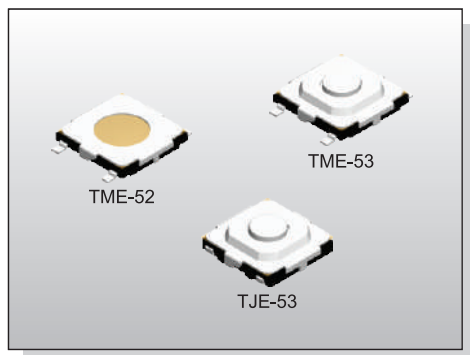


P.C.B. LAYOUT

TJ-4A



P.C.B. LAYOUT



FEATURES

- ※ Compact-sized 5.2x5.2mm
- ※ Long operating life
- ※ With ground terminal

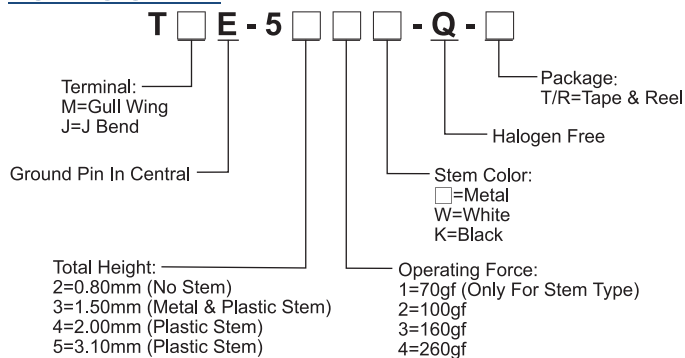
APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device

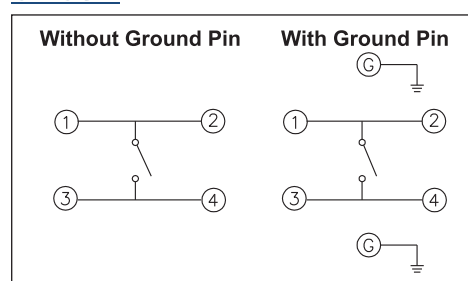
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	70±50gf/ 100±50gf/160±50gf 260±50gf
Travel	0.25mm
Operating Life	200,000 cycles for 260gf 1,000,000 cycles for 160/100/70gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT

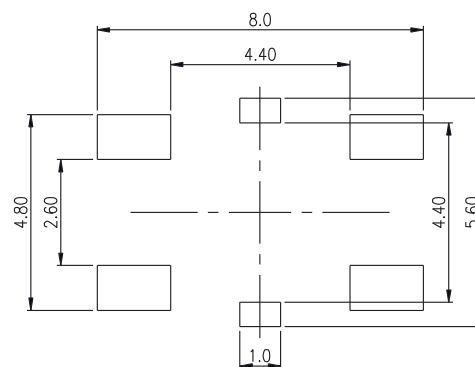
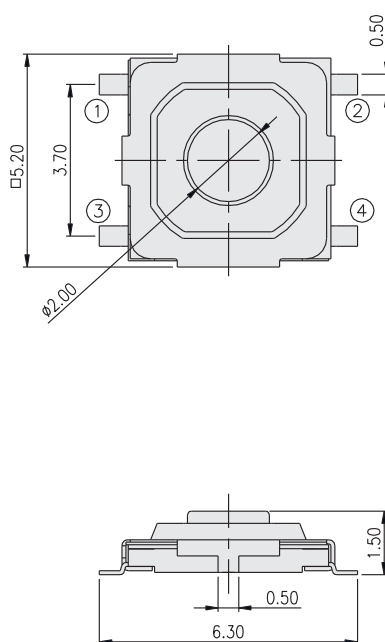


PACKAGE

<Tape & Reel>

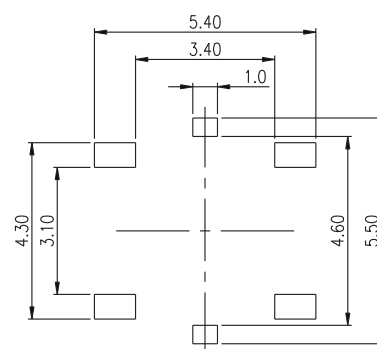
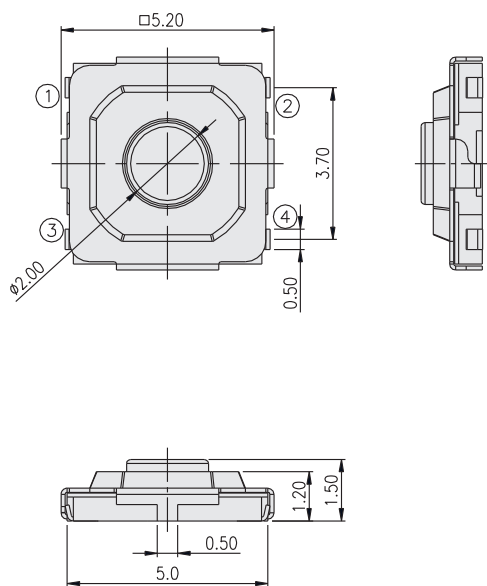
- T□E-52, 53=4000 pcs
- T□E-54=3000 pcs
- T□E-55=2000 pcs

TME-5



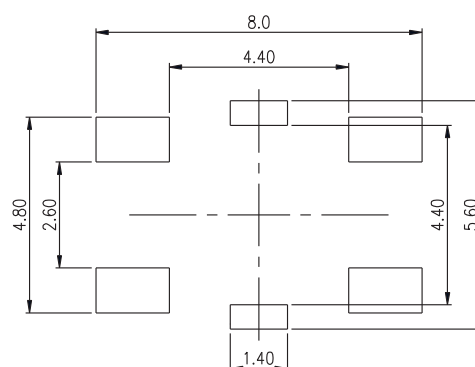
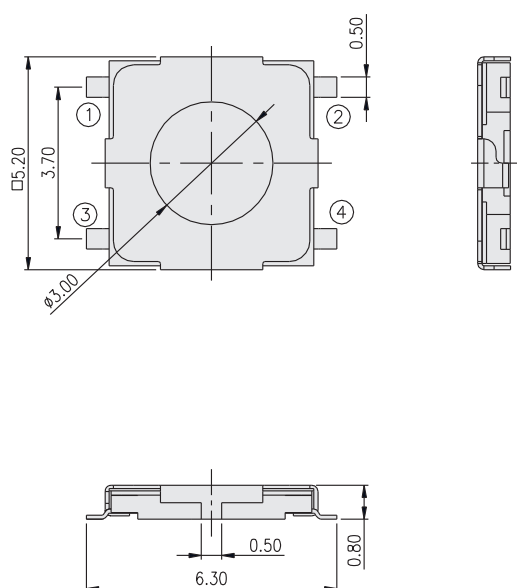
P.C.B. LAYOUT

TJE-53

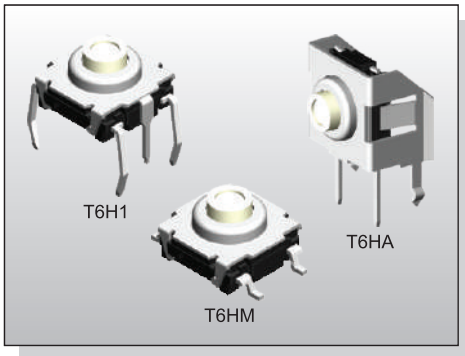


P.C.B. LAYOUT

TME-52



P.C.B. LAYOUT



FEATURES

- ✧ Support automatic insertion
- ✧ Vertical actuation
- ✧ Dust proof structure

APPLICATION

- ✧ Automotive
- ✧ Industrial
- ✧ Instrumentation

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	130±50gf/160±50gf 300±50gf/500±100gf
Travel	0.5mm
Operating Life	200,000 cycles for 500gf 500,000 cycles for 300gf 1,000,000 cycles for 160/130gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

T 6 H - - - Q

A=Right angle series
H=Through holes
M=S.M.T Type
1=6x6 ground terminal type
2=S.M.T ground terminal type

Package Style:
R=Tape & Reel (S.M.T. Type Only)
B=Tube

Halogen Free

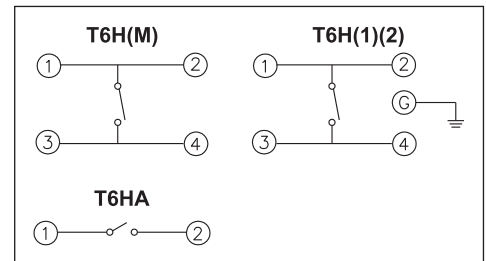
Contact Plating:
G = Plating Ag
A= Plating Au

Operating Force:
2=130gf
3=160gf
5=300gf
6=500gf

Total Height :

SMT/Through hole	Right angle
1=4.70mm	1=6.04mm
2=5.20mm	2=6.54mm
3=6.90mm	3=8.24mm
5=10.0mm	5=11.34mm

CIRCUIT



PACKAGE

<Tube>

T6HH, T6H1: 60 pcs

T6HA: 52 pcs

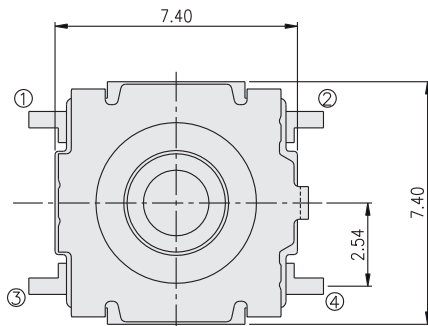
<Tape & Reel>

T6HM-(1)(2): 700 pcs

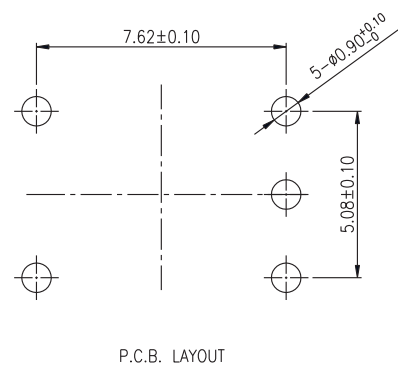
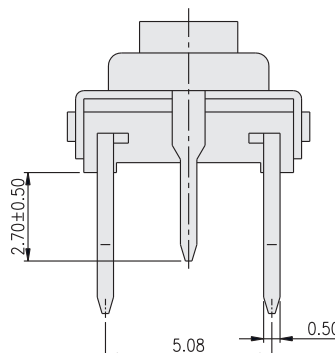
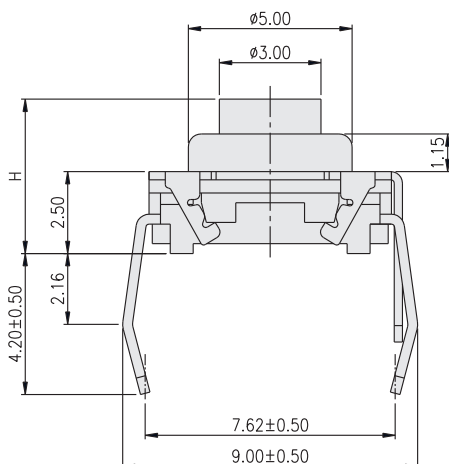
T6HM-3: 500 pcs

T6HM-5: 350 pcs

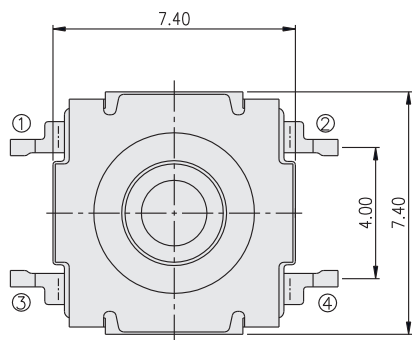
T6H1



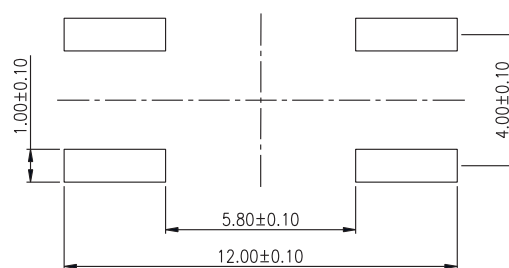
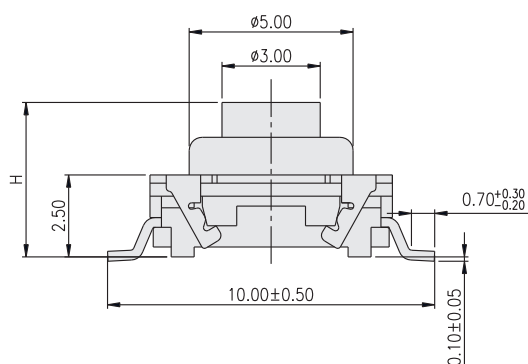
PART NO.	H
T6H1-1	4.70
T6H1-2	5.20
T6H1-3	6.90
T6H1-5	10.00



T6HM



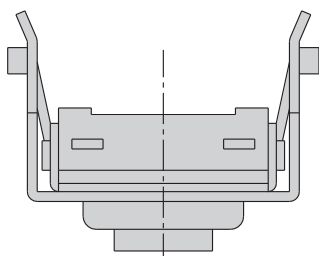
PART NO.	H
T6HM-1	4.70
T6HM-2	5.20
T6HM-3	6.90
T6HM-5	10.00



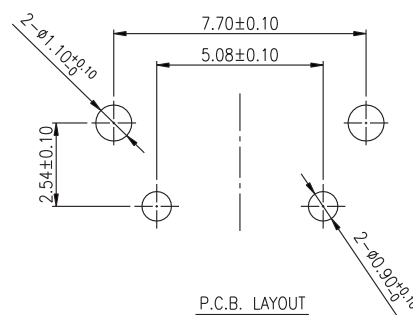
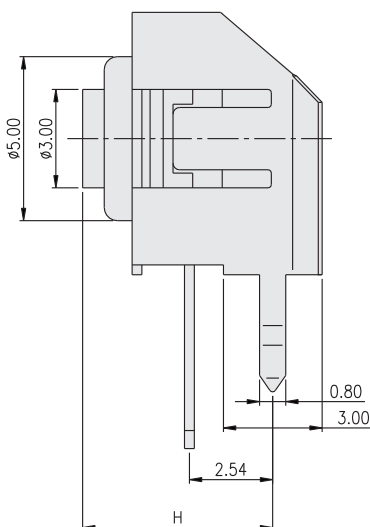
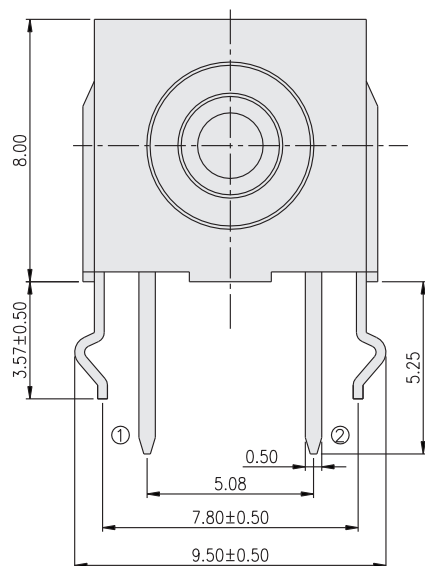
P.C.B. LAYOUT

TACT SWITCH

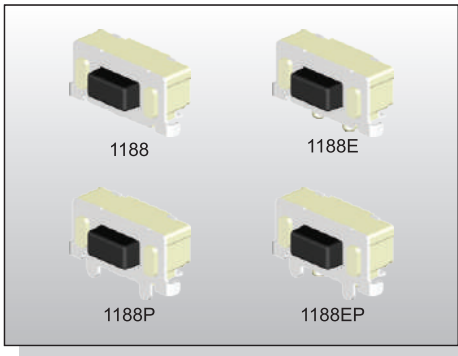
T6HA



PART NO.	H
T6HA-1	6.04
T6HA-2	6.54
T6HA-3	8.24
T6HA-5	11.34



P.C.B. LAYOUT



FEATURES

- ※Side actuated
- ※Support / Ground pins options
- ※High solder strength

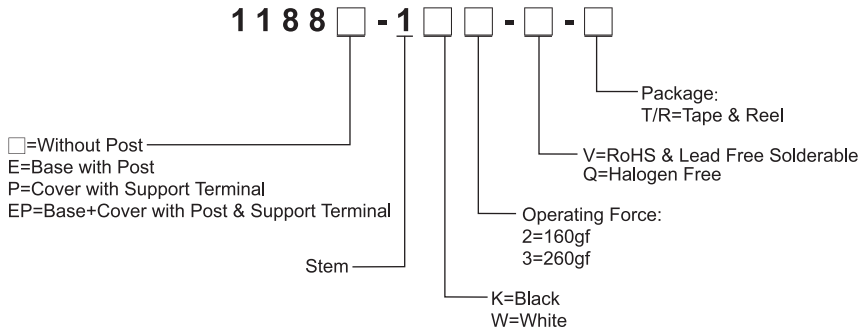
APPLICATION

- ※Audio, OA equipment
- ※Instrumentation
- ※Remote control

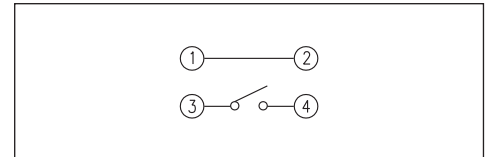
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf/260±50gf
Travel	0.25mm
Operating Life	30,000 cycles for 260gf 50,000 cycles for 160gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



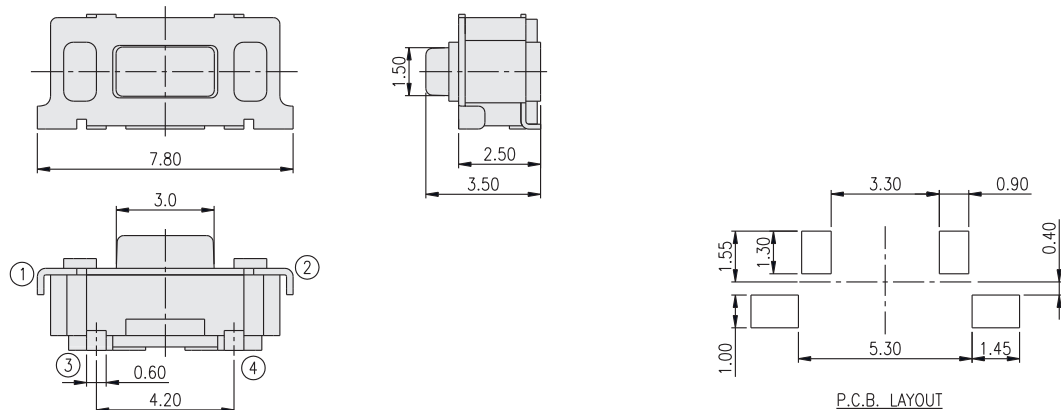
CIRCUIT



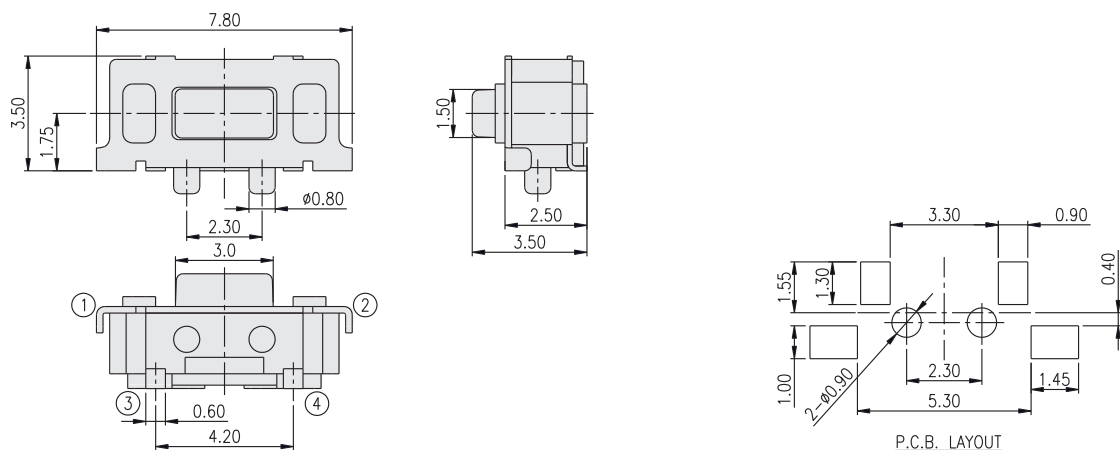
PACKAGE

<Tape & Reel>
1500 pcs

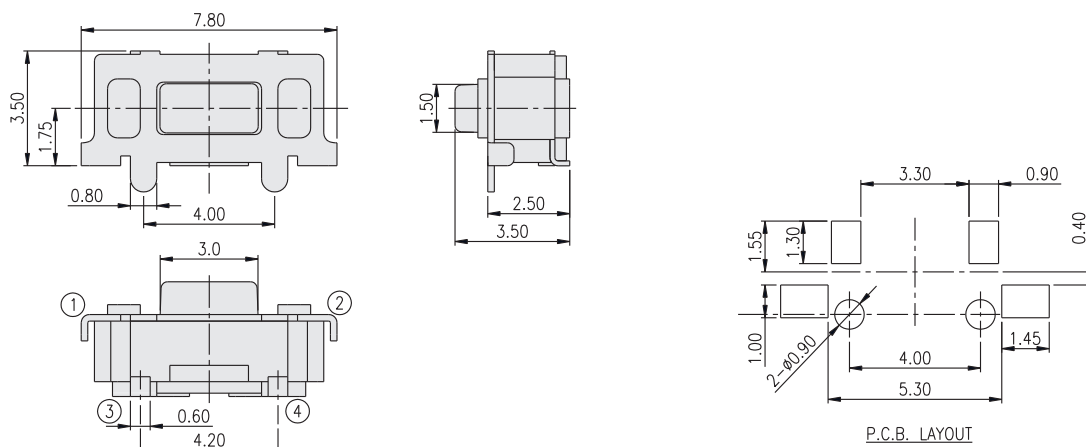
1188



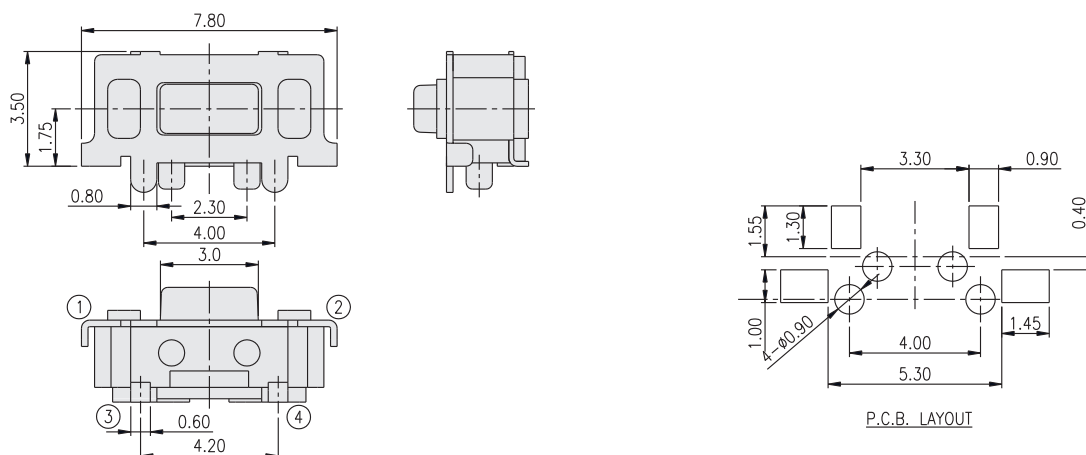
1188E



1188P

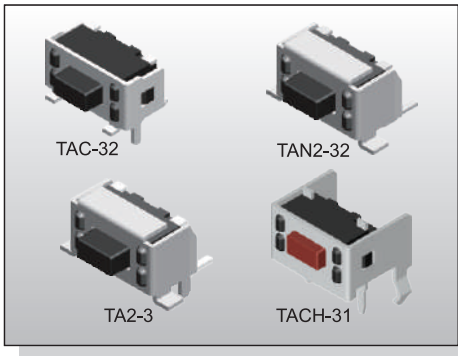


1188EP



TACT SWITCH TA(C)(2)-3 SERIES

3.95x7.3 / 4.65x7.0
SMT & Side Push Type



FEATURES

- ※Side actuated
- ※Support/Ground pin option
- ※High solder strength

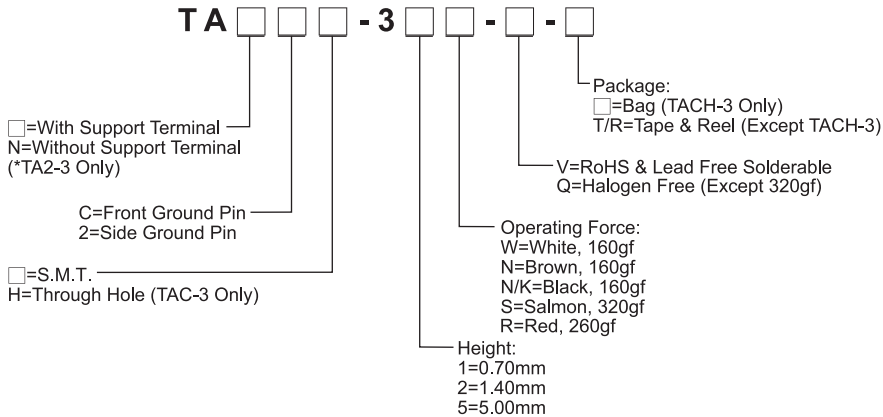
APPLICATION

- ※Data storage, Server
- ※Instrumentation
- ※Audio, OA equipment

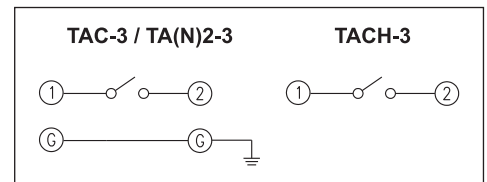
SPECIFICATION

Contact Rating	50mA, 12V DC	
Contact Resistance	100mΩ max.	
Insulation Resistance	100MΩ min. 500V DC	
Dielectric Strength	250V AC/1 minute	
Operating Force	160±50gf, 260±50gf	TAC-3
	160±50gf, White(W)	TA2-3
	160±50gf, Brown(N)	
	320±50gf, Salmon(S)	
Travel	0.25mm	
Operating Life	50,000 cycles	
Operating Temp.	-40°C ~ +85°C	
Storage Temp.	-40°C ~ +85°C	

HOW TO ORDER



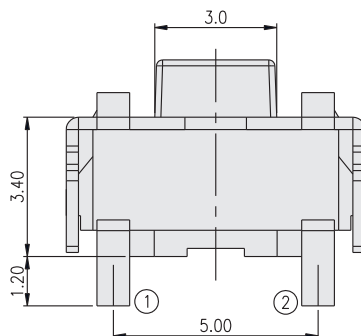
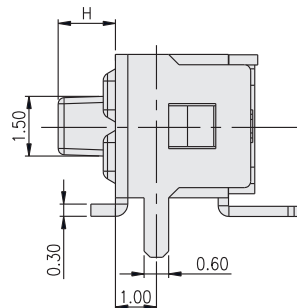
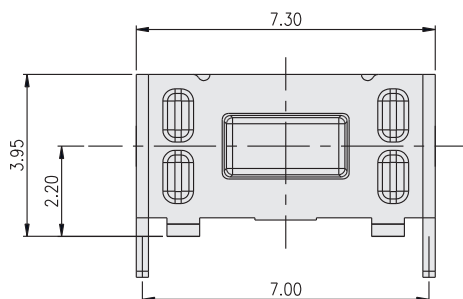
CIRCUIT



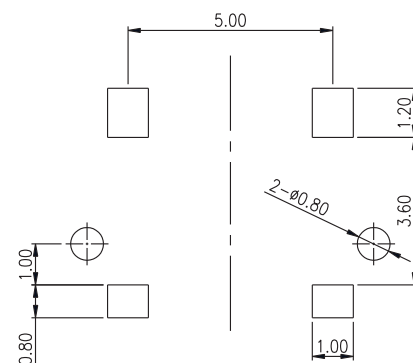
PACKAGE

<Bag>
500 pcs(TACH-3 Only)
<Tape & Reel>
900 pcs

TAC-3



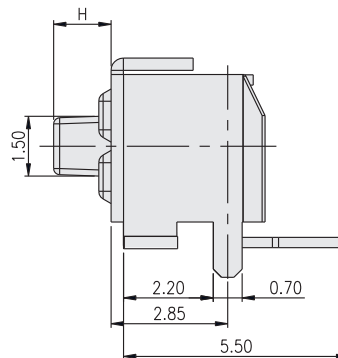
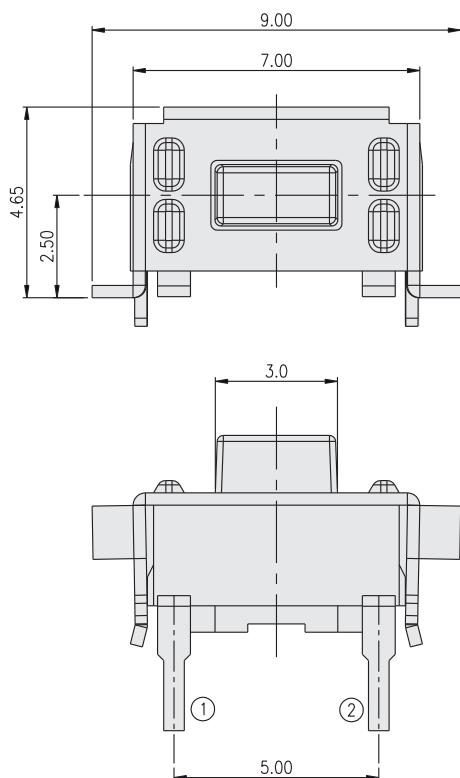
PART NO.	H
TAC-31	0.70
TAC-32	1.40
TAC-35	5.00



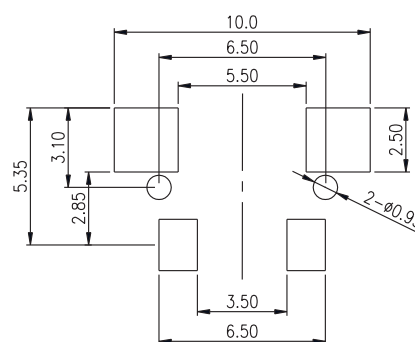
P.C.B. LAYOUT

TACT SWITCH

TA2-3

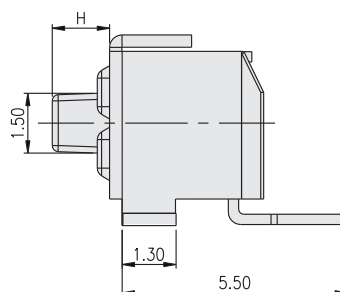
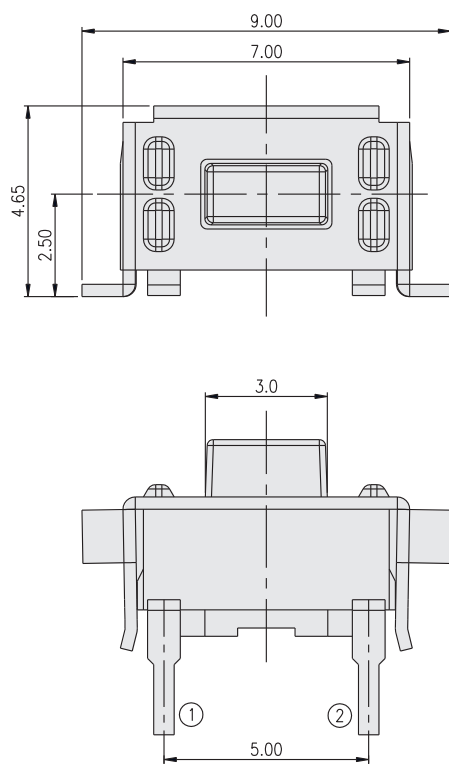


PART NO.	H
TA2-31	0.70
TA2-32	1.40
TA2-35	5.00

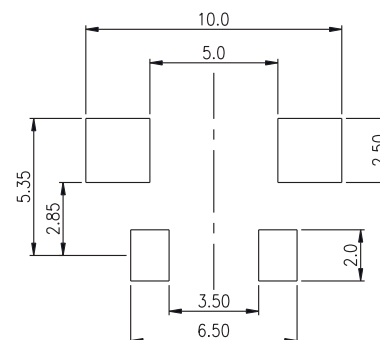


P.C.B. LAYOUT

TAN2-3

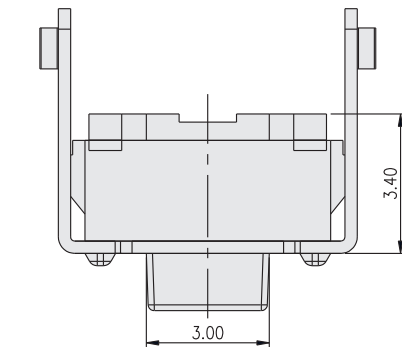


PART NO.	H
TAN2-31	0.70
TAN2-32	1.40
TAN2-35	5.00

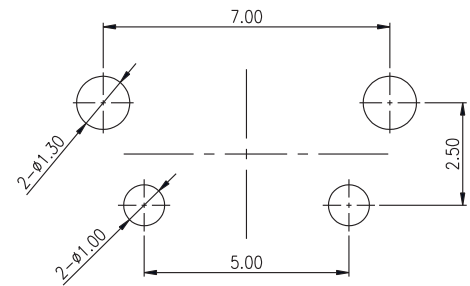
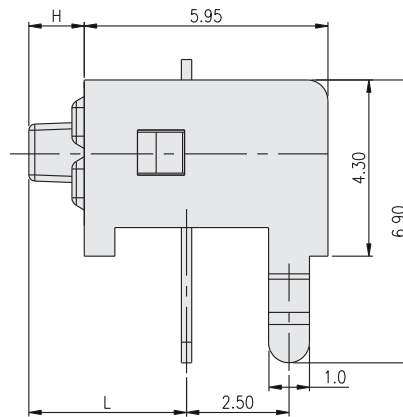
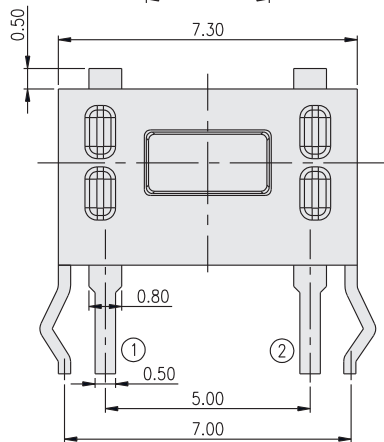


P.C.B. LAYOUT

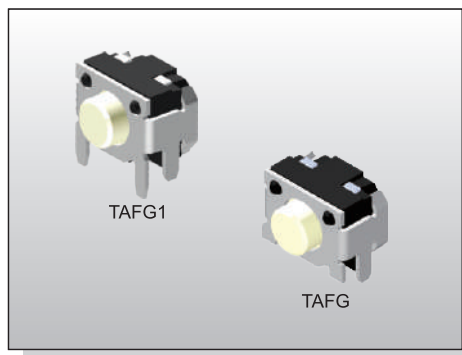
TACH-3



PART NO.	H	L
TACH-31	0.70	3.15
TACH-32	1.40	3.85
TACH-35	5.00	7.50



P.C.B. LAYOUT



FEATURES

- ※Miniature 3.3x4.5mm side push type
- ※High solder strength
- ※Sharp click feeling

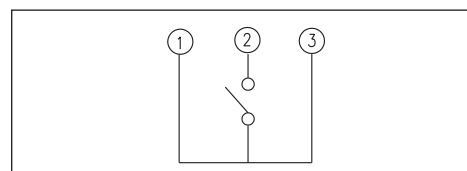
APPLICATION

- ※Smart phone
- ※Tablet
- ※Portable personal audio

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	500mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf/250±50gf
Travel	0.2mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
1800 pcs

HOW TO ORDER

T A F ☐ - 1 ☐ W Q R

☐=Cover Without Post
G=Cover With Post
G1=Cover With Post & Ground Pin

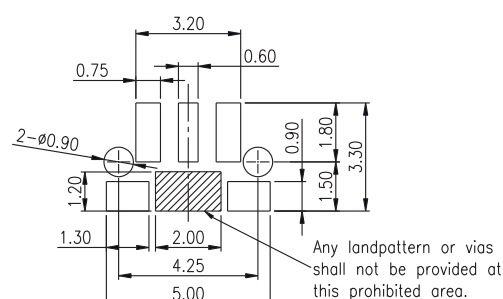
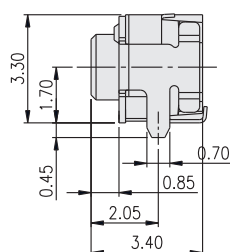
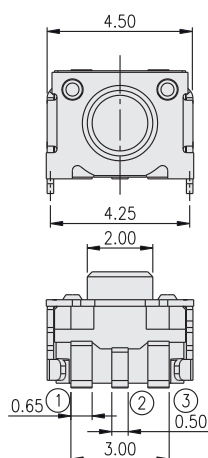
Package:
Tape & Reel

Halogen Free

2=160gf
3=250gf

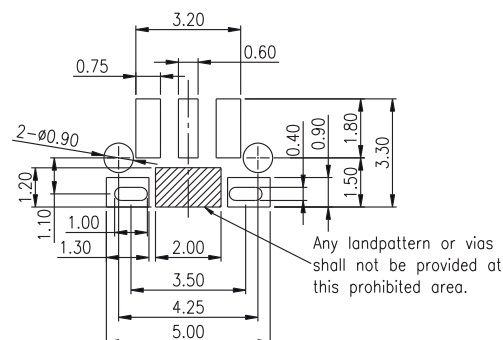
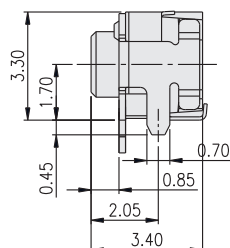
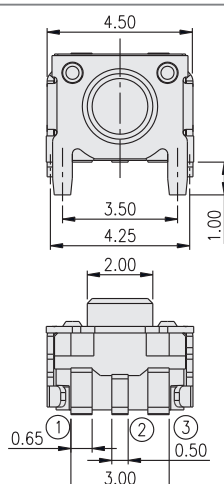
Stem Color:
W=White

TAFG

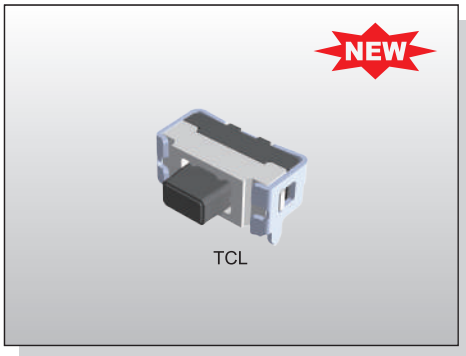


P.C.B. LAYOUT

TAFG1



P.C.B. LAYOUT



TCL

FEATURES

- ※Side-operational type
- ※PCB-base structure
- ※Sealed with dust proof

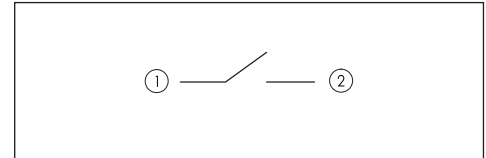
APPLICATION

- ※Drones
- ※E-Cigarettes
- ※Wireless Microphones
- ※Handheld Devices

SPECIFICATION

Contact Rating	10uA, 1V DC min. 50mA, 12V DC max.
Contact Resistance	500mΩ max.(initial)
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	150±50gf
Travel	0.15±0.1mm
Operating Life	200,000 cycles
Operating Temp.	-30°C ~ + 85°C
Storage Temp.	-40°C ~ + 90°C

CIRCUIT



PACKAGE

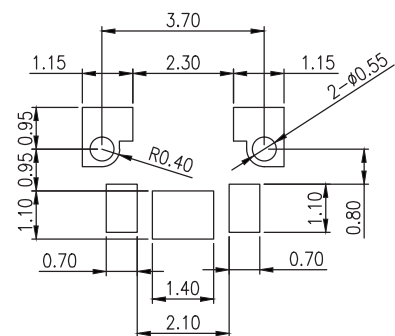
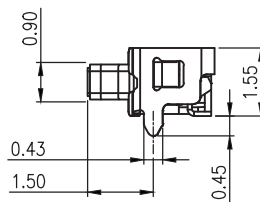
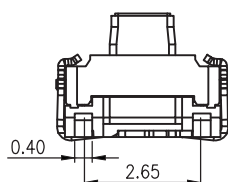
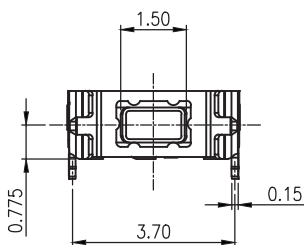
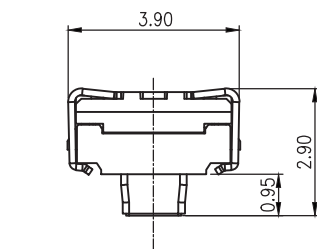
<Tape & Reel>
3200 pcs

HOW TO ORDER

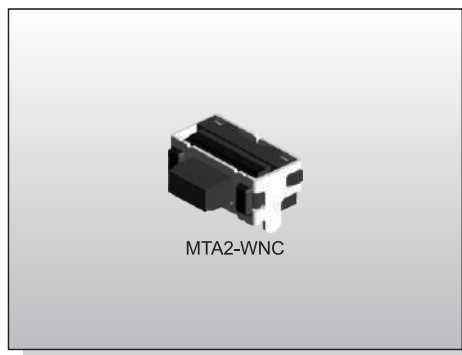
TCL-C2KGQR

- Shell With Post
- Operating Force:
2=150gf
- Package:
Tape & Reel
- Halogen Free
- Plating:
G=Silver Plating
- Color Of Stem:
K=Black

TCL-C2KGQR



P.C.B. LAYOUT



FEATURES

- ※ Compact-sized 1.9x4.5mm
- ※ Side actuated
- ※ Sealed with dust proof structure

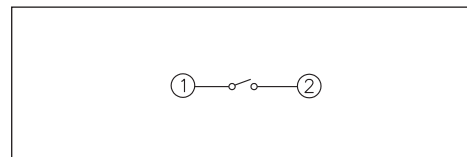
APPLICATION

- ※ Smart phone
- ※ Digital camera, Medical
- ※ Portable electronic device

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	180±50gf
Travel	0.20mm
Operating Life	100,000 cycles
Operating Temp.	-30°C ~ +80°C
Storage Temp.	-40°C ~ +90°C

CIRCUIT

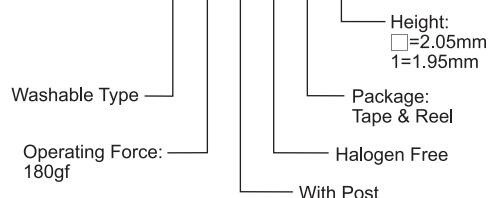


PACKAGE

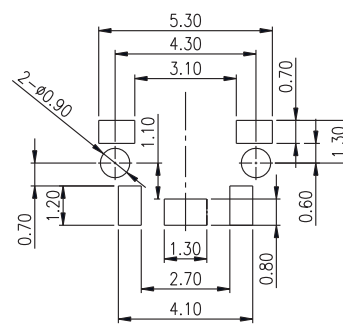
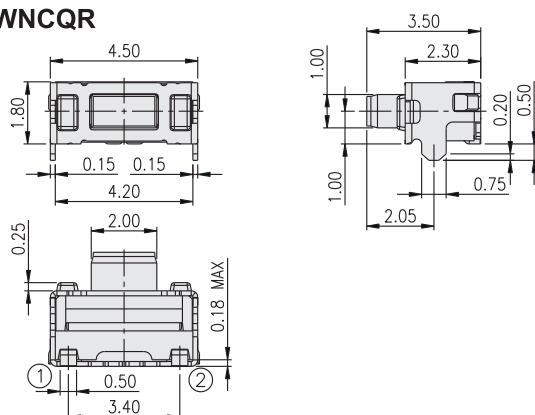
<Tape & Reel>
3000 pcs

HOW TO ORDER

MTA2-WNCQR

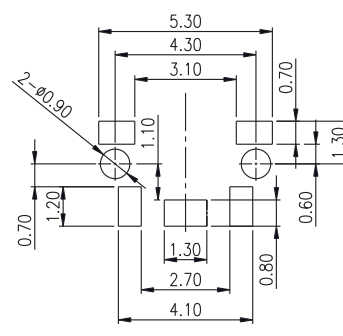
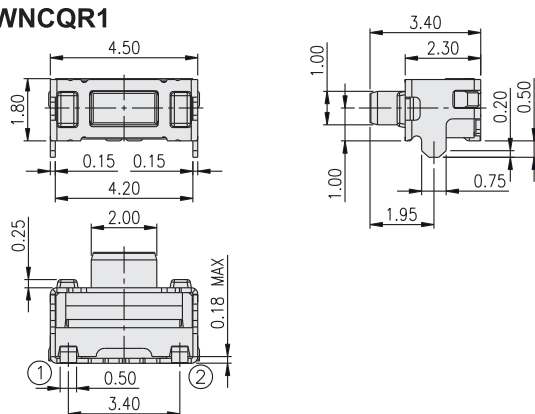


MTA2-WNCQR

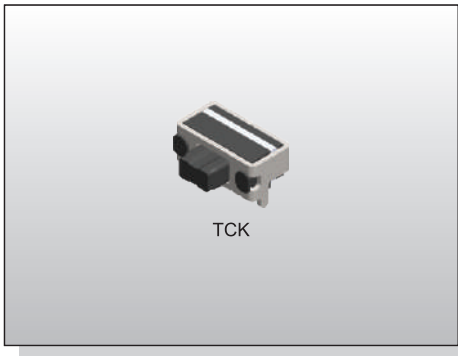


P.C.B. LAYOUT

MTA2-WNCQR1



P.C.B. LAYOUT



FEATURES

- ※Side-operational type
- ※PCB-base structure
- ※Sealed with dust proof

APPLICATION

- ※Smart phone
- ※Portable devices

SPECIFICATION

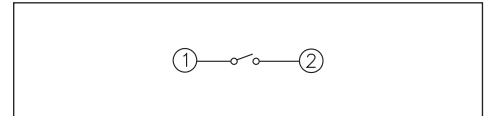
Contact Rating	20mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.2mm
Operating Life	200,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

TCK2QR

- Operating Force:
2=160gf
- Package:
R=Tape & Reel
- Q=Halogen Free
- Metal Cover Position Pin:
3=Pin Without Solder
4=Pin With Solder

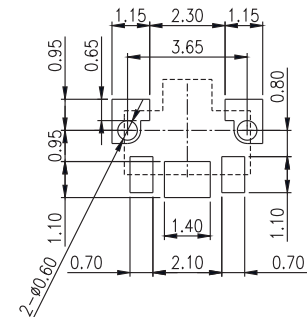
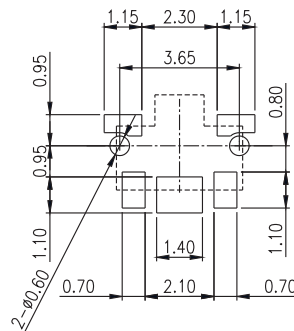
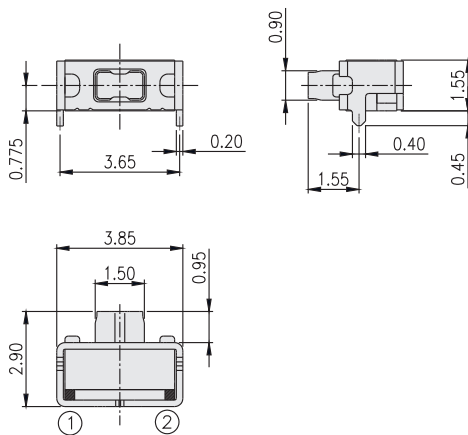
CIRCUIT



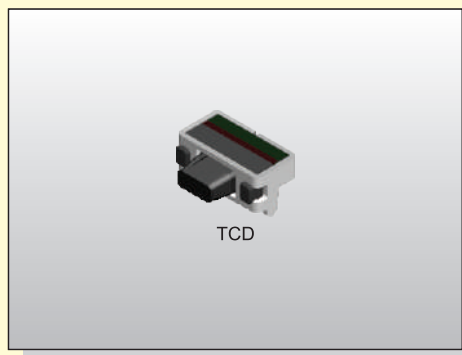
PACKAGE

<Tape & Reel>
3000 pcs

TCK



P.C.B. LAYOUT



FEATURES

- ※ Compact-sized
- ※ Side actuated
- ※ Sealed with dust proof
- ※ PCB-base structure

APPLICATION

- ※ Smart phone
- ※ Digital Camera, Medical
- ※ Portable electronic device

SPECIFICATION

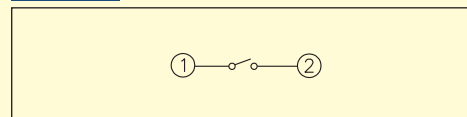
Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.2mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

T C D - C 2 K Q R 3

C=Cover With Post
2=160gf
K=Black
Q=Halogen Free
R=Tape & Reel
Package:
Soldering:

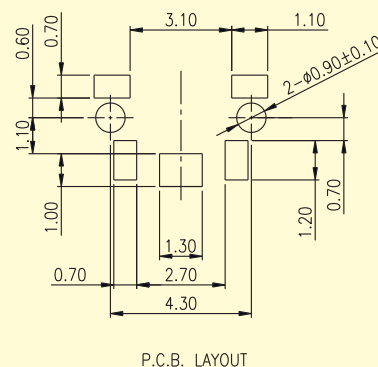
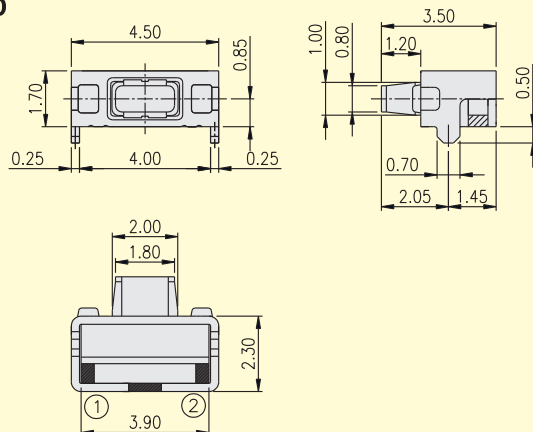
CIRCUIT

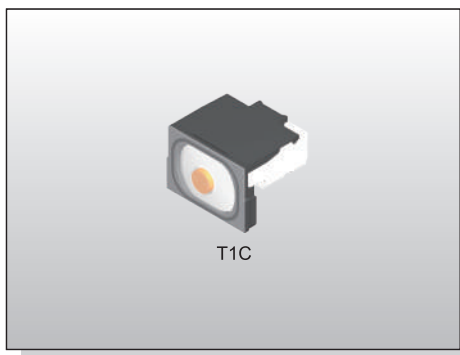


PACKAGE

<Tape & Reel>
3000 pcs

TCD





T1C

FEATURES

- ※Miniature 2.8*1.95mm
- ※Side push mid-mount type
- ※300,000 operating life cycles
- ※Better soldering peeling strength
- ※Height from surface of PCB:0.975mm

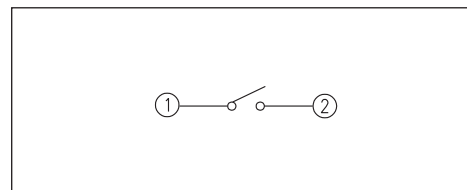
APPLICATION

- ※Smart phone
- ※Medical
- ※Portable electronic device
- ※3C products

SPECIFICATION

Contact Rating	10uA, 2V DC to 20mA, 15V DC
Contact Resistance	500mΩ max.
Insulation Resistance	50MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf
Travel	0.13mm
Operating Life	300,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
6000 pcs

HOW TO ORDER

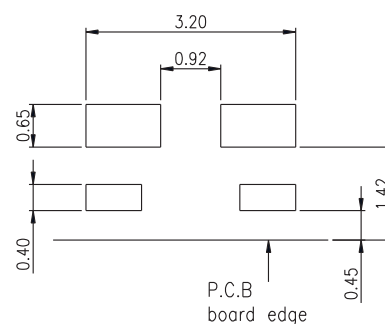
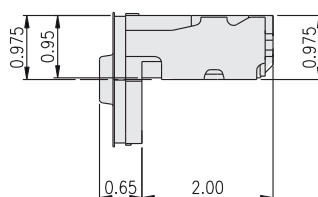
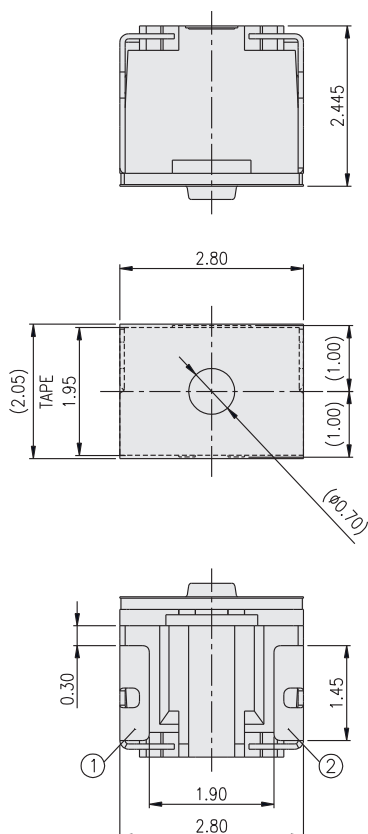
T1C □ QR

Package:
Tape & Reel

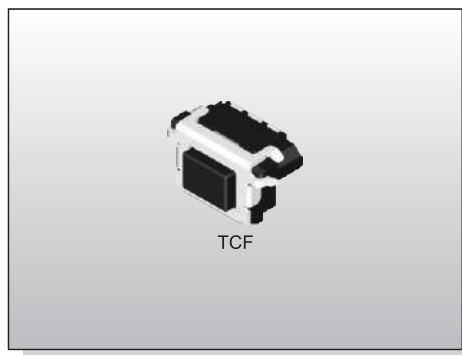
Halogen Free

Operating Force:
2=160gf

T1C



P.C.B. LAYOUT



TCF

FEATURES

- ※Miniature 2.9x4.5mm
- ※Side push mid-mount type
- ※200,000 operating life cycles

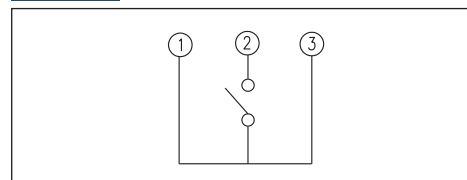
APPLICATION

- ※Smart phone
- ※Portable personal audio
- ※Digital camera

SPECIFICATION

Contact Rating	10μA, 2V DC to 20mA, 15V DC
Contact Resistance	1000mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf/240±70gf
Travel	0.15mm
Operating Life	200,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
2400 pcs

HOW TO ORDER

T C F ☐ ☐ **Q R**

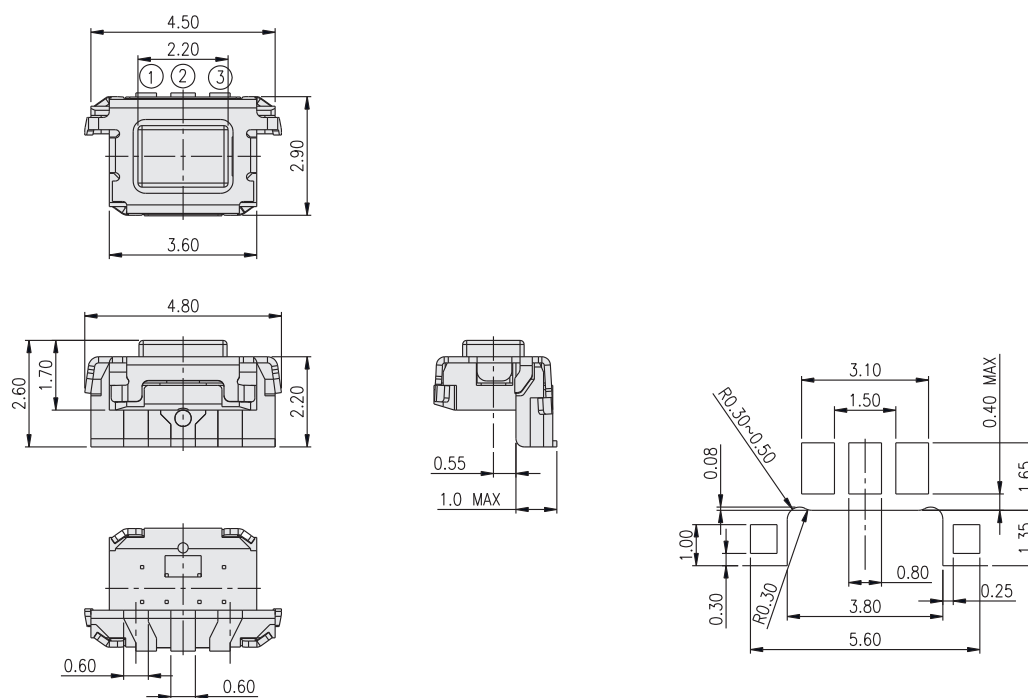
☐=Without Post
C=With Post

Package:
Tape & Reel

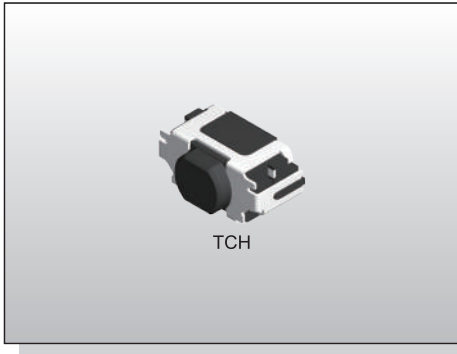
Halogen Free

Operating Force:
2=160gf
3=240gf

TCF



P.C.B. LAYOUT



TCH

FEATURES

- ※Miniature 4.5*2.2mm
- ※Side push mid-mount type
- ※600,000 operating life cycles

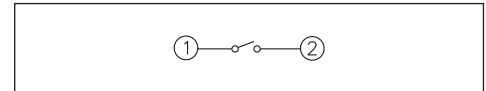
APPLICATION

- ※Smart phone
- ※Portable personal audio
- ※Digital camera
- ※3C products

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	500mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	160±50gf/220±50gf/250±80gf
Travel	0.15mm
Operating Life	600,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +90°C

CIRCUIT



PACKAGE

<Tape & Reel>
3000 pcs

HOW TO ORDER

TCH □ □ QR

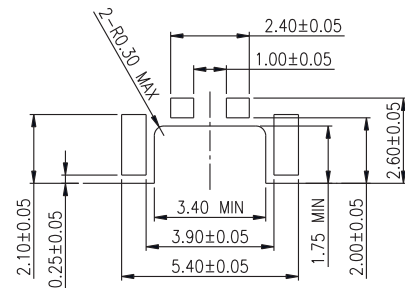
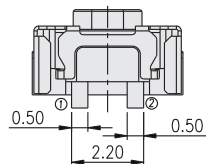
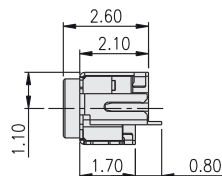
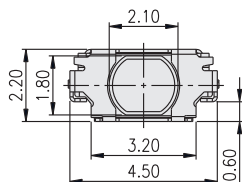
Package:
Tape & Reel

Halogen Free

□=Without Post
C=With Post

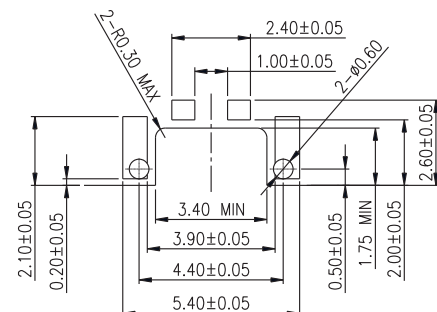
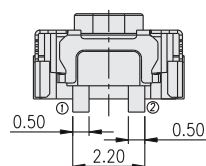
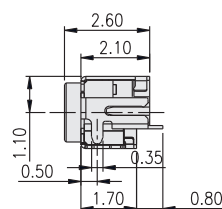
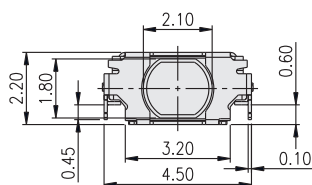
Operating Force:
2=160gf
3=220gf
5=250gf

TCH

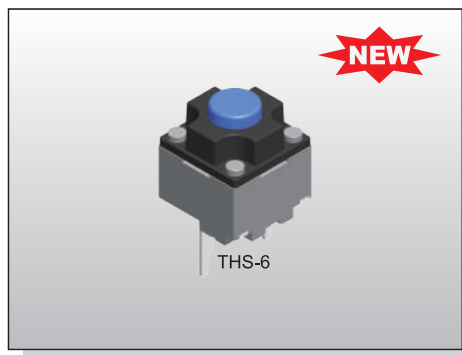


P.C.B. LAYOUT

TCHC



P.C.B. LAYOUT



FEATURES

- ※Through Hole
- ※The sound of movement is small
- ※Long life of 5 million

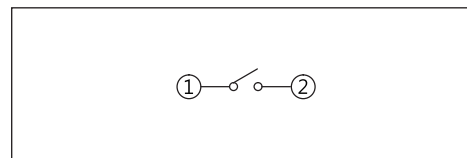
APPLICATION

- ※Computer Mice
- ※PC Peripherals
- ※Consumer Electronics

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	200mΩ max.(initial)
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	60±15gf
Travel	0.20±0.10mm
Operating Life	5,000,000 cycles
Operating Temp.	-10°C ~ + 70°C
Storage Temp.	-40°C ~ + 85°C

CIRCUIT



PACKAGE

<Bag>
1000 pcs

HOW TO ORDER

T H S - 6 1 U V

Terminal Type:
H=Through Hole
Silence

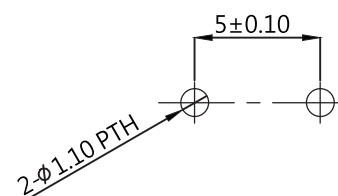
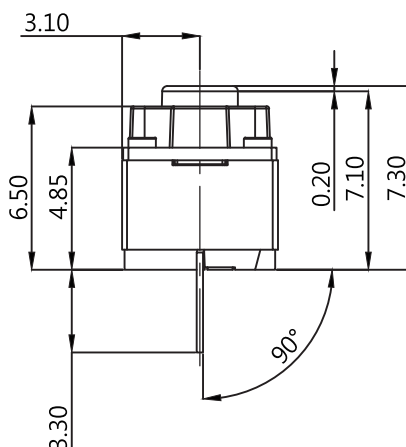
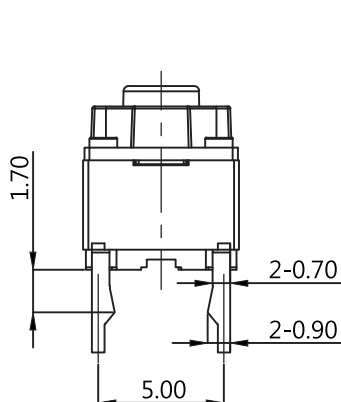
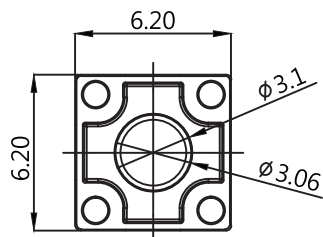
RoHS & Lead Free Solderable

Operating Force:
U=Blue, 60gf

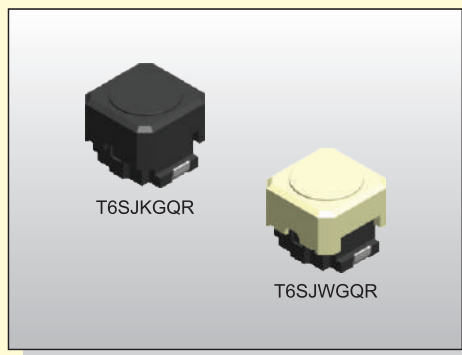
Height:
1=7.3mm

TACT SWITCH

THS-61UV



P.C.B LAYOUT



FEATURES

- ※High operating force
- ※Long stroke
- ※300,000 operating life cycles

APPLICATION

- ※Automotive
- ※Measuring instruments
- ※Car audio

SPECIFICATION

Contact Rating	50uA, 1V DC to 50mA, 16V DC
Contact Resistance	100mΩ max. (initial)
Insulation Resistance	100MΩ min.
Dielectric Strength	500V AC/1 minute
Operating Force	300±80gf/360±80gf
Travel	1.05mm
Operating Life	300,000 cycles min.
Operating Temp.	-40°C ~ +90°C
Storage Temp.	-40°C ~ +90°C

HOW TO ORDER

T 6 S J G Q R

J Bend

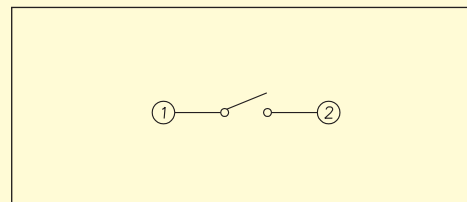
Operating Force:
K=Black, 360gf
W=White, 300gf

Package:
Tape & Reel

Halogen Free

Plating:
Silver Plating

CIRCUIT

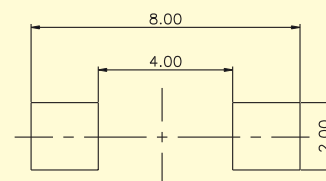
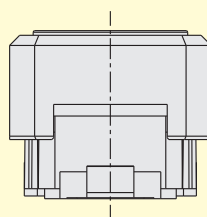
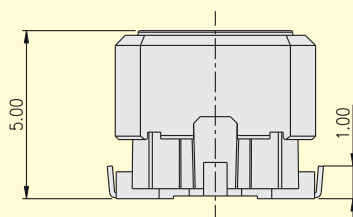
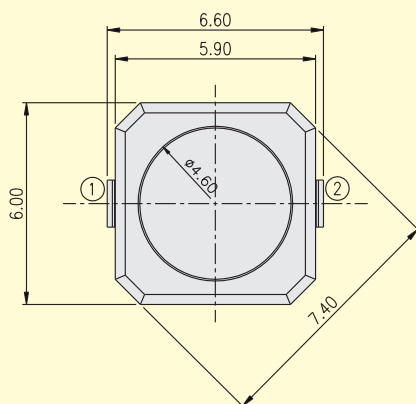


PACKAGE

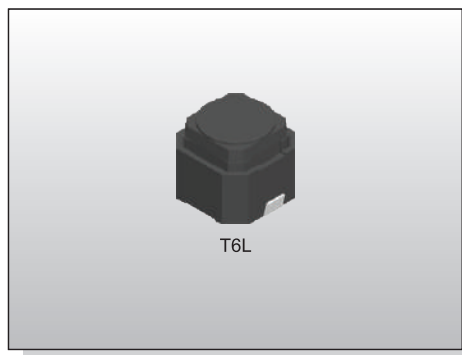
<Tape & Reel>
1500 pcs

TACT SWITCH

T6S



P.C.B. LAYOUT



FEATURES

- ※Miniature 5.9*6.0mm
- ※Long Travel type
- ※100,000 operating life cycles

APPLICATION

- ※Automotive
- ※Instrumentation
- ※Audio

SPECIFICATION

Contact Rating	10uA, 1V DC to 50mA, 16V DC
Contact Resistance	100mΩ max. 500V DC
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf/200±60gf 250±80gf/300±80gf
Travel	1.3mm
Operating Life	100,000 cycles (160gf/200gf/250gf/300gf)
Operating Temp.	-40°C ~ +90°C
Storage Temp.	-40°C ~ +90°C

HOW TO ORDER

T 6 L - □ K Q R

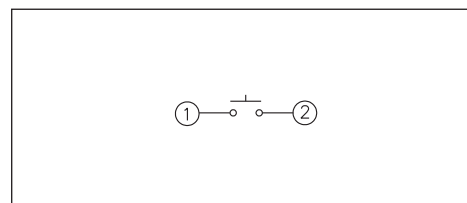
Operating Force:
2=160±50gf
3=200±60gf
4=250±80gf
5=300±80gf

Package:
Tape & Reel

Halogen Free

Button Color:
Black

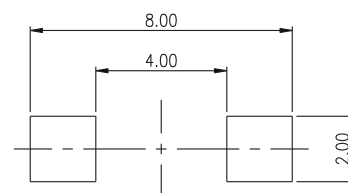
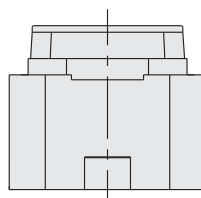
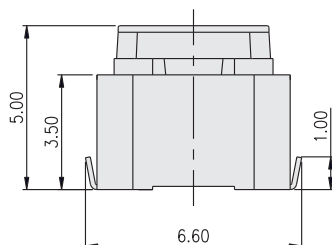
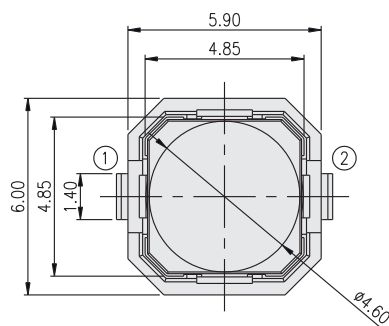
CIRCUIT



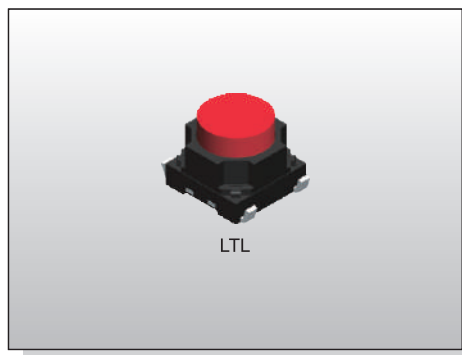
PACKAGE

<Tape & Reel>
1200 pcs

T6L



P.C.B. LAYOUT



FEATURES

- ※Soft actuation feeling
- ※Long travel of 1.3mm
- ※Wide stem for easy operating

APPLICATION

- ※Automotive
- ※Instrumentation
- ※Audio

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max. 500V DC
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	300V AC/1 minute
Operating Force	200±50gf/350±100gf
Travel	1.3mm
Operating Life	30,000 cycles (350gf) 100,000 cycles (200gf)
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

LTL - 6 1 3 - - -

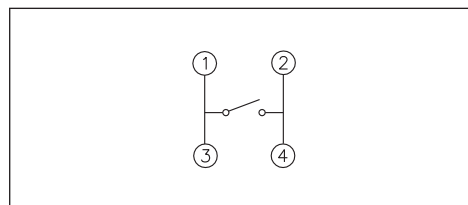
Package:
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

Operating Force:
R=200gf
S=350gf

Travel:1.30mm

CIRCUIT

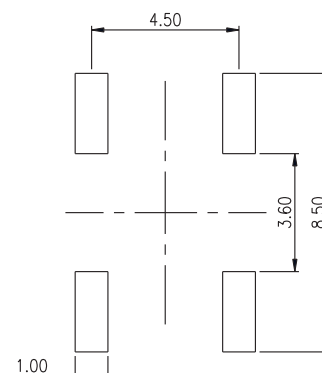
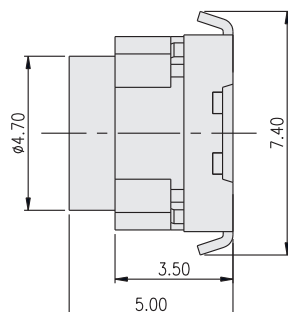
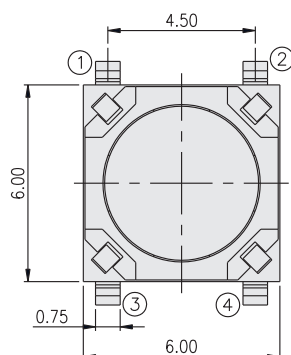


PACKAGE

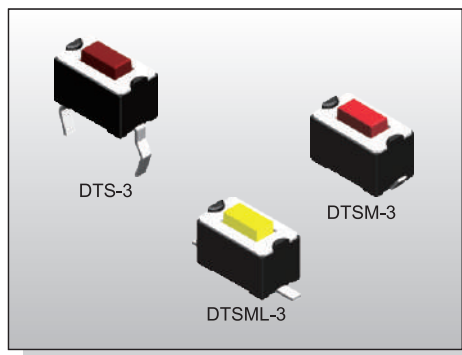
<Tape & Reel>
900 pcs

TACT SWITCH

LTL-6



P.C.B. LAYOUT



FEATURES

- ※ Compact size 3.5x6 mm
- ※ Sharp click feeling
- ※ Choice of SMT terminal type

APPLICATION

- ※ Audio, OA equipment
- ※ Instrumentation
- ※ Industrial

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	125±50gf, Black(K) 160±50gf, Brown(N) 260±50gf, Red(R) 320±80gf, Salmon(S) 520±130gf, Yellow(Y)
Travel	0.25mm
Operating Life	30,000 cycles for 520/320/260gf 50,000 cycles for 160/125gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

D T S - 3

□: Through Hole
M: J Bend Outward
ML: S.M.T./Flat
MF: S.M.T./Gull-wing

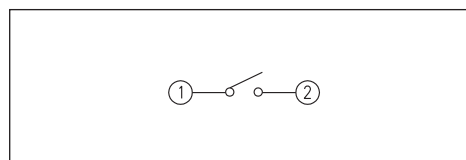
Dimension H:
1=4.30mm
2=5.00mm

Package:
□=Bag(Through Hole Only)
B=Tube Package(Except DTSMF-3)
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

Operating Force:
K=Black, 125gf
N=Brown, 160gf
R=Red, 260gf
S=Salmon, 320gf
Y=Yellow, 520gf >Not Available For Halogen Free

CIRCUIT



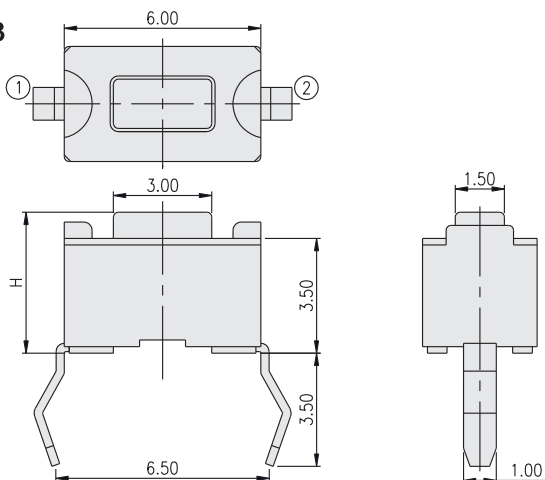
PACKAGE

<Tube>
DTS(M)(L)-3: 135 pcs

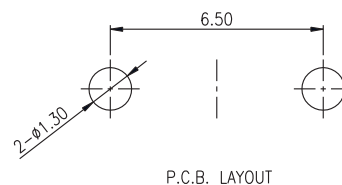
<Bulk>
1000 pcs

<Tape & Reel>
DTSM(L)(F)-31: 1800 pcs
DTSM(L)(F)-32: 1600 pcs

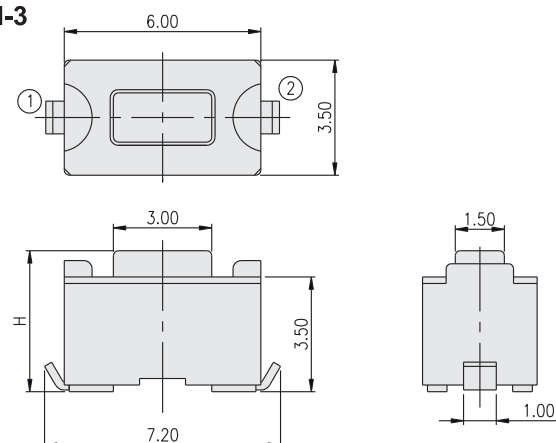
DTS-3



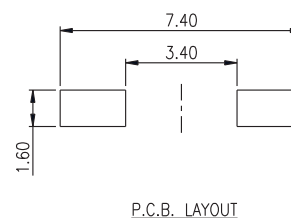
PART NO.	H
DTS-31	4.30
DTS-32	5.00



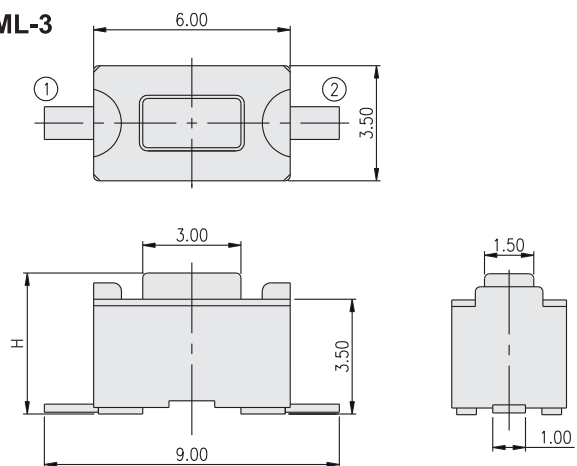
DTSM-3



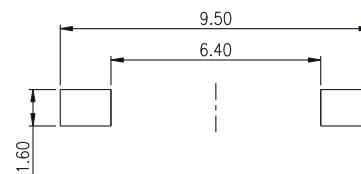
PART NO.	H
DTSM-31	4.30
DTSM-32	5.00



DTSML-3

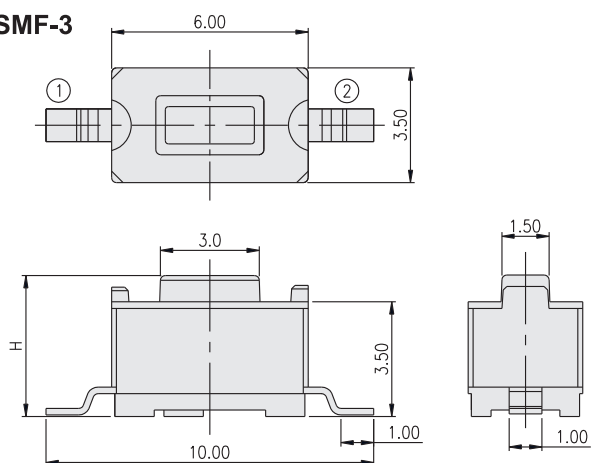


PART NO.	H
DTSML-31	4.30
DTSML-32	5.00

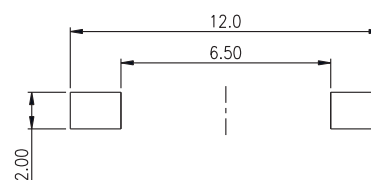


P.C.B. LAYOUT

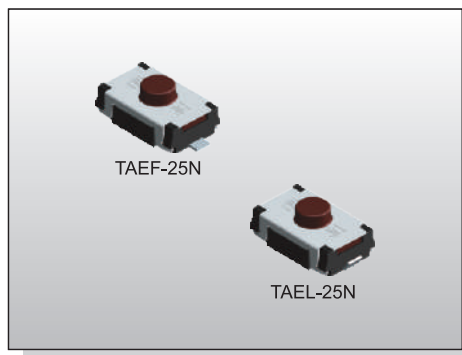
DTSMF-3



PART NO.	H
DTSMF-31	4.30
DTSMF-32	5.00



P.C.B. LAYOUT



FEATURES

- ※3.8x6mm of thinner type 2.5mm height
- ※Soft actuator with long travel
- ※Choice of actuation force

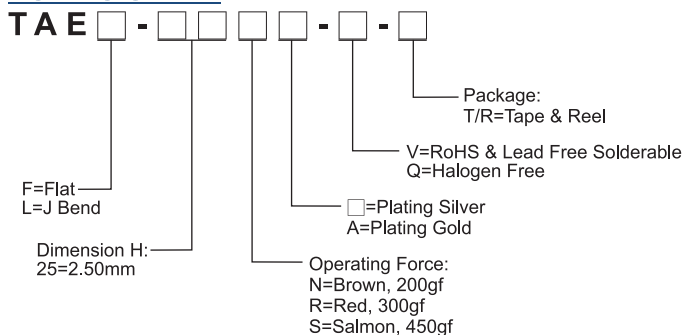
APPLICATION

- ※Car remote control
- ※Audio, OA equipment
- ※Instrumentation

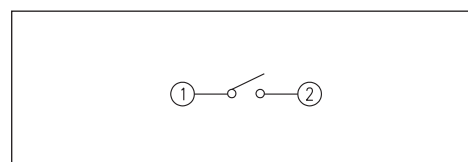
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	300V AC/1 minute
Operating Force	200gf, Brown(N) 300gf, Red(R) 450gf, Salmon(S)
Travel	0.30mm, Brown(N) 0.35mm, Red(R) 0.45mm, Salmon(S)
Operating Life	100,000 cycles (S) 200,000 cycles (N/R)
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



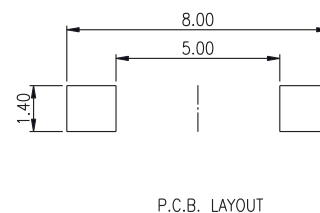
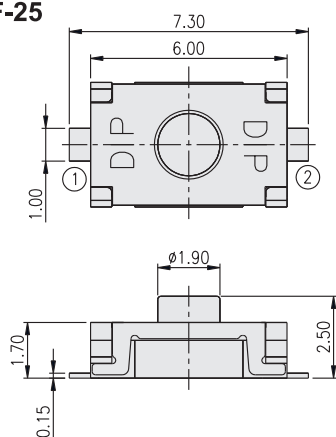
CIRCUIT



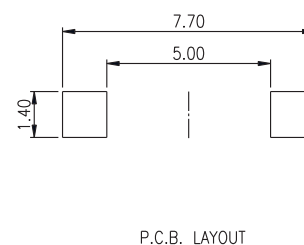
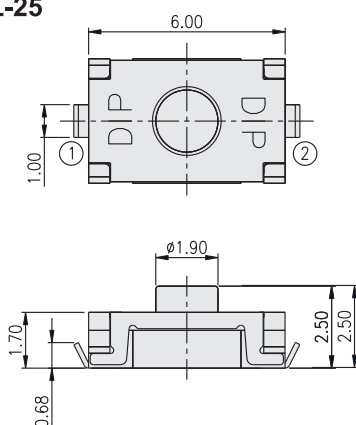
PACKAGE

<Tape & Reel>
2700 pcs

TAEF-25

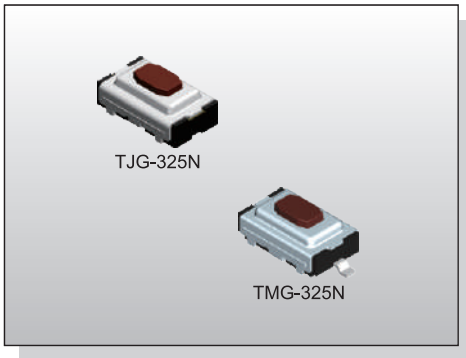


TAEI-25



TACT SWITCH T(M)(J)G-325 SERIES

3.7x6 Thinner Type Tactile Switch



FEATURES

- ※ Thinner type 2.5mm height
- ※ High density mounting
- ※ With anti-ESD of ground terminal

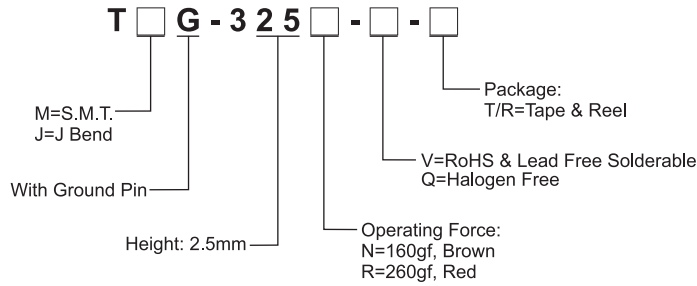
APPLICATION

- ※ Consumer products
- ※ Instrumentation
- ※ Industrial

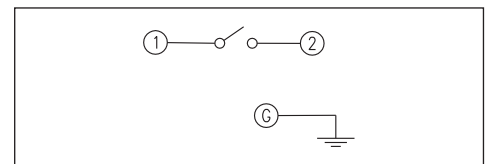
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	300V AC/1 minute
Operating Force	160±50gf, Brown(N) 260±50gf, Red(R)
Travel	0.25mm
Operating Life	20,000 cycles for 260gf 50,000 cycles for 160gf
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT

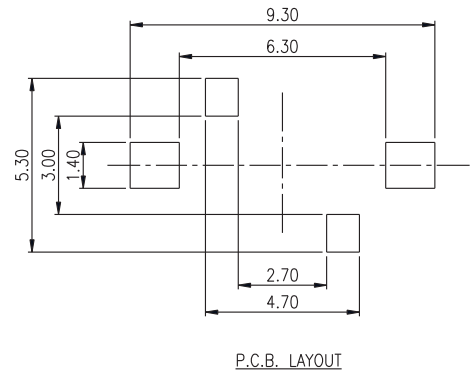
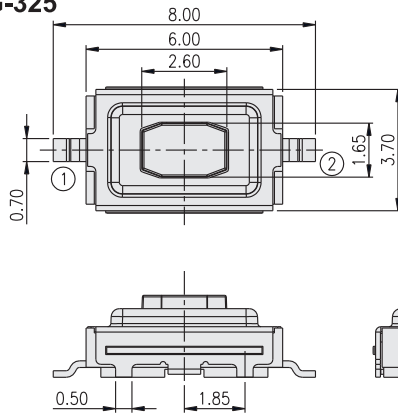


PACKAGE

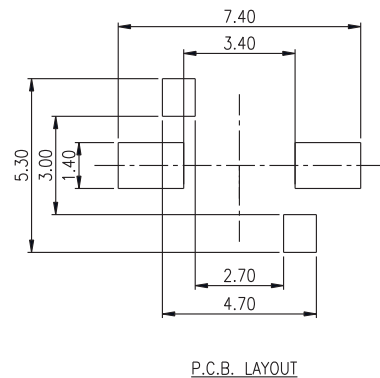
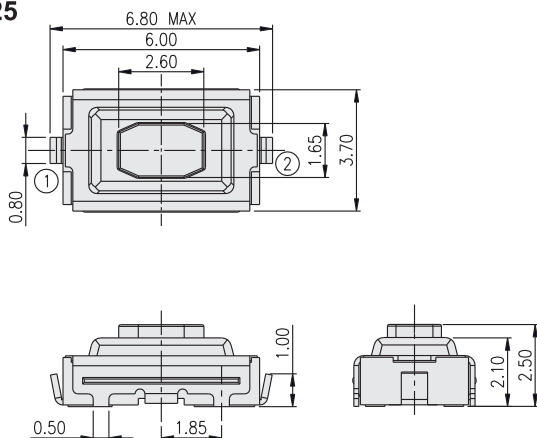
<Tape & Reel>
2800 pcs

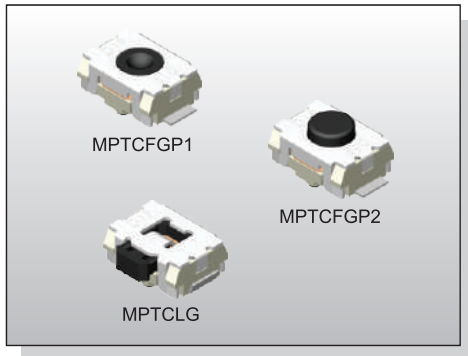
TACT SWITCH

TMG-325



TJG-325





FEATURES

- ※ Compact-sized 2.9x3.9mm
- ※ Vertical or side actuation
- ※ Reflow solderable

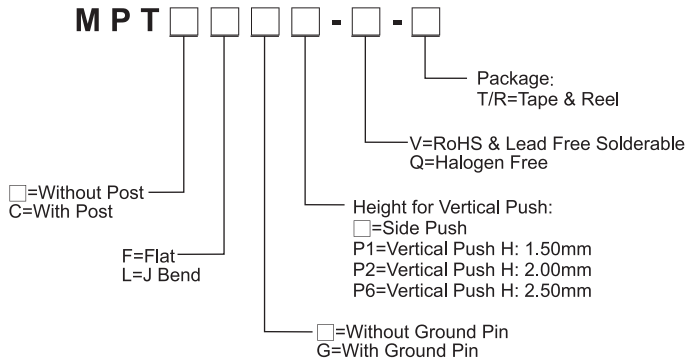
APPLICATION

- ※ Automotive
- ※ Portable electronic device
- ※ Control panel

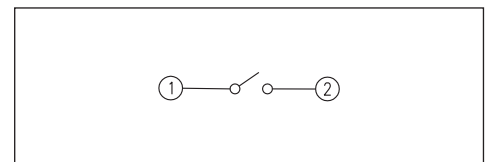
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	160±50gf (Vertical Push) 220±65gf (Side Push)
Travel	0.13mm (Vertical Push) 0.20mm (Side Push)
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT

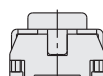
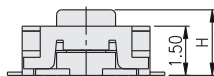
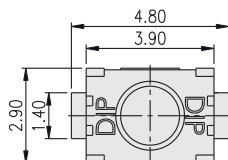


PACKAGE

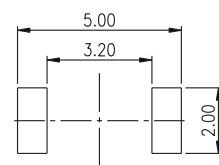
<Tape & Reel>

Side push: 3500 pcs
Vertical push: 2000 pcs

MPTFP ☐

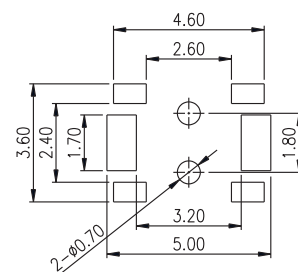
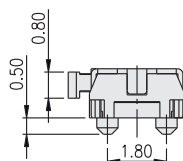
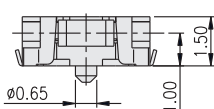
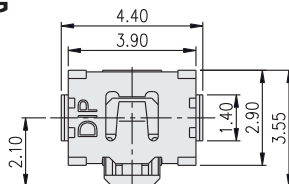


PART NO.	H
MPTFP1	1.50
MPTFP2	2.00
MPTFP6	2.50

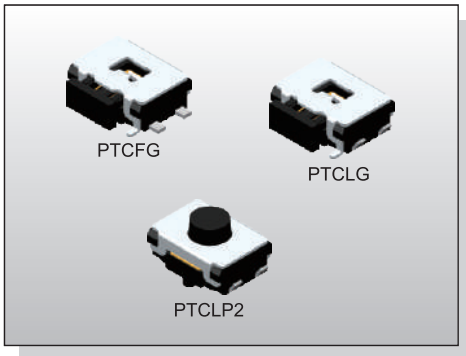


P.C.B. LAYOUT

MPTCLG



P.C.B. LAYOUT



FEATURES

- ※For high density mounting
- ※Vertical or side actuation
- ※Reflow solderable

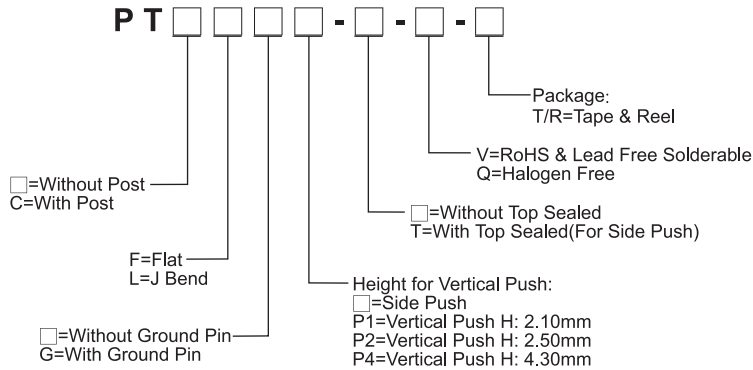
APPLICATION

- ※Automotive
- ※Portable electronic device
- ※Control panel

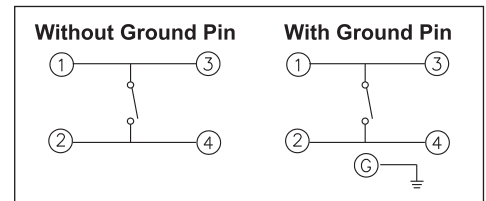
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf (Vertical Push) 220+80/-70gf (Side Push)
Travel	0.20mm (Vertical Push) 0.30mm (Side Push)
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT

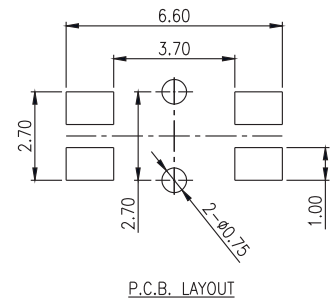
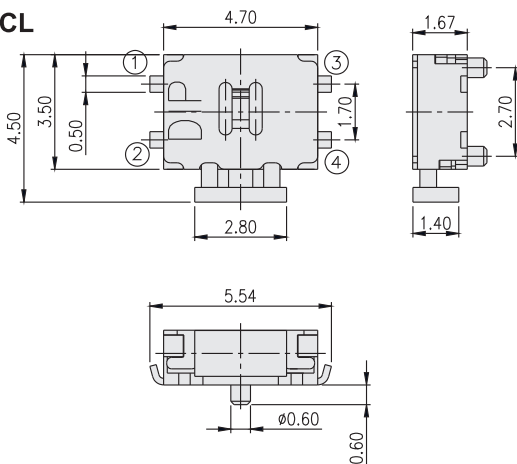


PACKAGE

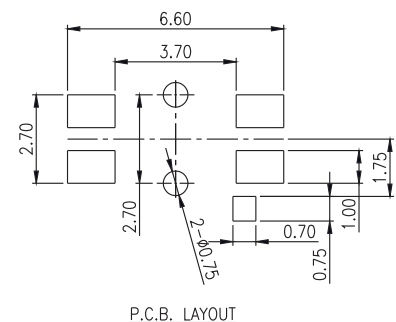
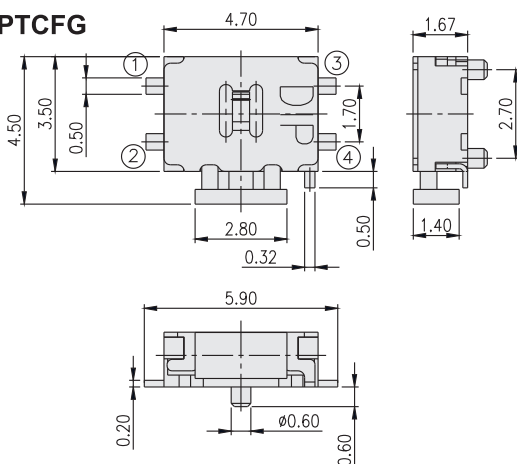
<Tape & Reel>

Side push: 3000 pcs
Vertical push: 2400 pcs
PTF(L)GP4: 1600 pcs

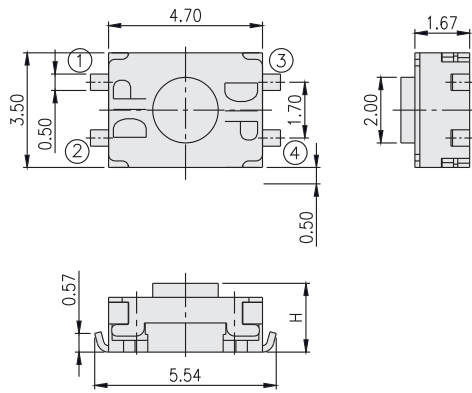
PTCL



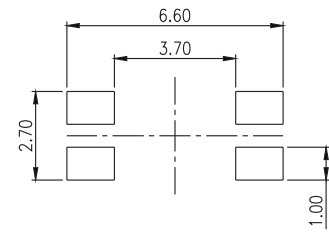
PTCFG



PTLGP □

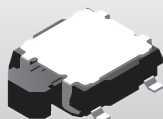


PART NO.	H
PTLP1	2.10
PTLP2	2.50
PTLP4	4.30



P.C.B. LAYOUT

NEW



LPT

FEATURES

- ※Horizontal Operation
- ※ROHS Compliance
- ※Compatible with pick & place machines

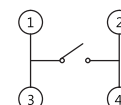
APPLICATION

- ※Automotive Electronics
- ※Wiper Controllers
- ※Power Tailgate Systems
- ※Steering Wheel Switches
- ※Center Console Controls

SPECIFICATION

Contact Rating	10 μ A, 1V DC min. 50mA, 12V DC max.
Contact Resistance	500m Ω max.(initial)
Insulation Resistance	100M Ω min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	180+80/-40gf, Black(K) 350 $\pm$ 80gf, White(W)
Travel	0.2+0.12/-0.06mm
Operating Life	50,000 cycles
Operating Temp.	-40°C ~ + 85°C
Storage Temp.	-40°C ~ + 85°C

CIRCUIT



PACKAGE

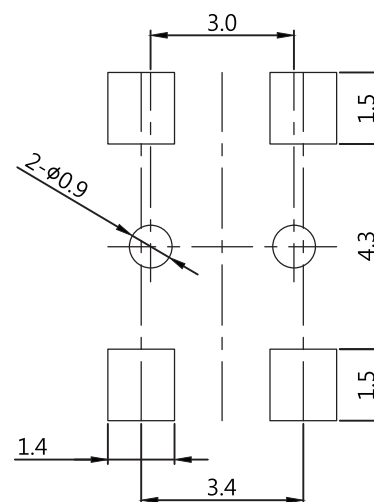
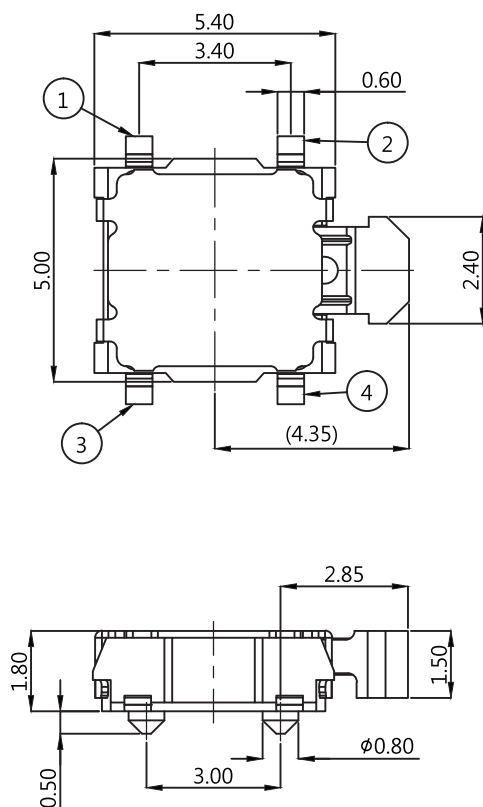
<Tape & Reel>
2000 pcs

HOW TO ORDER

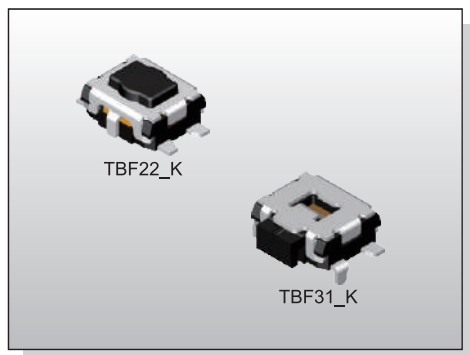
LPT-MP ☐ GQR

- M Bend
- With Post
- Package: Tape & Reel
- Halogen Free
- Plating: G=Silver Plating
- Operating Force: K=Black, 180gf
W=White, 350gf

LPT-MP ☐ GQR



P.C.B. LAYOUT



FEATURES

- ※Miniature 2.9x3.5mm
- ※Vertical or side actuation
- ※Long operating life

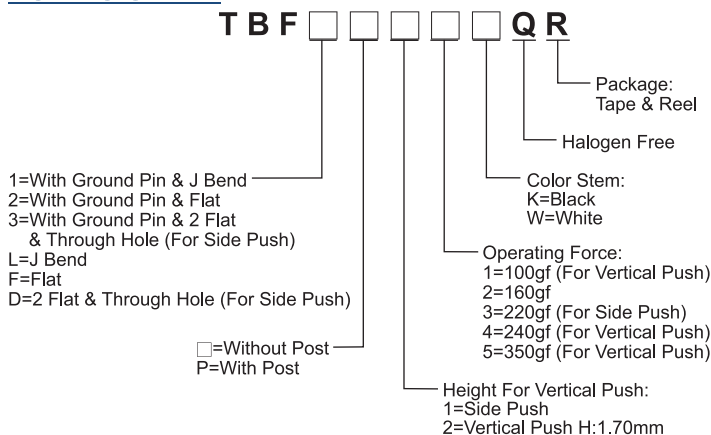
APPLICATION

- ※Mobile phone
- ※Consumer electronics
- ※Automotive

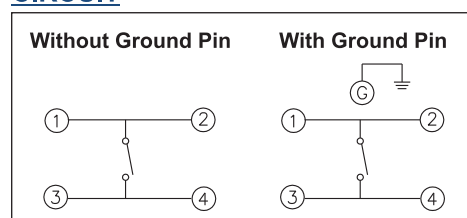
SPECIFICATION

Contact Rating	10μA, 2V DC to 20mA, 15V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	100±50/160±50/240±80/350±100gf (Vertical Push) 160+70/-40, 220+80/-70gf (Side Push)
Travel	0.15mm (Vertical Push) 0.20mm (Side Push)
Operating Life	100,000 cycles for Side Push 200,000 cycles for 160/240/350gf 1,000,000 cycles for 100gf (Vertical Push)
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



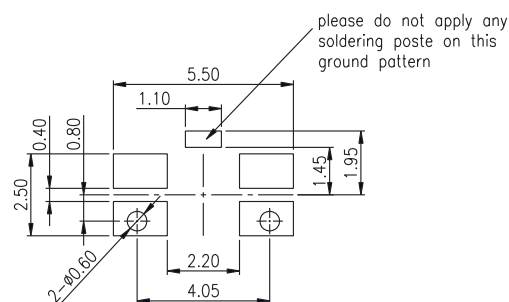
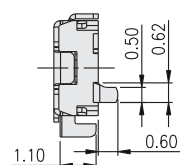
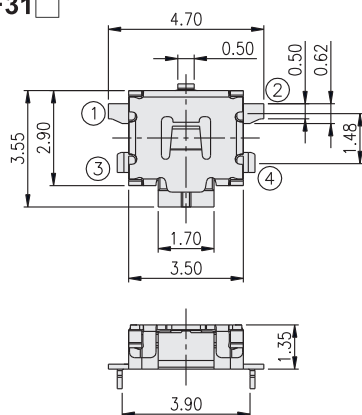
CIRCUIT



PACKAGE

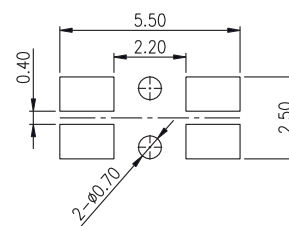
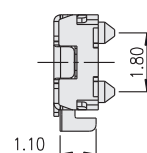
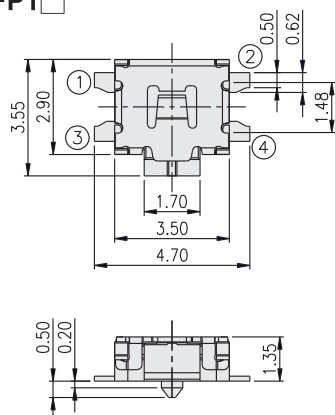
<Tape & Reel>
3000 pcs

TBF31 ☐



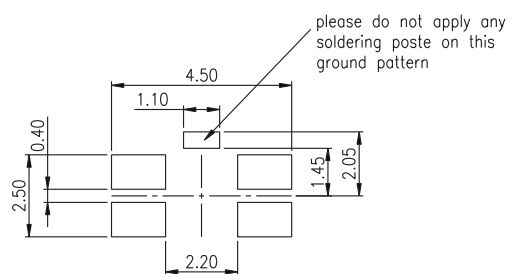
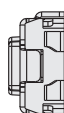
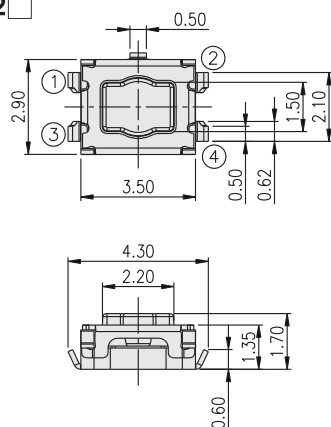
P.C.B. LAYOUT

TBFFP1 ☐



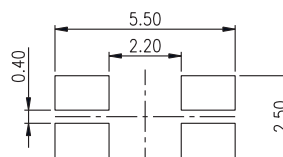
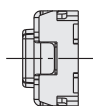
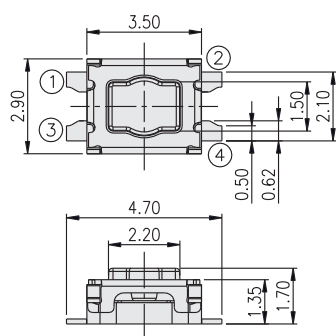
P.C.B. LAYOUT

TBF12 □

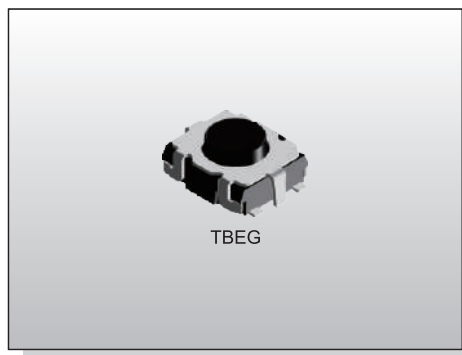


P.C.B. LAYOUT

TBFF2 □



P.C.B. LAYOUT



FEATURES

- ※Electrical life: 200,000 cycles
- ※Sharp click feeling
- ※2.7x3.0mm miniature tact switch

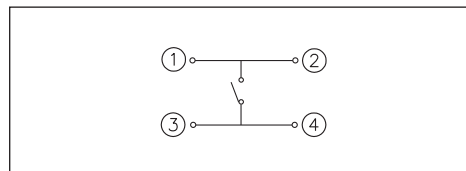
APPLICATION

- ※Automotive
- ※Video game device

SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf/200±50gf/400±80gf
Travel	0.12mm
Operating Life	200,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +90°C

CIRCUIT



PACKAGE

<Tape & Reel>
8000 pcs

HOW TO ORDER

T B E - - Q -

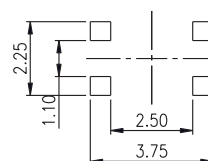
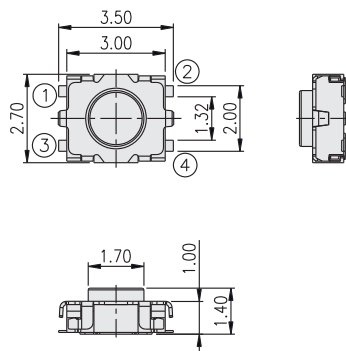
G=With Ground Pin
□=Without Ground Pin

Package:
T/R=Tape & Reel

Halogen Free

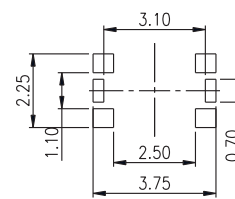
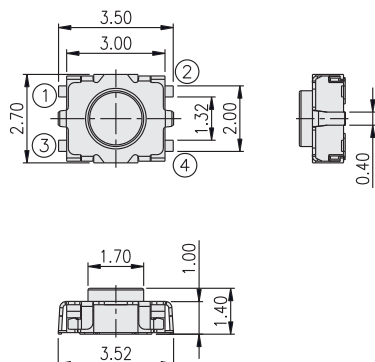
Operating Force:
N=Brown, 160gf
W=White, 200gf
□=Black, 400gf

TBE

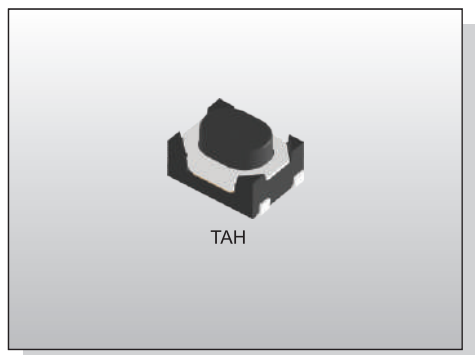


P.C.B. LAYOUT

TBEG



P.C.B. LAYOUT



FEATURES

- ※Electrical life: 100,000 cycles
- ※3.2x4.0mm miniature tact switch

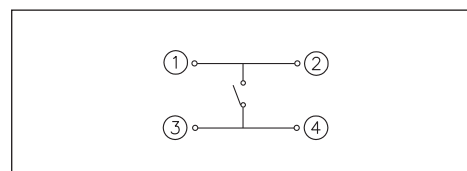
APPLICATION

- ※Control panel
- ※Remote controls
- ※Keyless entry devices

SPECIFICATION

Contact Rating	10μA, 1V DC to 50mA, 16V DC
Contact Resistance	500mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160±50gf/260±100gf/400±100gf
Travel	0.2mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
3000 pcs

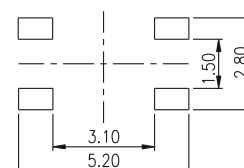
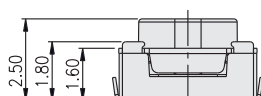
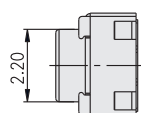
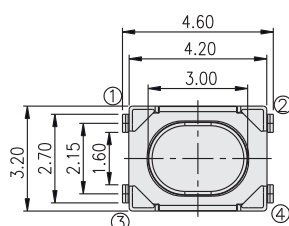
HOW TO ORDER

TAH □ QR

Operating Force:
1=160gf (Brown)
2=260gf (White)
3=400gf (Black)

Package:
Tape & Reel
Halogen Free

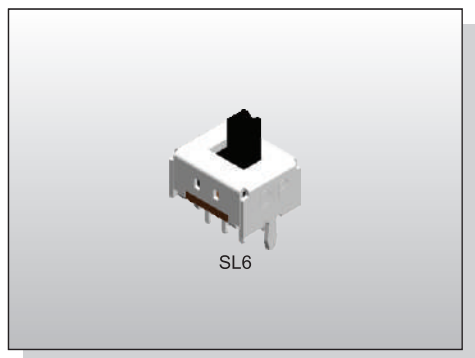
TAH



P.C.B. LAYOUT

SLIDE SWITCH SL6 SERIES

Slide Type (2P2T)



FEATURES

- ※4.7mm height
- ※10,000 operating life cycles

APPLICATION

- ※Portable audio
- ※Instrumentation
- ※Radio cassette

SPECIFICATION

Contact Rating	0.1A, 12V DC
Contact Resistance	20mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	200±150gf
Travel	2mm
Operating Life	10,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

S L 6 N C H V R

Poles-Positions:
2P2T

Timing:
Non-Shorting

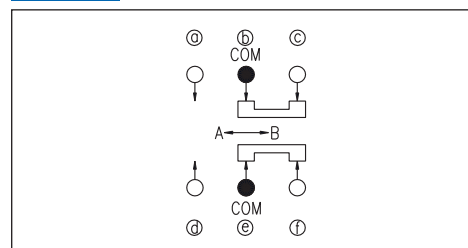
Package:
Tape & Reel

RoHS & Lead Free Solderable

Through Hole

With Post

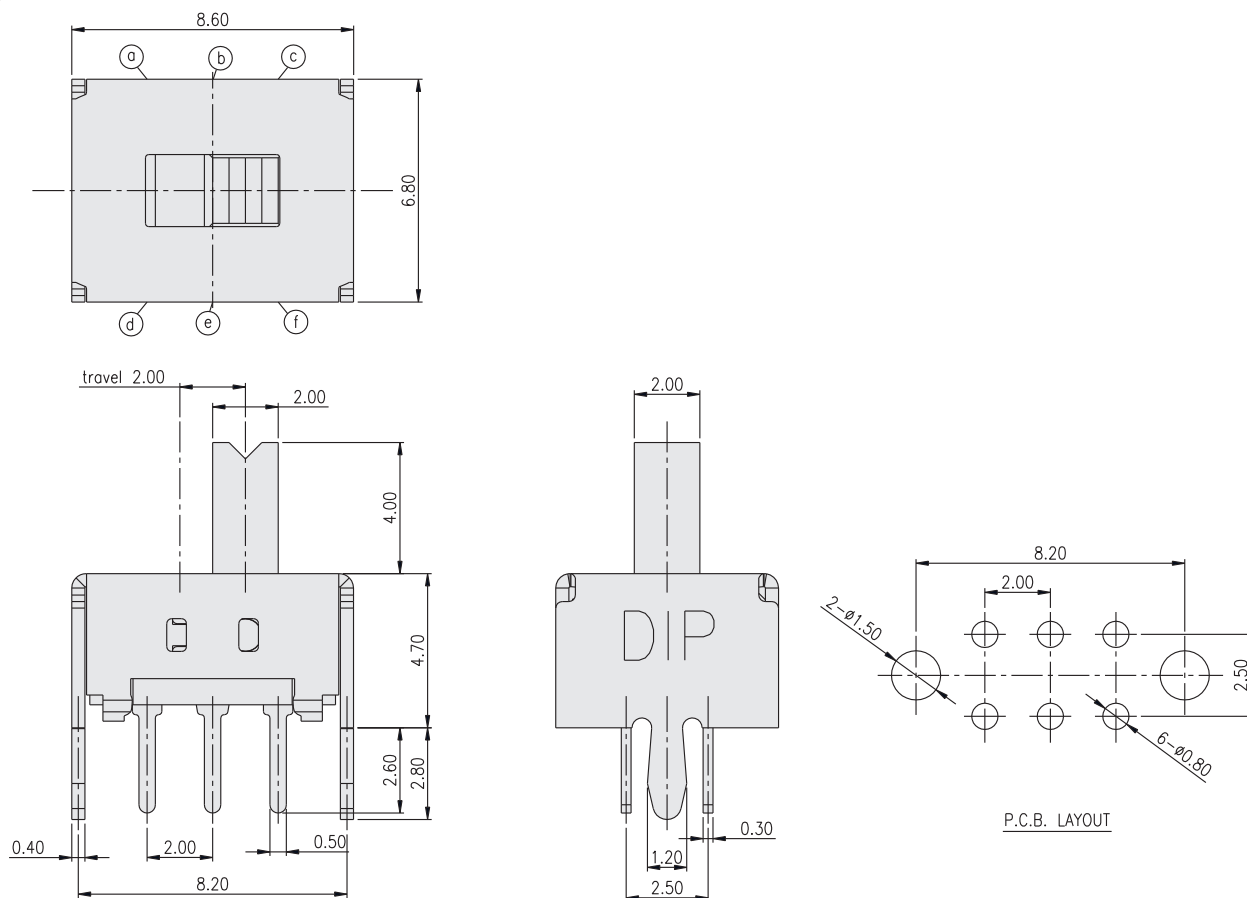
CIRCUIT

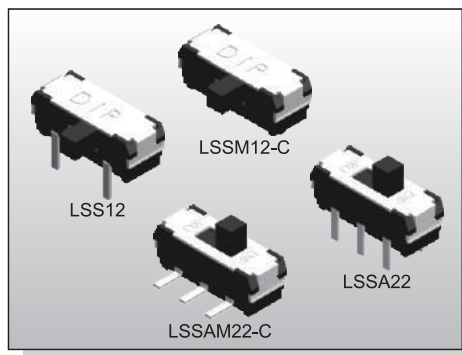


PACKAGE

<Tape & Reel>
300 pcs

SL6





FEATURES

- ※2.0mm stroke
- ※Through hole or SMT
- ※1P2T, 2P2T models

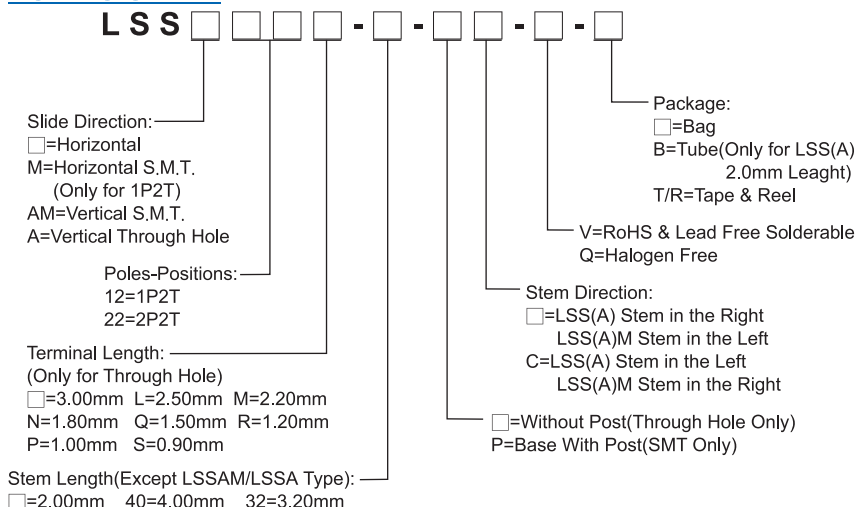
APPLICATION

- ※Remote control
- ※Consumer electronics
- ※Instrumentations

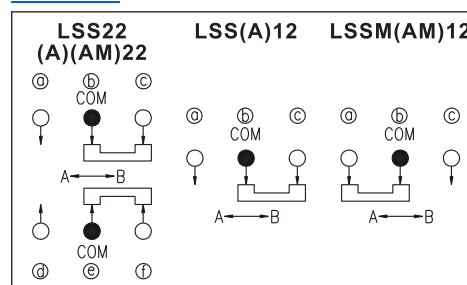
SPECIFICATION

Contact Rating	0.1A, 12V DC
Contact Resistance	60mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	200±150gf
Travel	2mm
Operating Life	10,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



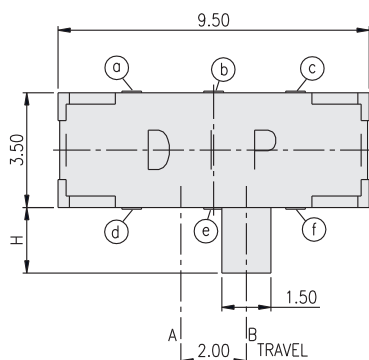
CIRCUIT



PACKAGE

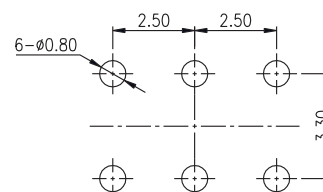
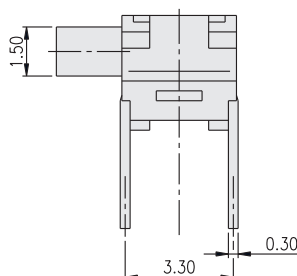
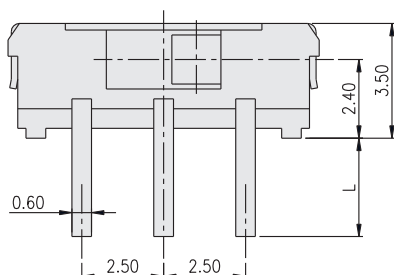
- <Bag>
 LSS(A)12, 22: 1000 pcs
- <Tube>
 LSS[]2, LSS[]2M, LSS[]2L: 50 pcs
- <Tape & Reel>
 LSS12, 22-N,P,S,Q,R: 900 pcs
 LSS12, 22-[],M,L: 800 pcs
 LSS12, 12-40-P, 22[]-40: 800 pcs
 LSSM12-P, LSSM12-40-P: 800 pcs
 LSSM12: 1000 pcs
 LSSA(M)12, 22: 600 pcs
 LSSA12, 22M,L-P: 600 pcs
 LSSA12, 22R-P: 500 pcs

LSS22



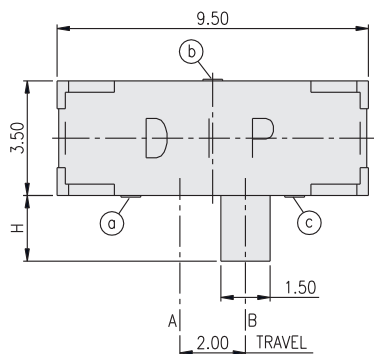
PART NO.	H
LSS22	2.0
LSS22-32	3.20
LSS22-40	4.0

PART NO.	L
LSS22	3.0
LSS22S	0.90
LSS22P	1.0
LSS22R	1.20
LSS22Q	1.50
LSS22N	1.80
LSS22M	2.20
LSS22L	2.50



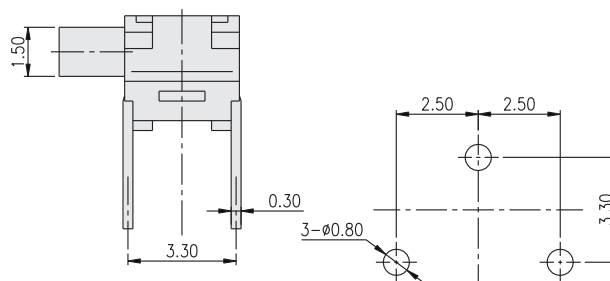
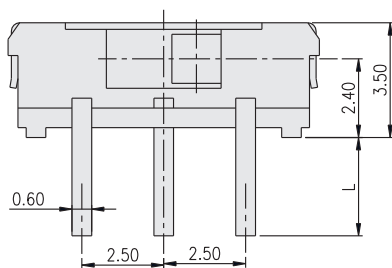
P.C.B. LAYOUT

LSS12



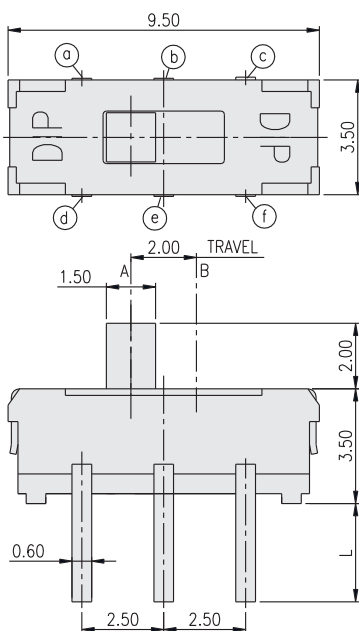
PART NO.	H
LSS12	2.00
LSS12-32	3.20
LSS12-40	4.00

PART NO.	L
LSS12	3.0
LSS12S	0.90
LSS12P	1.0
LSS12R	1.20
LSS12Q	1.50
LSS12N	1.80
LSS12M	2.20
LSS12L	2.50

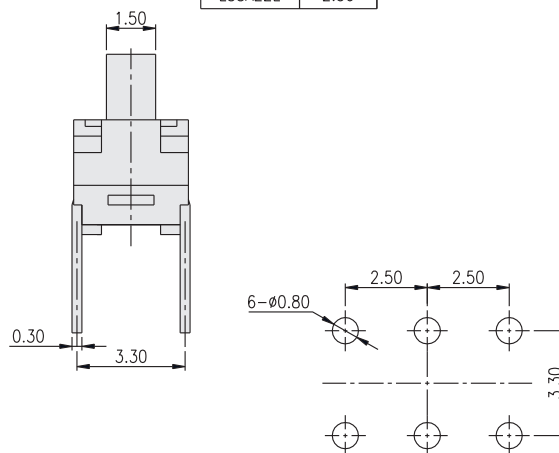


P.C.B. LAYOUT

LSSA22

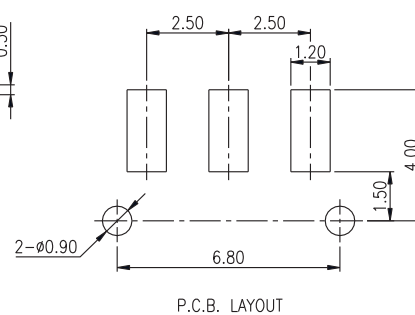
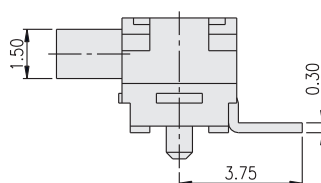
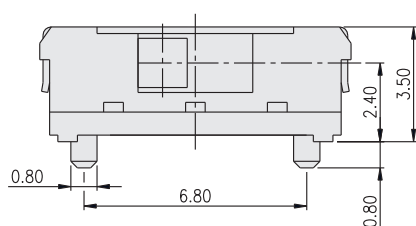
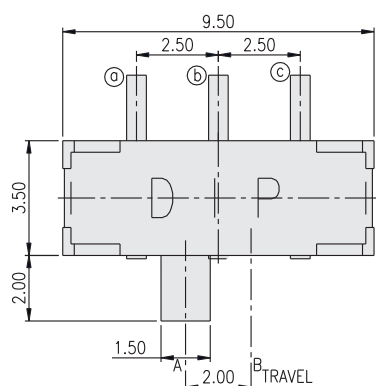


PART NO.	L
LSSA22	3.0
LSSA22S	0.90
LSSA22P	1.0
LSSA22R	1.20
LSSA22Q	1.50
LSSA22N	1.80
LSSA22M	2.20
LSSA22L	2.50



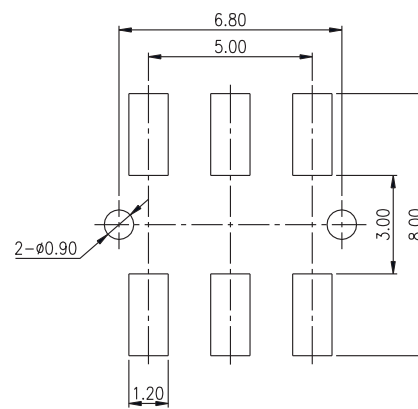
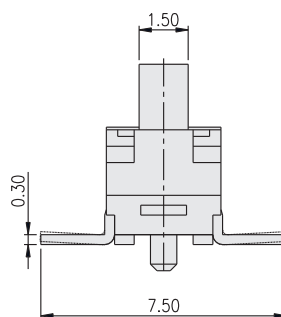
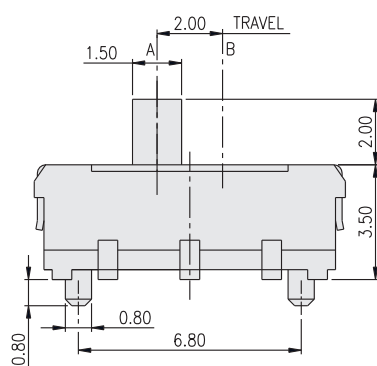
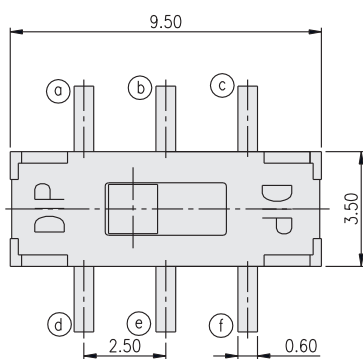
P.C.B. LAYOUT

LSSM12-P

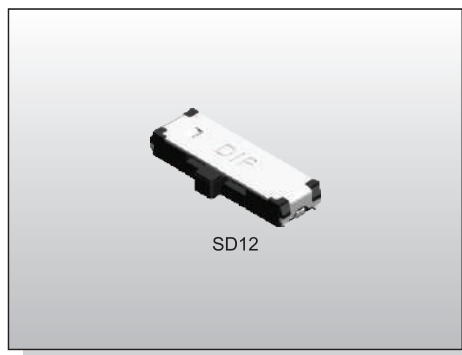


P.C.B. LAYOUT

LSSAM22-P



P.C.B. LAYOUT



FEATURES

- ※1.45mm height
- ※1P3T model
- ※Single side recoil

APPLICATION

- ※ Remote control
- ※ Consumer electronics
- ※ Instrumentations

SPECIFICATION

Contact Rating	0.3A, 15V DC
Contact Resistance	1Ω max.
Insulation Resistance	10MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	150±100gf
Travel	1.5mm
Operating Life	5, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

SD 12-LPR-V-

- Package:
T/R=Tape & Reel

- RoHS & Lead Free Solderable

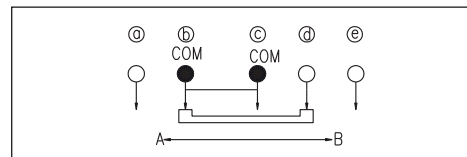
Poles-Positions:
1P3T

- Recoil on the Right

J Bend —

- With Post

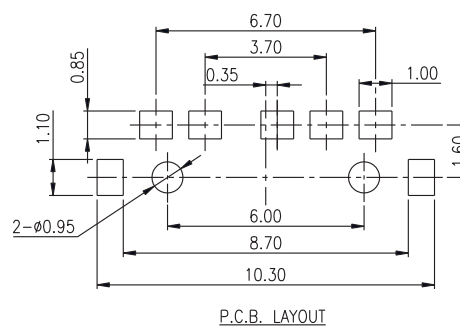
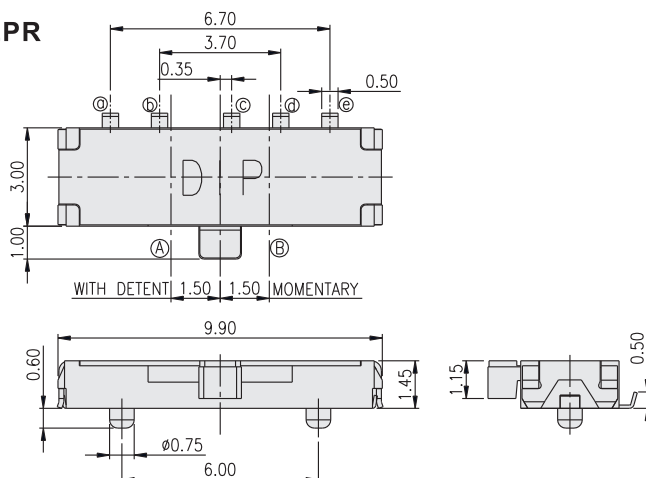
CIRCUIT

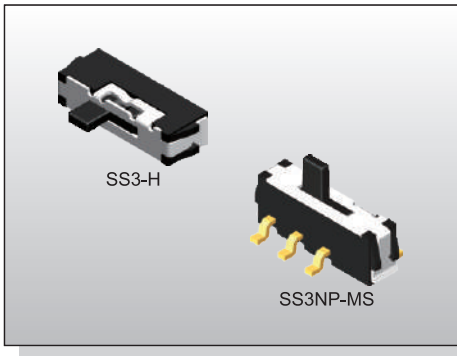


PACKAGE

<Tape & Reel>
3000 pcs

SD12-LPR





FEATURES

- ※2.0mm height
- ※1P2T model
- ※Reflow solderable

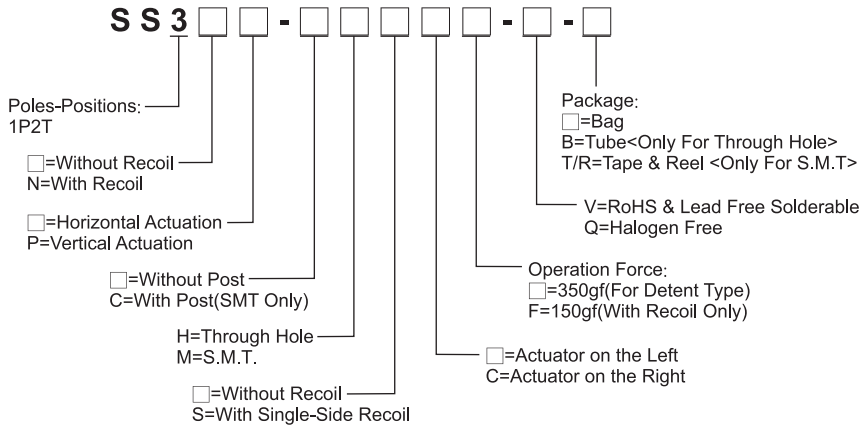
APPLICATION

- ※Remote control
- ※Consumer electronics
- ※Instrumentations

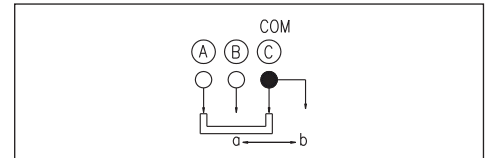
SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	100gf min./350gf max.(Detent Type) 150±100gf(Recoil Type)
Travel	2mm
Operating Life	10,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



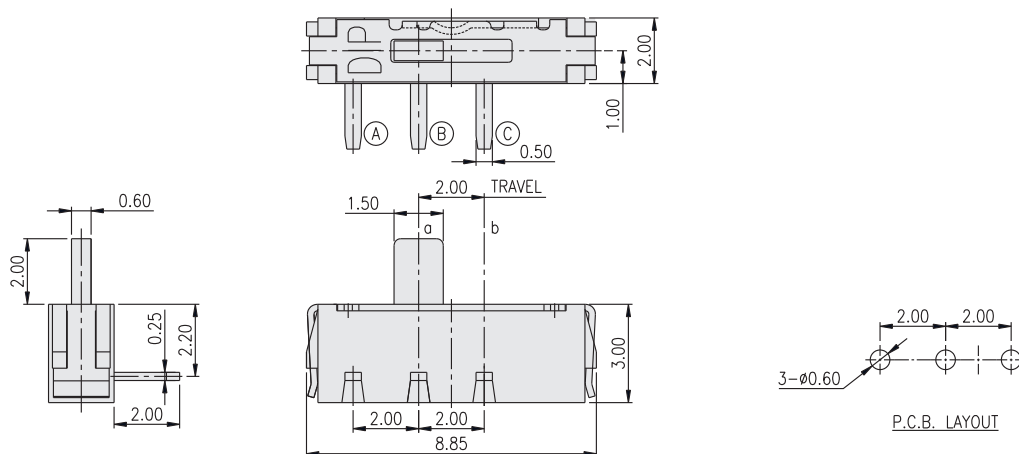
PACKAGE

<Bag>
2000 pcs

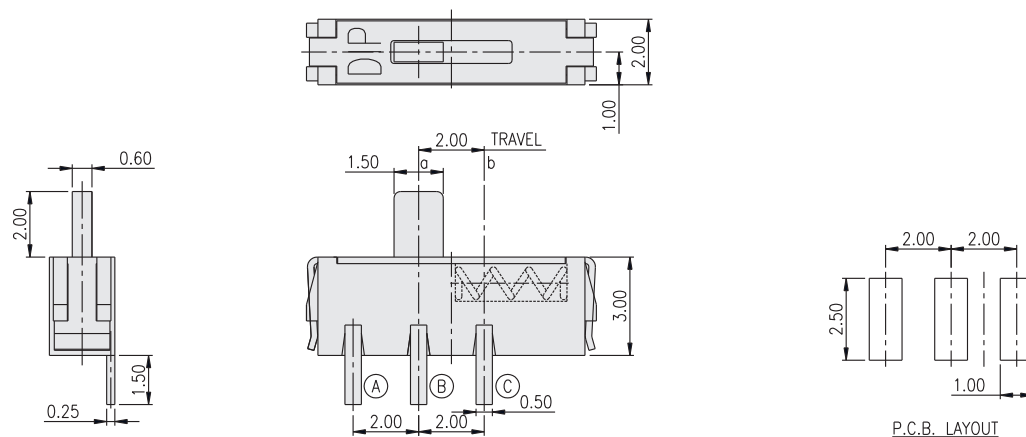
<Tube>
53 pcs

<Tape & Reel>
SS3-CM: 1900 pcs
SS3NP: 1000 pcs

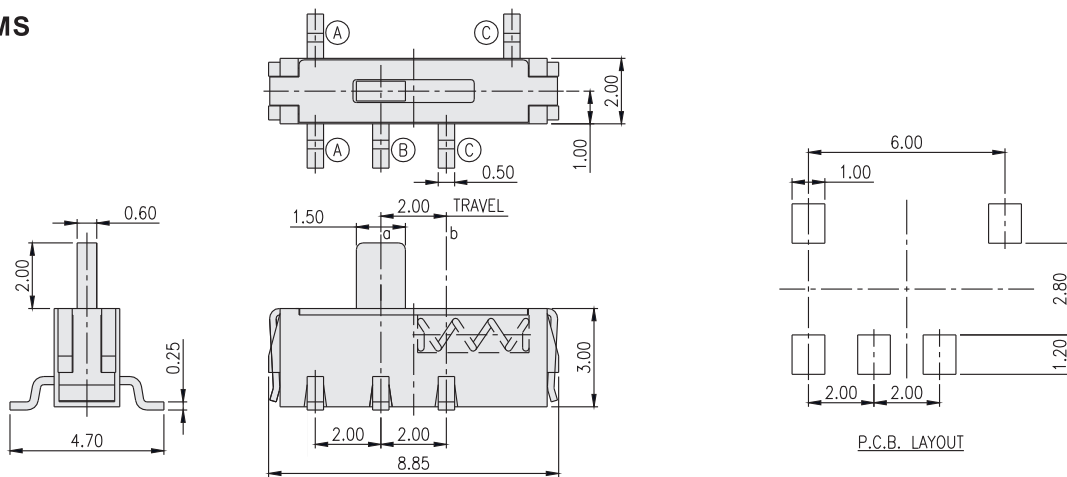
SS3-H



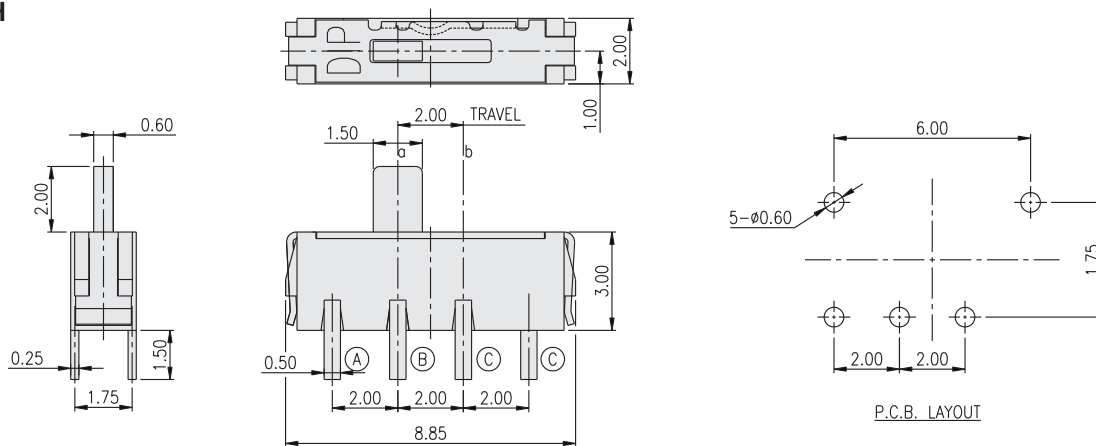
SS3N-MS



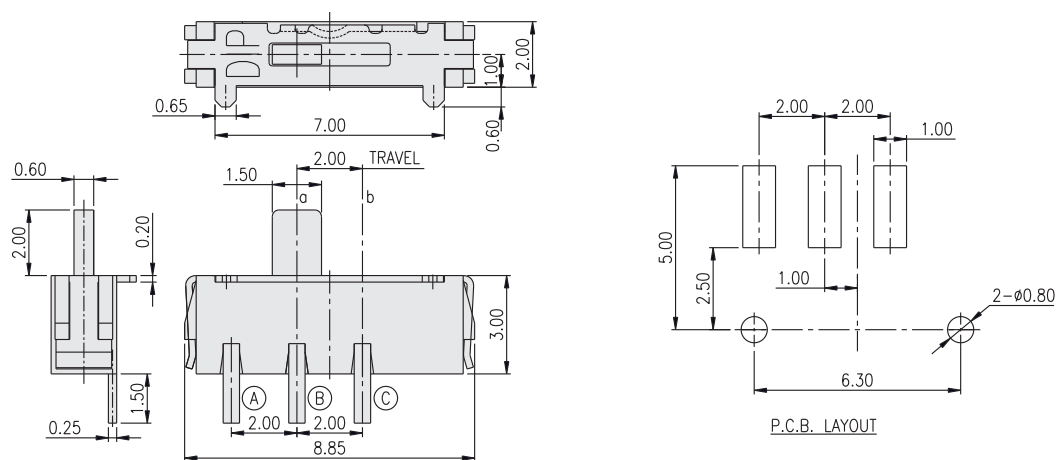
SS3NP-MS

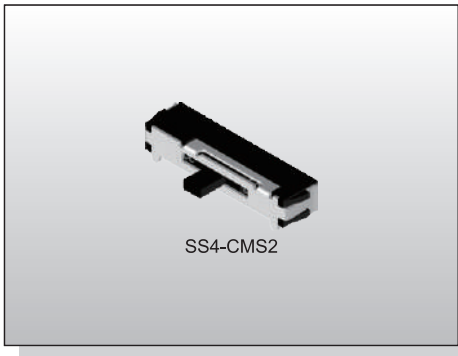


SS3P-H



SS3-CM





SS4-CMS2

FEATURES

- ※2.0mm height
- ※1P3T model
- ※Reflow solderable

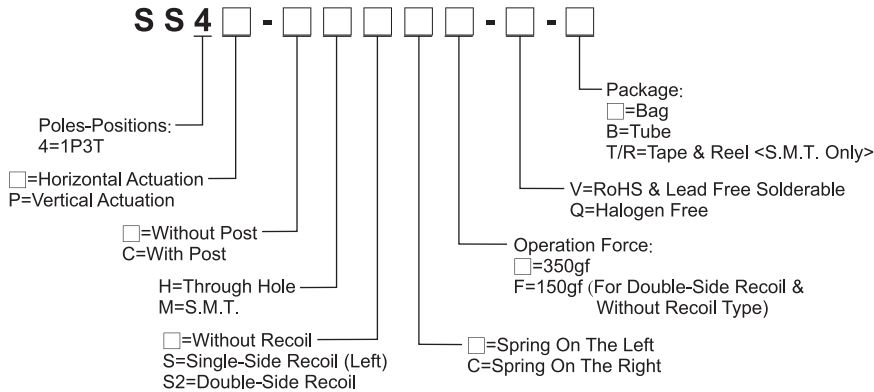
APPLICATION

- ※Remote control
- ※Consumer electronics
- ※Instrumentations

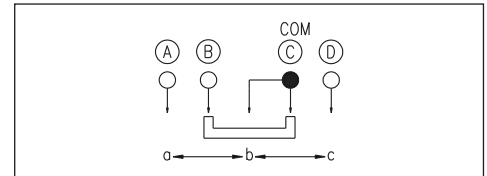
SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	100gf min./350gf max.(Detent Type) 150±100gf (Recoil Type)
Travel	2mm
Operating Life	10,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



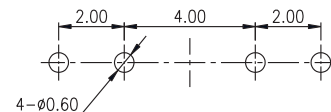
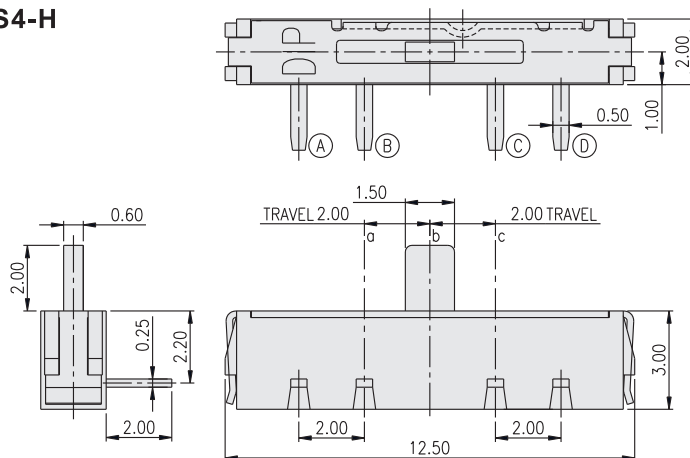
CIRCUIT



PACKAGE

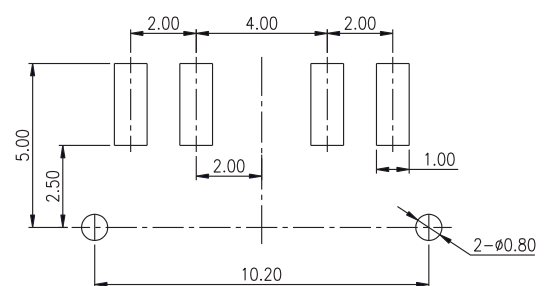
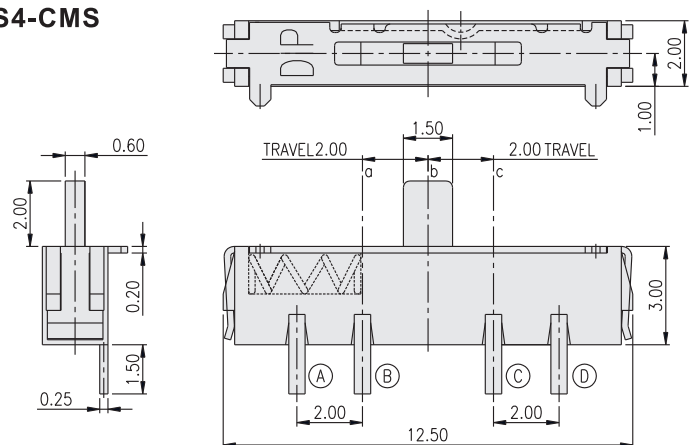
- <Bag>
1500 pcs
- <Tube>
38 pcs
- <Tape & Reel>
1900 pcs

SS4-H



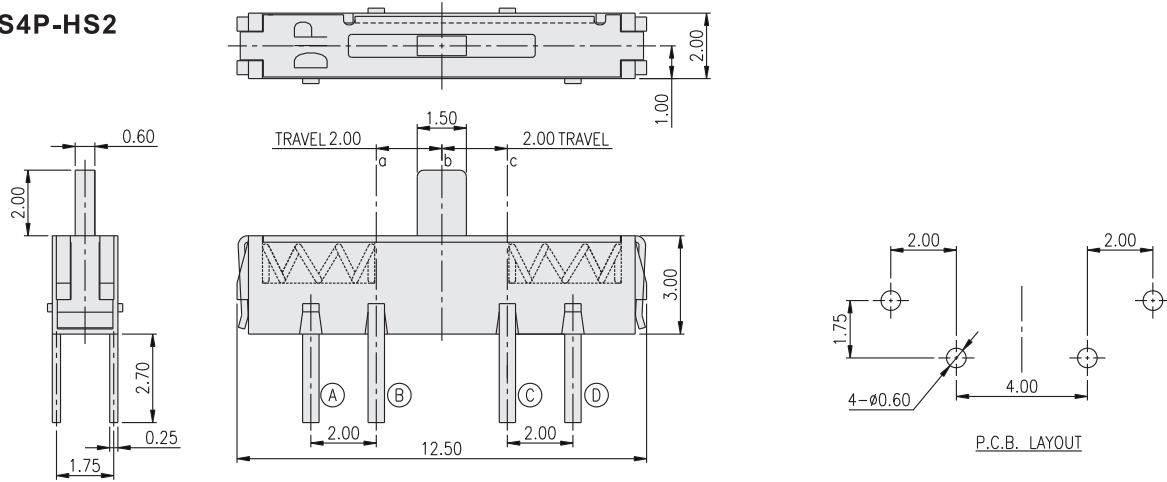
P.C.B. LAYOUT

SS4-CMS

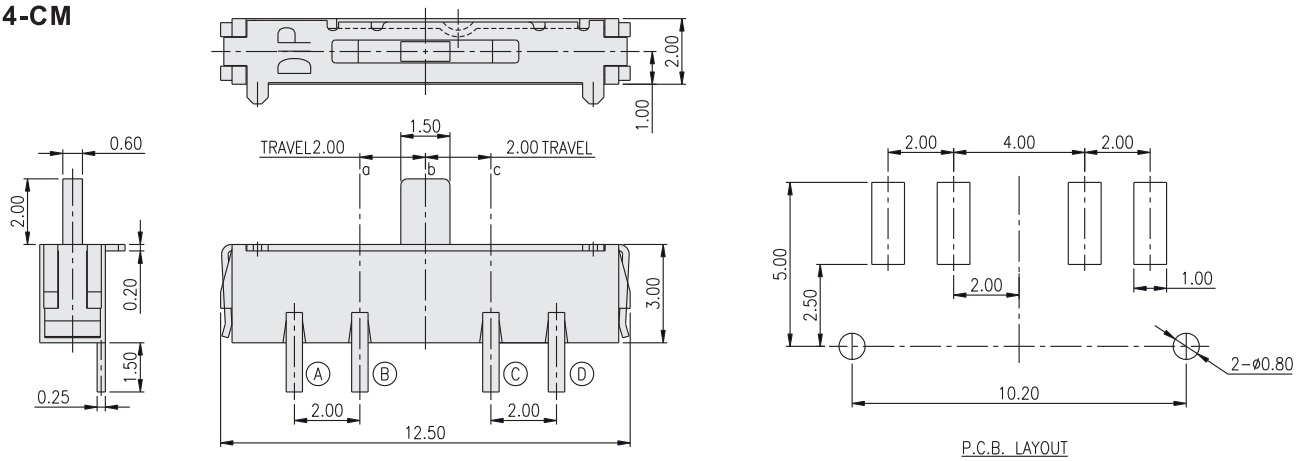


P.C.B. LAYOUT

SS4P-HS2

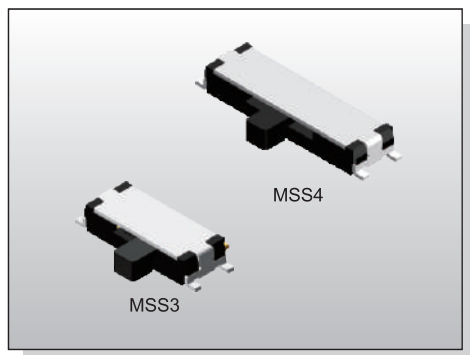


SS4-CM



SLIDE SWITCH MSS(3)(4) SERIES

Miniature & SMT Type
(1P2T, 1P3T)



FEATURES

- ※ 1.4mm height
- ※ 1P2T, 1P3T models
- ※ Stroke 1.5mm

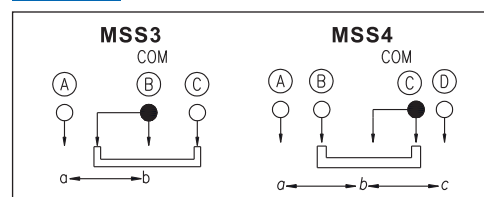
APPLICATION

- ※ Remote control
- ※ Consumer electronics
- ※ Instrumentations

SPECIFICATION

Contact Rating	25mA , 24V DC
Contact Resistance	70mΩ max
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	150±100gf (1.47N±0.98N) MSS3 A→B 150±100gf (1.47N±0.98N) C→B 150±100gf (1.47N±0.98N) B→C 200±150gf (1.96N±1.47N) MSS4 B→A 200±150gf (1.96N±1.47N)
Travel	1.5mm
Operating Life	10, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

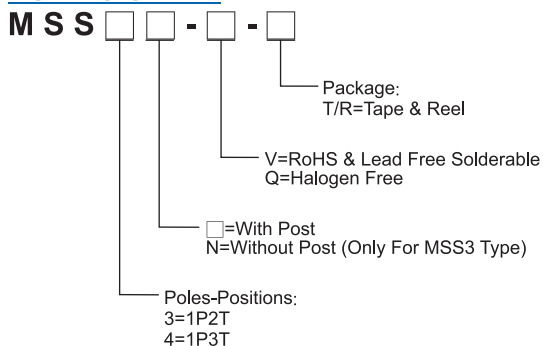
CIRCUIT



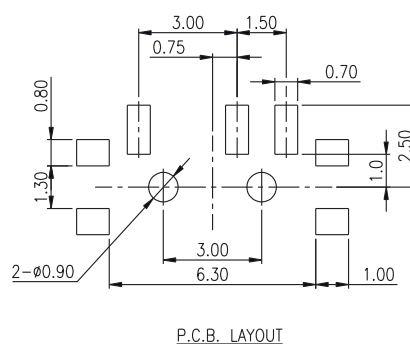
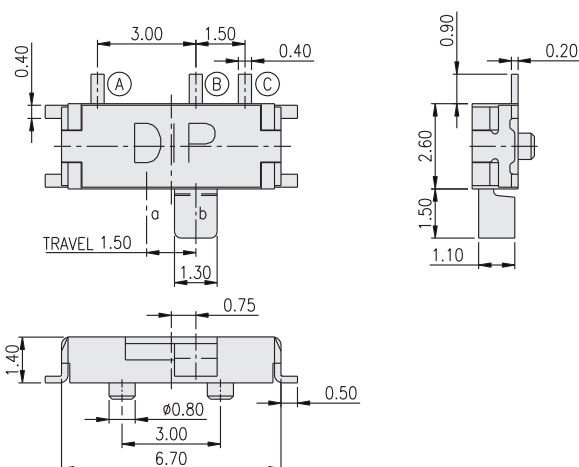
PACKAGE

<Tape & Reel>
2500 pcs

HOW TO ORDER

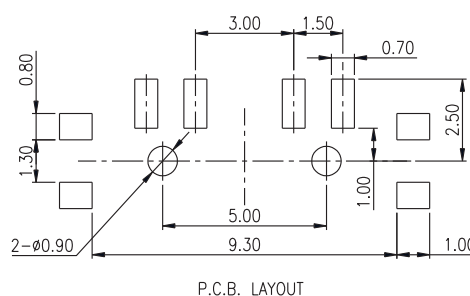
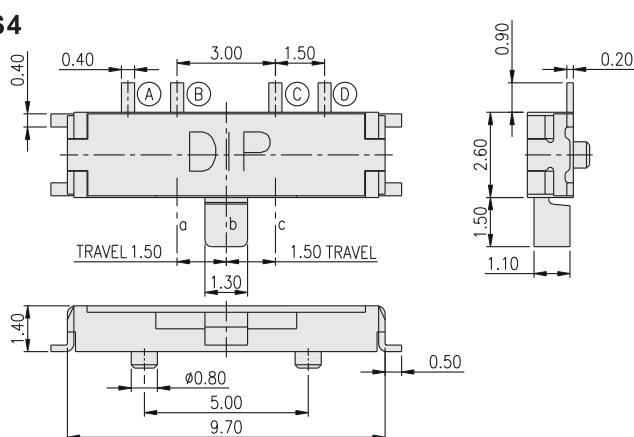


MSS3



P.C.B. LAYOUT

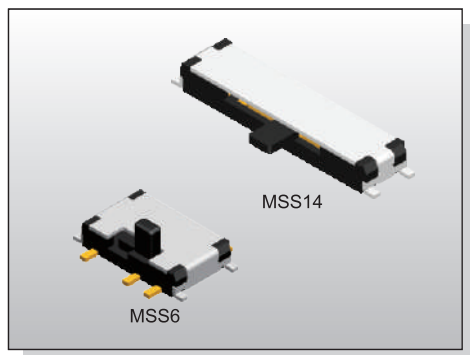
MSS4



P.C.B. LAYOUT

SLIDE SWITCH MSS(6)(14) SERIES

Miniature Travel & SMT Type
(2P2T, 1P4T)



FEATURES

- ※ 1.4mm height
- ※ 2P2T, 1P4T models
- ※ Stroke 1.5mm

APPLICATION

- ※ Remote control
- ※ Consumer electronics
- ※ Instrumentations

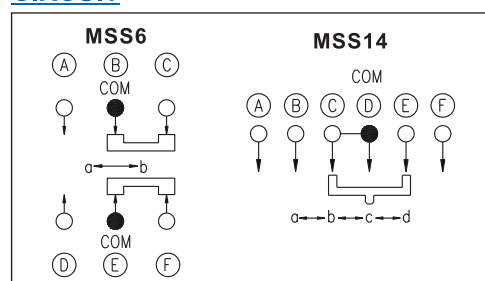
SPECIFICATION

Contact Rating	25mA , 24V DC	
Contact Resistance	70mΩ max	
Insulation Resistance	100MΩ min. 100V DC	
Dielectric Strength	100V AC/1 minute	
Operating Force	200±150gf (1.96N±1.47N)	MSS6
	A→B 150±100gf (1.47N±0.98N)	MSS14
	D→C 150±100gf (1.47N±0.98N)	
	B→C 200±150gf (1.96N±1.47N)	
	C→D 200±150gf (1.96N±1.47N)	
	C→B 200±150gf (1.96N±1.47N)	
	B→A 200±150gf (1.96N±1.47N)	
Travel	1.5mm	
Operating Life	10, 000 cycles	
Operating Temp.	-40°C ~ +85°C	
Storage Temp.	-40°C ~ +85°C	

HOW TO ORDER

M S S - - -
 Package:
 T/R=Tape & Reel
 V=RoHS & Lead Free Solderable
 Q=Halogen Free
 Poles-Positions:
 6=2P2T
 14=1P4T

CIRCUIT

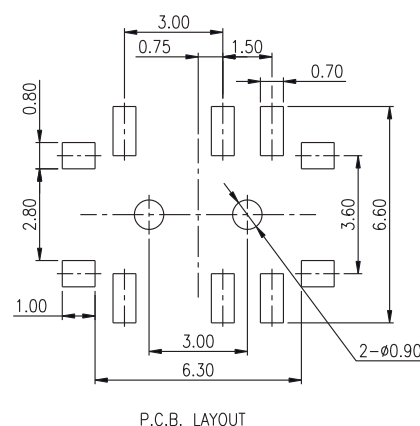
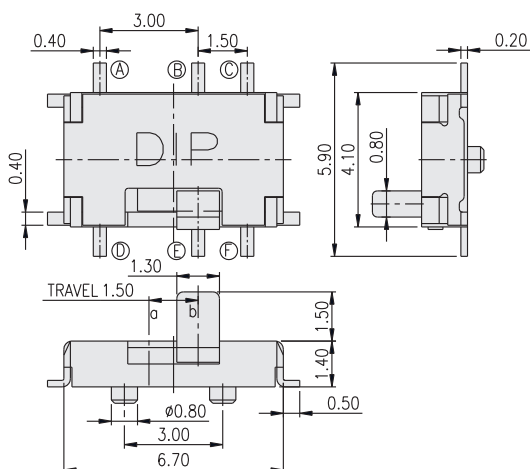


PACKAGE

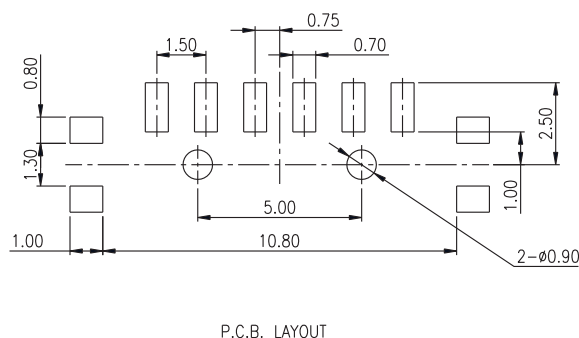
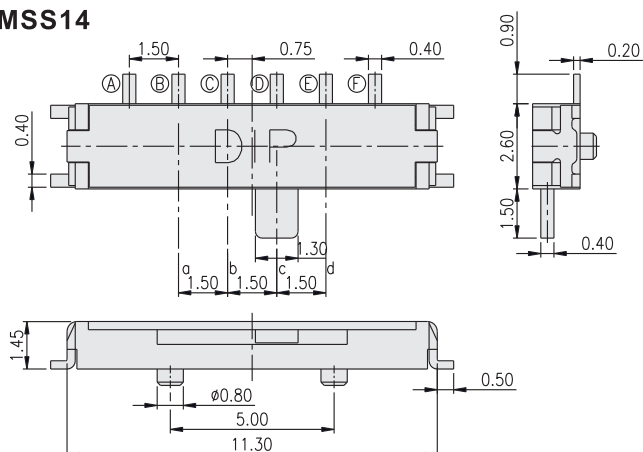
<Tape & Reel>

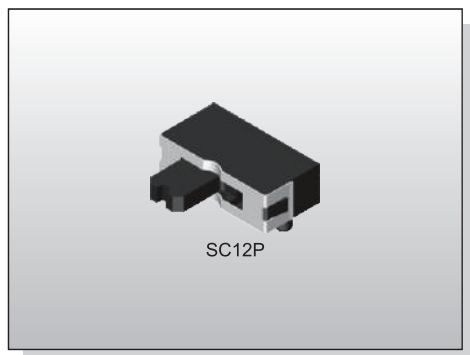
MSS6: 1400 pcs
 MSS14: 2500 pcs

MSS6



MSS14





FEATURES

- ※ 3.0mm height
- ※ Through hole type
- ※ 1P2T model

APPLICATION

- ※ Remote control
- ※ Consumer electronics
- ※ Instrumentations

SPECIFICATION

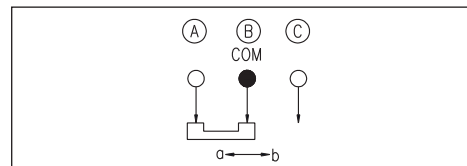
Contact Rating	0.3A, 10V DC
Contact Resistance	50mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	100~300gf
Travel	2.5mm
Operating Life	10, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

SC12P - QR

Package: Tape & Reel
Halogen Free
Terminal Length:
A=2.50mm
B=1.20mm
C=1.00mm
D=0.80mm
Poles-Positions: 1P2T
With Post

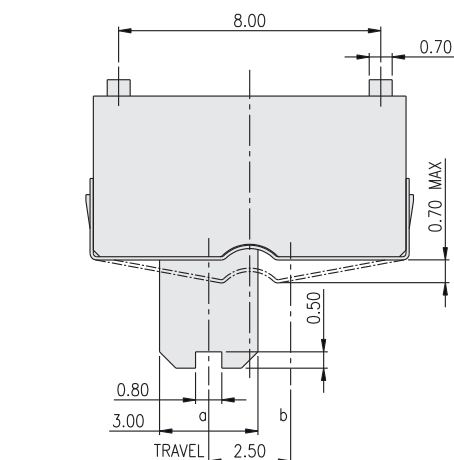
CIRCUIT



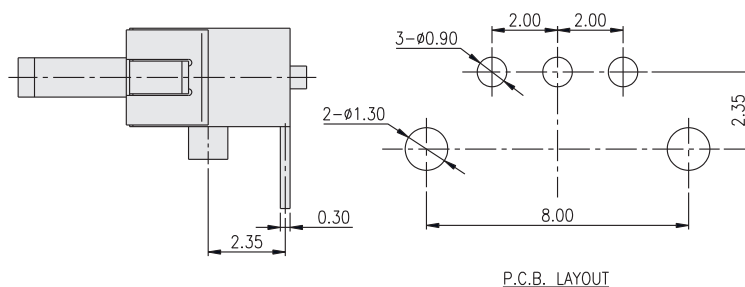
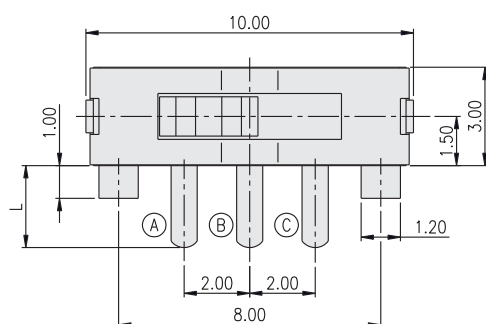
PACKAGE

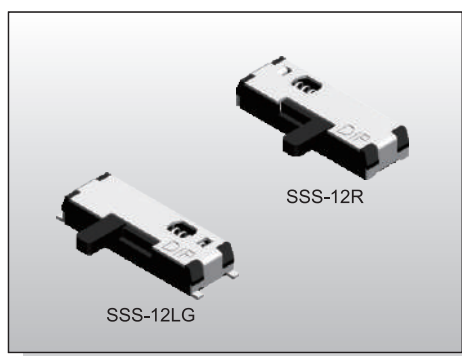
<Tape & Reel>
650 pcs

SC12P



PART NO.	L
SC12P-A	2.50
SC12P-B	1.20
SC12P-C	1.00
SC12P-D	0.80





FEATURES

- ※2.0mm height
- ※1P2T model
- ※Stroke 2.7mm

APPLICATION

- ※Remote control
- ※Consumer electronics
- ※Instrumentations

SPECIFICATION

Contact Rating	0.3A, 4V DC
Contact Resistance	70mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	180±70gf
Travel	2.7mm
Operating Life	10,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

SSS - 12

Poles-Positions:
1P2T

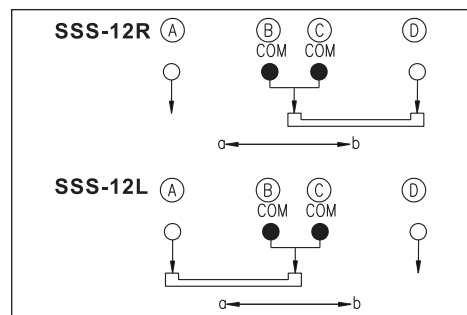
L=Actuator on the Left
R=Actuator on the Right

Package:
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

□=Without Ground Pin
G=Ground Pin

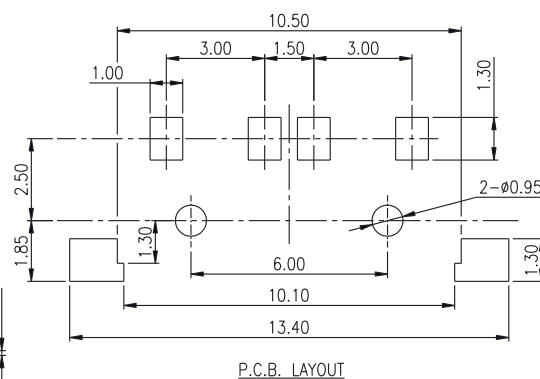
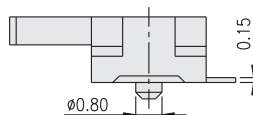
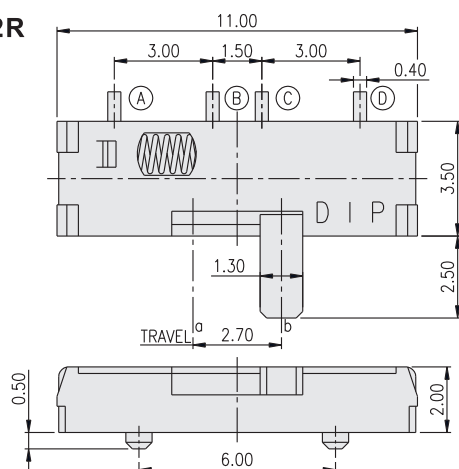
CIRCUIT



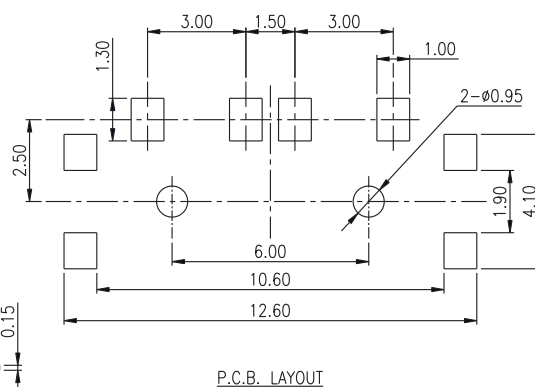
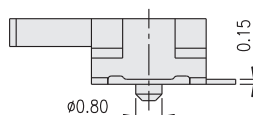
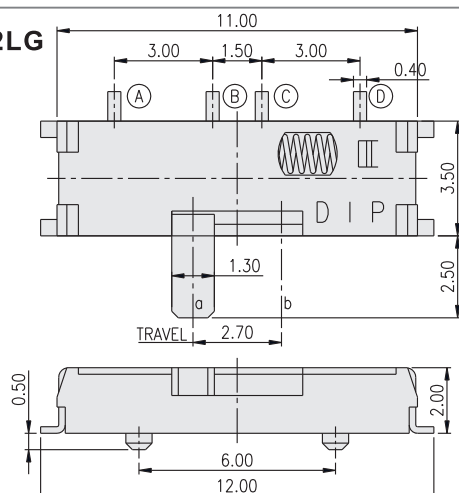
PACKAGE

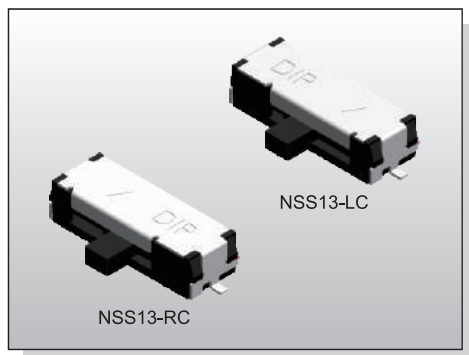
<Tape & Reel>
2000 pcs

SSS-12R



SSS-12LG





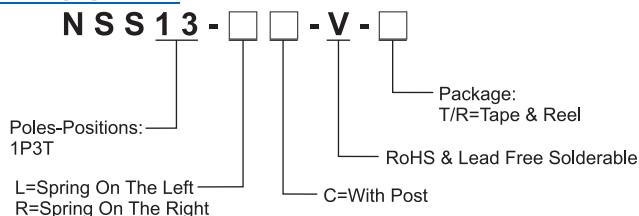
FEATURES

- ※ 1P3T model
- ※ Single-side recoil type
- ※ Reflow solderable

APPLICATION

- ※ Remote control
- ※ Consumer electronics
- ※ Instrumentations

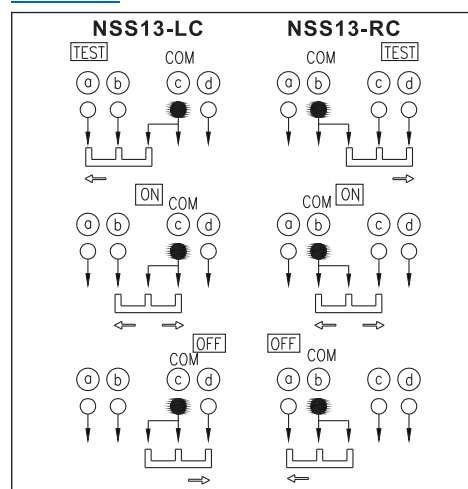
HOW TO ORDER



SPECIFICATION

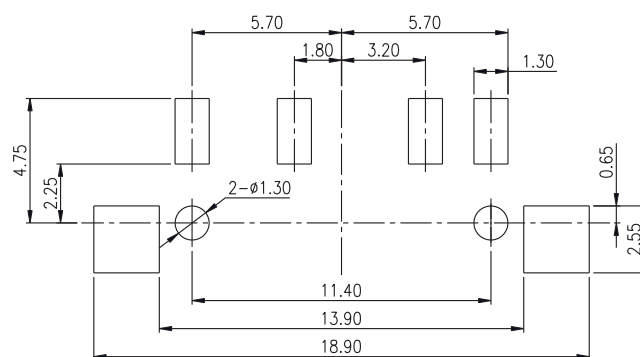
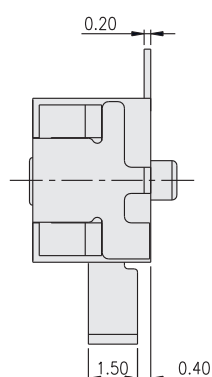
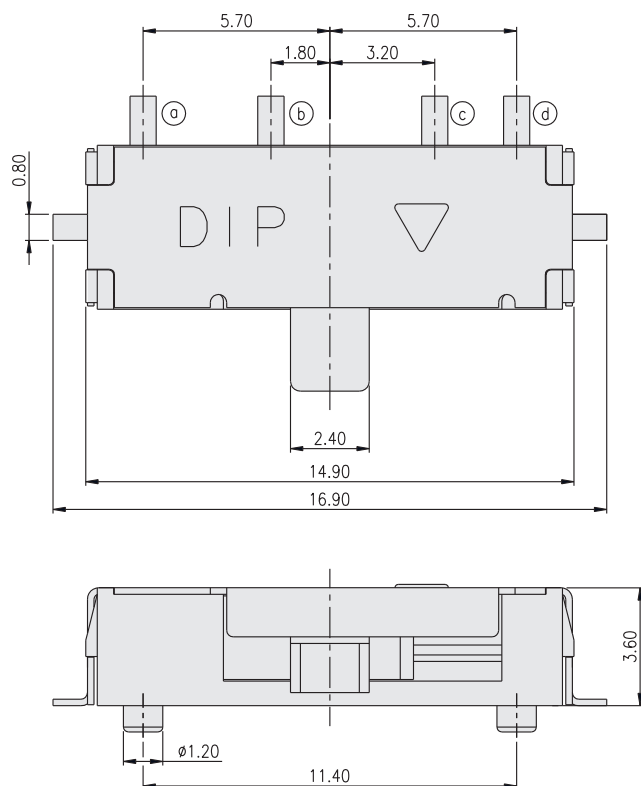
Contact Rating	0.3A, 4V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	320±150gf (ON-TEST) 320±150gf (OFF-ON) 500+100/-200gf (ON-OFF)
Travel	2mm (ON-TEST) 4mm (OFF-ON) 4mm (ON-OFF)
Operating Life	10, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



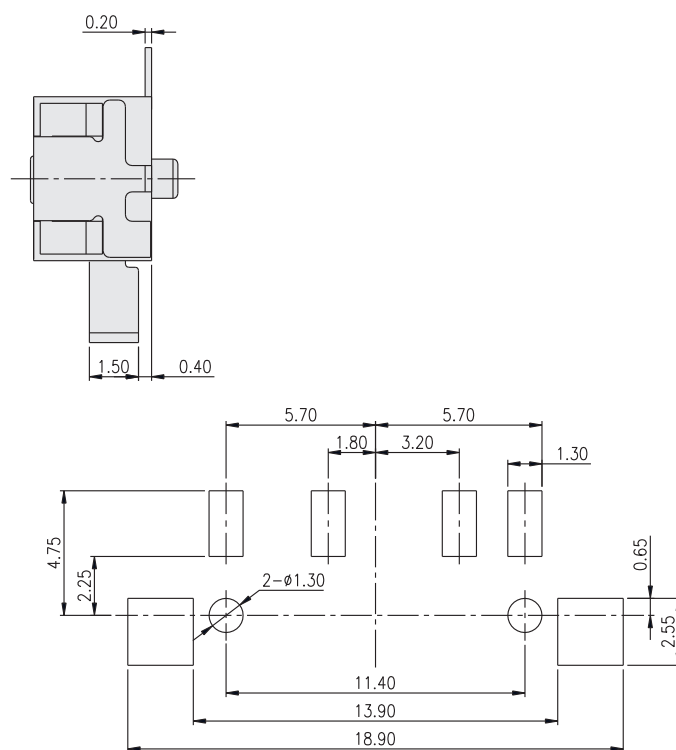
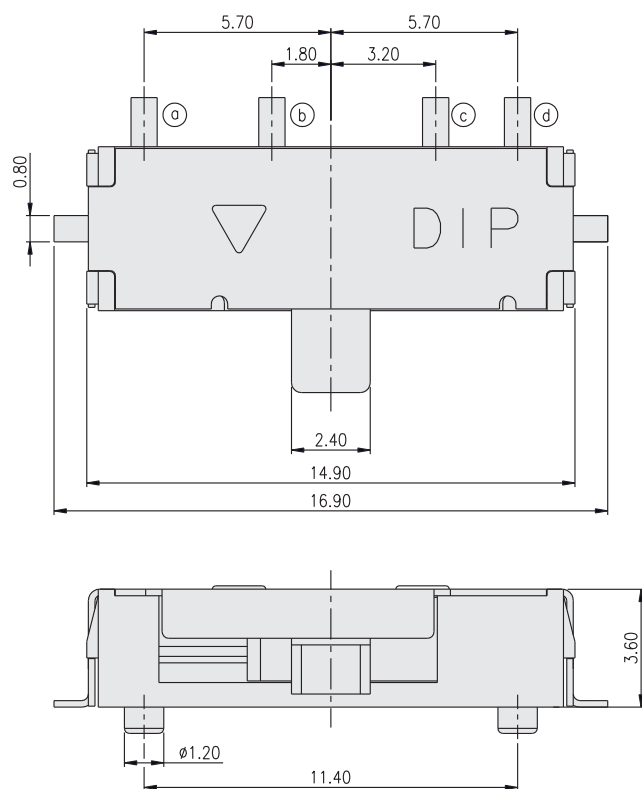
PACKAGE
<Tape & Reel>
800 pcs

NSS13-LC



P.C.B. LAYOUT

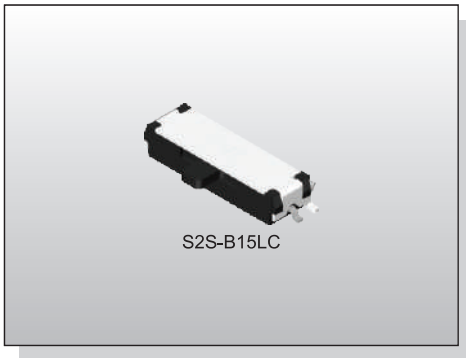
NSS13-RC



P.C.B. LAYOUT

SLIDE SWITCH S2S SERIES

Double-Side Recoil Type (1P2T, 1P3T)



FEATURES

- ※2.0mm height
- ※Double-side recoil
- ※Stroke 1.5mm

APPLICATION

- ※Remote control
- ※Consumer electronics
- ※Instrumentations

SPECIFICATION

Contact Rating	300mA, 4V DC
Contact Resistance	70mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	100±50gf
Travel	1.5mm
Operating Life	50, 000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +90°C

HOW TO ORDER

S 2 S - [] [] [] [] - [] []

Package:
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

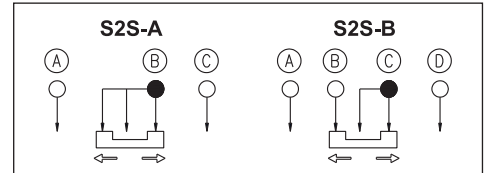
Poles-Positions:
A=1P2T
B=1P3T

[]=Without Post
C=With Post

Actuator Length:
15=1.50mm
25=2.50mm

L=J Bend
F=S.M.T. Flat

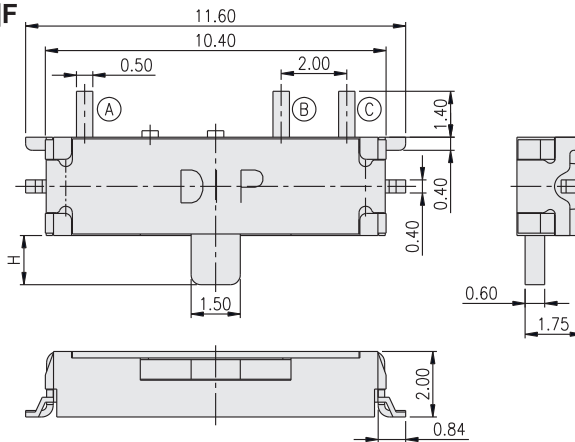
CIRCUIT



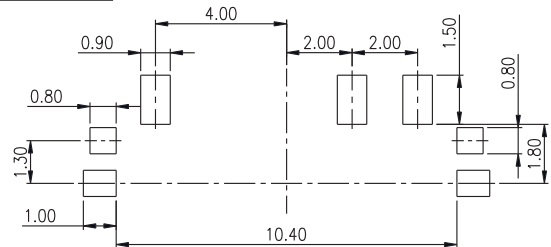
PACKAGE

<Tape & Reel>
2000 pcs

S2S-A [] [] F

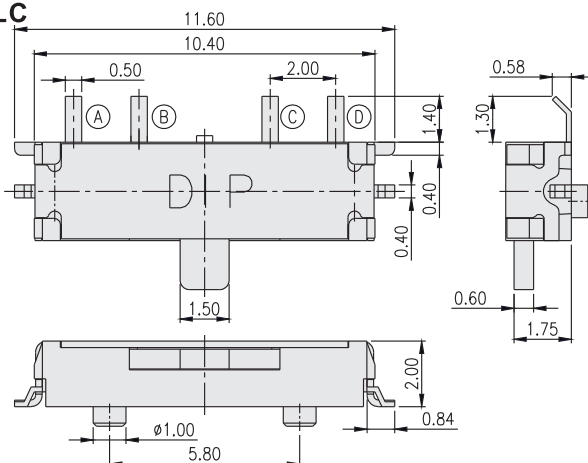


PART NO.	H
S2S-A15F	1.50
S2S-A25F	2.50

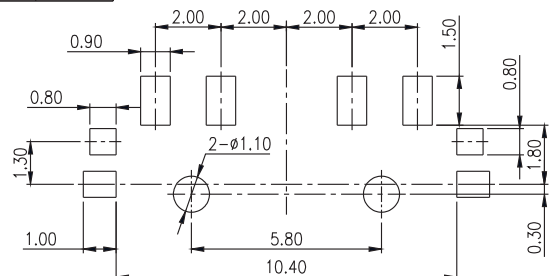


P.C.B. LAYOUT

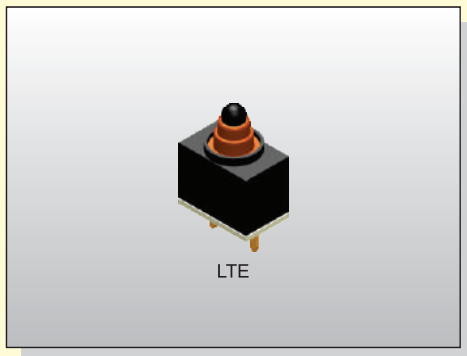
S2S-B [] [] LC



PART NO.	H
S2S-B15LC	1.50
S2S-B25LC	2.50



P.C.B. LAYOUT



FEATURES

- ※Water-proof type
- ※Compact size
- ※PCB Space saving

APPLICATION

- ※White goods
- ※Automotive
- ※Motorcycle

SPECIFICATION

Contact Rating	50μA, 5V DC 0.1A, 12V DC
Contact Resistance	500mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	500V AC/1 minute
Operating Force	102±50gf
Operating Position	4.1±0.3mm
Operating Life	300,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

LTE -

Contact Form:
1: Normal Open
2: Normal Close

Operating Force:
1=1N

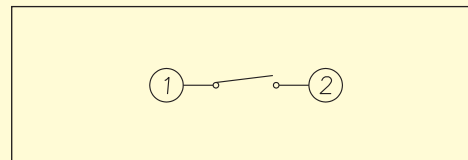
Post Type(Screw Mounting):
N=Non
T=Top Side
S=Single Side

Special Code

V=Lead Free

Terminal Type:
1=PC Board Terminal Type
2=Lead Terminal Type

CIRCUIT



PACKAGE

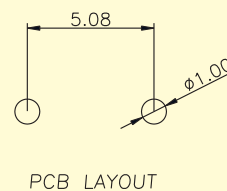
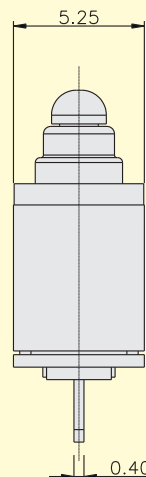
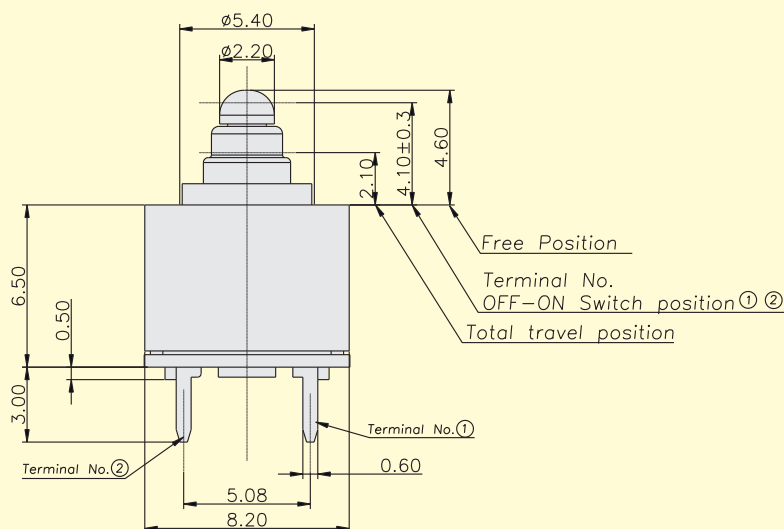
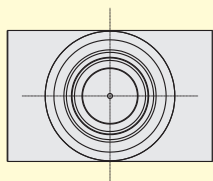
<Bag>

500 pcs

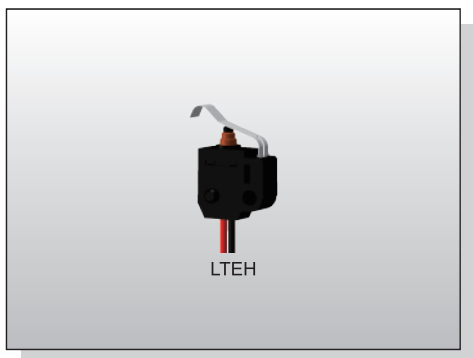
<Tube>

LTE-□1T: 54 pcs

LTE



PCB LAYOUT



FEATURES

- ※With lever type
- ※With internal resistor
- ※Water-proof IP67

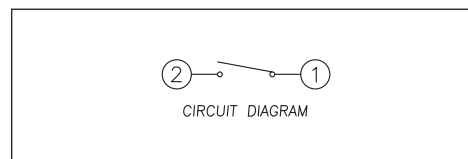
APPLICATION

- ※Home appliances
- ※Automotive
- ※Motorcycle handle bar

SPECIFICATION

Contact Rating	50μA, 5 V DC Min. 0.1A, 12VDC Max.
Contact Resistance	1200Ω (initial)
Insulation Resistance	10MΩ Min. 100V DC / 1 minute
Dielectric Strength	500V AC / 1 minute
Operating Force	480gf Max.
Operating Life	100,000 cycles Min.
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Box>
50 pcs

HOW TO ORDER

L T E H - 0 1 S 4 1 T W 4 G V B A 3

Ratings: _____
01= 12VDC 0.1A

Actuator: _____
S4=Simulated
Straight Leaf Lever

Contact Form: _____
1=SPST-NO
(Molded Lead Wire Models Only)

Plating: _____
G= Silver Plating

Terminals: _____
4= Lower Moulded Wire

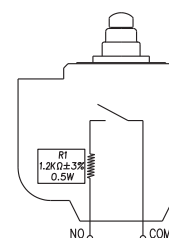
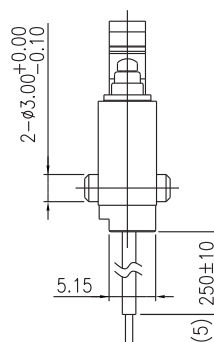
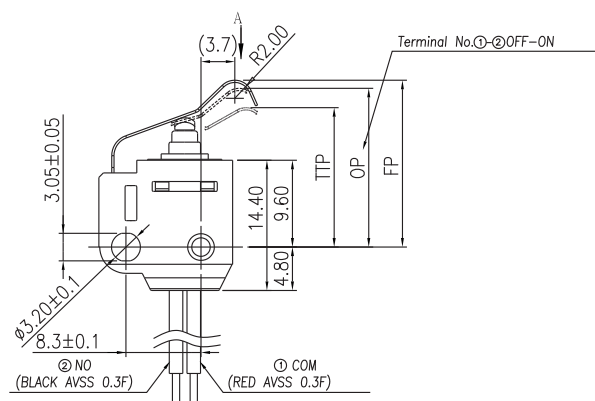
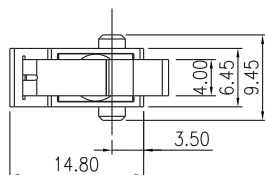
Posts: _____
TW= Short Columns On Both Sides

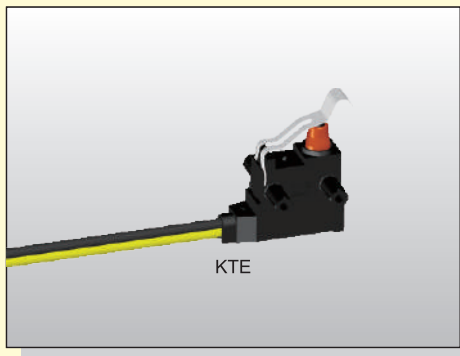
A3= Wire Length 250mm Avss03f

B= R1(1206 1200R 1/2W)

V= RoHS & Lead Free

LTEH





FEATURES

- ※Low noise operation
- ※Dust and water resistance
- ※With internal resistors option

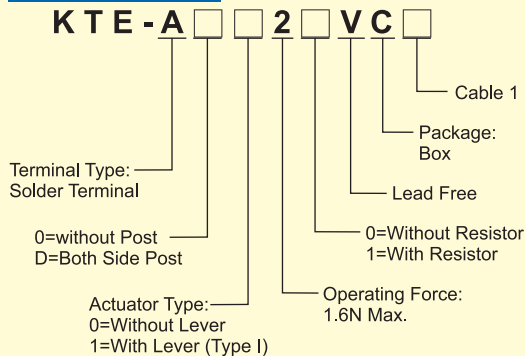
APPLICATION

- ※Automotive
- ※Industrial equipment
- ※White goods

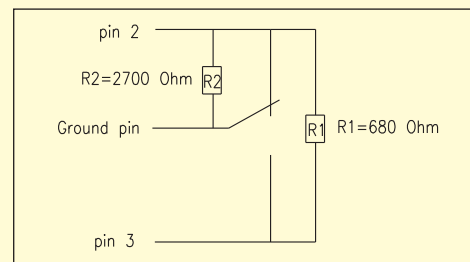
SPECIFICATION

Contact Rating	1mA~100mA, $\leq 25V$ DC
Contact Resistance	free position($680\Omega \pm 1.5\%$) 8.3mm~9.15mm ($3380\Omega \pm 1.5\%$) 6.85mm~8.0mm ($\leq 500m\Omega$)
Insulation Resistance	100M Ω min. 500V DC
Dielectric Strength	250V AC/1 minute
Operating Force	Actuating Force $\leq 1.6N$
Operating Life	200,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



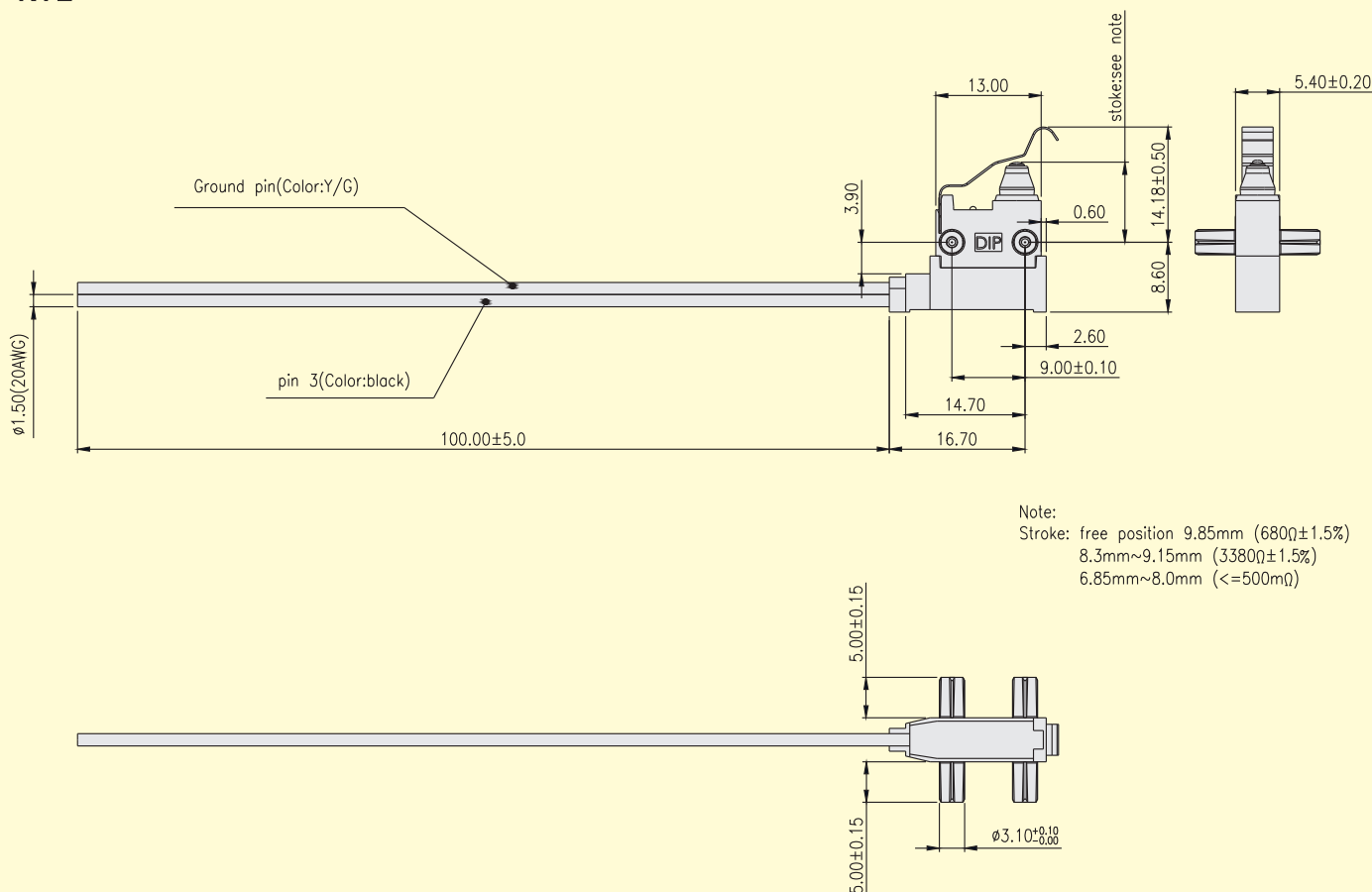
CIRCUIT

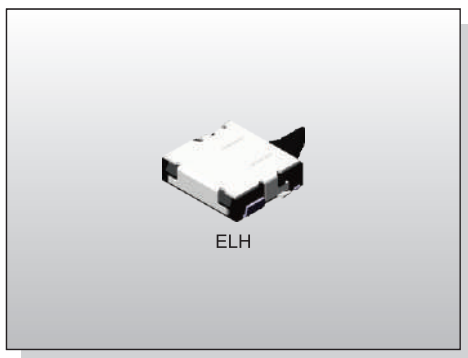


PACKAGE

<Box>
240 pcs

KTE





FEATURES

- ※ Compact size
- ※ Two-way operating
- ※ Halogen Free

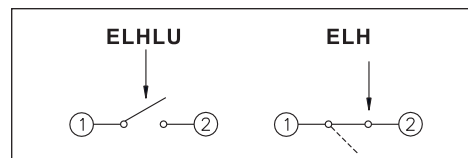
APPLICATION

- ※ Digital camera
- ※ Notebook
- ※ Automotive

SPECIFICATION

Contact Rating	50 μ A, 3V DC min. 1mA, 5V DC max.
Contact Resistance	2 Ω max.
Insulation Resistance	100M Ω min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	35gf max.
Travel	1.15mm
Operating Life	50,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

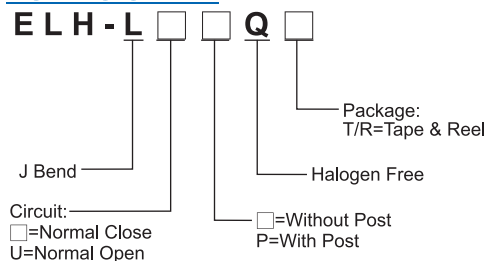
CIRCUIT



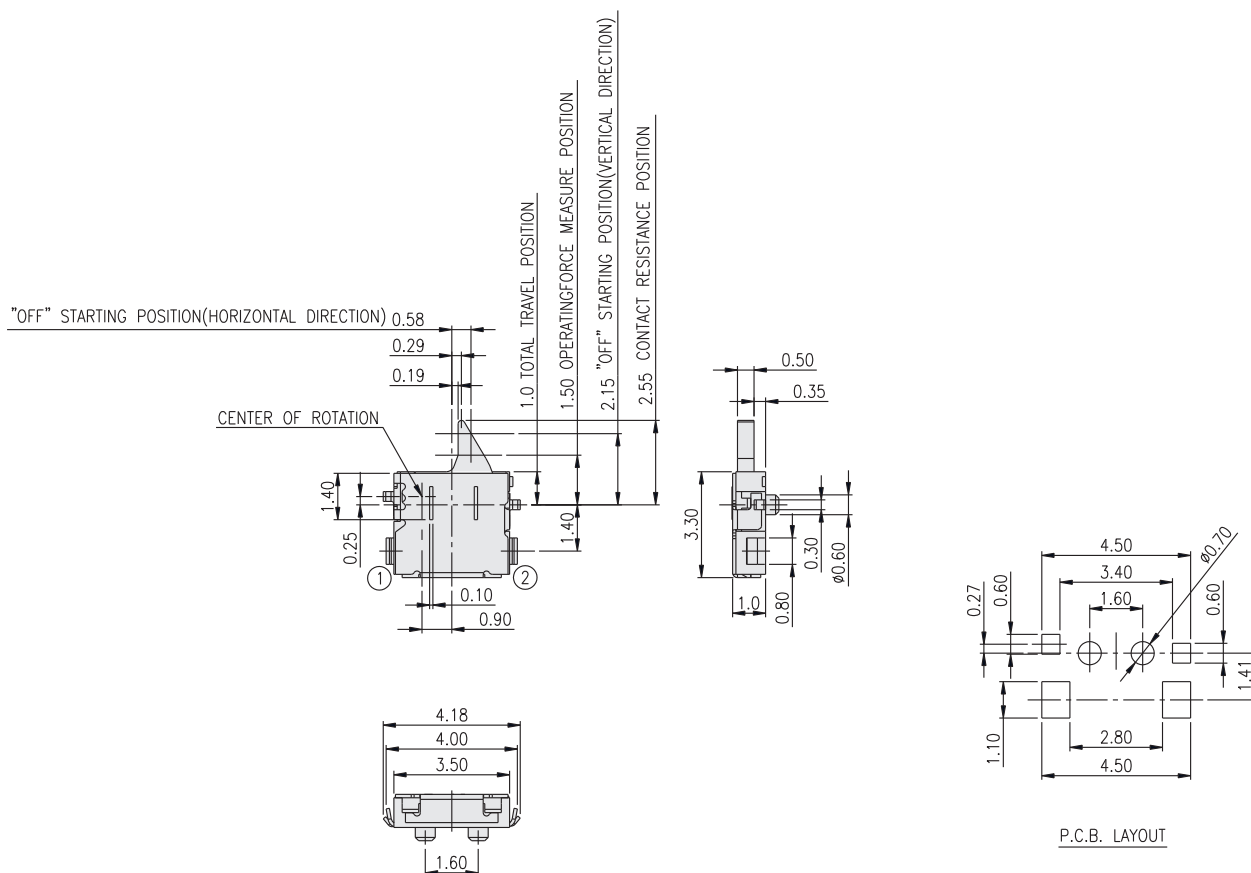
PACKAGE

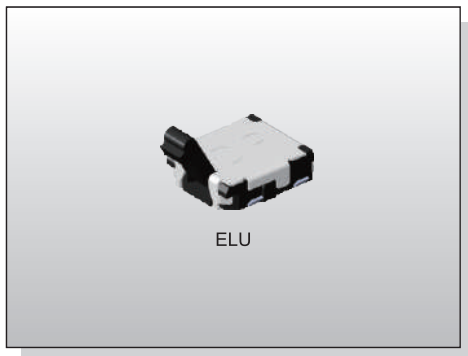
<Tape & Reel>
3500 pcs

HOW TO ORDER



ELH





ELU

FEATURES

- ※ Compact sized
- ※ Sharp detection feeling

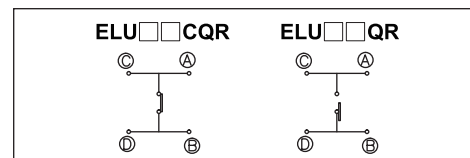
APPLICATION

- ※ Consumer electronics
- ※ Safety control device
- ※ Heat energy regulator

SPECIFICATION

Contact Rating	100 μ A, 3V DC min. 1mA, 5V DC max.
Contact Resistance	3 Ω max.
Insulation Resistance	100M Ω min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	35gf max.
Travel	2.18mm
Operating Life	50,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
2000 pcs

HOW TO ORDER

ELU ☐ ☐ ☐ QR

☐=Without Post
P=With Post

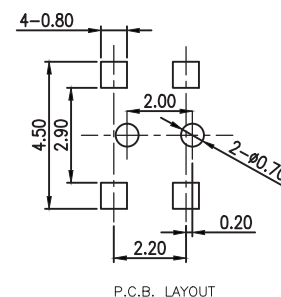
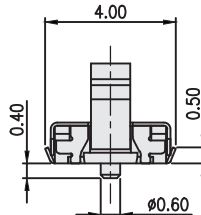
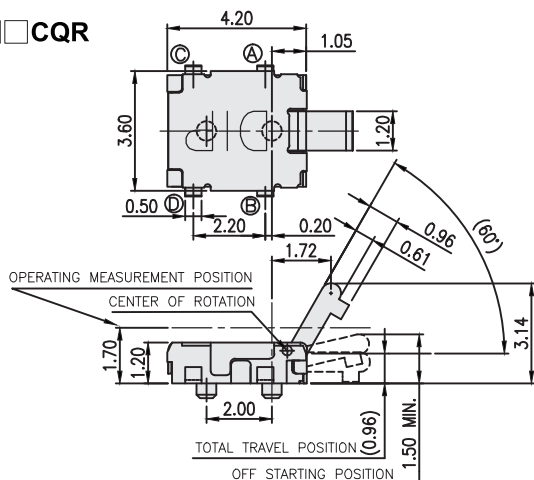
Terminal Type :
F=With Flat Terminal
L=With Bending Terminal

Package:
Tape & Reel

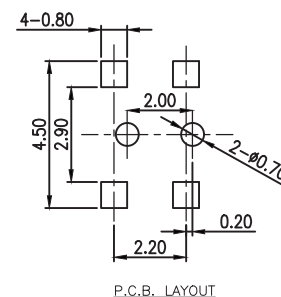
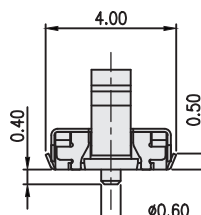
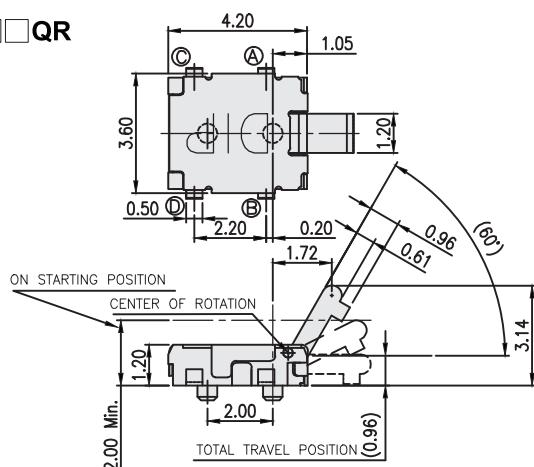
Halogen Free

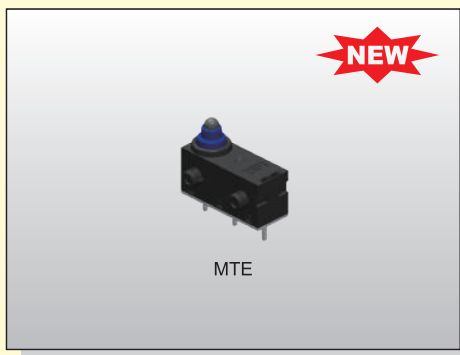
Circuit:
C=Normal Close
☐=Normal Open

ELU ☐ ☐ CQR



ELU ☐ ☐ QR





FEATURES

- ※Compact size: 13.3x5.3x6.5mm
- ※With internal resistor
- ※Water-proof IP67

APPLICATION

- ※Home appliances
- ※Automotive (Hood Latch, EV Charger)
- ※Industrial equipment

SPECIFICATION

Contact Rating	50μA , 5V DC Min. 0.1A , 12VDC Max.
Contact Resistance	500mΩ max. (initial)
Insulation Resistance	100MΩ min.
Dielectric Strength	500V AC / 1 minute
Operating Force	P1 : 100gf±50gf L31 : 300gf Max.
Operating Life	300,000 cycles min.
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

MTE -

Ratings:
01=12VDC 0.1A

Actuator:
P =Pin Plunger

Contact Form:
1=SPDT

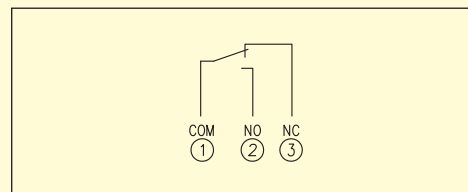
V=RoHS & Lead Free

Plating:
G=Silver Plating

Terminals:
H=PCB Terminal

Posts:
A=Without Posts
J =Posts on Left
K=Posts on Right
T=Posts on Left / Right
C=M3 screw hole

CIRCUIT

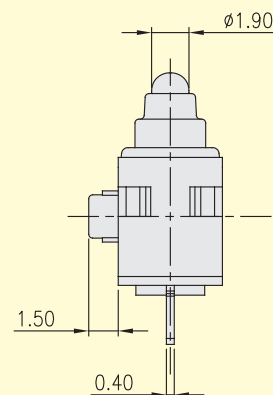
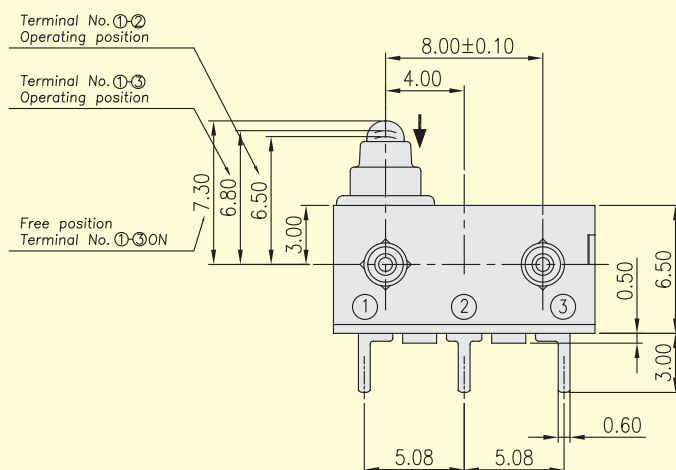
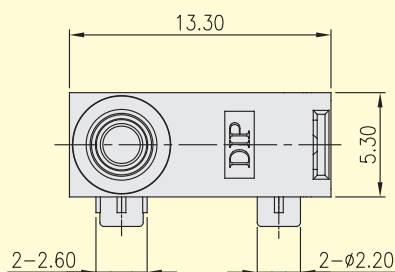


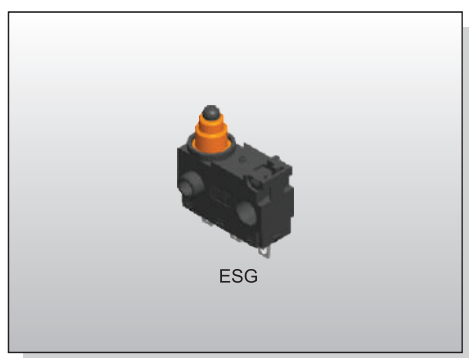
PACKAGE

<Bag>

500 pcs

MTE





FEATURES

- ※PC board terminals option
- ※Solder terminals option with wire
- ※IP67 dust and water resistance
- ※With Resistors option

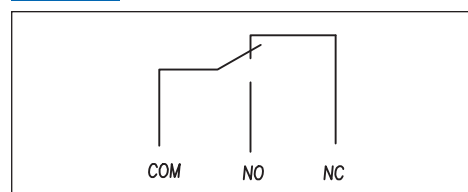
APPLICATION

- ※White goods
- ※Automotive
- ※Motorcycle

SPECIFICATION

Contact Rating	1mA, 5V DC 0.1A, 30V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min.
Dielectric Strength	600V AC/1 minute
Operating Force	153gf max.
Operating Position	NC OP 8.7±0.3mm NO OP 8.4±0.3mm
Operating Life	10mA, 14V DC 500,000 cycles 0.1A, 30V DC 200,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Bag>

<Bag>
400 pcs

HOW TO ORDER

ESG -

Cover Type: ☐
1=M3 Screw Mounting

Rating: _____
G=1mA 5V DC~

0.1A 30 VDC
Contact Silver Plated

Actuator: _____
0=Pin Plunger
2=Hinge lever 14mm

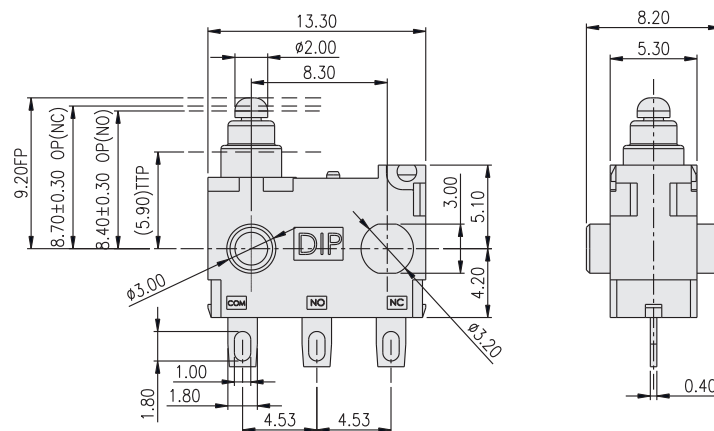
- Cable Type

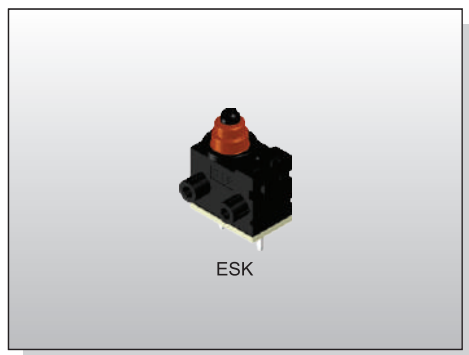
- V=Lead Free

- Terminal Type:
1=PCB Terminal Type
2=Lead Terminal Type

Contact Form:
1=SPDT
2=Normal Close
3=Normal Open

ESG





FEATURES

- ※8.25x5.25x7.85mm
- ※Silent operation
- ※Dust and water resistance

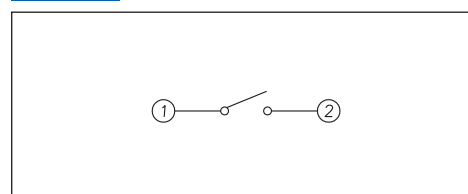
APPLICATION

- ※ Vacuum cleaners
- ※ Air conditioners
- ※ Door open/Close detection

SPECIFICATION

Contact Rating	1mA, 5V DC min. 50mA, 16V DC max.
Contact Resistance	500mΩ max. (initial)
Insulation Resistance	100MΩ min.
Dielectric Strength	500V AC/1 minute
Operating Force	160gf max.
Operating Life	50mA, 16V DC 150,000 cycles min. 50mA, 12V DC 200,000 cycles min. 1mA, 5V DC 300,000 cycles min.
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Bag>

400 pcs

HOW TO ORDER

ESK - P 3 J ☐ G V

Actuator:—
Pin Plunger

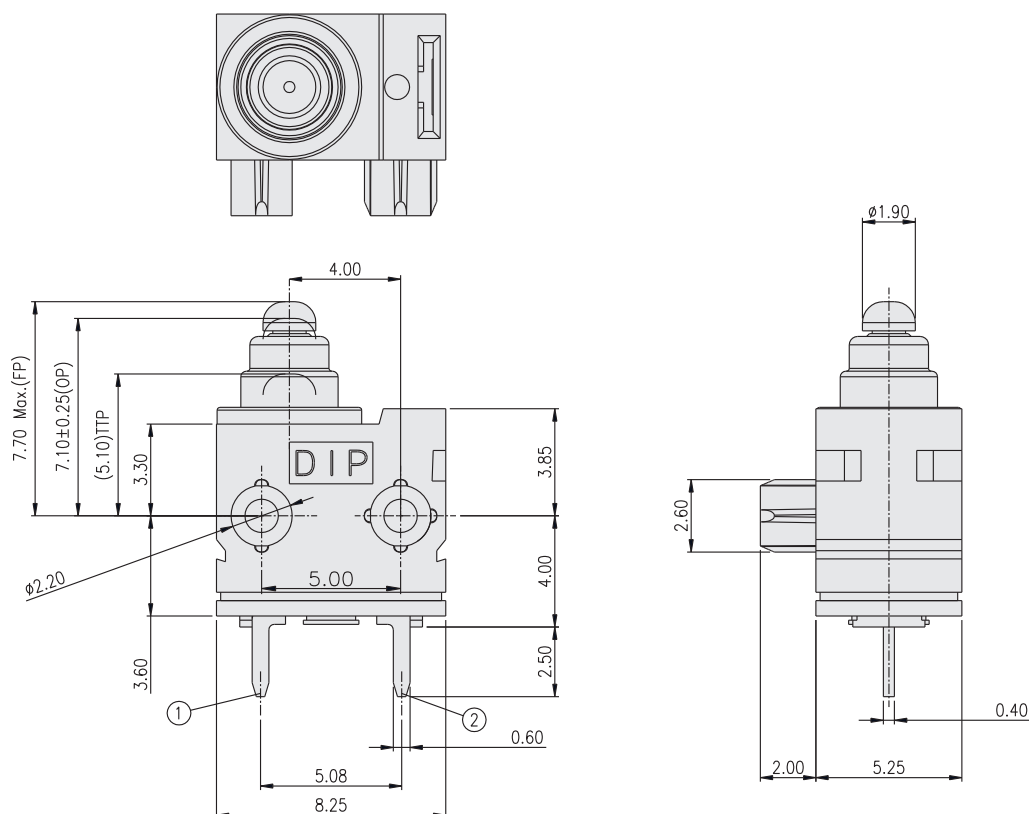
Contact Form: _____
SPST(Normal Open)

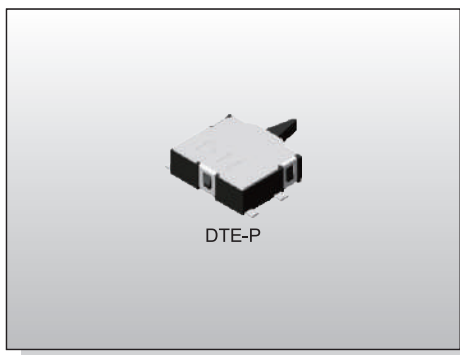
Short Posts on Left

- Lead Free

- Plating:
Silver Plating

- Terminal Type:
H=PCB
W=Solder





FEATURES

- ※ Compact size
- ※ Two-way operating, auto return
- ※ Circuit type: Normally open

APPLICATION

- ※ Detecting opening/ closing of DSC cover
- ※ Computer peripheral
- ※ Instruments
- ※ Automotive

SPECIFICATION

Contact Rating	10mA, 5V DC
Contact Resistance	500mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	30gf max.
Travel	1.5mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

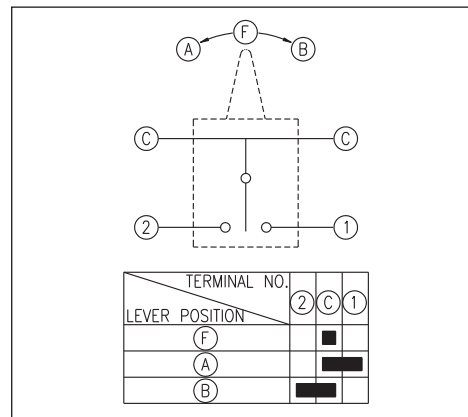
DTE-P - -

With Post

Package:
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

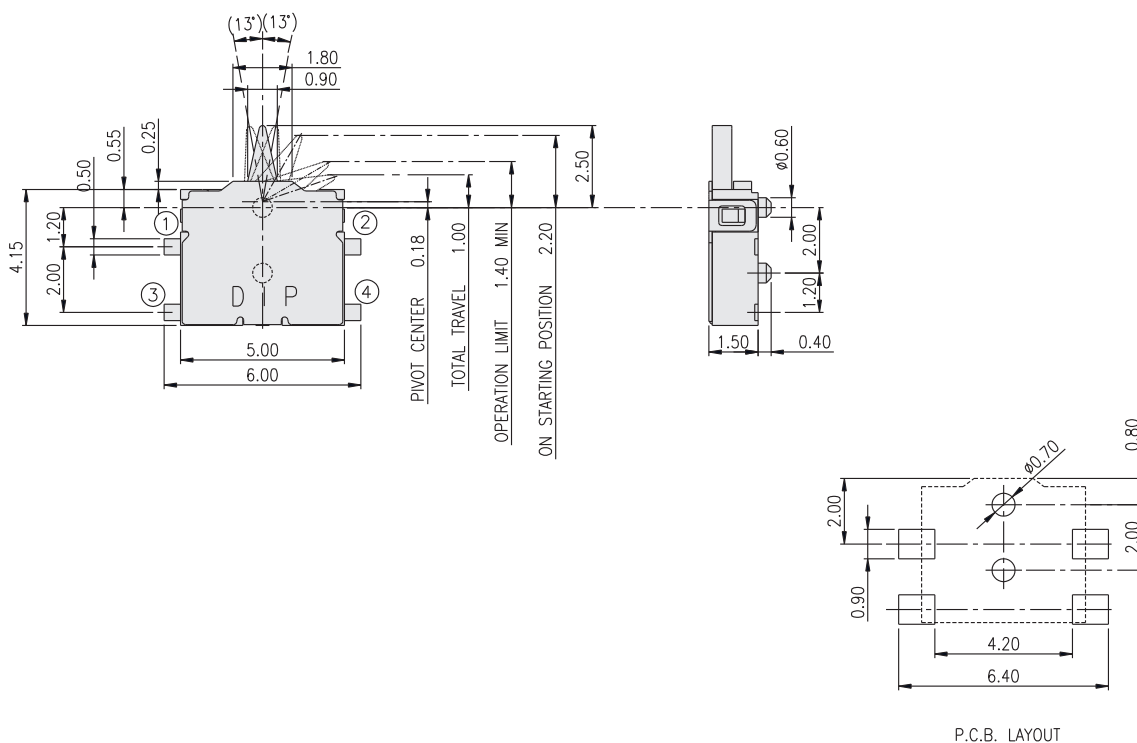
CIRCUIT

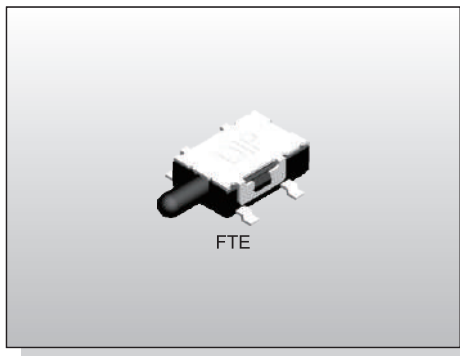


PACKAGE

<Tape & Reel>
3800 pcs

DTE-P





FEATURES

- ※Ultra-low profile with 2.0mm
- ※Sharp detection feeling

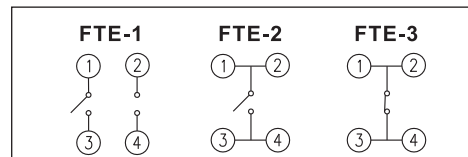
APPLICATION

- ※Detection of car audio mechanism
- ※Smoke detector
- ※Notebook

SPECIFICATION

Contact Rating	1mA, 5V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	105gf max.
Travel	2.0mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

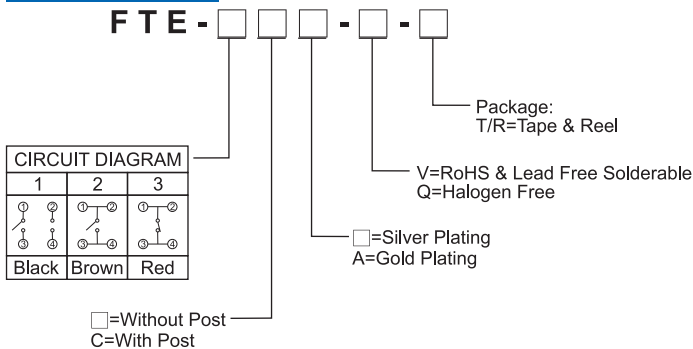
CIRCUIT



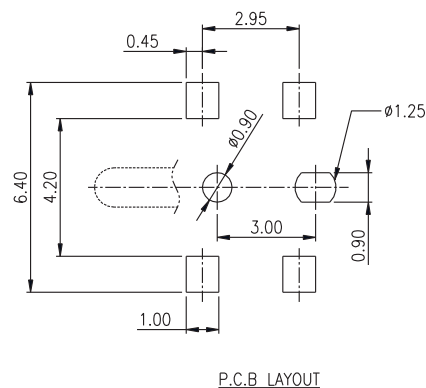
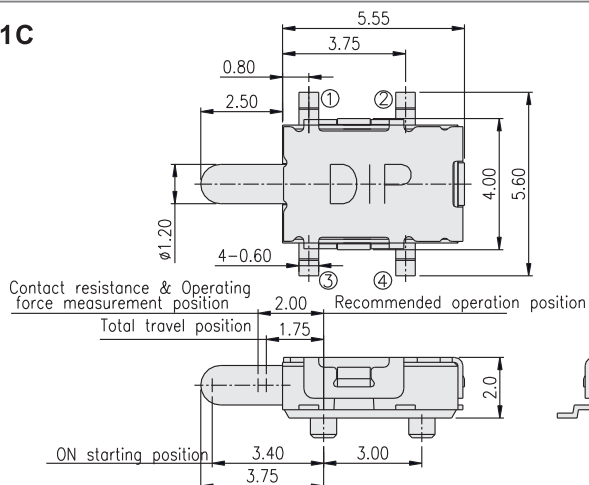
PACKAGE

<Tape & Reel>
3000 pcs

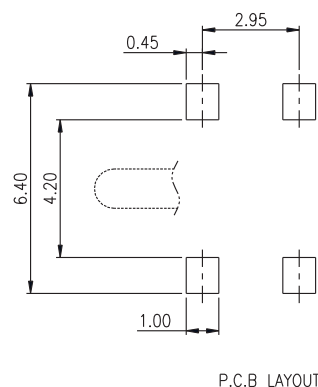
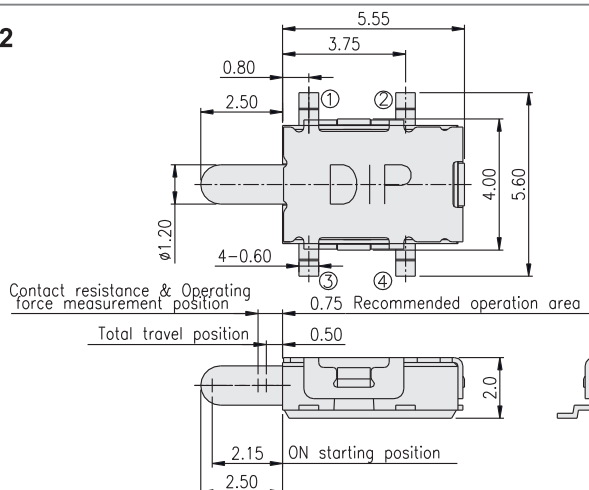
HOW TO ORDER



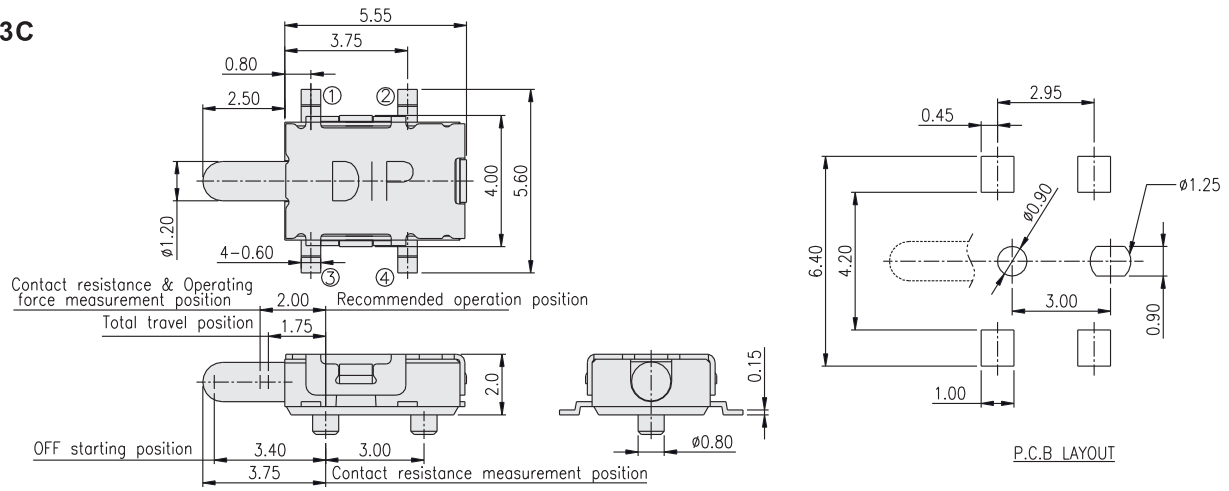
FTE-1C

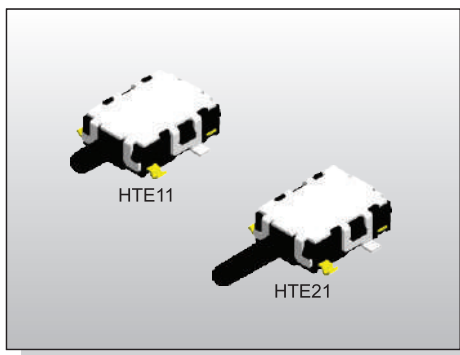


FTE-2



FTE-3C





FEATURES

- ※Ultra-low profile with 2.0mm
- ※Sharp detection feeling

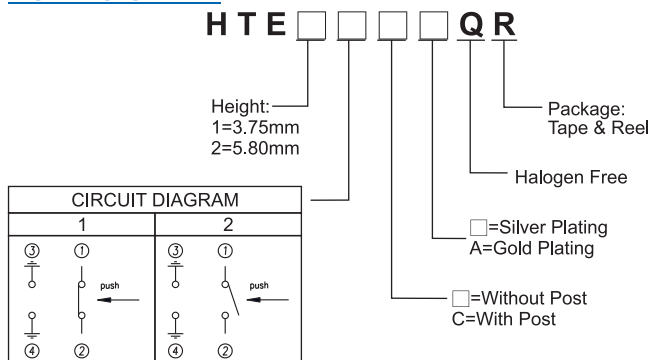
APPLICATION

- ※Detection of car audio mechanism
- ※Smoke detector
- ※Notebook
- ※Industrial application
- ※3C products

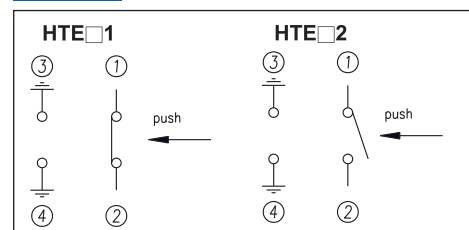
SPECIFICATION

Contact Rating	10mA, 5V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	150gf max.
Travel	2.0mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



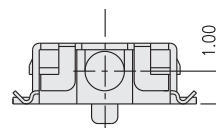
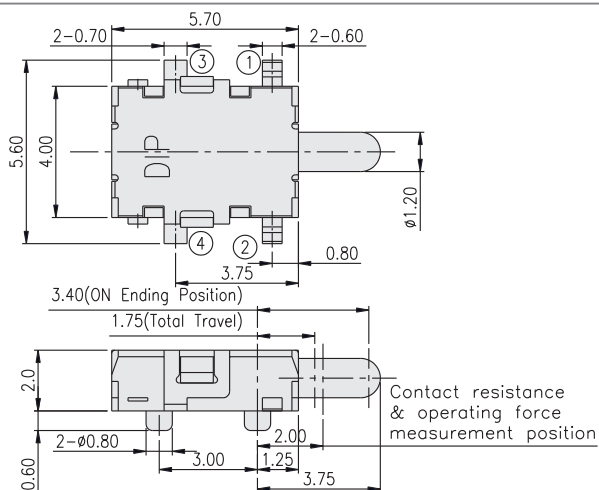
CIRCUIT



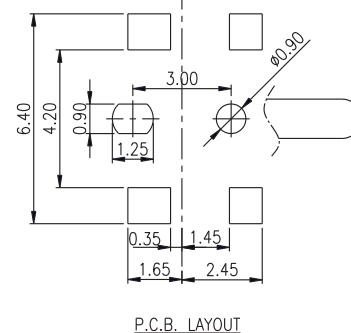
PACKAGE

<Tape & Reel>
3000 pcs

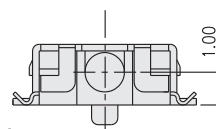
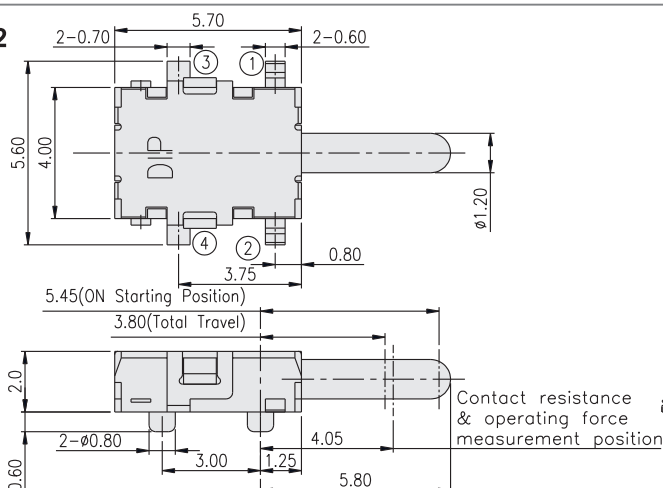
HTE11



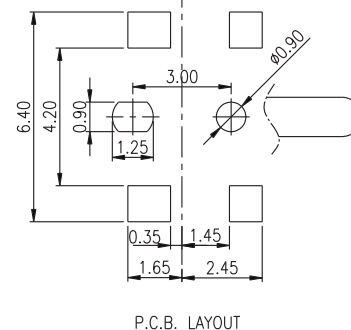
P.C.B. Mounting pattern Dimension

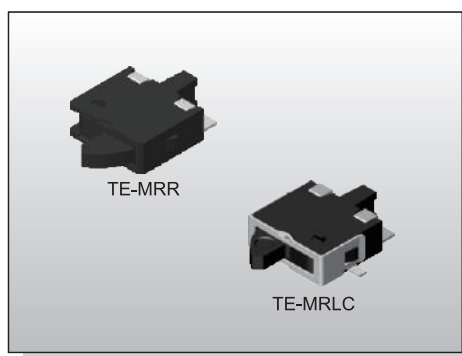


HTE22



P.C.B. Mounting pattern Dimension





FEATURES

※Left or right operating direction

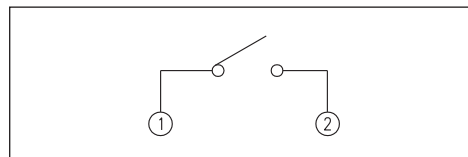
APPLICATION

- ※Close/open detection
- ※White goods
- ※Automotive

SPECIFICATION

Contact Rating	50mA, 20V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	50gf max.
Travel	2.15mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>

TE-MR□: 3000 pcs

TE-MR□C: 2000 pcs

HOW TO ORDER

TE-MR

S.M.T.-

Actuator Direction:
Side Stem

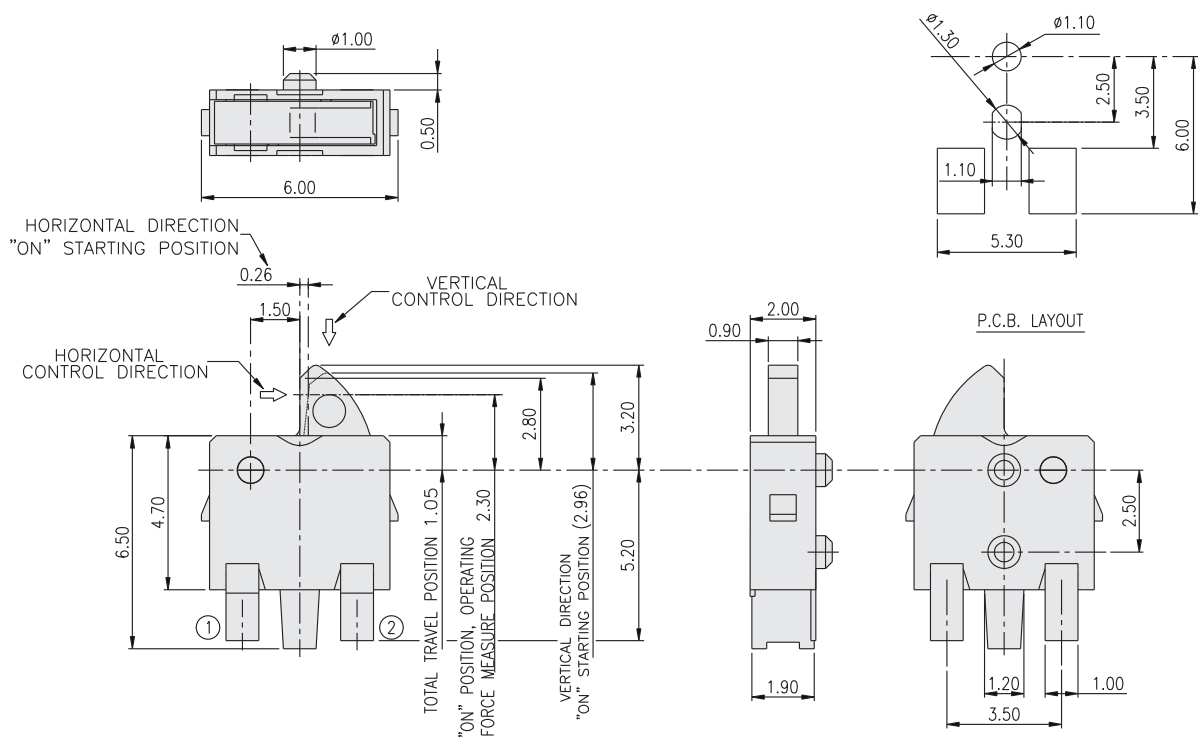
- Package:
T/R=Tape & Reel

- V=RoHS & Lead Free Solderable
- Q=Halogen Free

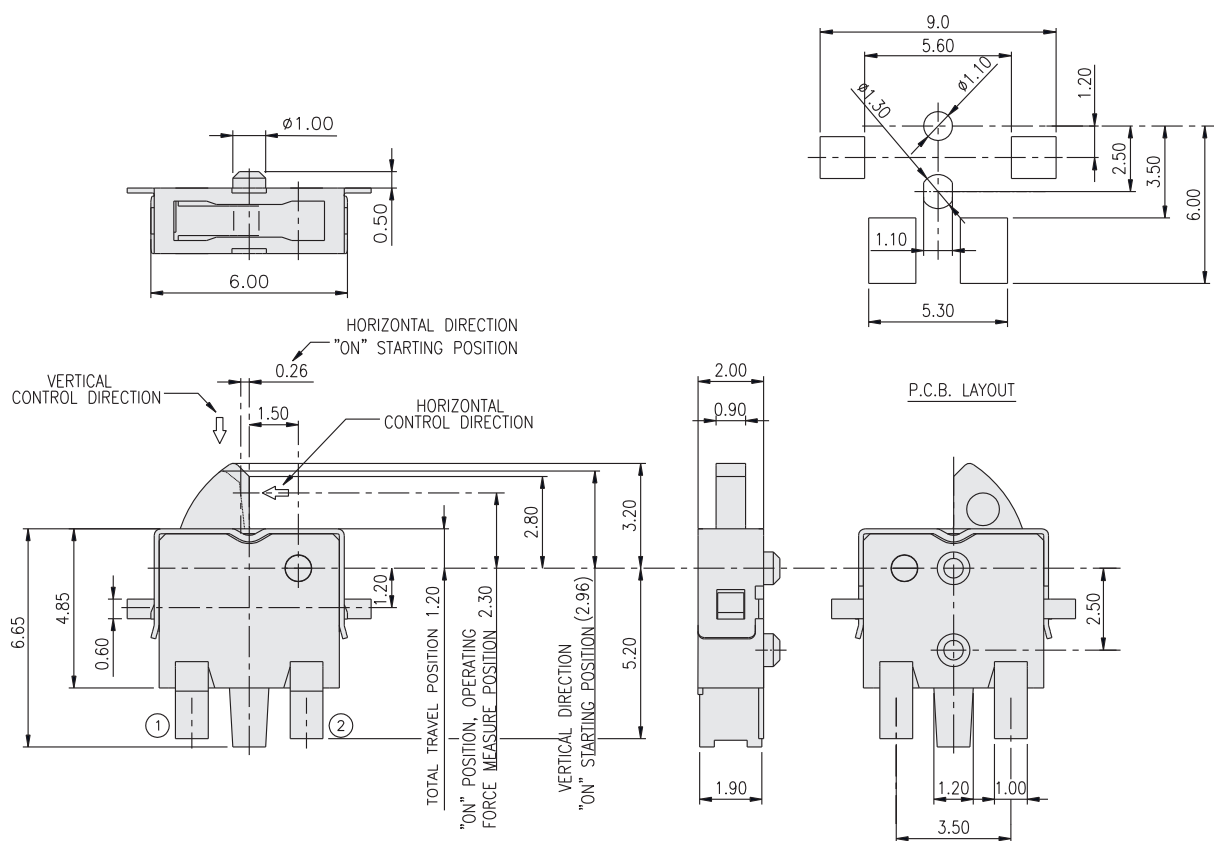
- ☐ = Without Ground Pin
C = With Ground Pin

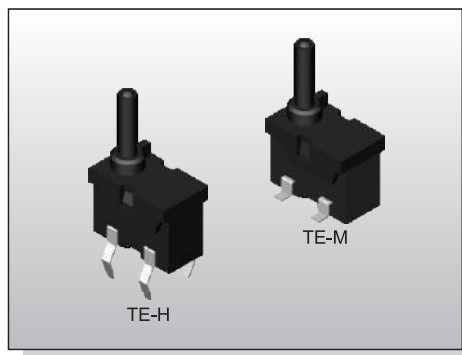
- Operating Direction:
R=Right Side
L=Left Side

TE-MRR



TE-MRLC



**FEATURES**

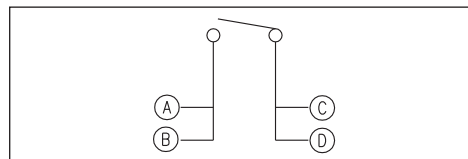
- ※ Compact size
- ※ SMT & Through hole type available
- ※ Different stem height for option

APPLICATION

- ※ DVD Players, CD-ROMs
- ※ Automotive
- ※ Telecommunication

SPECIFICATION

Contact Rating	5mA, 5V DC
Contact Resistance	500mΩ max.
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	35gf max.
Travel	2mm
Operating Life	50,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT**PACKAGE**

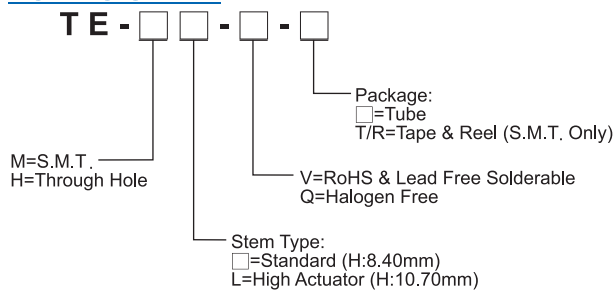
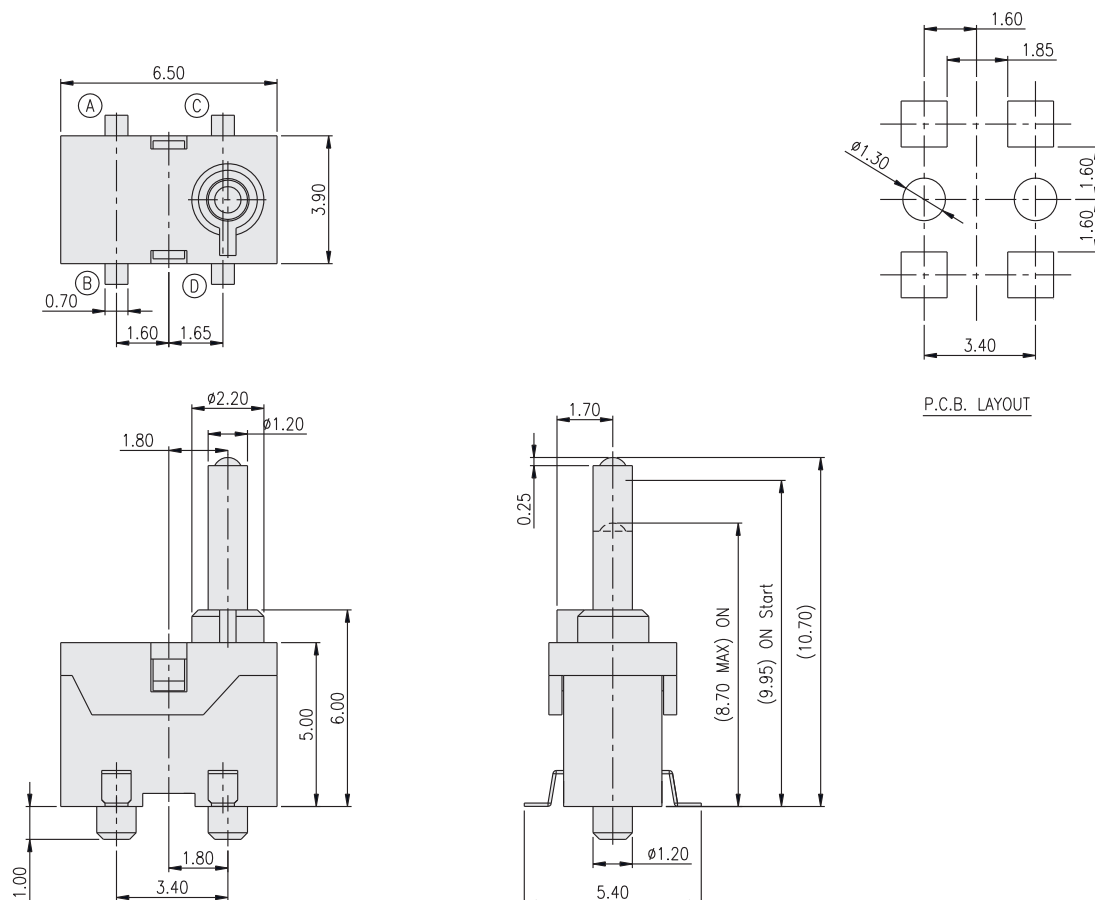
<Tube>

72 pcs

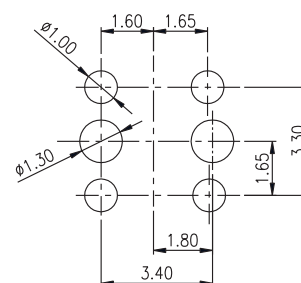
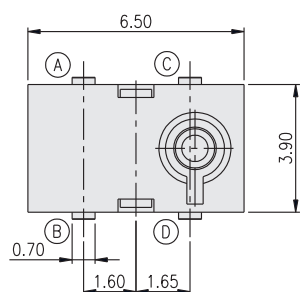
<Tape & Reel>

TE-M: 500 pcs

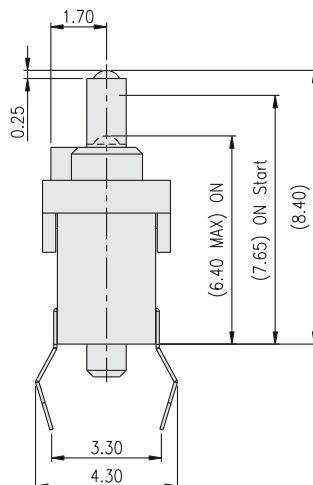
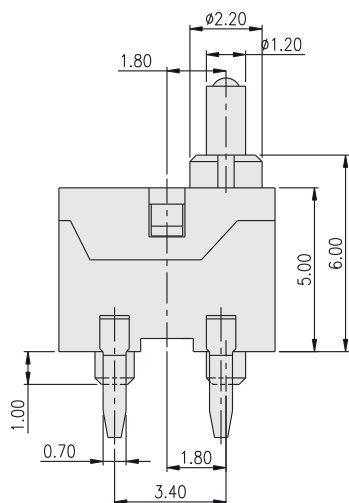
TE-ML: 400 pcs

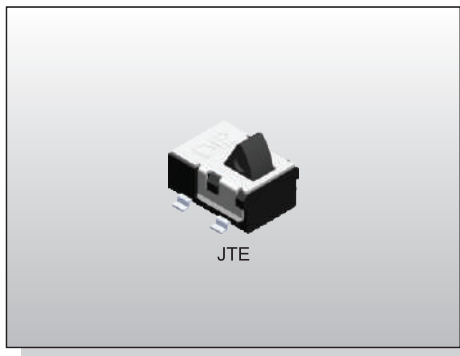
HOW TO ORDER**TE-ML**

TE-H



P.C.B. LAYOUT





FEATURES

- ※ Guiding post offers easy orientation
- ※ Long travel 2.5mm
- ※ 100,000 operating life cycles

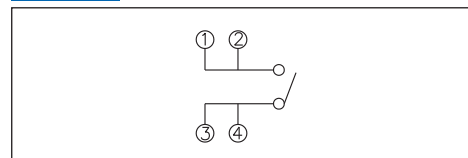
APPLICATION

- ※ Consumer electronics
- ※ Medical devices
- ※ Open/close detection
- ※ NB power off function

SPECIFICATION

Contact Rating	10mA, 5V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	36gf max.
Travel	1.3mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
1800 pcs

HOW TO ORDER

JTE 1 ☐ **QR**

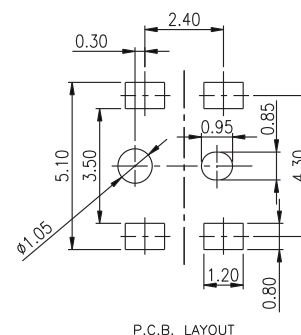
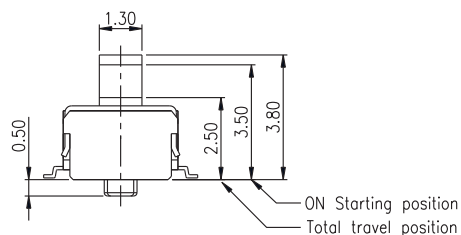
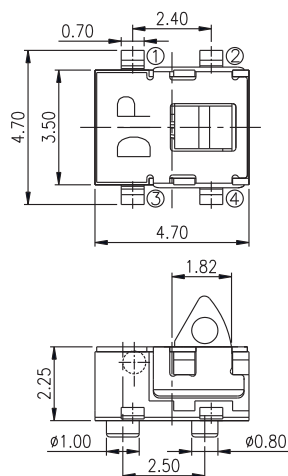
Height: 3.80mm

Package: Tape & Reel

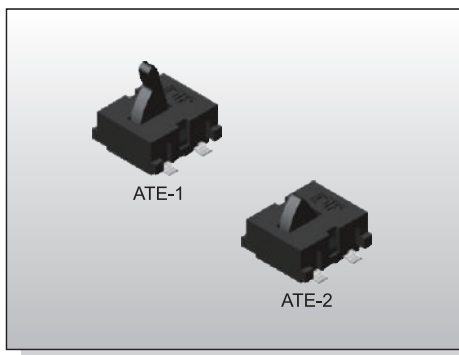
Halogen Free

☐ = Without Post
C = With Post

JTE



P.C.B. LAYOUT



FEATURES

- ※Guiding post offers easy orientation
- ※3.80 & 5.30mm stem height available

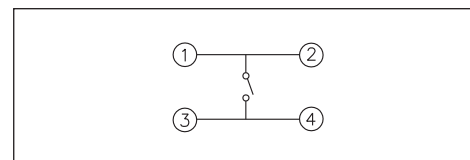
APPLICATION

- ※Smoke detector
- ※Detection of disc loading

SPECIFICATION

Contact Rating	1mA, 5V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	40gf max.
Travel	3.9mm max. Stem Height 5.3mm 2.6mm max. Stem Height 3.8mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>

ATE-1□□: 900 pcs

ATE-2□K: 900 pcs

ATE-2□: 1200 pcs

HOW TO ORDER

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Height:
1=5.30mm (With Cover Only)
2=3.80mm

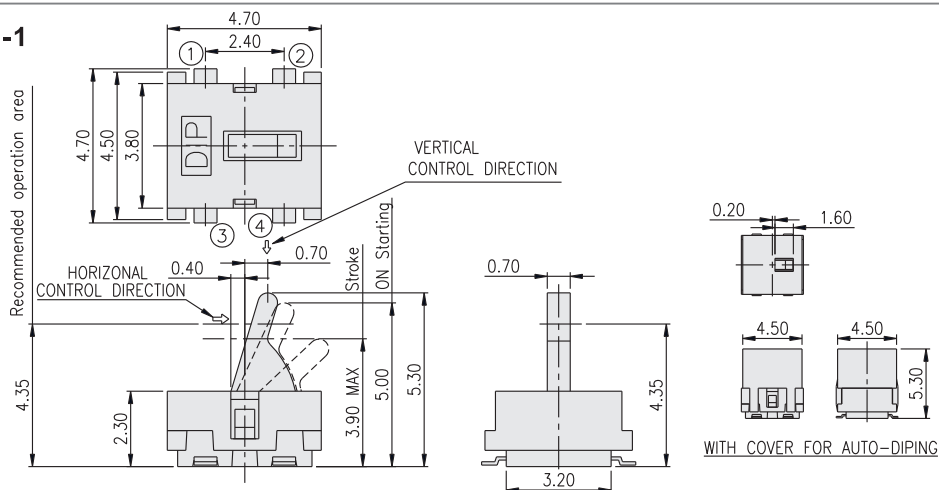
Package:
T/R=Tape & Reel

V=RoHS & Lead Free Solderable
Q=Halogen Free

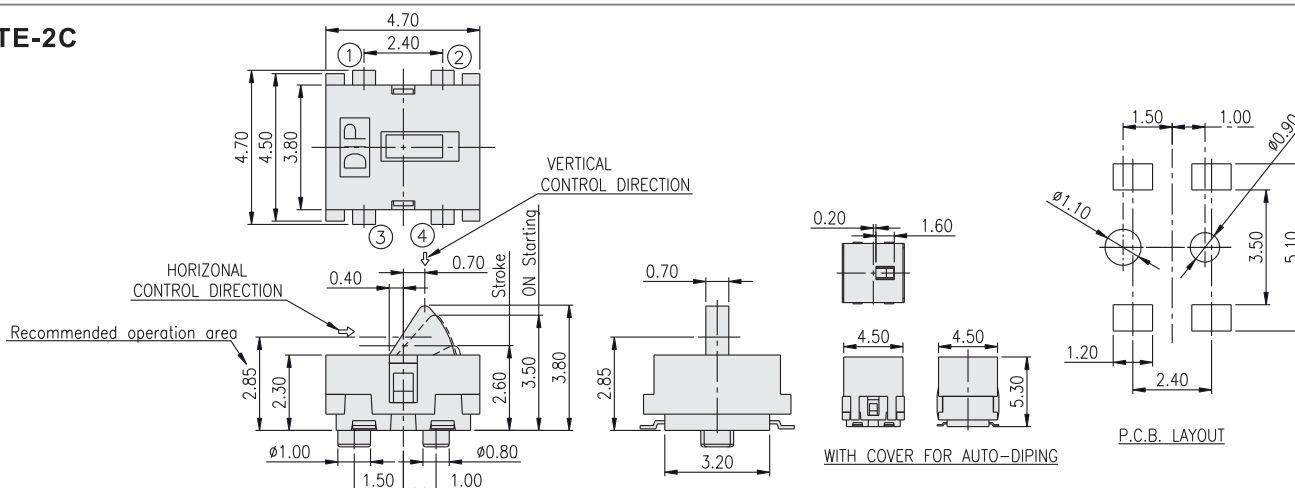
□=Without Cover
K=Cover

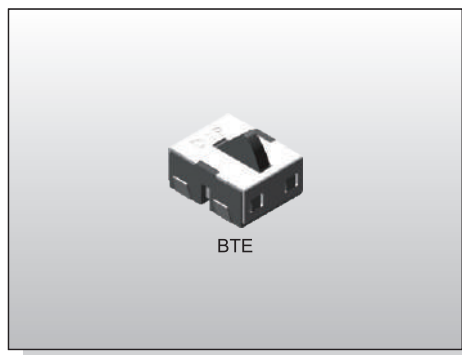
□=Without Post
C=With Post

ATE-1



ATE-2C





BTE

FEATURES

- ※Guiding post offers easy orientation
- ※Ultra-low profile

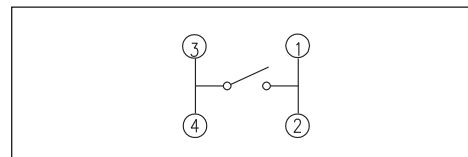
APPLICATION

- ※Notebook
- ※Smart phone
- ※Sensor

SPECIFICATION

Contact Rating	1mA, 5V DC
Contact Resistance	2Ω max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	50gf max.
Travel	1.03mm
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT

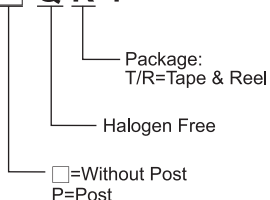


PACKAGE

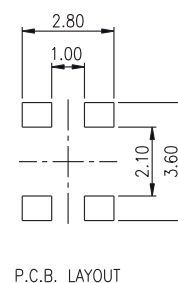
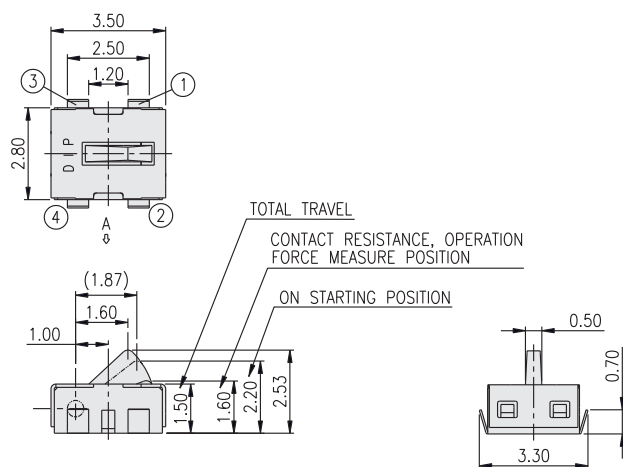
<Tape & Reel>
2600 pcs

HOW TO ORDER

BTE - □ QR 4

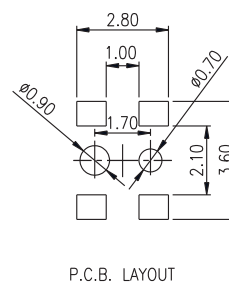
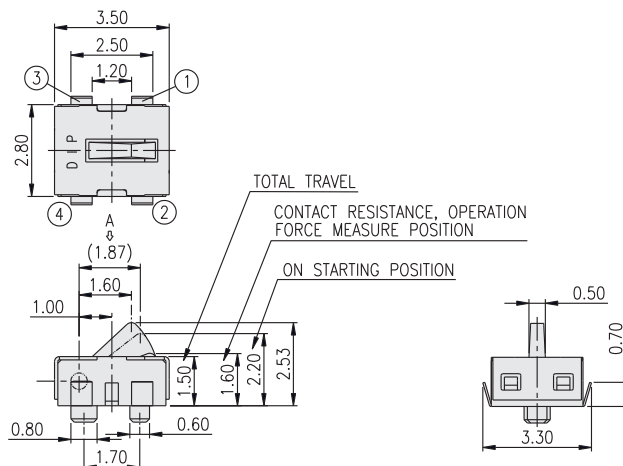


BTE

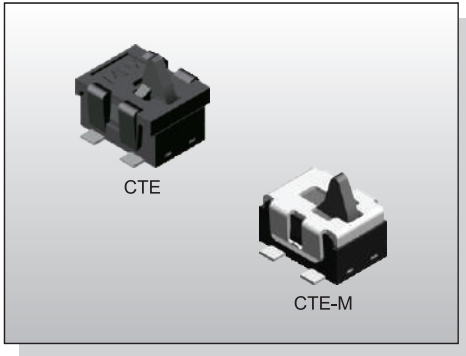


P.C.B. LAYOUT

BTE-P



P.C.B. LAYOUT



FEATURES

- ※Guiding post offers easy orientation
- ※Operating force: 35gf max.

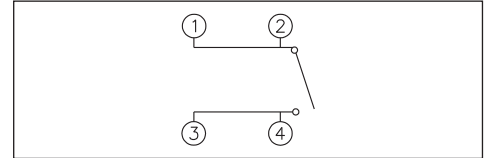
APPLICATION

- ※Open/close detection
- ※Notebook
- ※Audio device

SPECIFICATION

Contact Rating	0.1mA~100mA, 20mV~5V DC
Contact Resistance	500mΩ max.
Insulation Resistance	100MΩ min. 250V DC
Dielectric Strength	250V AC/1 minute
Operating Force	35gf max.
Travel	1.05mm
Operating Life	80,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

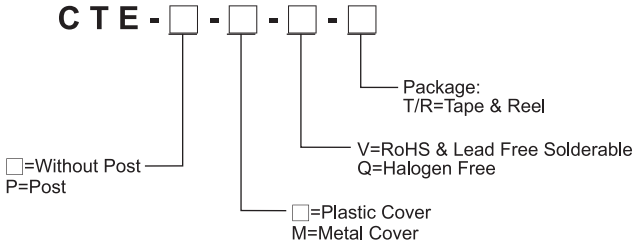
CIRCUIT



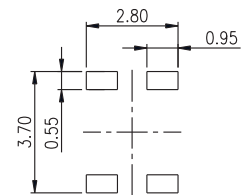
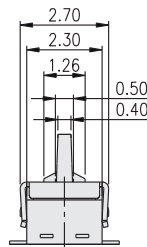
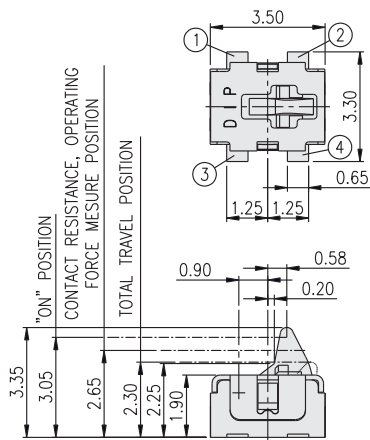
PACKAGE

<Tape & Reel>
1800 pcs

HOW TO ORDER

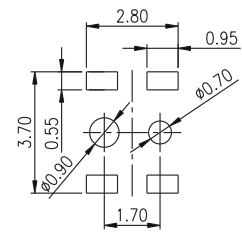
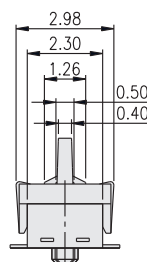
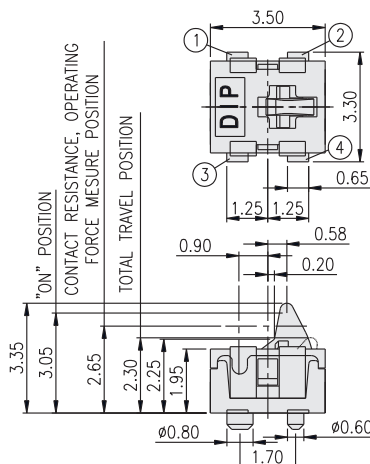


CTE-M

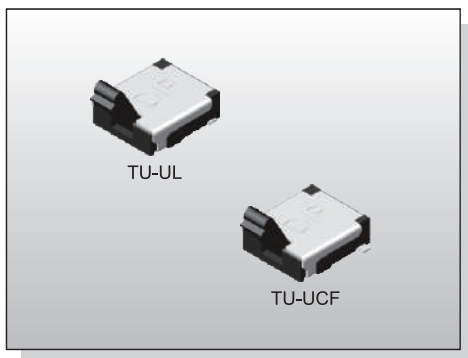


P.C.B. LAYOUT

CTE-P



P.C.B. LAYOUT



FEATURES

- ※Ultra-thin with height 1.2 mm
- ※Flat & bending terminal available

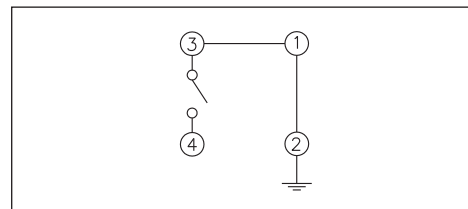
APPLICATION

- ※Detection of video cameras
- ※Open/close detection

SPECIFICATION

Contact Rating	50uA, 3V DC to 10mA, 5V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min.
Dielectric Strength	100V AC/1 minute
Operating Force	40gf max.
Travel	60°
Operating Life	50,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

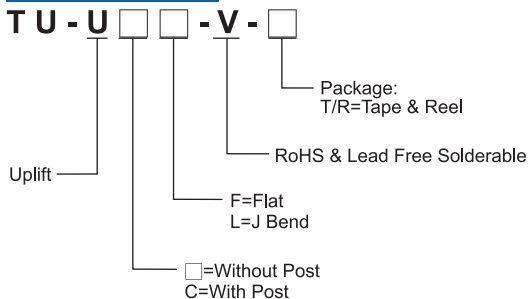
CIRCUIT



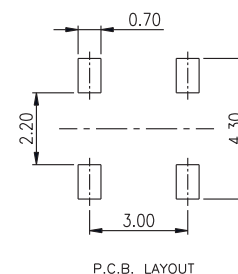
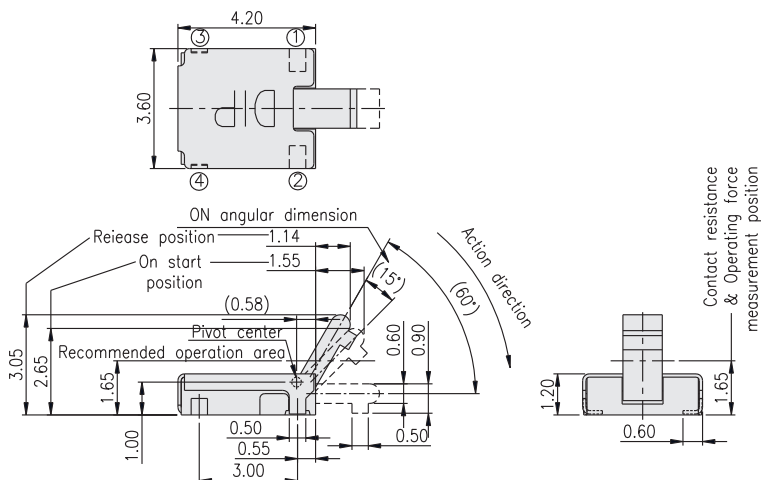
PACKAGE

<Tape & Reel>
2300 pcs

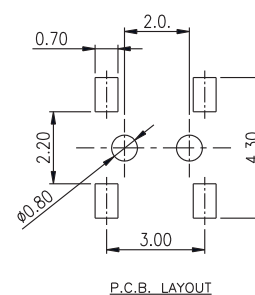
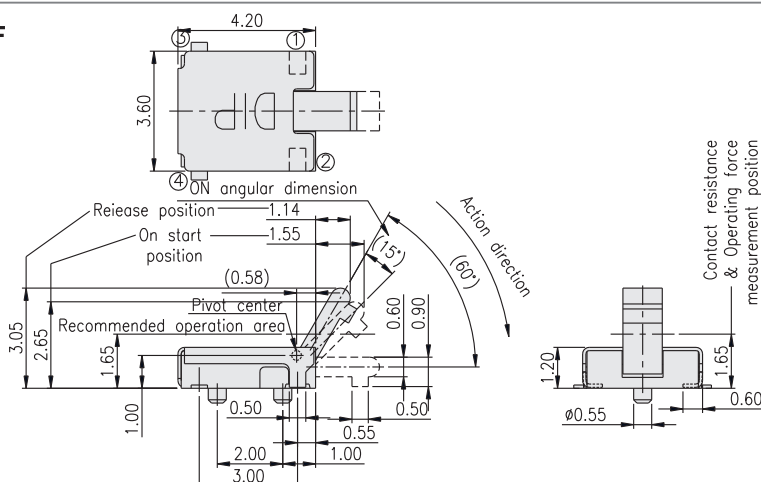
HOW TO ORDER

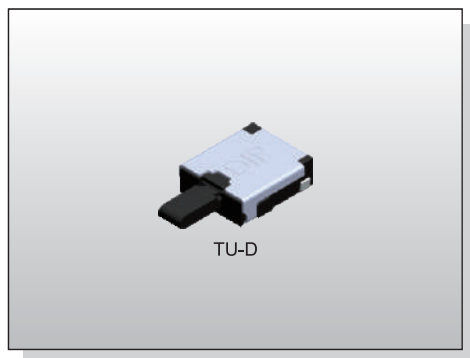


TU-UL



TU-UCF





FEATURES

- ※Flat & bending terminals available
- ※50,000 operation life cycles

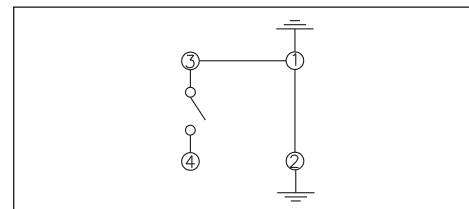
APPLICATION

- ※Consumer electronics
- ※Detection of video cameras
- ※Open/close detection
- ※Safety control device
- ※Heat energy regulator

SPECIFICATION

Contact Rating	50uA, 3V DC to 10mA, 5V DC
Contact Resistance	1Ω max.
Insulation Resistance	100MΩ min.
Dielectric Strength	100V AC/1 minute
Operating Force	40gf max.
Travel	60°
Operating Life	50,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>
3500 pcs

HOW TO ORDER

T U - D ☐ ☐ **Q R**

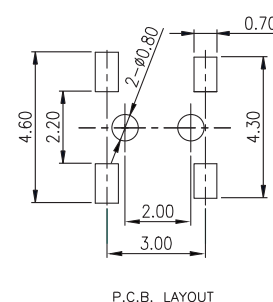
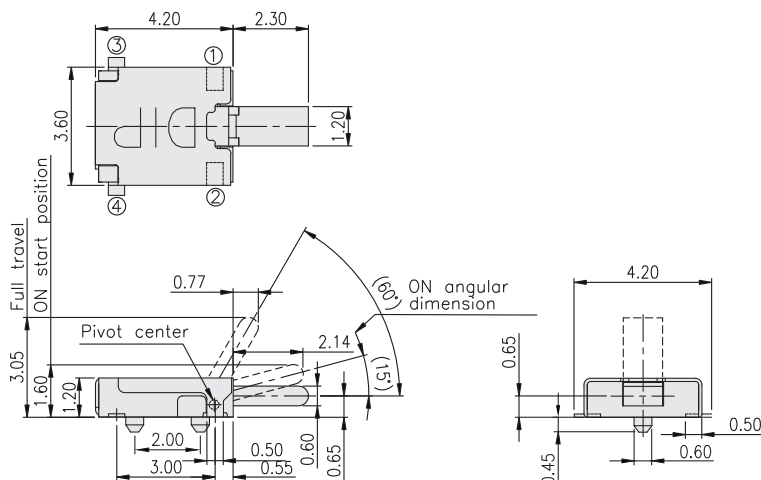
Package:
Tape & Reel

Halogen Free

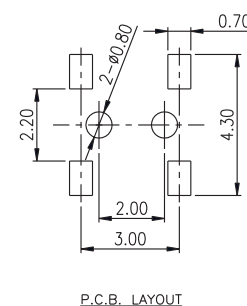
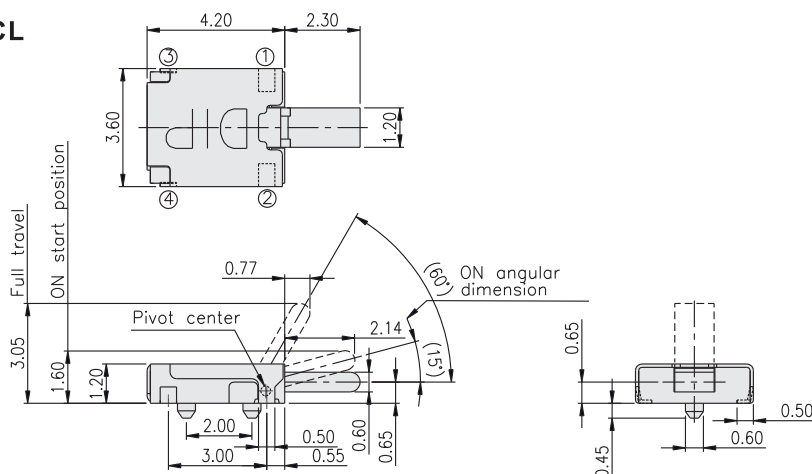
F=Flat
L=Bending

☐=Without Post
C=With Post

TU-DCF



TU-DCL



DETECTOR SWITCH ESL SERIES

Detector Vertical Type



ESL

FEATURES

- ※Water-proof type IP67
- ※Two-pole fast-switching circuit
- ※300,000 life cycles

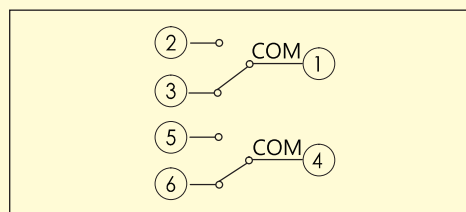
APPLICATION

- ※Automotive
- ※Energy and industrial
- ※HVAC

SPECIFICATION

Contact Rating	50μA , 5 VDC Min. 50mA , 18VDC Max.
Contact Resistance	100mΩ Max. (initial)
Insulation Resistance	100MΩ Min. 500V DC
Dielectric Strength	500VAC/1 minute
Operating Force	200±50gf
Operating Position	NC 11.0mm NO 11.7mm
Operating Life	300,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Tape & Reel>

200 pcs

<Tube>

30 pcs

HOW TO ORDER

ESL -

Actuator:
P=Pin Plunger

Terminal:
M=S.M.T.
H=Through Hole

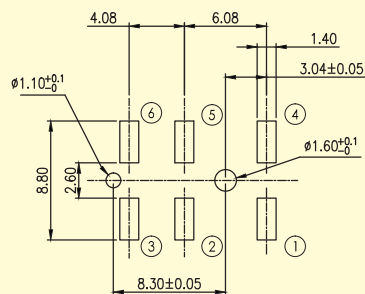
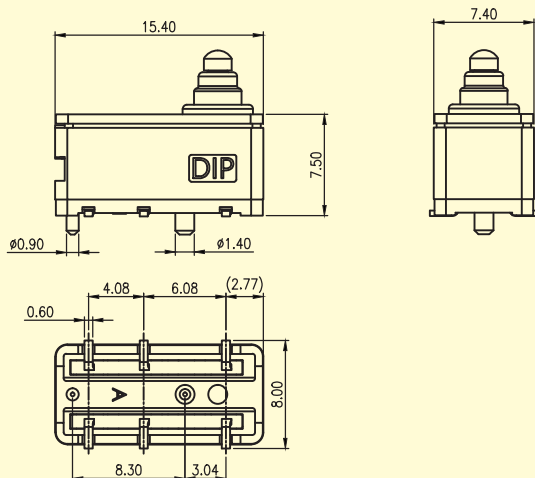
Special Code

Package:
R=Reel (S.M.T. Only)
B=Tube (Through Hole Type Only)

Q=Halogen Free

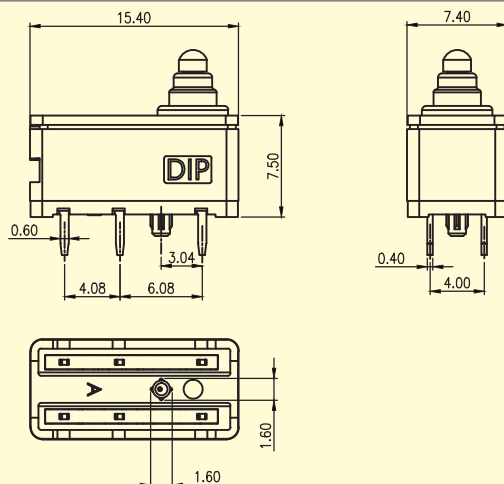
Plating:
G=Silver Plating

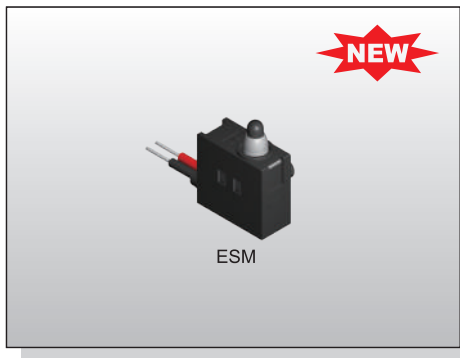
ESL-PMGQR



P.C.B. LAYOUT

ESL-PHGQB





FEATURES

- ※Water-proof type IP67
- ※300,000 life cycles

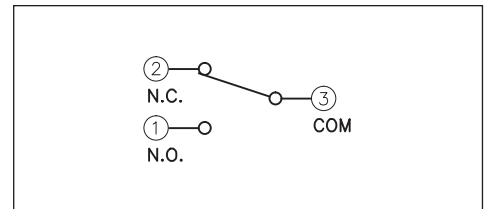
APPLICATION

- ※Robotics
- ※Lift
- ※Automotive

SPECIFICATION

Contact Rating	50 μ A , 5 VDC Min. 0.1A , 12VDC Max.
Contact Resistance	500m Ω Max. (initial)
Insulation Resistance	100M Ω Min. 500V DC
Dielectric Strength	500VAC/1 minute
Operating Force	100 $\pm$ 50gf
Operating Life	300,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

CIRCUIT



PACKAGE

<Bag>
50 pcs

HOW TO ORDER

ESM -

Actuator:
P=Pin Plunger

Actuator:
L1=Wire On Left-Side

V=Lead Free

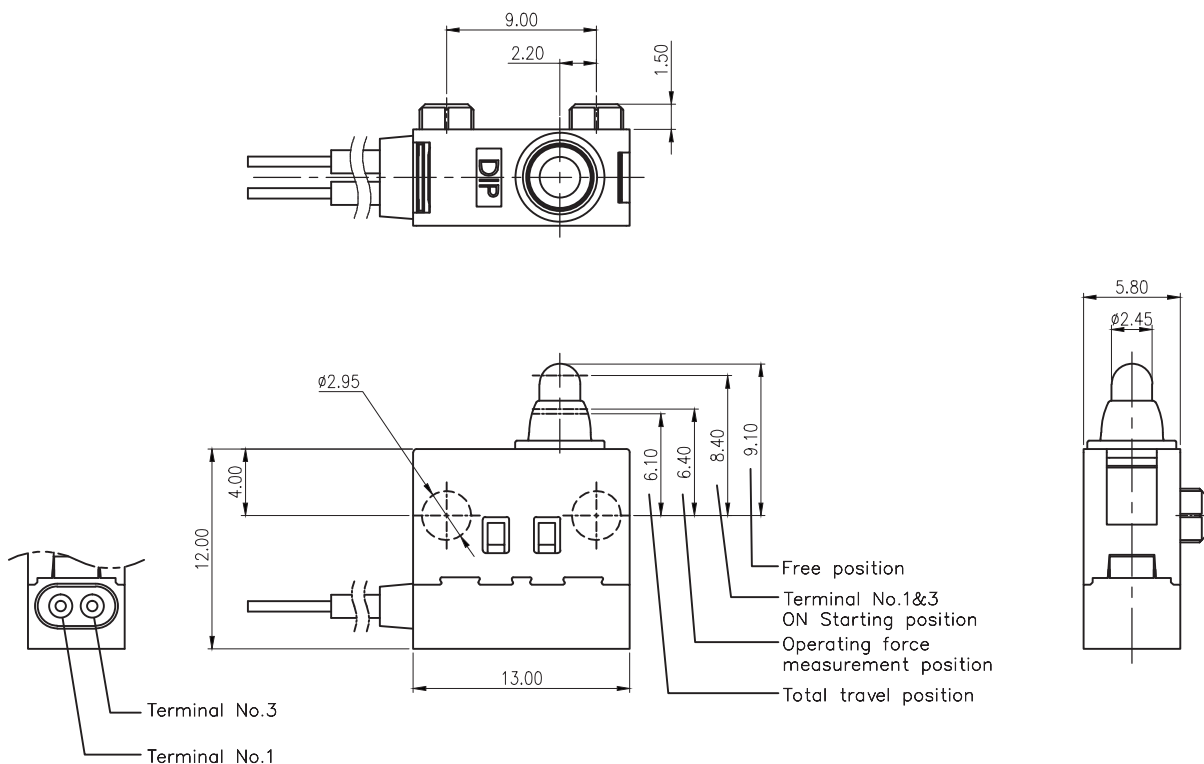
Contact Form:
3=SPST-NO

Plating:
G= Silver Plating

Posts:
R=Boss-Right Side

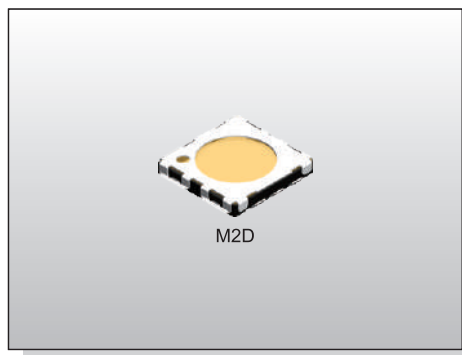
Terminal:
W=Solder Terminal

ESM



MULTI FUNCTION SWITCH M2D SERIES

Miniature
Double Action Type



M2D

FEATURES

- ※Double action
- ※Compact-sized 4.1x4.3mm
- ※0.6mm height

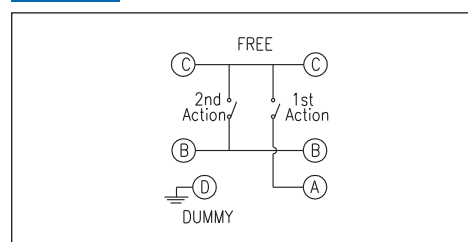
APPLICATION

- ※Camera
- ※Mobile phone & peripherals

SPECIFICATION

Contact Rating	10 μ A, 2V DC min. 20mA, 15V DC max.
Contact Resistance	500m Ω max.
Insulation Resistance	100M Ω min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	90 $\pm$ 40gf, 1st 190 $\pm$ 60gf, 2nd
Travel	0.15mm, 1st 0.30mm, 2nd
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

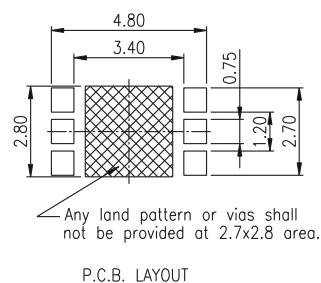
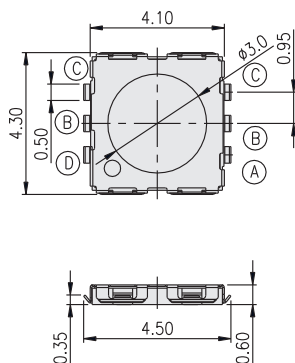
CIRCUIT



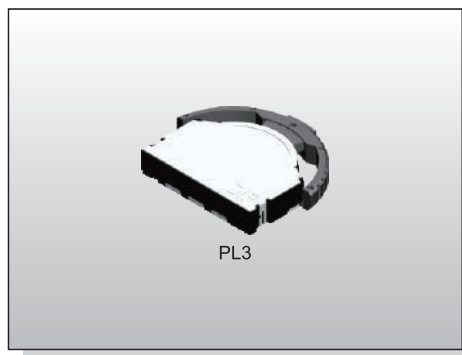
PACKAGE

<Tape & Reel>
4500 pcs

M2D



P.C.B. LAYOUT

**FEATURES**

※Multi function (Push & Lever)

APPLICATION

※Remote controls
※Volume control for variety of applications

SPECIFICATION

Contact Rating	10mA, 5V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	70±50gf, Lever(CW, CCW) 200±100gf, Center push
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER

P L 3 - **C** -

Package:
T/R=Tape & Reel

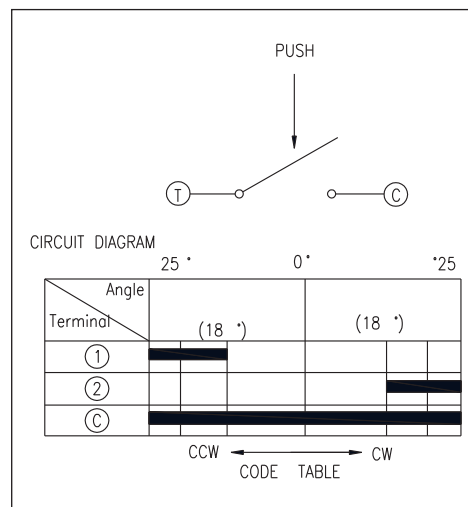
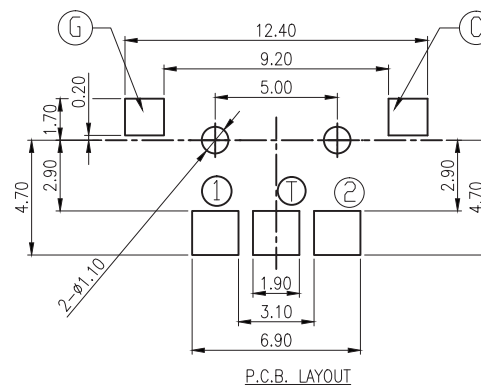
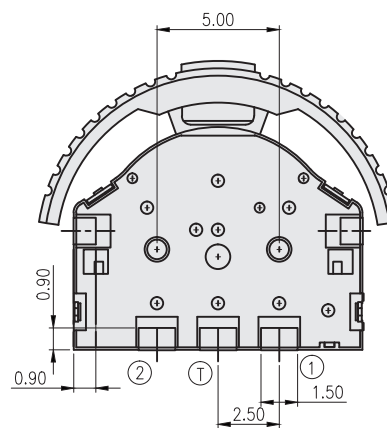
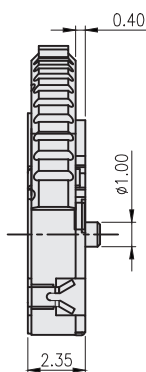
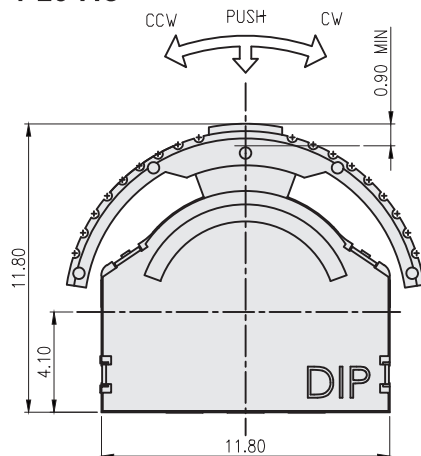
V=RoHS & Lead Free Solderable
Q=Halogen Free

With Click Feeling

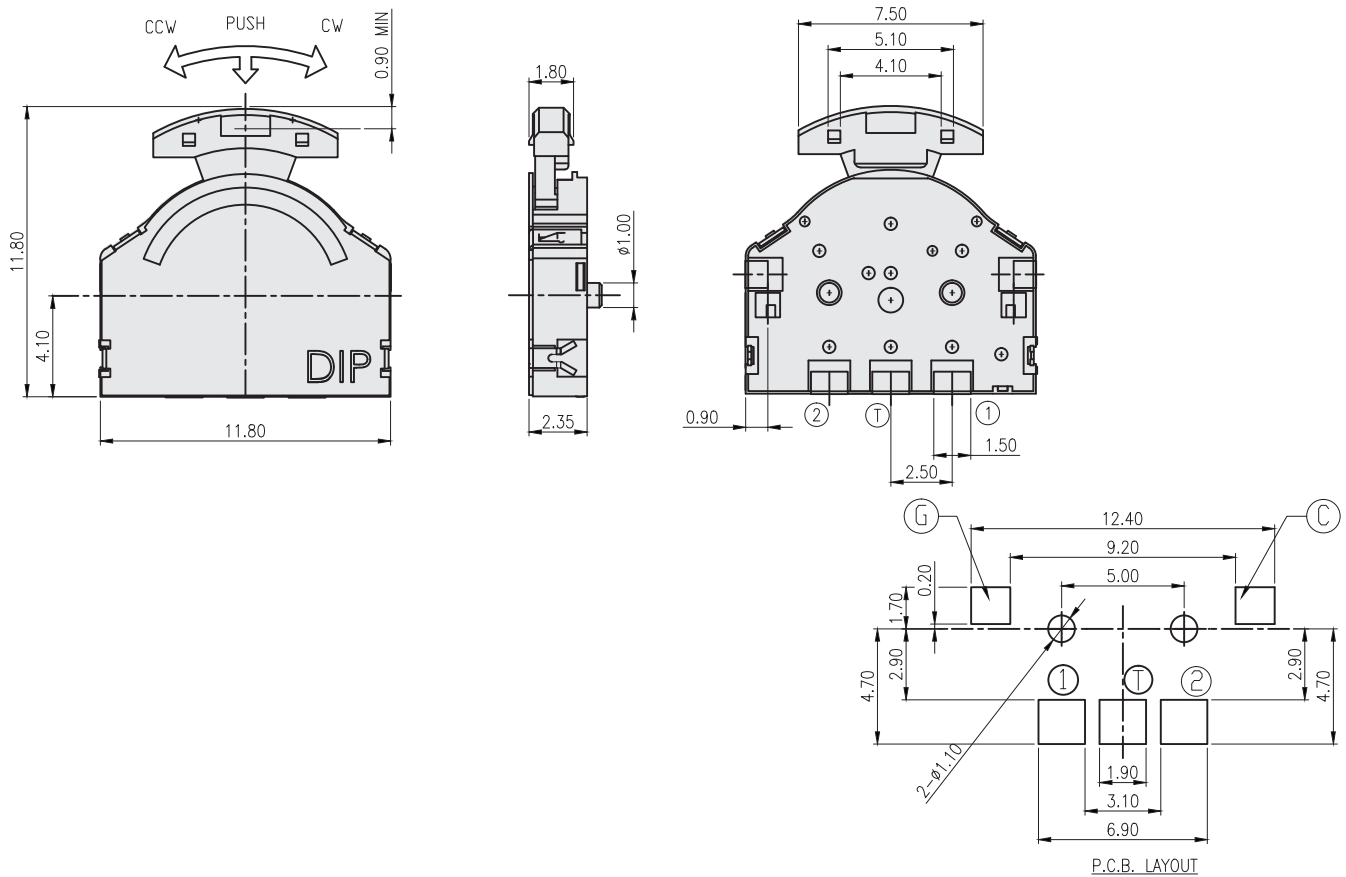
Actuator:
A=Mounting Knob Integrated
B=Mounting Knob

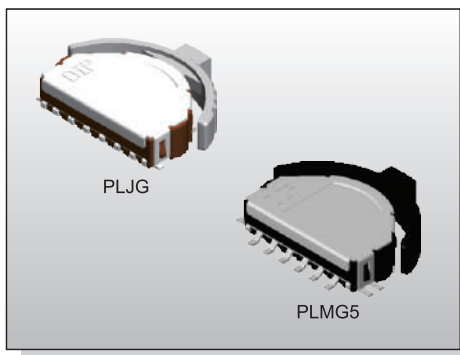
PACKAGE

<Tape & Reel>
900 pcs

CIRCUIT**PL3-AC**

PL3-BC



**FEATURES**

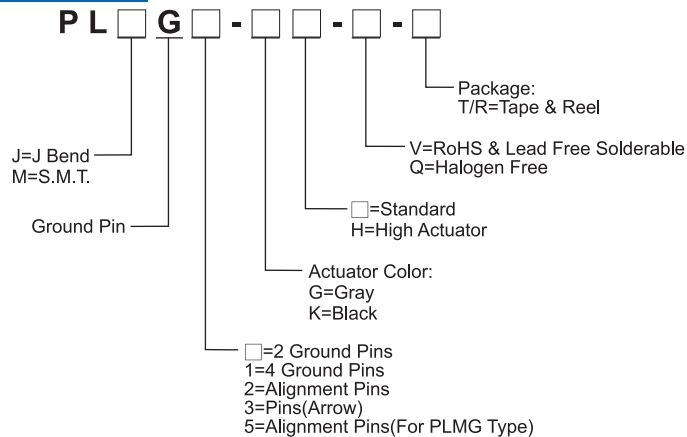
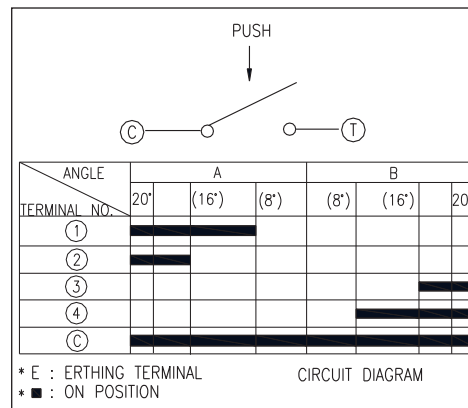
※Multi function (Push & Lever)

APPLICATION

※Remote controls
 ※Volume control for variety of applications
 ※TV

SPECIFICATION

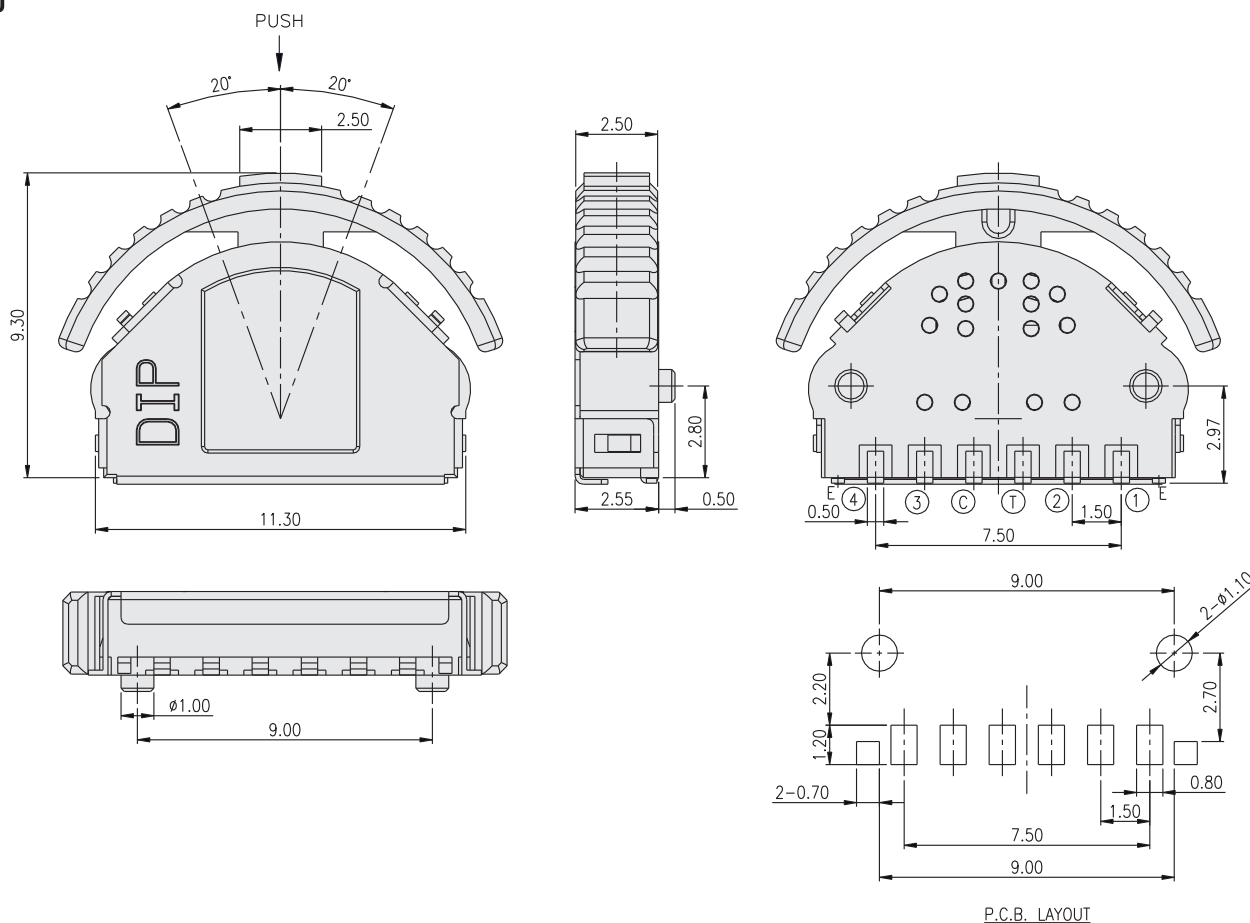
Contact Rating	10mA, 5V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	100V AC/1 minute
Operating Force	40±20gf, Return actuator 150+100/-50gf, Center push direction
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER**CIRCUIT****PACKAGE****<Tape & Reel>**

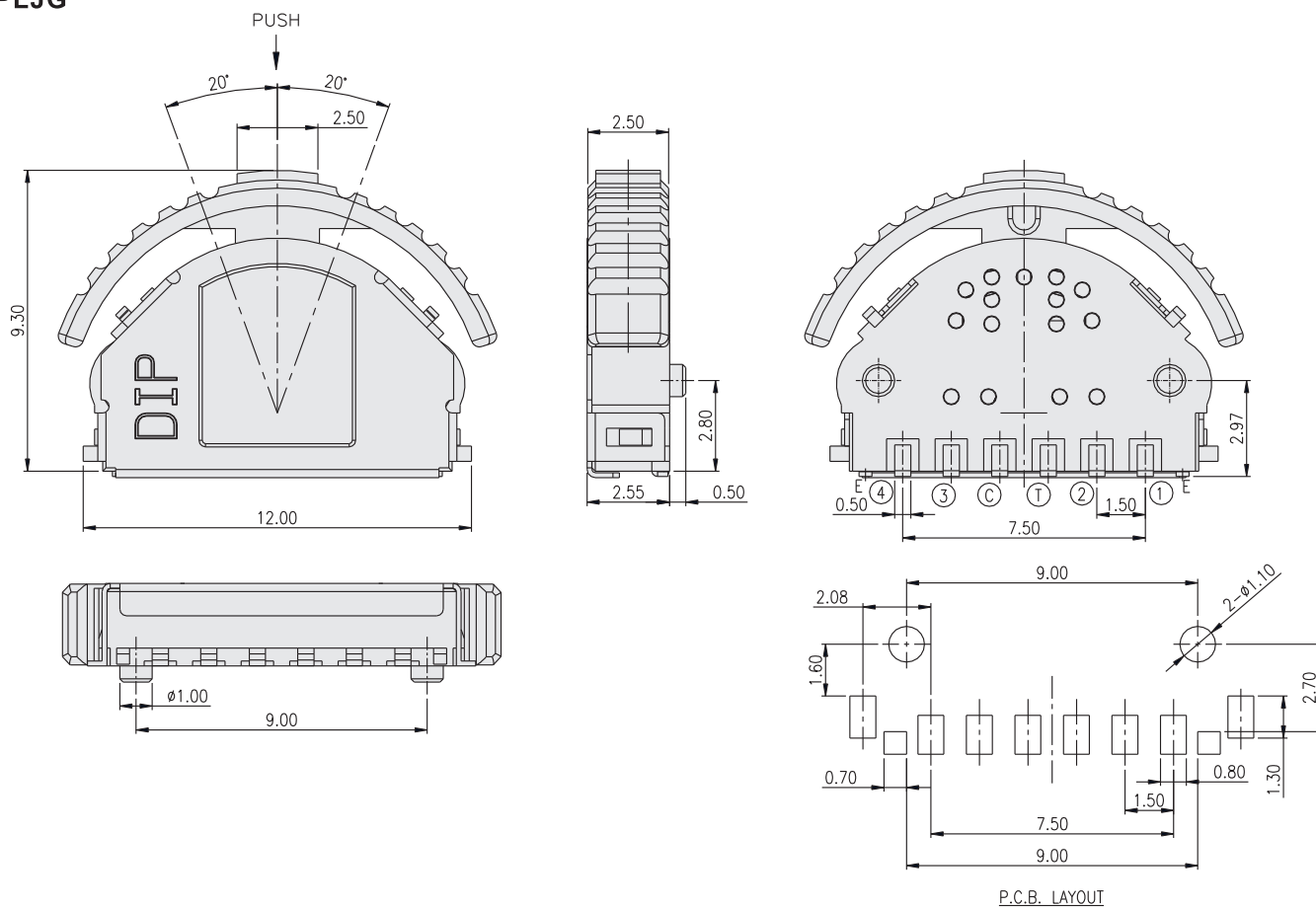
PLJ(G), PLJG1: 1000 pcs

PLJG(2)(3): 800 pcs

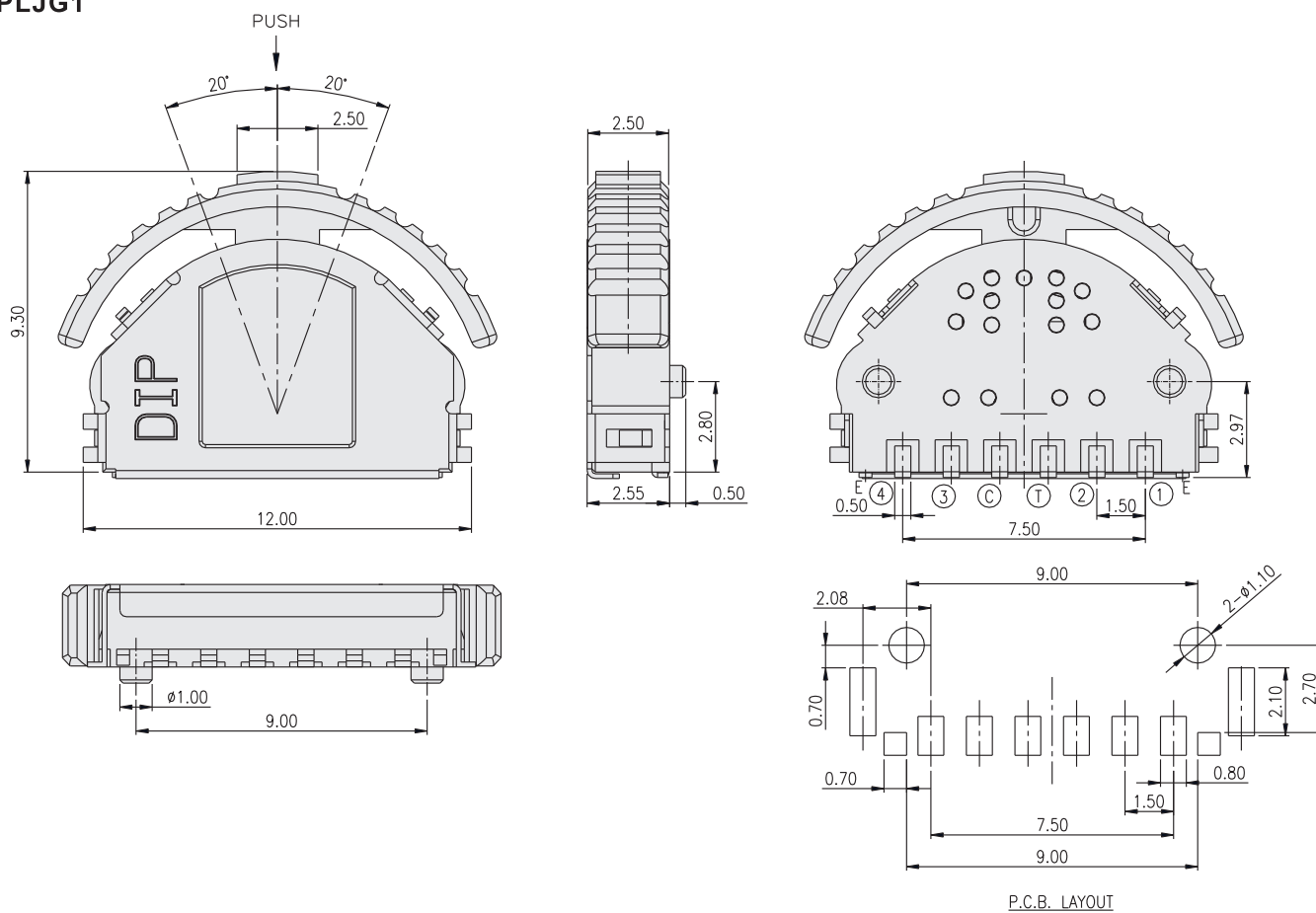
PLMG5: 750 pcs

PLJ

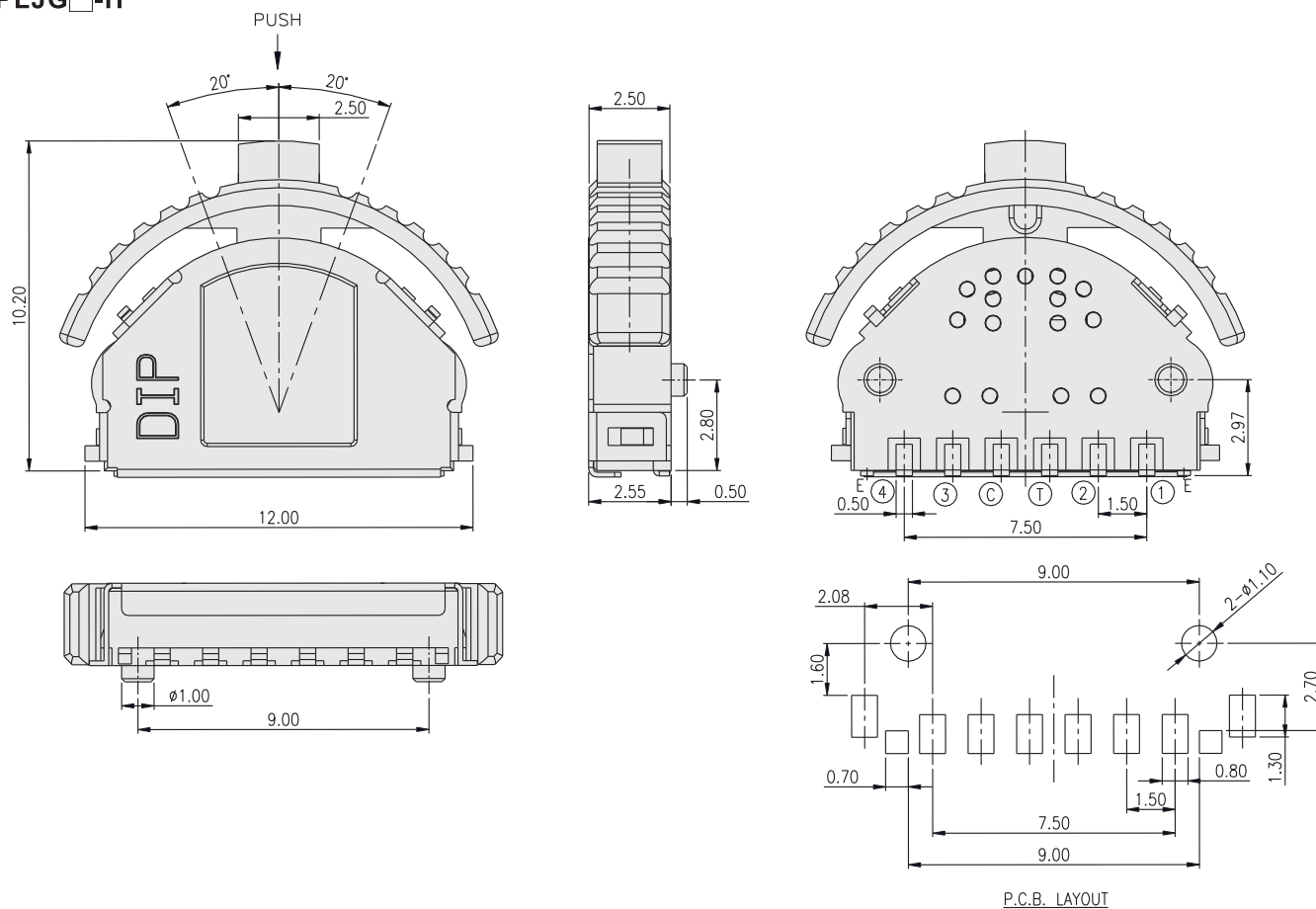
PLJG



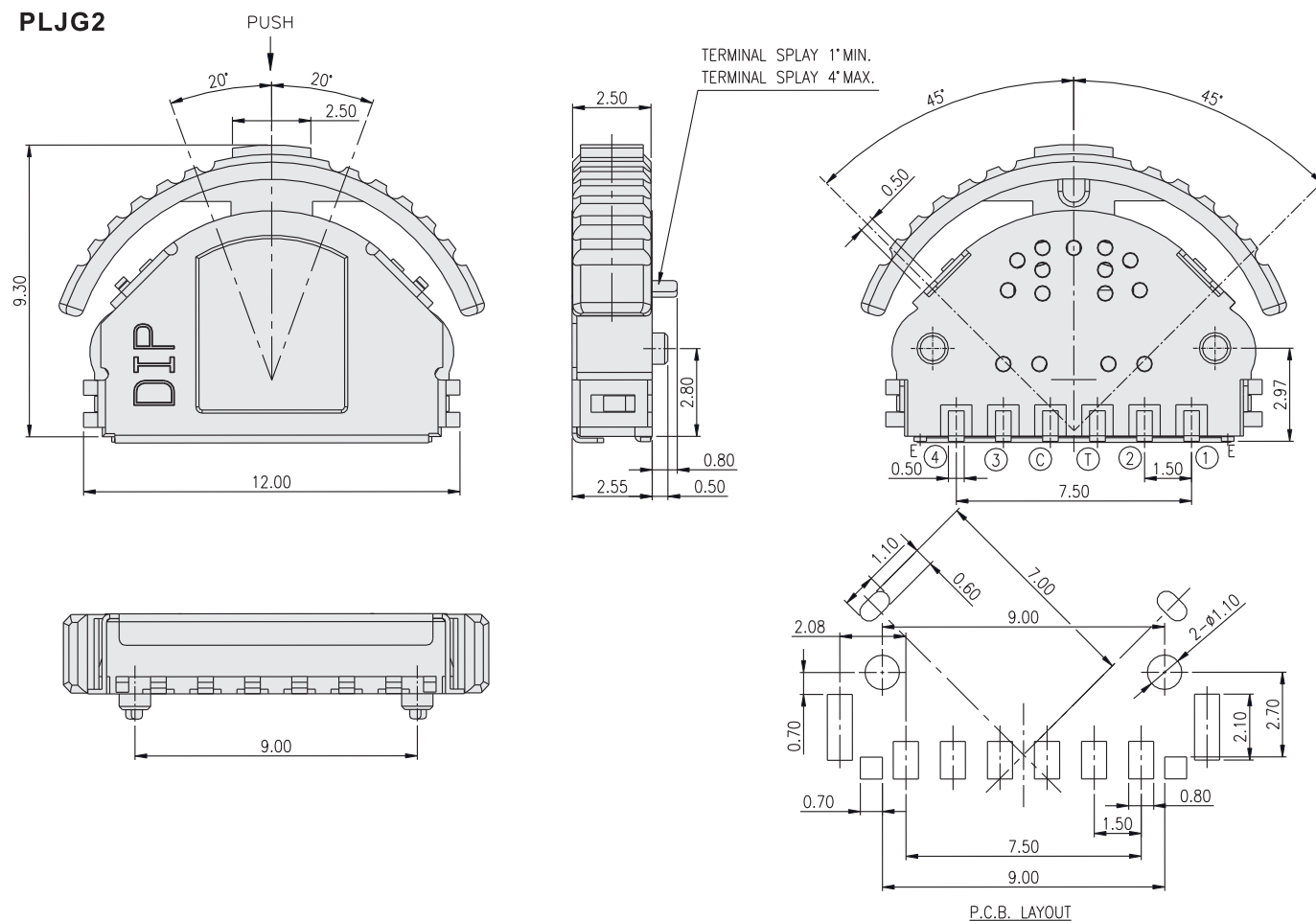
PLJG1



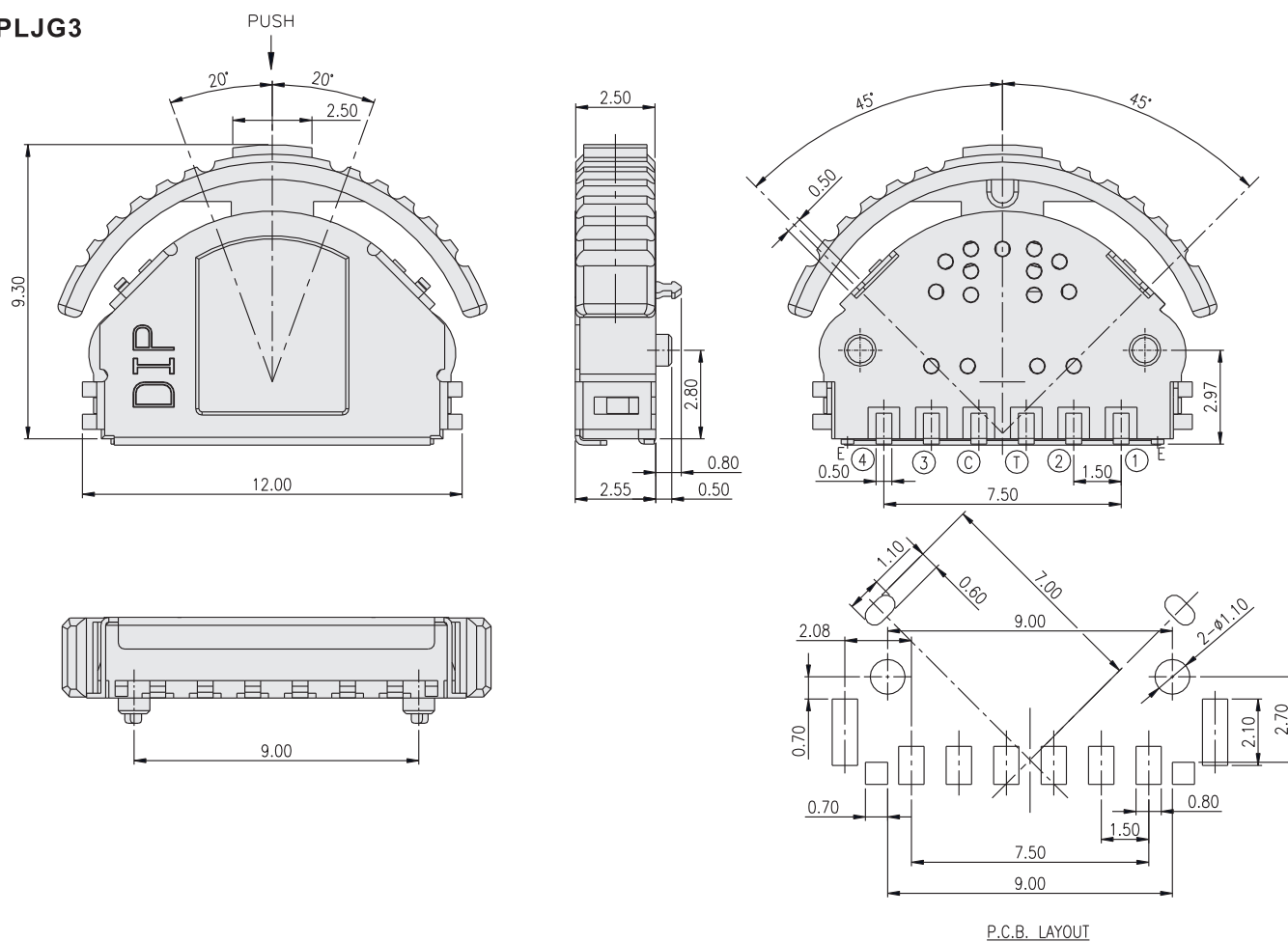
PLJG□-H



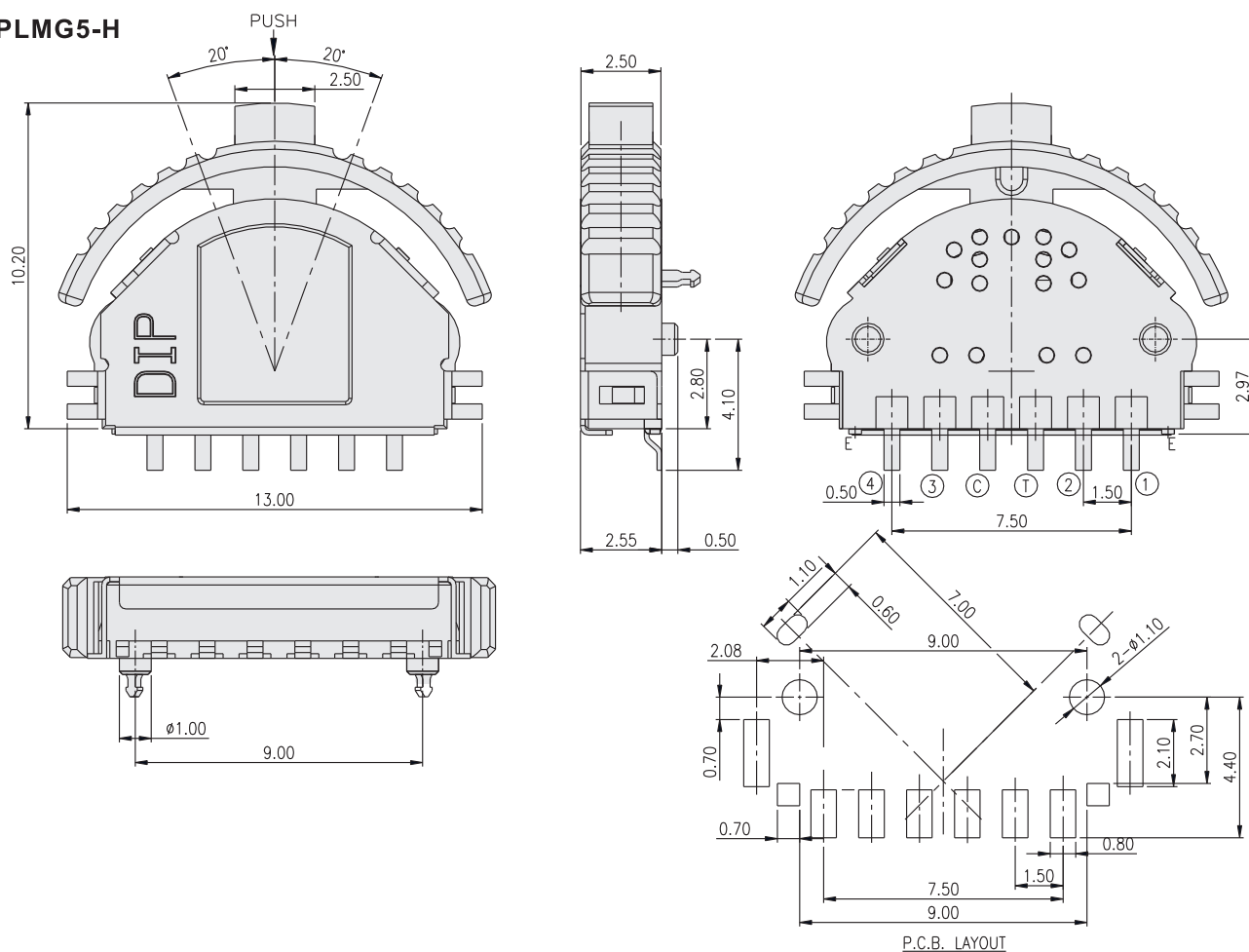
PLJG2



PLJG3

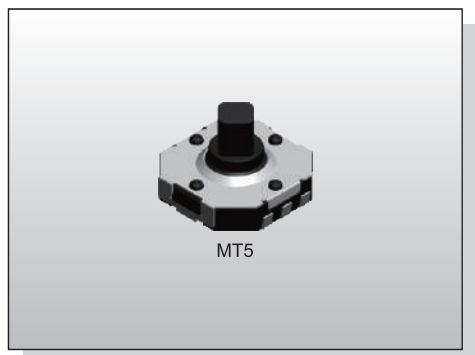


PLMG5-H



MULTI FUNCTION SWITCH MT(4)(5) SERIES

Multi-direction
Type



FEATURES

- ※7.4x7.7mm
- ※Variety of height options
- ※Reflow solderable

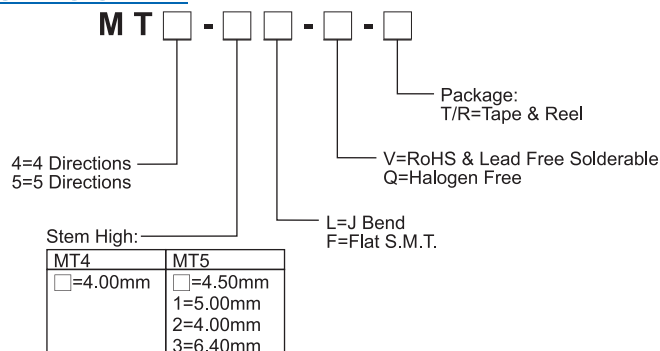
APPLICATION

- ※Medical device
- ※Consumer electronics
- ※Security device

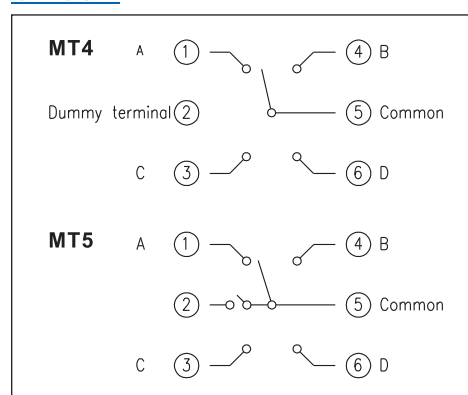
SPECIFICATION

Contact Rating	50mA, 12V DC
Contact Resistance	100mΩ max.
Insulation Resistance	100MΩ min. 100V DC
Dielectric Strength	250V AC/1 minute
Operating Force	160gf, 4-direction 360gf, Center push
Travel	0.25mm, 4-direction 0.15mm, Center push
Operating Life	100,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDER



CIRCUIT



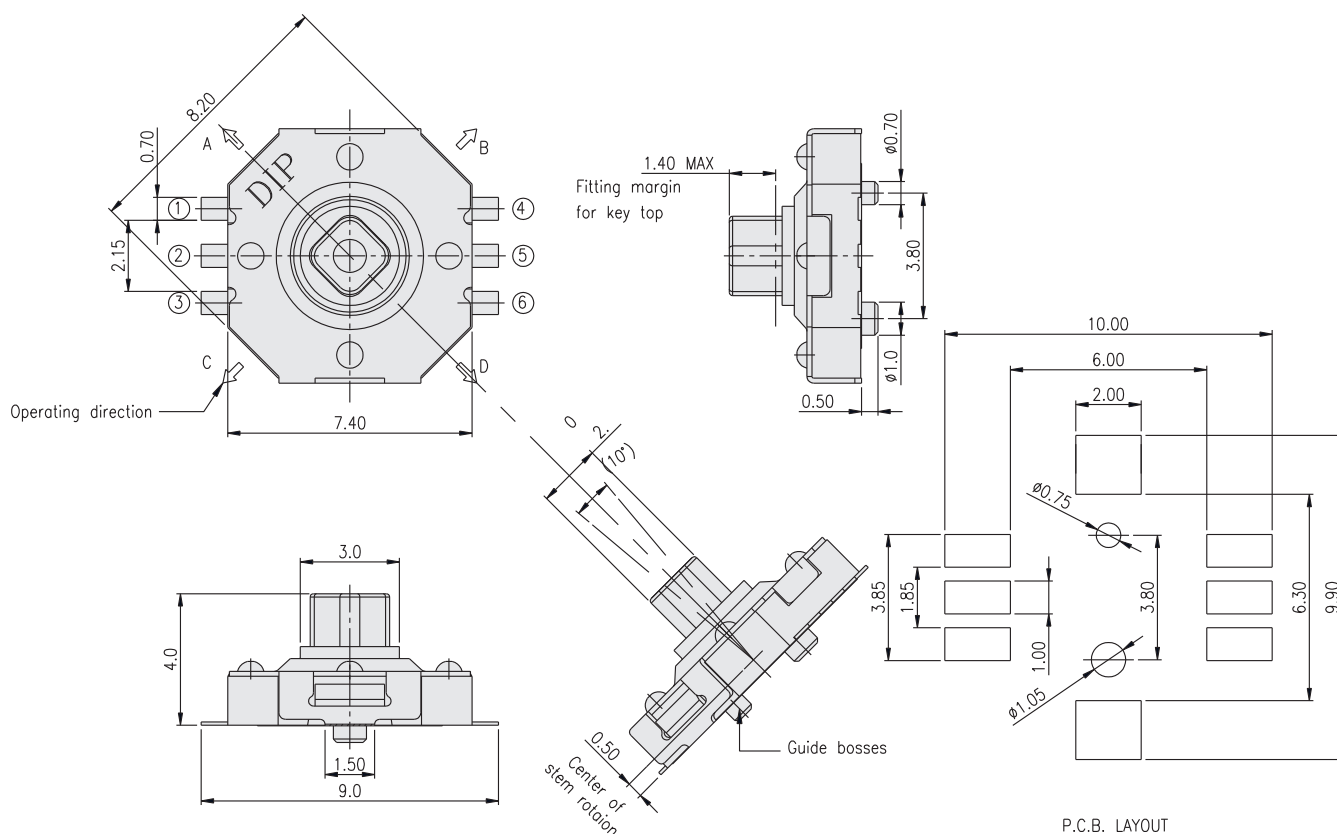
PACKAGE

<Tape & Reel>

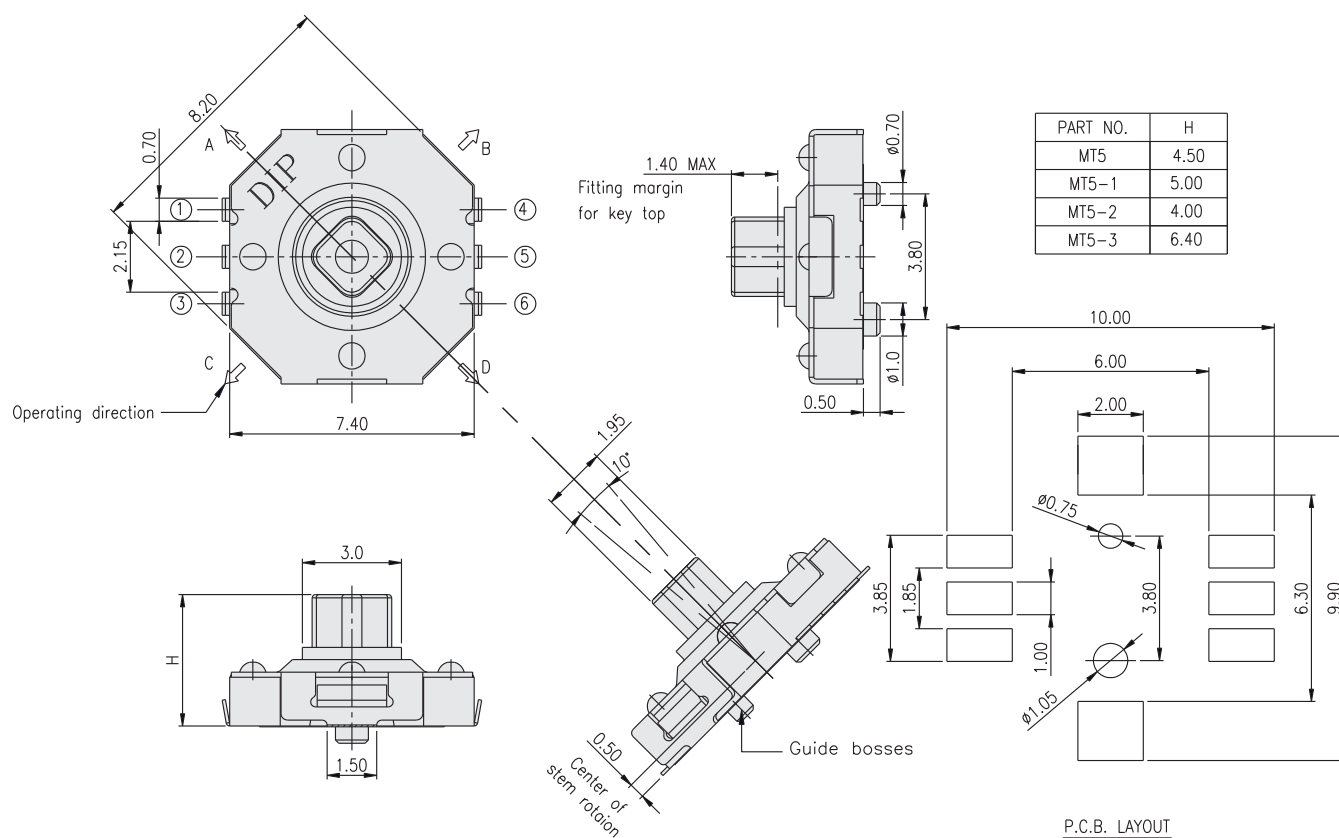
850 pcs

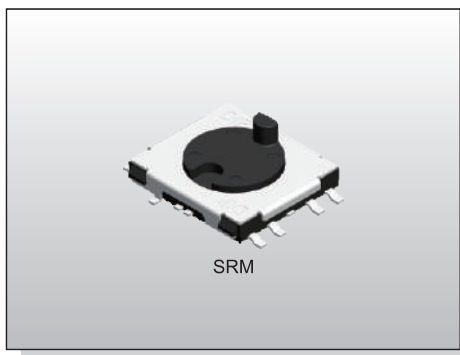
MT5-3☐: 800 pcs

MT4-F



MT5-L



**FEATURES**

- ※Low profile
- ※Mode switching with maximum 8-direction
- ※Non-click structure applicable

APPLICATION

- ※Thermal controller
- ※Camera
- ※Audio

SPECIFICATION

Contact Rating	25mA, 24V DC
Contact Resistance	200mΩ max.
Insulation Resistance	100MΩ min. 500V DC
Dielectric Strength	300V AC/1 minute
Operating Force	40±30gf, B 130±50gf, N
Operating Life	10,000 cycles
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +85°C

HOW TO ORDERS R M - 8 R ☐ ☐ ☐ - V - ☐

8 Direction

Package:
T/R=Tape & Reel

Circuit:

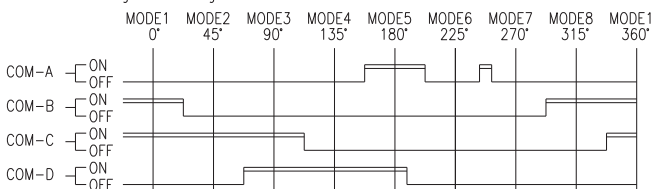
7=7 Circuit, Base: Black
8=8 Circuit, Base: Brown☐=Without Ground Pin
G=With Ground Pin☐=Non-click, Black
B=40gf, Blue
N=130gf, Brown**PACKAGE**

<Tape & Reel>

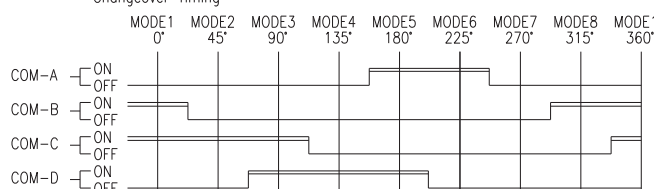
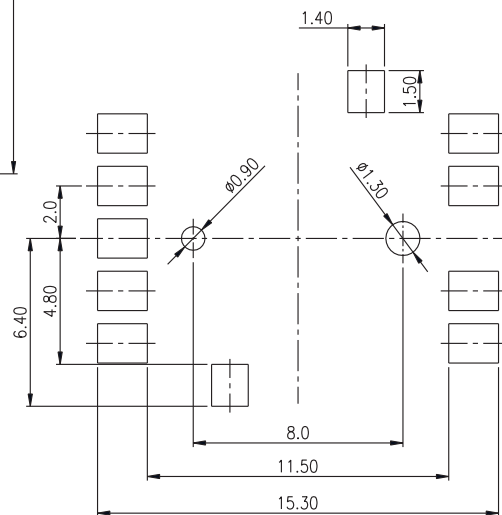
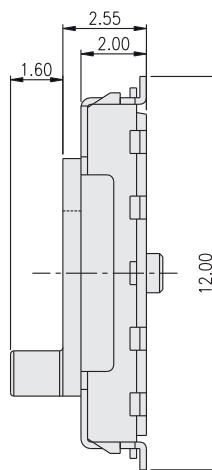
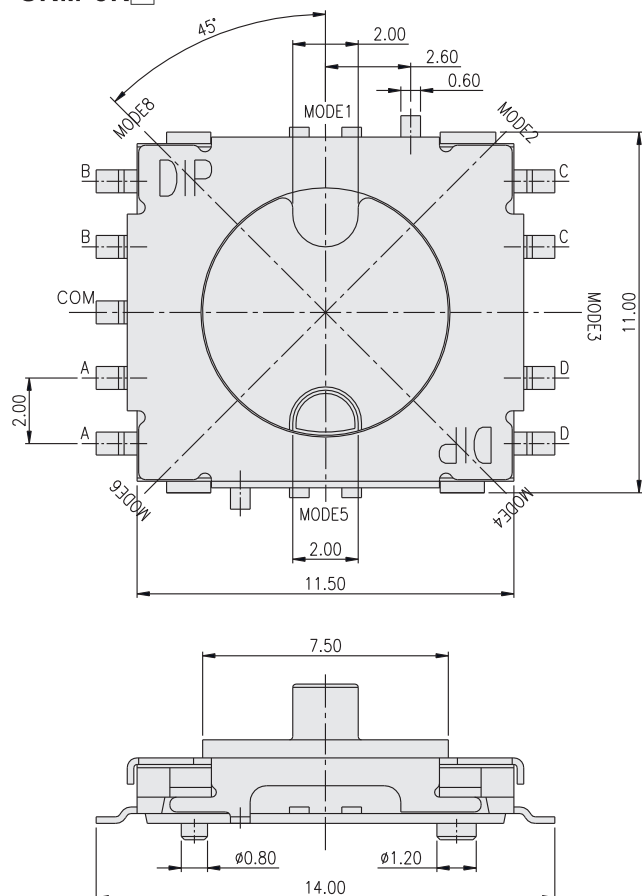
900 pcs

CIRCUIT**SRM-8R7**

Changeover Timing

**SRM-8R8**

Changeover Timing

**SRM-8R ☐**

P.C.B. LAYOUT

