

PCB mount latching switches with integrated Red LED



DESCRIPTION

PCB mounted latching switches incorporating an independent LED.

DISTINCTIVE FEATURES

- Red illuminated push button switch
- DPDT contacts
- 300mA contact current
- 30V DC contact voltage
- Through-hole PCB Mount, 2.5mm pitch

APPLICATIONS

Applications include pro audio and video processing equipment and broadcast and test equipment amplification. The LED operation is independent of the switching function allowing designers to freely assign the LED illumination for a wide variety of status options.

DPDT

LED

PCB
Mount



ELECTRICAL SPECIFICATION

Switch Contacts	DPDT
Rating	30VDC 0.3A
*Insulation Resistance	DC 500V 10 MΩ min
**Dielectric Strength	AC 500V for 1 minute
***Contact Resistance	20 mΩ max (DC 1.5V 100 mA, by method of voltage drop)
LED Absolute Maximum Ratings at TA=25°C	
Power Dissipation (P _D)	50 mW
Forward Current (I _F)	30 mA
Peak Forward Current ¹ (I _{FP})	100 mA
Reverse Voltage (V _R)	5 V
¹ Pulse width ≤ 0.1ms, Duty cycle ≤ 1/10	

LED Electrical / Optical Characteristics at TA=25°C					
Parameter	Min	Typ	Max	Unit	Test Conditions
Forward Voltage (V _F)	1.8	1.8	2.4	V	IF=5mA
	1.8	2	2.6		IF=20mA
Reverse Current (I _R)	-	-	10	μA	VR=5V
Dominant Wavelength (λ _d)	615	617	625	nm	IF=5mA
	615	620	625		IF=20mA
Peak Wavelength (λ _P)	-	625	-	nm	IF=5mA
		630			IF=20mA
Spectral Line Half Width (Δλ)	-	15	-	nm	IF=5mA
		15			IF=20mA
Luminous Intensity (I _v)	6	15	25	mcd	IF=5mA
	60	100	150		IF=20mA
Power Angle (2θ _{1/2})	-	35	-	Deg.	IF=5mA
					IF=20mA



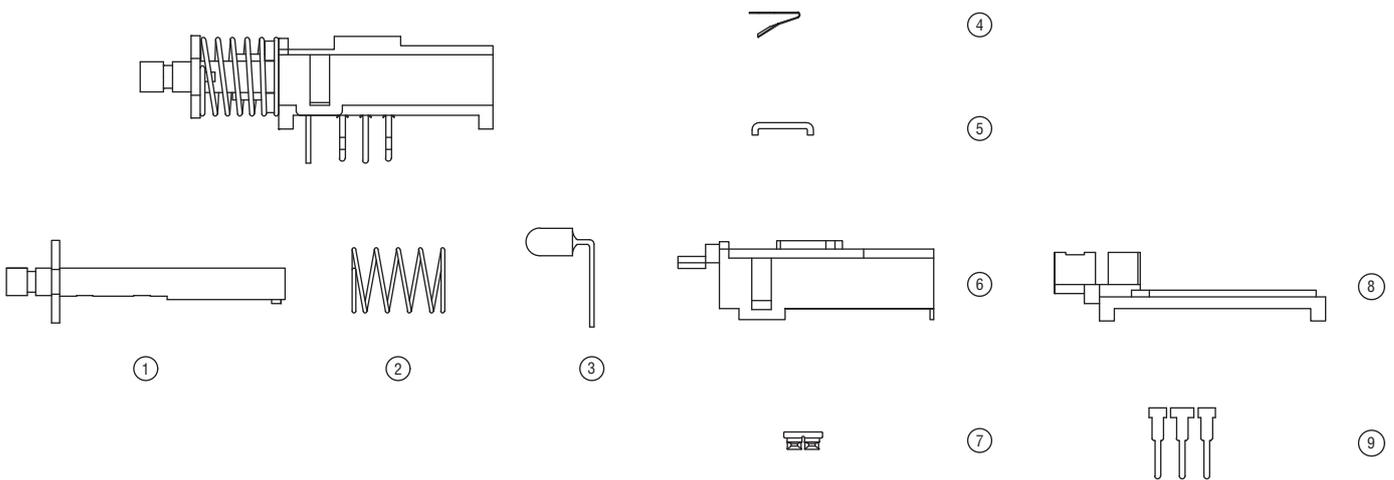
GENERAL SPECIFICATION

Type	Latching PCB Mount Switch
Illumination	LED - Red



MATERIALS

Part	Drawing Reference	Material
Actuator	1	PC
Spring	2	Stainless Steel
LED (Chip Material)	3	GaAsP
Spring Plate	4	Phosphor Bronze
Lock Pin	5	Steel, Nickel Plated
Base Frame	6	POM
Clip	7	Phosphor Bronze
Terminal Board	8	PA66
Terminal	9	Brass, Silver Plated





ENVIRONMENTAL/OPERATING SPECIFICATION

Operating Force	200±100gf	
Operating Travel	Lock Travel: 2.5mm	
	Full Travel: 3.3mm	
Timing	Non-Shorting Type	
Robustness of Terminals	To withstand without damage or distortion a static load of 500gf applied from any direction to the end of terminal for 1 minute. Once per terminal only	
Robustness of Actuator	To withstand without breakage or unusual appearance a static load of 5Kgf applied to the actuator along the operating direction	
Resistance of soldering heat; Manual Soldering	300±5°C for 3 seconds	
Resistance of soldering heat; Dip/ Flow Soldering	260±5°C for 3 seconds	
Durability	Operating life without load after 10,000 cycles	
Contact Resistance	50mΩMax	
Operating Force	Within ± 30% of operating force specification	
Insulation Resistance	DC500V 10MΩ Min	
Dielectric Strength	AC 500V for 1 minute	
Operating Temperature	-40°C ~85°C	
Storage Temperature	-40°C ~85°C	
Environmental Performance	Test Conditions	Criteria
Cold	-40±2°C for 24 Hours	Shall meet Electrical specifications marked *, **, ***
		Mechanical performance should remain normal
Dry Heat	85±2°C for 48 Hours	Contact resistance shall be less than 50mΩ
		Shall meet Electrical specifications marked *, **
		Mechanical performance should remain normal
Damp Heat	40±2°C 90%~95%RH for 96 Hours	Contact resistance shall be less than 50mΩ
		Insulation resistance shall be higher than 10MΩ
		Dielectric strength shall meet the requirements of **
		Mechanical performance should remain normal



TERMINALS

Solder Pins	2.54mm pitch
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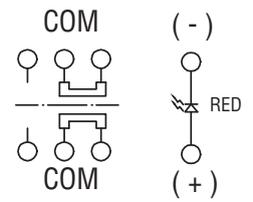


DIMENSIONS/DRAWINGS

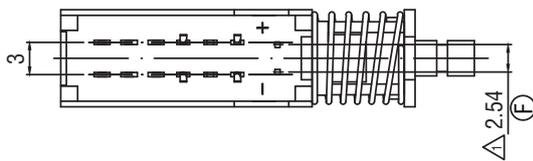
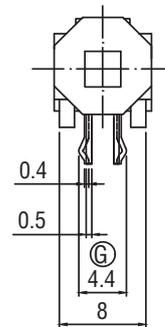
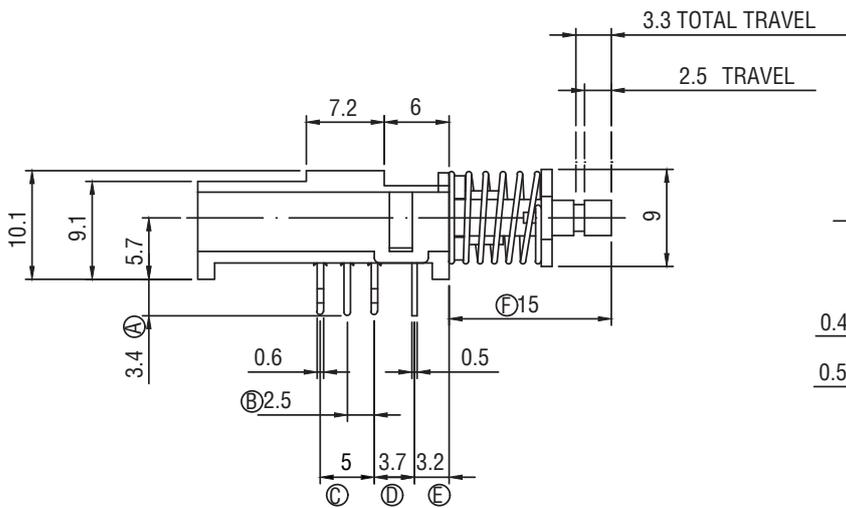
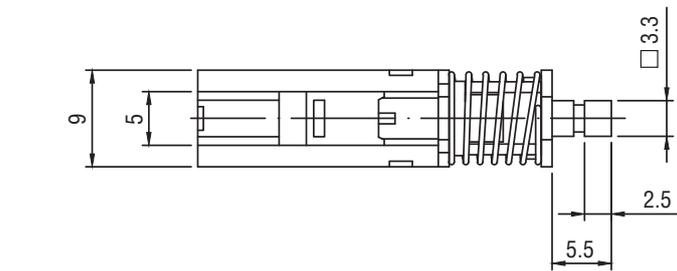
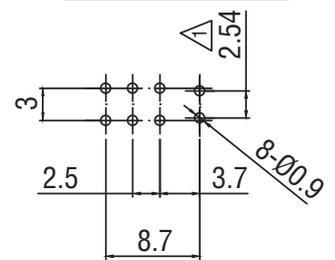
Units	mm - unless stated otherwise
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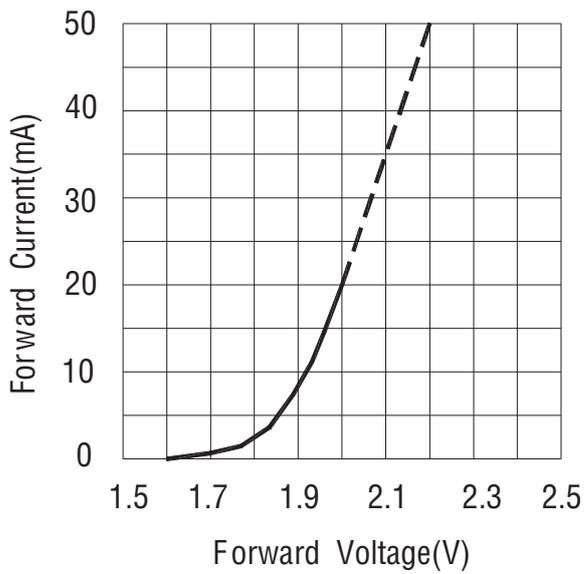
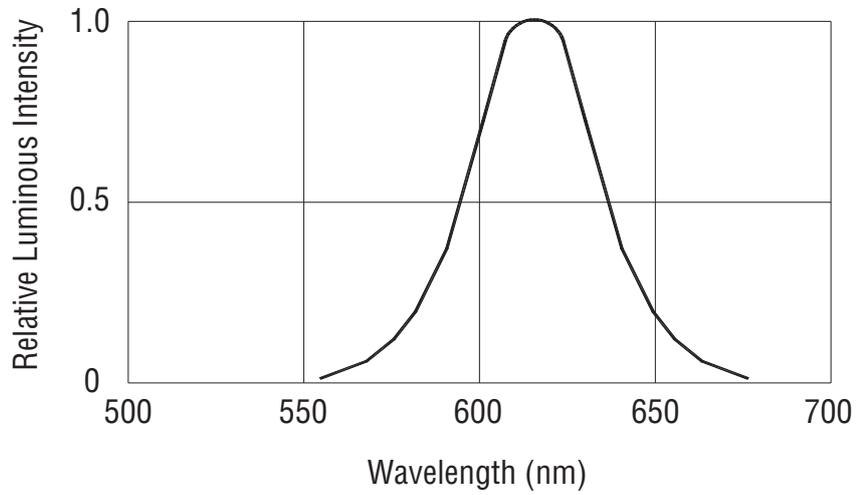
SCHEMATIC



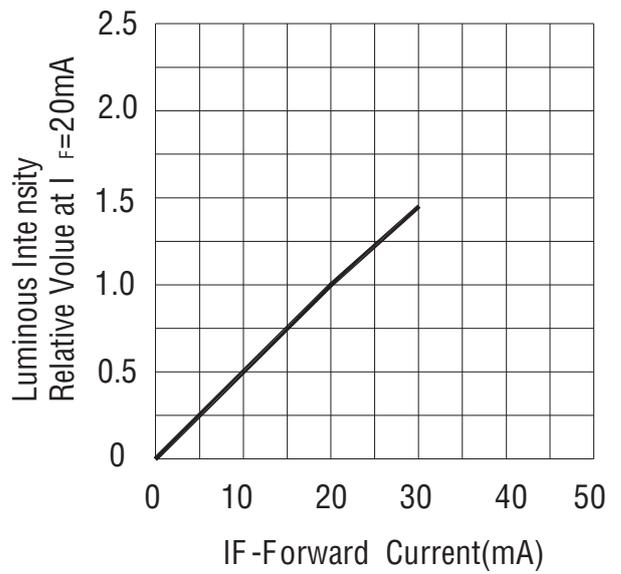
P.C.B HOLE DETAIL



Ta=25°C Unless Otherwise Stated



FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT



OPTIONS (MOQ may apply)

Non-Latching Types	
LED Sorting; Binning based on:	Forward Voltage
	Luminous Intensity
	Dominant Wavelength



PART NUMBER TABLE

Part Number	Weight	EAN	UNSPSC	Country of origin
78-0390	50g	5053556003204	39122216	China

Accessories	
Part Number	Description
78-0389	R-TECH 780389 Knob for PCB Switch 8.4mm x 9mm Clear
78-0392	R-TECH 780392 Round Clear Switch Cap Large



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