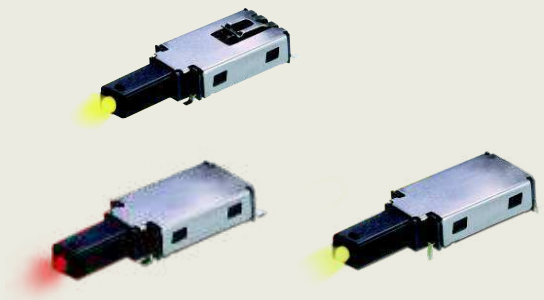




Illuminated Latching Pushbutton Switches PE series



Electrical Specification

Maximum Power: 3.5VA.
Min./Max. Voltage: 20mV to 50VDC.
Min./Max. Current: 0.01mA to 250mA.
Insulation Resistance: $\geq 10^9 \Omega$
Contact Resistance: $\geq 50m\Omega$
Dielectric Strength: $\geq 250V_{rms}$

Mechanical Specification

Operating Force: 2.5N at full travel.
Switching Travel: 0.130" (2.95mm).
Latch Travel: 0.131" (3.30mm).
Full Travel: 0.200" (5.10mm).

Process Environment

Solderability: According to MIL-STD 202F method 208D.
or EIA RS-186E Method 9..

Lead Free Process Compatible: 260°C peak, 10 seconds
Max. above 250°C.

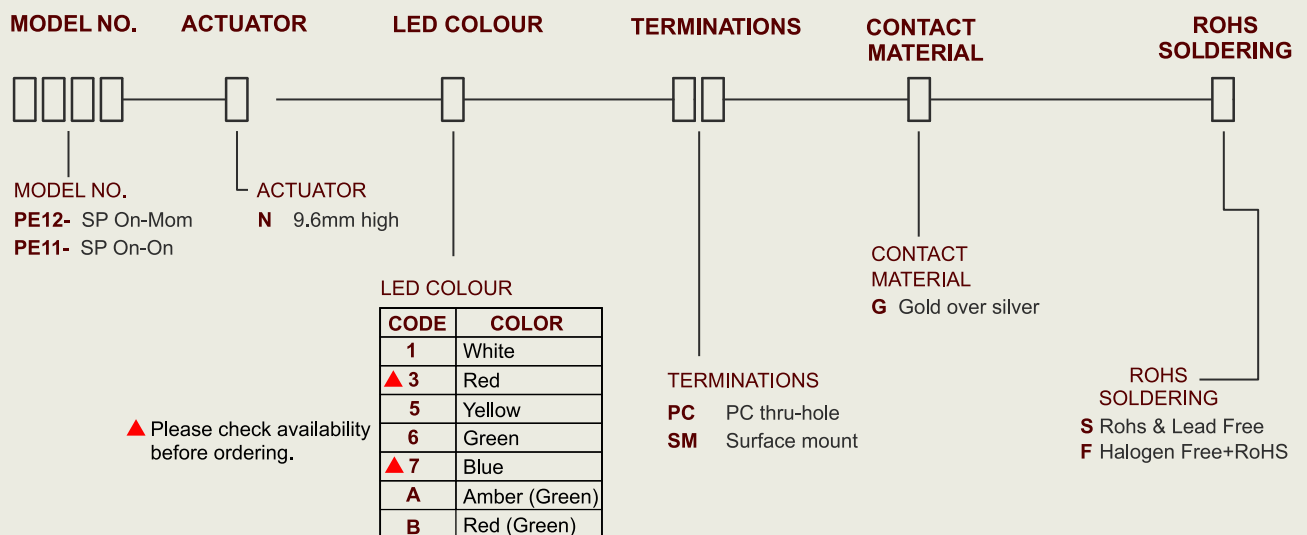
Operating Environment

Operating Temperature: -30°C to + 85°C.
Storage Temperature: -30°C to + 85°C.
Relative Humidity: 90% R.H. @ 80°C.
Operating Life: 30,000 cycles.
Vibration: Per EIA 186-E Methods 7 & 8.
Mechanical Shock: Per EIA 186-E Method 12.

Materials

Fixed Contacts & Terminals: Stainless steel, silver plated with gold flash (STD).
Movable Contacts: Copper alloy, silver plated with gold flash (STD).
Actuator: Glass filled LCP (UL94-V0).
Base: Glass filled LCP (UL94-V0).
Cover: Stainless steel.

How to Order

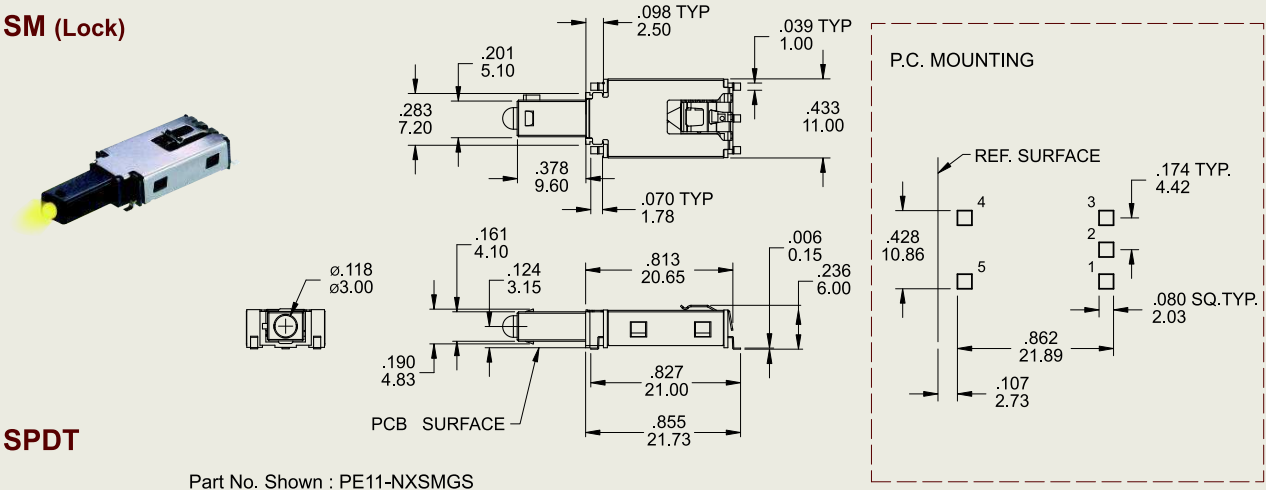


Switch Function

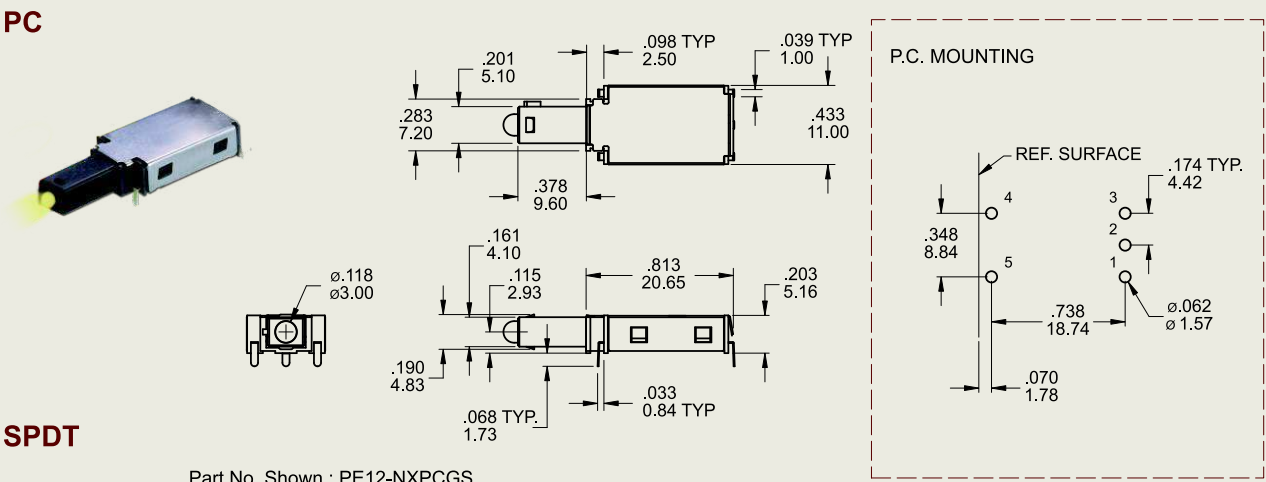
NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
		POS.1	POS.2	POS.1	POS.2	
SP	PE12	ON	ON(MOM)	3-4	2-3	Single colors LED Dual colors LED
SP	PE11	ON	ON	3-4	2-3	

MOM=MOMENTARY

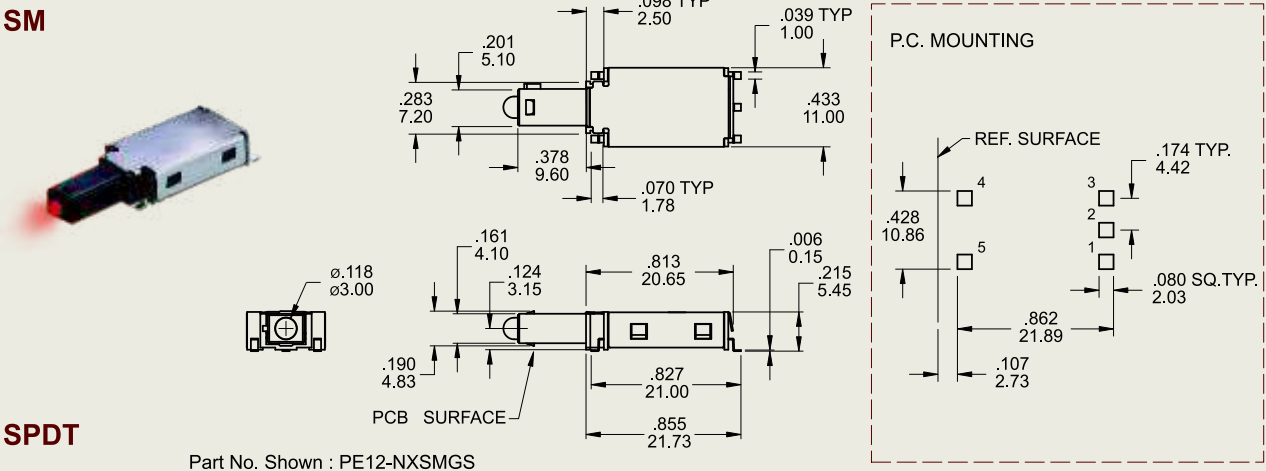
SM (Lock)



PC



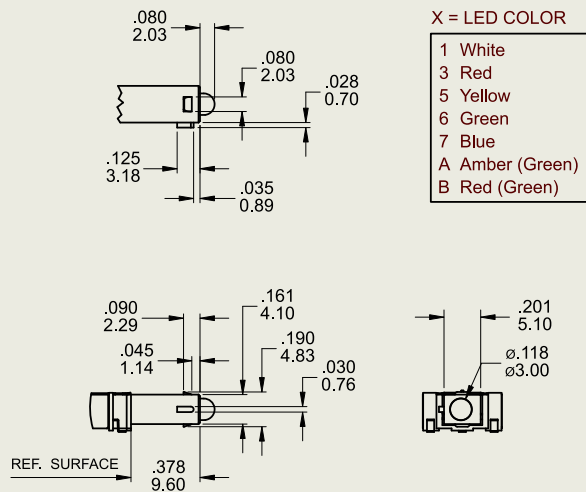
SM



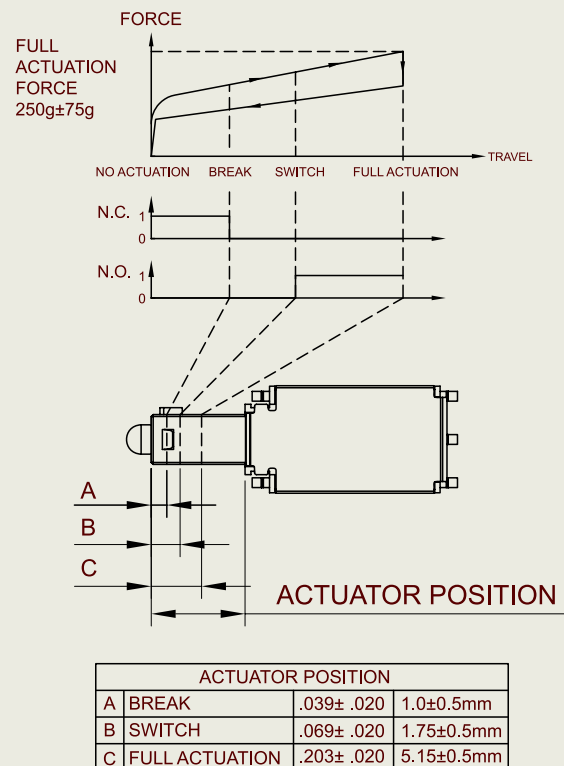
SPDT

Actuator Options

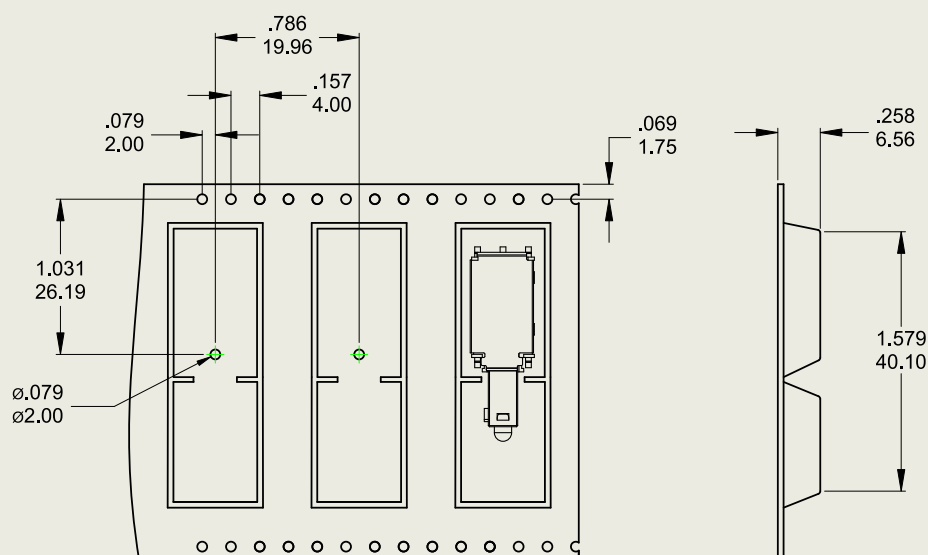
NX WITHOUT WINDOW AND
SNAP FEATURE TO ACCEPT CUSTOM CAP



Force & Travel Diagrams



Tape & Reel Dimensions



REEL INFORMATION	
QUANTITY PER REEL	450 / pcs

LED Electro-optical Data

* The LED specification for reference only

Lens Appearance	Color		Electro-optical Data(AT 20mA)				Peak wavelength	Viewing Angle 2Θ 1/2 (deg)
			Vf (V)		Iv (mcd)			
			Typ.	Max.	Min..	Typ.		
Water Clear	White		3.3	3.8	4900	10000		30°
	Red		2.35	2.8	1	3	630	50°
	Yellow		2.1	2.6	20	35	588	65°
	Green		2.2	2.6	50	60	570	60°
	Blue		3.5	3.8	210	550	470	75°
	Amber (Green)	A	2.1	2.5	19	28	588	55°
		G	2.2	2.6	9	19	570	50°
	Red (Green)	R	2.35	2.8		1	630	
		G	2.2	2.6	6	13	570	

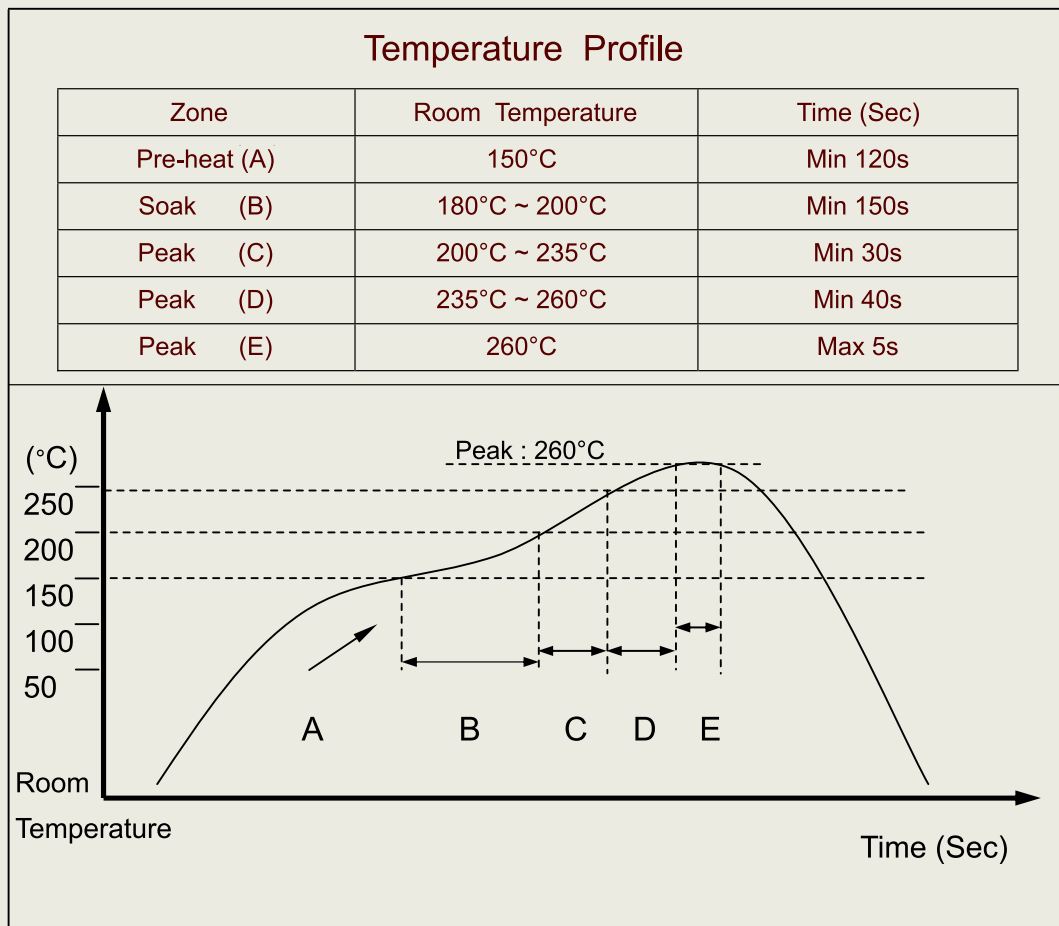
Soldering Process

WAVE SOLDERING: Recommended Soldering Temperature : $260 \pm 5^{\circ}\text{C}$

Duration of Solder Immersion: Max 5 sec.

(PCB is 1.6mm in thickness)

SOLDERING : Vapor phase & IR-reflow soldering can be applied.



PE SERIES SPECIFICATION

Test Sequence

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
①	Visual Examination	Visual Examination check without any external force applied	There shall be no defects that affect the serviceability of the product.
②	Contact Resistance	@2-4VDC 100mA.	50 mΩ Max.
③	Insulation Resistance	Measurements shall be made following application of 1000VDC potential across terminals and cover.	1000MΩ min/1000VDC 100mA
④	Dielectric Withstanding Voltage	250 VAC (50Hz or 60Hz) 0.5mA shall be applied across terminals and cover for 1 minute.	There shall be no breakdown or flashover.
⑤	Solder Heat Resistance	IR Reflow Soldering Soldering Temperature: 260+/- 5°C. Duration of Solder Immersion: 10 secs max.	Shall be free from pronounced backlash and falling-off or breakage of terminals. Shall conform to the limits in items ② to ④.
⑥	Vibration	Per EIA186-E Methods 7 & 8	Shall conform to the limits in items ② to ④.
⑦	Shock	Per EIA186-E Method 12	Shall conform to the limits in items ② to ④.
⑧	Actuation Force	Model-1305N Mechanical Test	Test Force : 250+/-100g. Stroke: 5.1 +/- 0.5mm
⑨	Operating Life	Measurements shall be made following the test below: (a) Maximum Power: 3.5VA Min/Max Voltage: 20mV to 50VDC Min/Max Current: 0.01mA to 250mA (b) Rate of operation: 6-8 operations per minute (c) Electrical Life Test: 30,000 cycles	Contact Resistance: 50mΩ max.
⑩	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: (a) Temperature -40±3°C. (b) Time 96 hours.	Shall conform to the limits in items ② to ④.
⑪	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: (a) Temperature 85±2°C . (b) Time 96 hours.	Shall conform to the limits in items ③ & ④. Insulation Resistance: 1000MΩ min.
⑫	Resistance Humidity	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: (a) Temperature 80±2°C. (b) Relative Humidity 90%. (c) Time 96 hours.	Contact Resistance: 50mΩ max. Insulation Resistance: 1000MΩ min.

E&OE. Specifications are subject to change without notice.