



A
Pushbutton

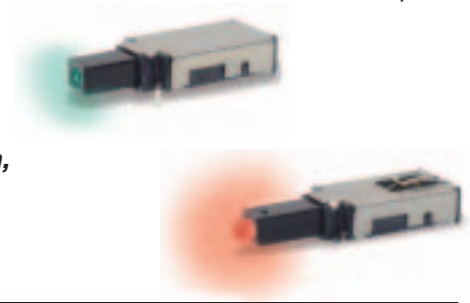
Patent Numbers
6,974,924 B2 US
EP1583118B1 Europe

Features/Benefits

- **SPDT (N.O. & N.C.)**
- **Low height above PCB**
- **Reliable self-cleaning contact**
- **Surface-mount or thru-hole PCB**
- **Standard or custom actuator**
- **Central LED illumination**
- **Latching or Momentary**
- **Long travel. Smooth feel**
- **RoHS compliant and compatible**

Typical Applications

- **Telecom network equipment**
- **Automotive electronics**
- **Consumer electronics**
- **Computer, server, modem, data storage**
- **Professional instrumentation, medical**



Materials

FIXED CONTACTS AND TERMINALS: Stainless steel, silver plated with gold flash (STD.)
MOVABLE CONTACTS: Copper alloy, silver plated with gold flash (STD.)
BASE: Glass filled LCP (UL94V-0)
ACTUATOR: Glass filled nylon 4/6 (UL94V-0)
COVER: Stainless steel

Electrical

MAXIMUM POWER: 3.5 VA
MIN./MAX. VOLTAGE: 20 mV – 50 VDC
MIN./MAX. CURRENT: 0.01 mA – 250 mA
DIELECTRIC STRENGTH: ≥ 250 Vrms
CONTACT RESISTANCE: ≤ 50 mΩ
INSULATION RESISTANCE: ≥ 10⁹ Ω
BOUNCE TIME: ≤1 ms
LED SPECIFICATIONS: See page A-5

Mechanical

OPERATING FORCE: 2.5 N at Full Travel
SWITCHING TRAVEL: .067" (1.7 mm)
LATCH TRAVEL: .131" (3.6 mm)
FULL TRAVEL: .200" (5.1 mm)

Operating Environment

OPERATING TEMPERATURE: -40°C TO 80°C.
STORAGE TEMPERATURE: -40°C TO 80°C.
RELATIVE HUMIDITY: 90% R.H. @ 80°C.
OPERATING LIFE: 30,000 Cycles.
VIBRATION: Per EIA 186-E Method
MECHANICAL SHOCK: Per EIA 186-E Method 12.
OVERLOAD: Withstands 40 N for 1 minute without damage

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.
WASHING PROCESS: No clean process compatible (SMT)
Bottom wash compatible (Thru-hole)
SHEAR TEST (SWITCH/PCB): > 40 N

Packaging

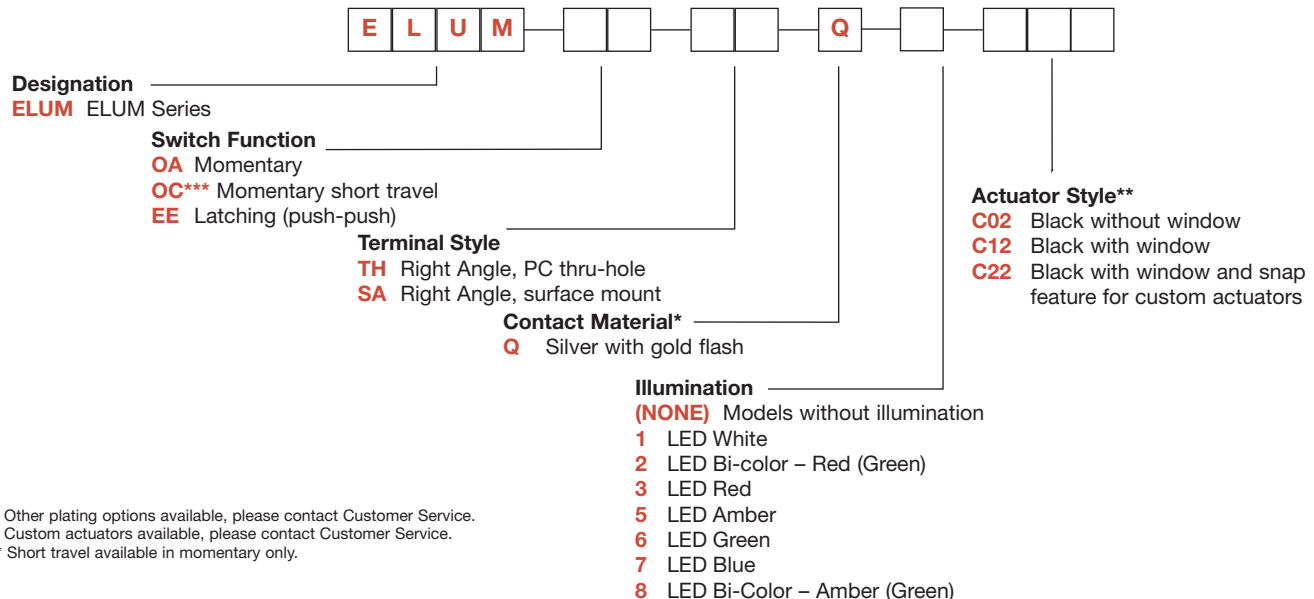
“SA” Terminal Style SMT: Tape and reel per EIA 481-2 (450/reel)
“TH” Terminal Style PC: Tray (60/tray)

NOTE: Any models supplied with Q, contact material are RoHS compliant.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, please contact Customer Service.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box.



* Other plating options available, please contact Customer Service.
** Custom actuators available, please contact Customer Service.
*** Short travel available in momentary only.





ELUM™ Series Right Angle Illuminated Latching Pushbutton

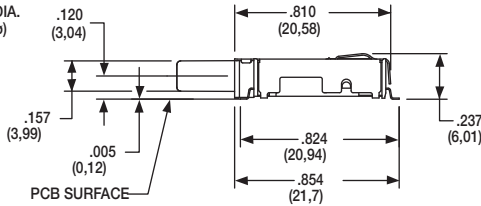
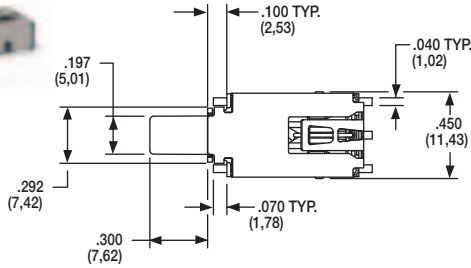
STANDARD OPTIONS

Pushbutton
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ELUMEESAQ7C12



SURFACE MOUNT

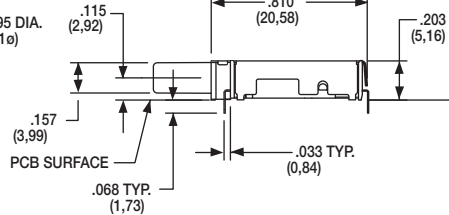
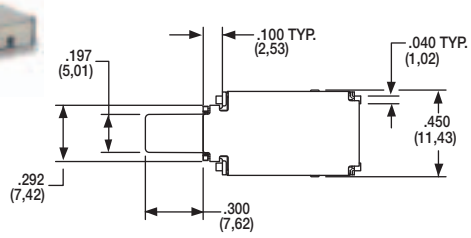


ACTUATOR SHOWN EXTENDED POSITION

ELUMOATHQ6C12



PC THRU-HOLE

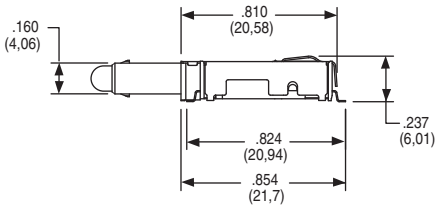
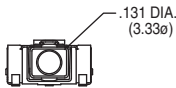
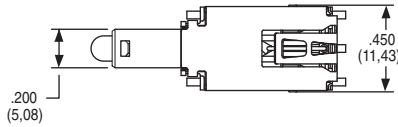


ACTUATOR SHOWN EXTENDED POSITION

ELUMEESAQ3C22

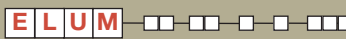


SURFACE MOUNT



ACTUATOR SHOWN EXTENDED POSITION

DESIGNATION



ELUM ELUM SERIES, Illuminated Latching Pushbutton

SWITCH FUNCTION



OPTION CODE	NO. OF POLES	POSITION 1	CONNECTED TERMINALS	POSITION 2	CONNECTED TERMINALS	SCHEMATIC
		SWITCH FUNCTION		SWITCH FUNCTION		
OA / OC	SP Momentary	ON	3 - 4	ON (Mom.)	3 - 2	
EE	SP Latching (Push-Push)	ON	3 - 4	ON	3 - 2	

For SPST N.O. function, only terminals 3 & 2 are used.

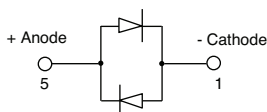
For SPST N.C. function, only terminals 3 & 4 are used.

Circuit: Make before break

LED pins 1 & 5 are independent of switch function.

NOTE:

For bi-color LED's the polarity must be reversed to alternate the color



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



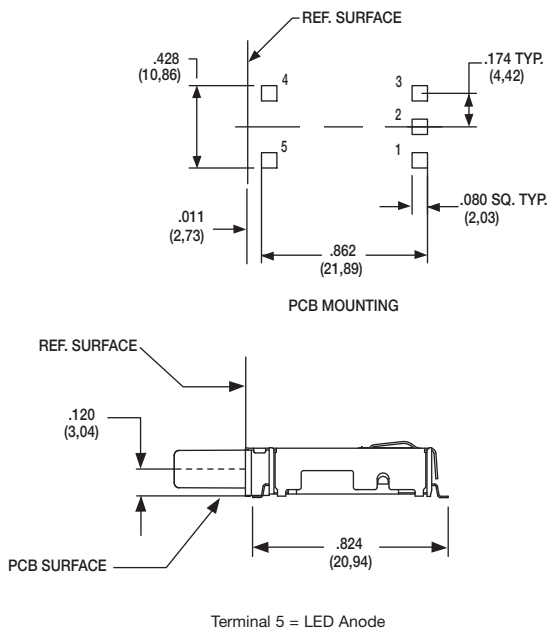
ELUM™ Series Right Angle Illuminated Latching Pushbutton



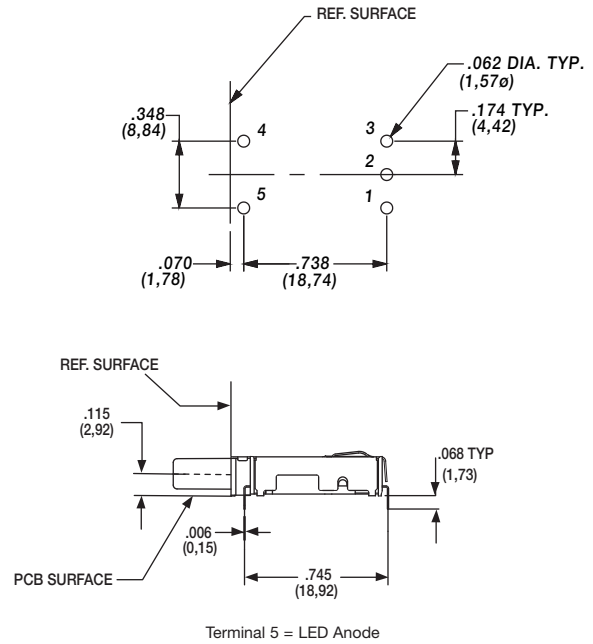
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Pushbutton

SA RIGHT ANGLE, SURFACE MOUNT



TH RIGHT ANGLE, PC THRU-HOLE



CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS
Q	SILVER WITH GOLD FLASH	SILVER WITH GOLD FLASH	250 mA

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

FIXED CONTACTS AND TERMINALS: Stainless steel, silver plated with gold flash

MOVABLE CONTACTS: Copper alloy, silver plated with gold flash

NOTE: Any models supplied with Q, contact material are RoHS compliant.

ILLUMINATION

OPTION CODE	ILLUMINATION TYPE	TYPICAL INTENSITY*		PEAK WAVELENGTH	Vf Forward Voltage
		MIN	MAX		
		(mcd)		(nm)	
00	Model without illumination	N/A		N/A	
01	LED Super White	4,000	5,000	N/A	3.5
02	LED Bi-Color – Red (Green)	10	20	635/565	2.0
03	LED Red	4	8	700	2.0
05	LED Amber	35	50	610	2.0
06	LED Green	35	50	565	2.0
07	LED Super Blue	800	1,500	470	3.8
08	LED Bi-Color – Amber (Green)	10	10	585/565	2.0

*LED FORWARD CURRENT: 20 mA

LED FORWARD VOLTAGE: see chart above

LED REVERSE VOLTAGE: 5.0 V MAX

* For information on specific and custom LED, please contact Customer Service.



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Specifications and dimensions subject to change





ELUM™ Series Right Angle Illuminated Latching Pushbutton

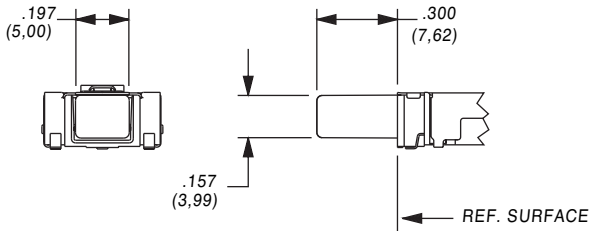
ACTUATOR STYLE*



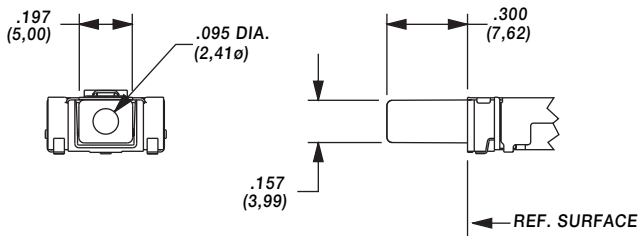
Pushbutton

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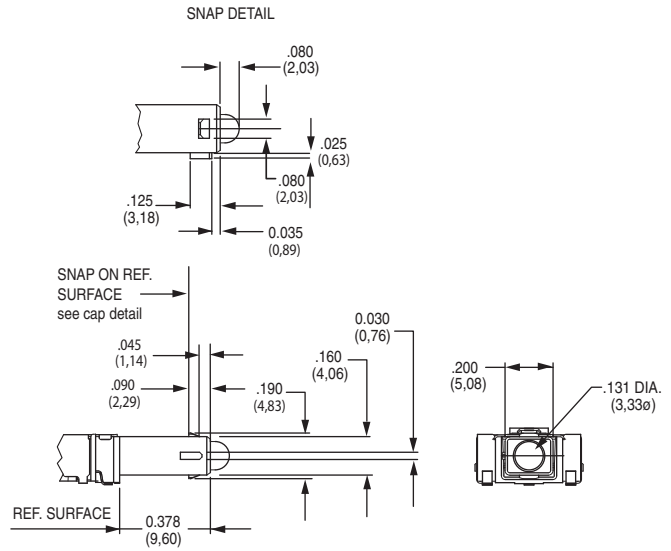
C02 BLACK WITHOUT WINDOW



C12 BLACK WITH WINDOW

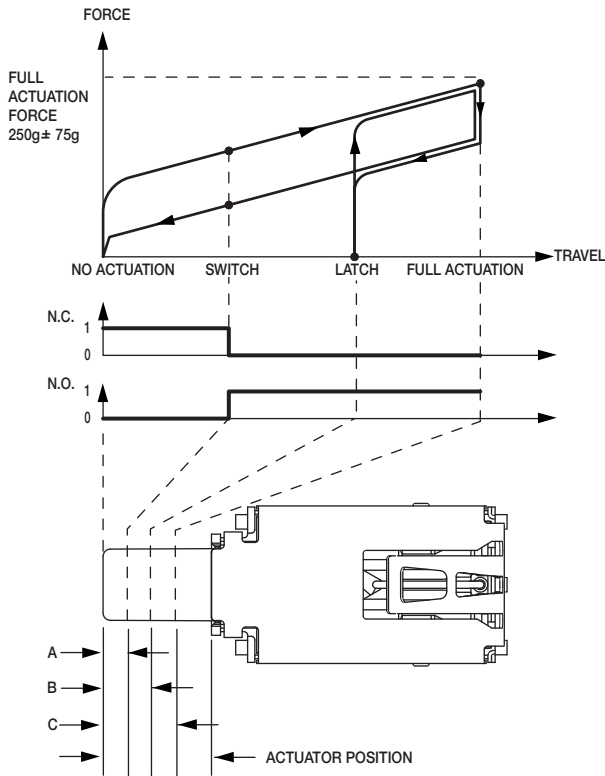


C22 BLACK WITH WINDOW AND SNAP FEATURE TO ACCEPT CUSTOM CAP



* Custom actuators available, please contact Customer Service.

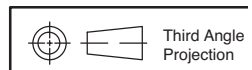
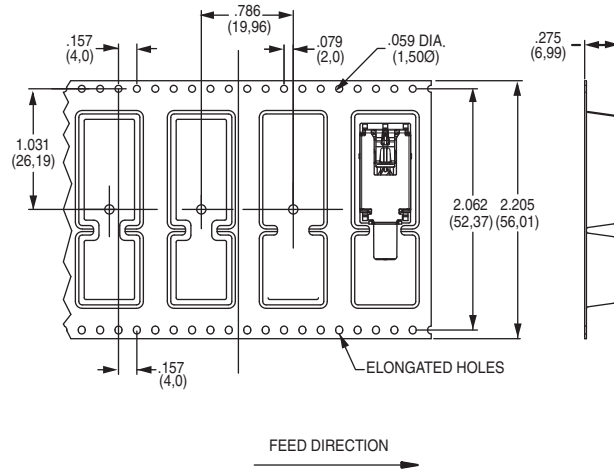
FORCE TRAVEL DIAGRAM



OA, EE ACTUATOR POSITION			
A	SWITCH POINT	.067 ± .020	1,7 ± 0.5mm
B	LATCH	.131 ± .020	3,3 ± 0.5mm
C	FULL ACTUATION	.200 ± .020	5,1 ± 0.5mm

OC ACTUATOR POSITION			
A	SWITCH POINT	.067 ± .020	1,7 ± 0.5mm
C	FULL ACTUATION	.098 ± .020	2,5 ± 0.5mm

TAPE & REEL



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



ELUM™ Series Right Angle Illuminated Latching Pushbutton



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Pushbutton

AVAILABLE HARDWARE

Cap



Cap



Cap



PART NO.

957C00000 High temperature black cap with universal standby symbol

956C02000 High temperature black cap with no symbol

Material: 4/6 Nylon SMT compatible

PART NO.

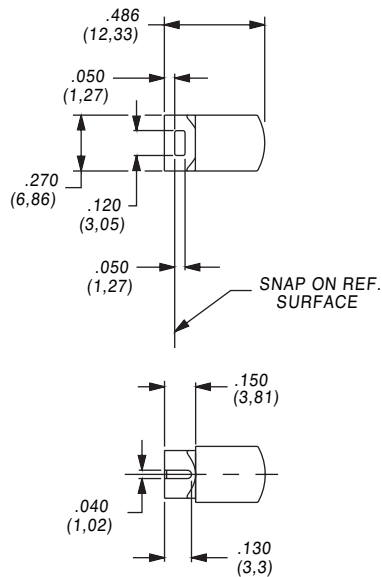
181D01000 Paint and Laser Etched with black paint and universal standby symbol

Material: Clear polycarbonate

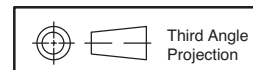
PART NO.

181D00000 Paint and laser etched with white paint underlay and black paint with universal standby symbol.

Material: Clear polycarbonate



NOTE: Caps are for use with the C22 actuator style. Other colors and symbols available, consult Customer Service Center.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



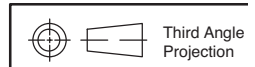
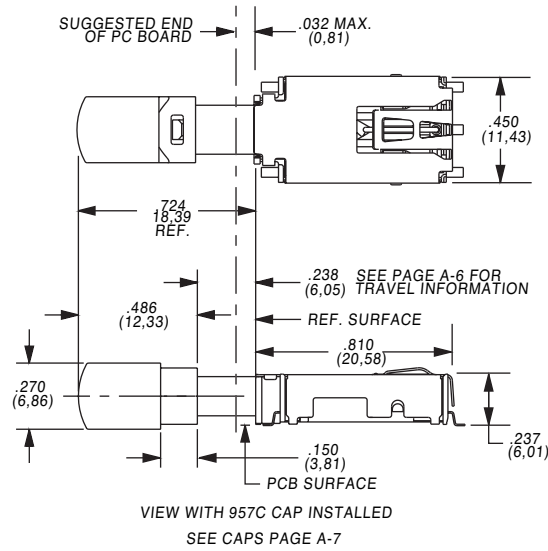


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CAP INSTALLATION

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Dimensions are shown: Inches (mm)
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