



Pushbutton
A

ELUM™ Series Right Angle Illuminated Latching Pushbutton

**LEAD FREE
COMPATIBLE OPTION**

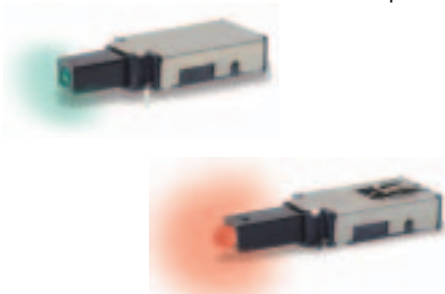
Features/Benefits

- 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

Patent Numbers
6,974,924 B2 US
EP1583118B1 Europe



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

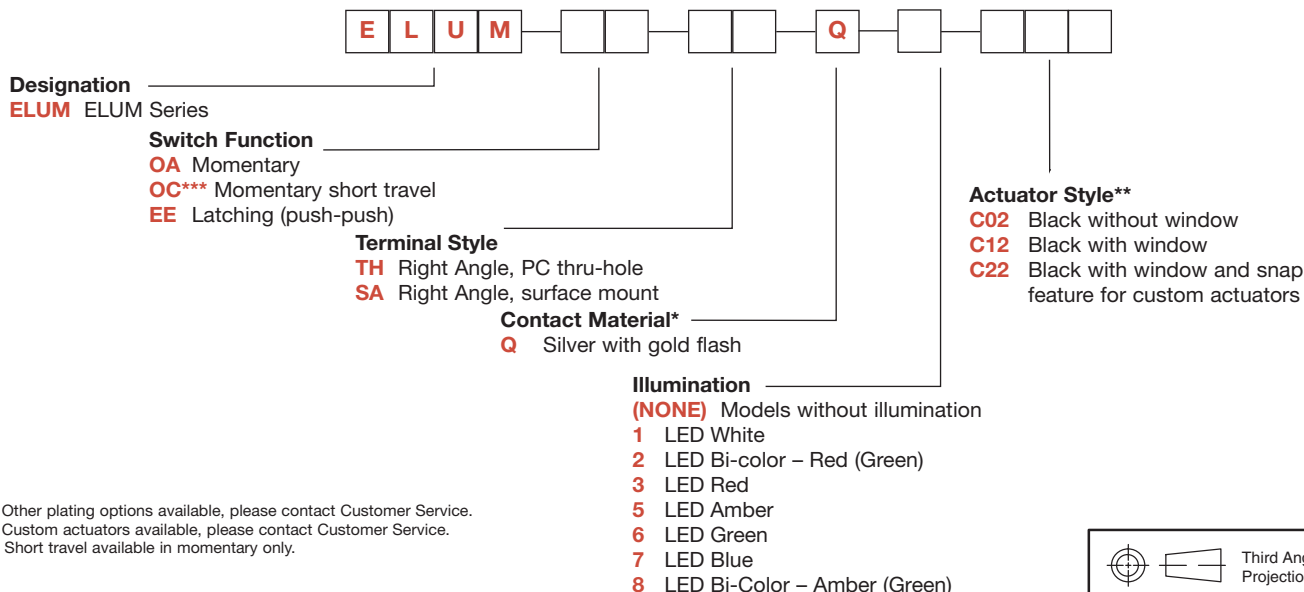
"SA" Terminal Style SMT: Tape and reel per EIA 481-2 (450/reel)
 "TH" Terminal Style PC: Tray (60/tray)

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

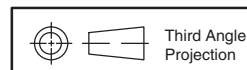
NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, please contact Customer Service.

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.



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



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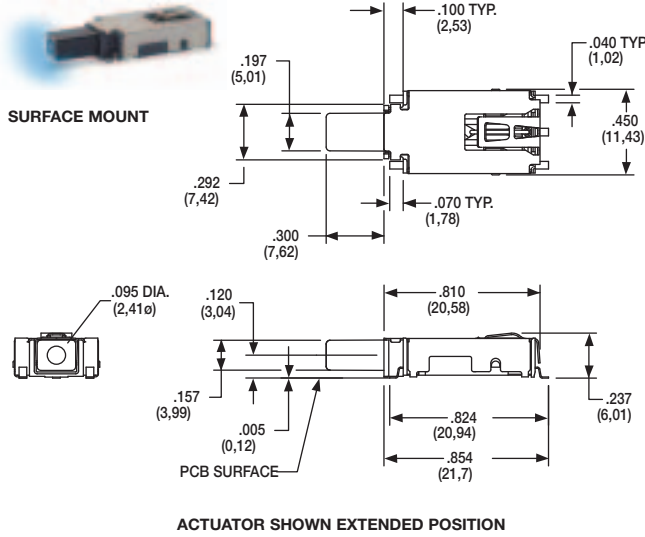


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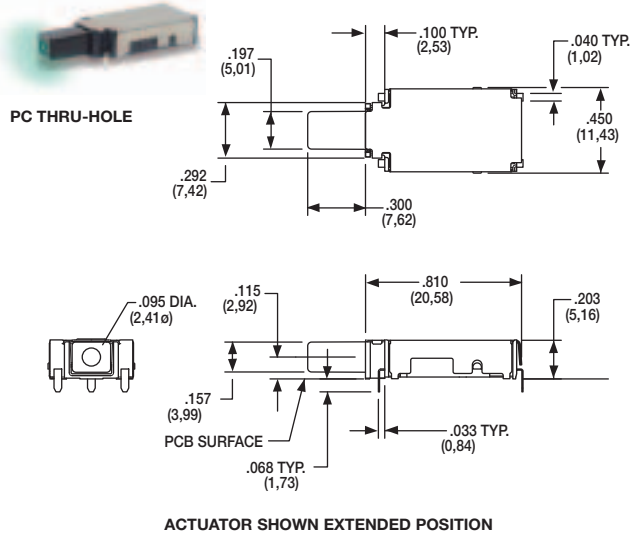
Pushbutton

STANDARD OPTIONS

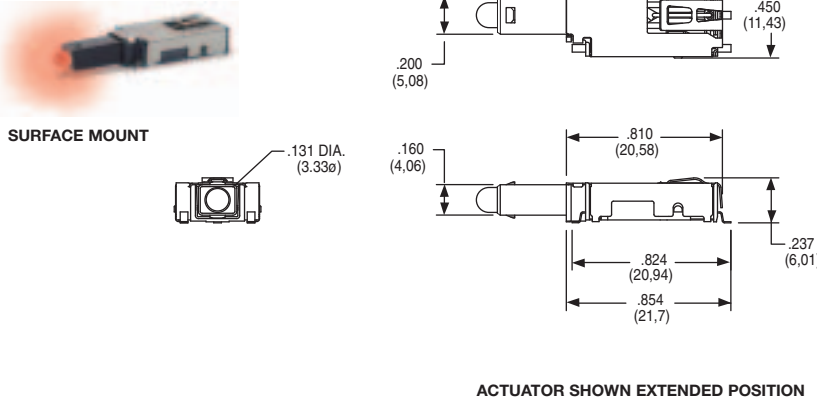
ELUMEEA7C12



ELUMOATHQ6C12



ELUMEEA3C22



DESIGNATION **ELUM** □ □ □ □ □ □ □ □ □ □

ELUM ELUM SERIES, Illuminated Latching Pushbutton

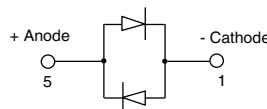
SWITCH FUNCTION ■ □ □ □ □ □ □ □ □ □ □

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

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



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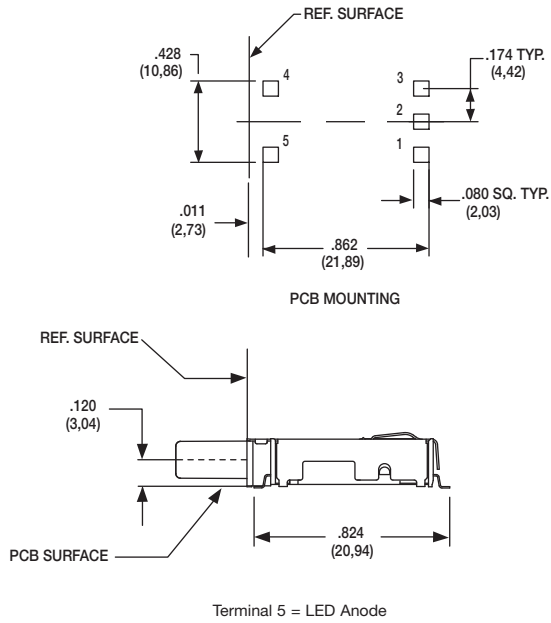
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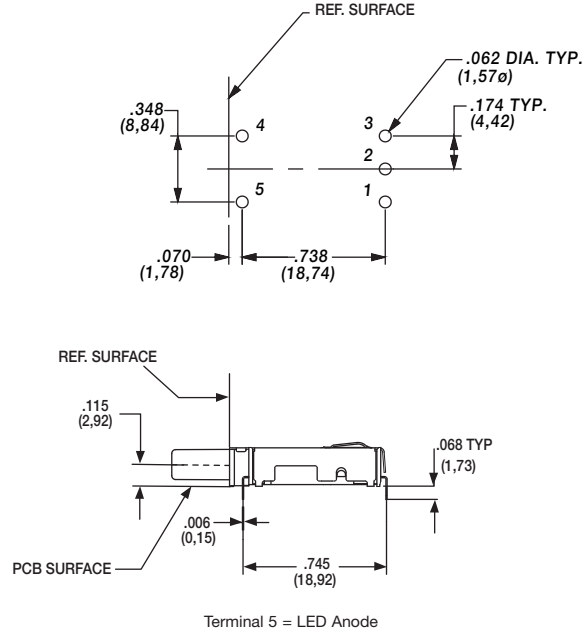
TERMINAL STYLE



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



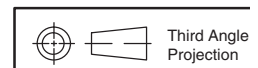
| OPTION CODE | ILLUMINATION TYPE | TYPICAL INTENSITY* | | PEAK WAVELENGTH | Vf Forward Voltage |
|-------------|------------------------------|--------------------|-------|-----------------|--------------------|
| | | MIN | MAX | | |
| | | (mcd) | | (nm) | |
| 0 | Model without illumination | N/A | | N/A | |
| 1 | LED Super White | 4,000 | 5,000 | N/A | 3.5 |
| 2 | LED Bi-Color – Red (Green) | 10 | 20 | 635/565 | 2.0 |
| 3 | LED Red | 4 | 8 | 700 | 2.0 |
| 5 | LED Amber | 35 | 50 | 610 | 2.0 |
| 6 | LED Green | 35 | 50 | 565 | 2.0 |
| 7 | LED Super Blue | 800 | 1,500 | 470 | 3.8 |
| 8 | 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.



Third Angle Projection



Dimensions are shown: Inches (mm)
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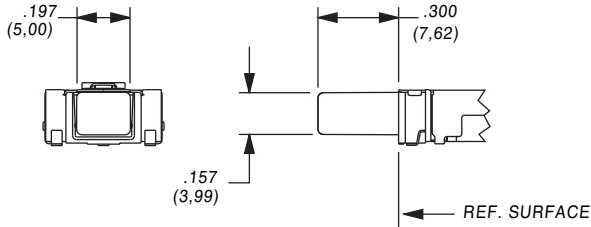
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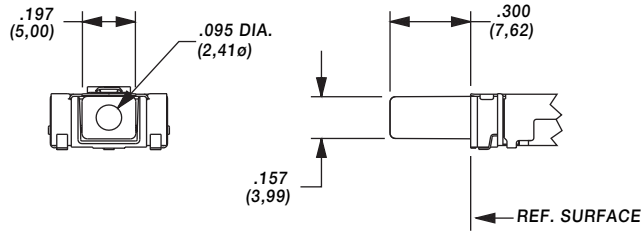
ACTUATOR STYLE*



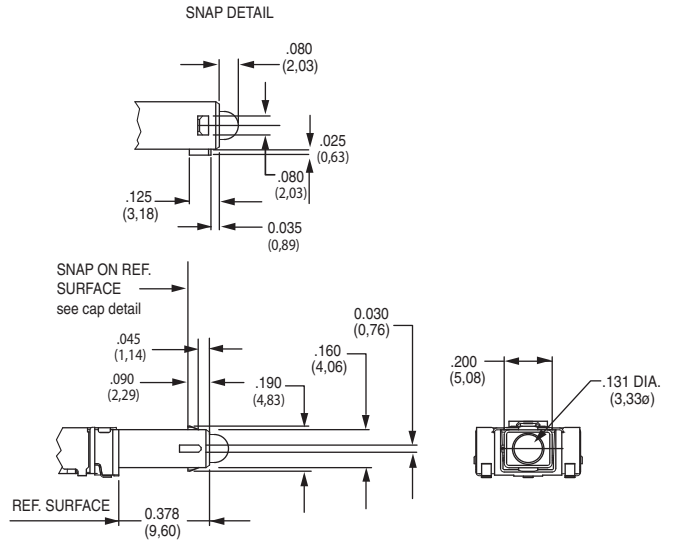
C02 BLACK WITHOUT WINDOW



C12 BLACK WITH WINDOW

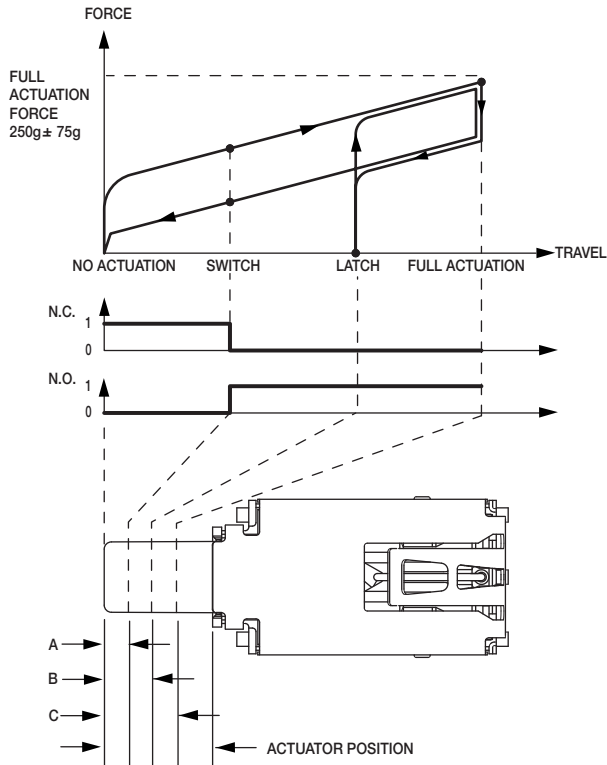


C22 BLACK WITH WINDOW AND SNAP FEATURE TO ACCEPT CUSTOM CAP



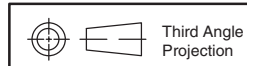
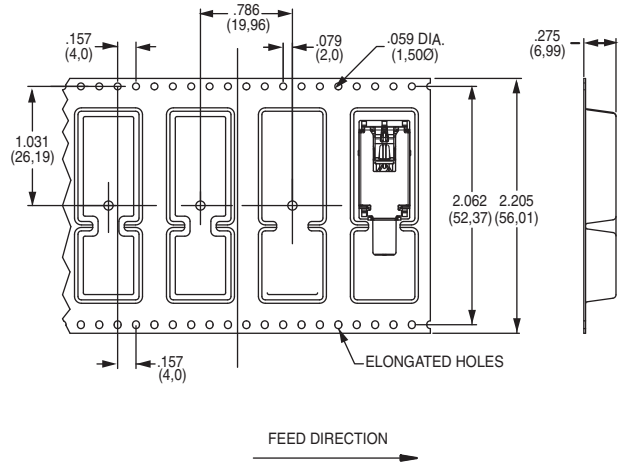
* Custom actuators available, please contact Customer Service.

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



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AVAILABLE HARDWARE

A
Pushbutton

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

Cap



PART NO.

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

Material: Clear polycarbonate

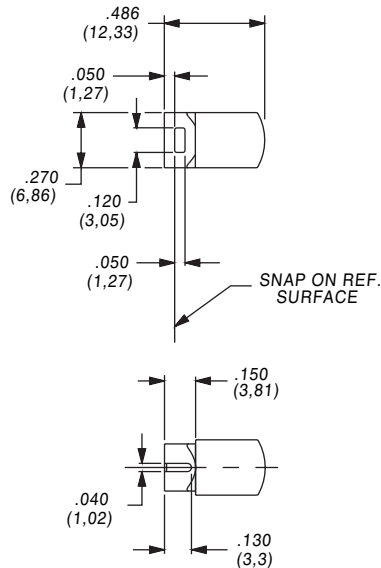
Cap



PART NO.

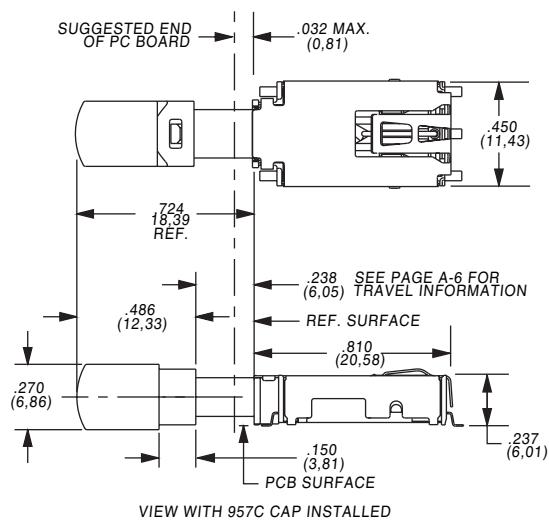
181D00000 Paint and laser etched with white paint underlay and black paint with universal standby symbol.

Material: Clear polycarbonate



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

CAP INSTALLATION



Third Angle
Projection



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