



A

Pushbutton

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: Stainless steel, silver plated with gold flash
TERMINALS: Stainless steel, silver plated
MOVABLE CONTACTS: Copper alloy, silver plated with gold flash
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 m Ω
INSULATION RESISTANCE: $\geq 10^9$ 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.

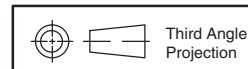
NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, please contact Customer Service.

Build-A-Switch

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

Designation _____ ELUM ELUM Series Switch Function _____ OA Momentary OC*** Momentary short travel EE Latching (push-push) Terminal Style _____ TH Right Angle, PC thru-hole SA Right Angle, surface mount Contact Material* _____ Q Silver with gold flash Illumination _____ (NONE) Models without illumination 1 LED White 2 LED Bi-color – Red (Green) 3 LED Red 5 LED Amber 6 LED Green 7 LED Blue 8 LED Bi-Color – Amber (Green)	E L U M	Actuator Style** C02 Black without window C12 Black with window C22 Black with window and snap feature for custom actuators
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* 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

C&K

ELUM™ Series Right Angle Illuminated Latching Pushbutton

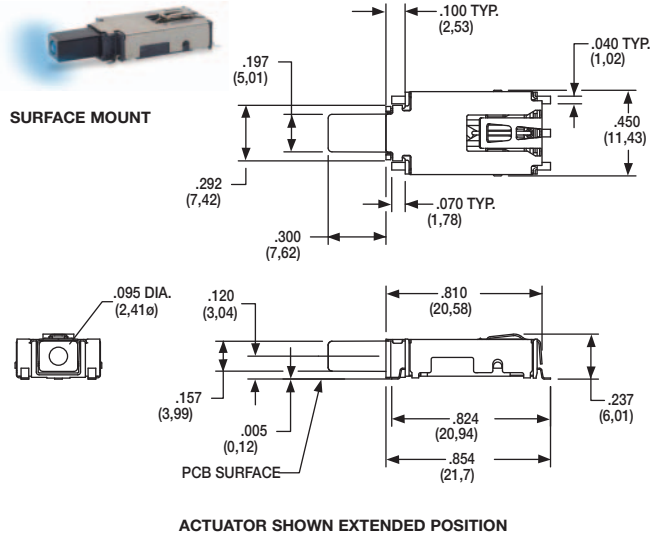


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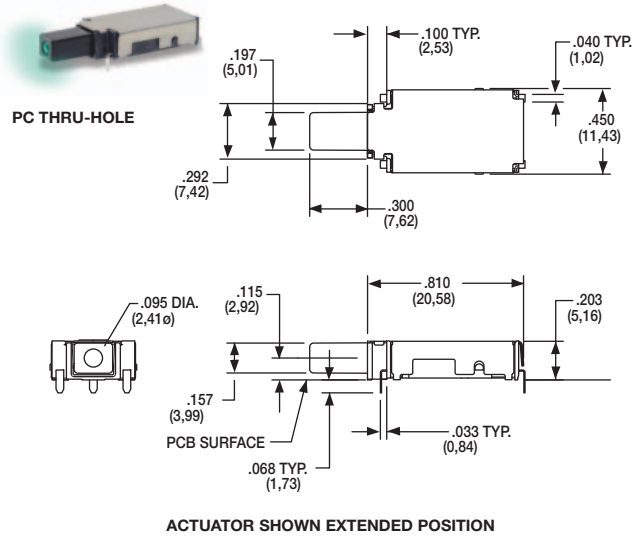
Pushbutton

STANDARD OPTIONS

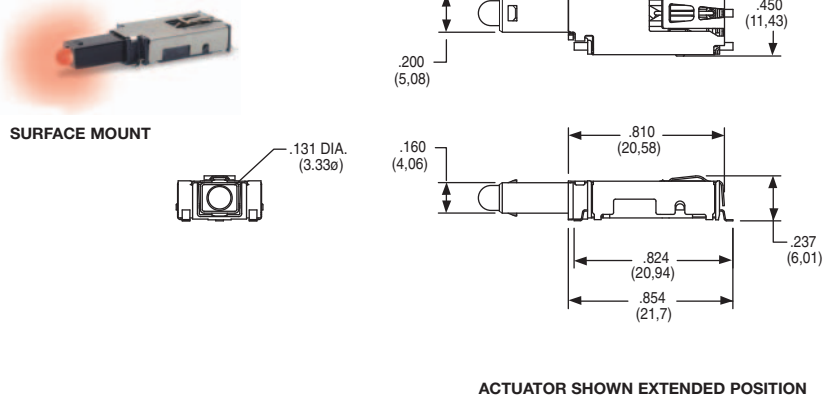
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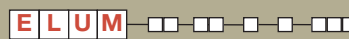
ELUMOATHQ6C12



ELUMEESAQ3C22



DESIGNATION



ELUM ELUM SERIES, Illuminated Latching Pushbutton

SWITCH FUNCTION



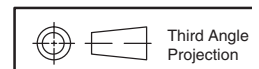
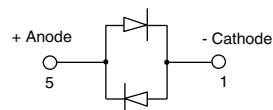
		POSITION 1		POSITION 2		SCHEMATIC
OPTION CODE	NO. OF POLES	SWITCH FUNCTION	CONNECTED TERMINALS	SWITCH FUNCTION	CONNECTED TERMINALS	SPDT 4 NC 3 C NO 2 5 1 + Anode - Cathode
OA / OC	SP Momentary	ON	3 - 4	ON (Mom.)	3 - 2	
EE	SP Latching (Push-Push)	ON	3 - 4	ON	3 - 2	

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



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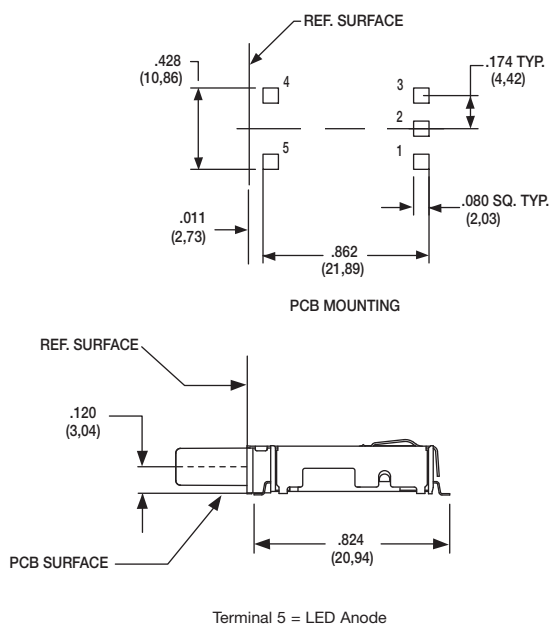
**A****Pushbutton**

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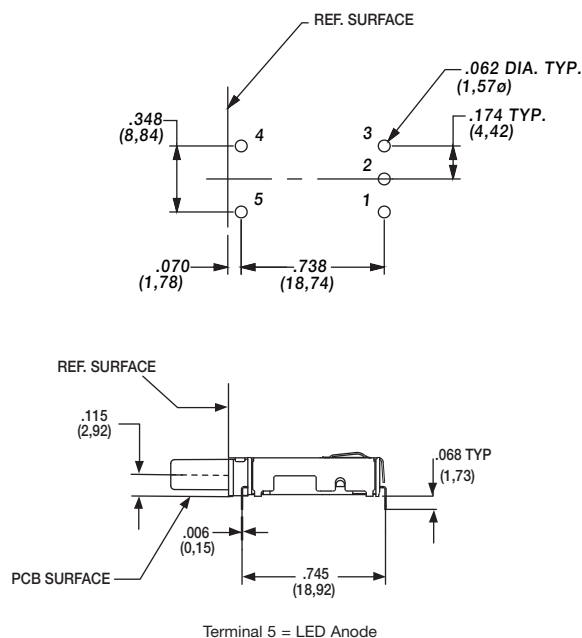
TERMINAL STYLE



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	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



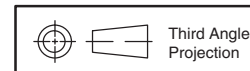
OPTION CODE	ILLUMINATION TYPE	TYPICAL INTENSITY* MIN	MAX	PEAK WAVELENGTH (nm)	Vf Forward Voltage
		(mcd)		(nm)	
0	Model without illumination	N/A		N/A	
1	LED Super White	4,000	5,000	N/A	3.5
2	LED Bi-Color – Red (Green)	10	20	635/565	2.0
3	LED Red	4	8	700	2.0
5	LED Amber	35	50	610	2.0
6	LED Green	35	50	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)
Specifications and dimensions subject to change

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Pushbutton

The diagram shows a horizontal sequence of five nodes connected by arrows. Each node is a rectangle divided into two parts: the left part for data and the right part for the next pointer. The first four nodes have data values 10, 20, 30, and 40 respectively. The fifth node's data field contains 50, and its pointer field contains an arrow pointing to a new, empty node structure consisting of two adjacent empty boxes. The first four nodes are shaded grey, while the new node is white.

Technical drawing of a mechanical part showing two views: a top view and a side view.

Top View Dimensions:

- Overall width: $.197$ (5,00)
- Central hole diameter: $.095 \text{ DIA.}$ (2,41 ϕ)

Side View Dimensions:

- Shaft diameter: $.157$ (3,99)
- Total length: $.300$ (7,62)
- Reference surface: Indicated by an arrow pointing to the right end of the shaft.

SNAP DETAIL

Side View Dimensions:

- Top edge thickness: .080 (2,03)
- Inner hole diameter: .025 (0,63)
- Inner hole offset from top edge: .080 (2,03)
- Inner hole offset from bottom edge: .035 (0,89)
- Bottom edge thickness: .125 (3,18)

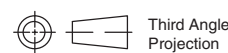
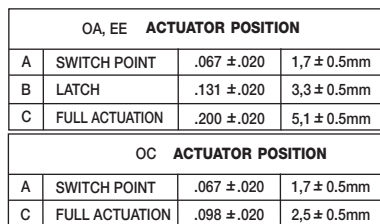
Top View Dimensions:

- Overall width: .045 (1,14)
- Overall height: .160 (4,06)
- Inner hole diameter: .131 DIA. (3,33ø)
- Inner hole offset from left edge: .090 (2,29)
- Inner hole offset from right edge: .190 (4,83)
- Inner hole offset from top edge: .030 (0,76)
- Inner hole offset from bottom edge: .0378 (9,60)

Labels:

- SNAP ON REF. SURFACE → see cap detail
- REF. SURFACE

TAPE & REEL



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AVAILABLE HARDWARE

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

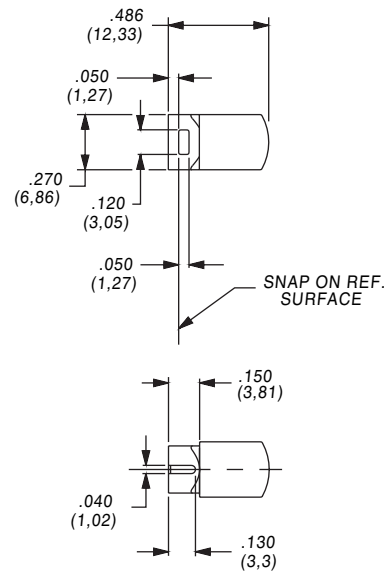
Cap



PART NO.

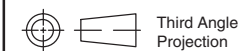
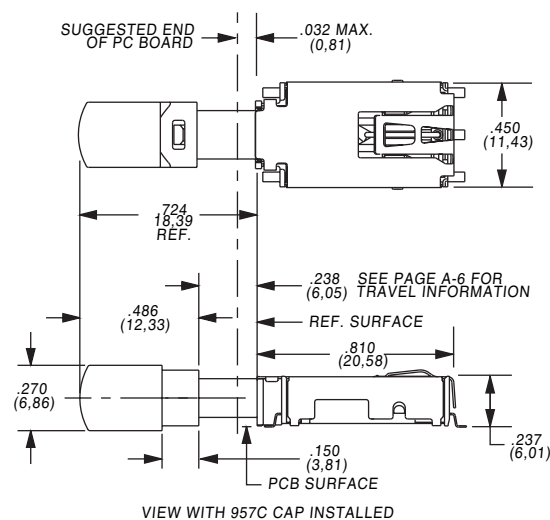
181D00000 Paint and laser etched with white paint underlay and black paint with universal standby symbol.

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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