

**SPECIFICATIONS**

Electrical Ratings	50mA @ 35VDC
Electrical Life	100,000 cycles typical
Contact Resistance	< 50 mΩ initial
Actuation Force	130 +/- 50gF
Actuator Travel	.50 +/- .1mm
Dielectric Strength	500Vrms min
Insulation Resistance	> 100MΩ min
Operating Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C



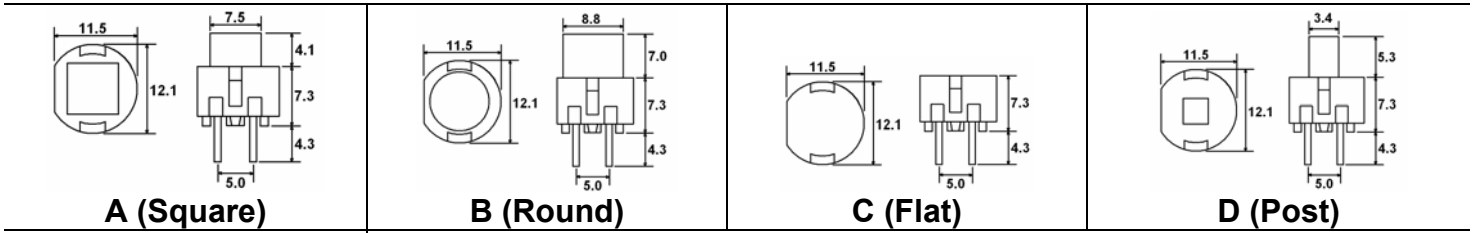
**MATERIALS ←RoHS COMPLIANT**

Cover	PC
Base	Valox
Contacts	Copper Alloy, Silver Plated
Terminals	Copper Alloy, Silver Plated

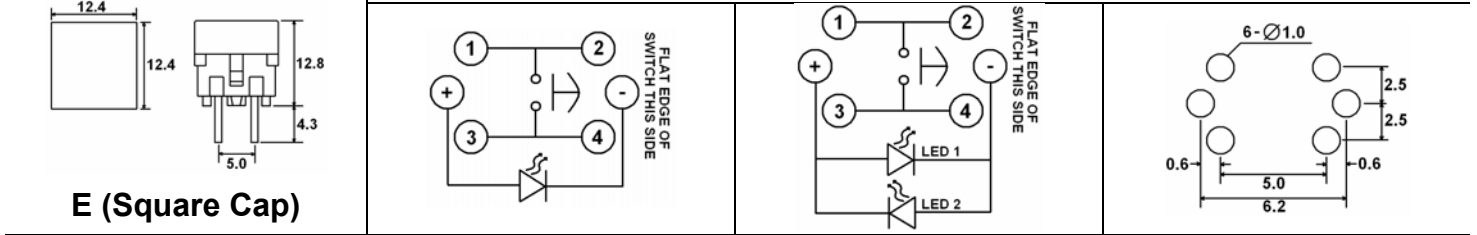
**ORDERING INFORMATION**

<b>1. Series:</b>	<b>SH</b>	<b>B</b>	<b>L</b>	<b>B</b>	<b>A</b>	<b>MS</b>
SH						
<b>2. Actuator Options:</b>						
A - Square						
B - Round						
C - Flat						
D - Post						
E - Large Square Cap						
<b>3. Actuator Colors:</b>						
<b>Non-illuminated Actuator Color Options</b>	<b>Illuminated Actuator Options</b>					
1 = White	5 = Green	L = LED Option – Clear Actuator Color				
2 = Black	6 = Orange	L1 = LED Option – With Laser Etching Style				
3 = Red	7 = Blue	<b>**LED only available with A &amp; B actuators</b>				
4 = Yellow	8 = Dark Gray					
	9 = Beige					
<b>4. LED Colors:</b>	<b>Bicolor LED Colors:</b>					
Blank = No LED	RG = Red/Green					
R = Red	RY = Red/Yellow					
G = Green	YG = Yellow/Green					
Y = Yellow	BG = Blue/Green					
B = Blue	BR = Blue/Red					
W = White	BY = Blue/Yellow					
<b>5. Laser Etching Styles:</b>	<b>**Laser etching styles are only available with the A or B actuator. A colored film is applied to the actuator and is laser etched to allow the LED to shine through the pattern.</b>					
Blank = No Laser Etching Style						
A F						
B G						
C H						
D J						
E K						
<b>6. Laser Etching Colors:</b>	<b>** A colored film is applied to the actuator and is laser etched to allow the standard color of the actuator or the LED to shine through the pattern.</b>					
Blank = No Laser Etching Color						
MS =Misty Silver						
BS = Bright Silver						
BG = Bright Gold						
<b>7. Caps:</b>	<b>Cap Colors:</b>					
Blank = No Cap	C15	C22				
C11	C16	C26	<b>**See Cap Options for color availability</b>			
C12	C17	C27	<b>** Caps available with D actuator only</b>			
C13	C18	C28				
C14	C19					

**DIMENSIONS**



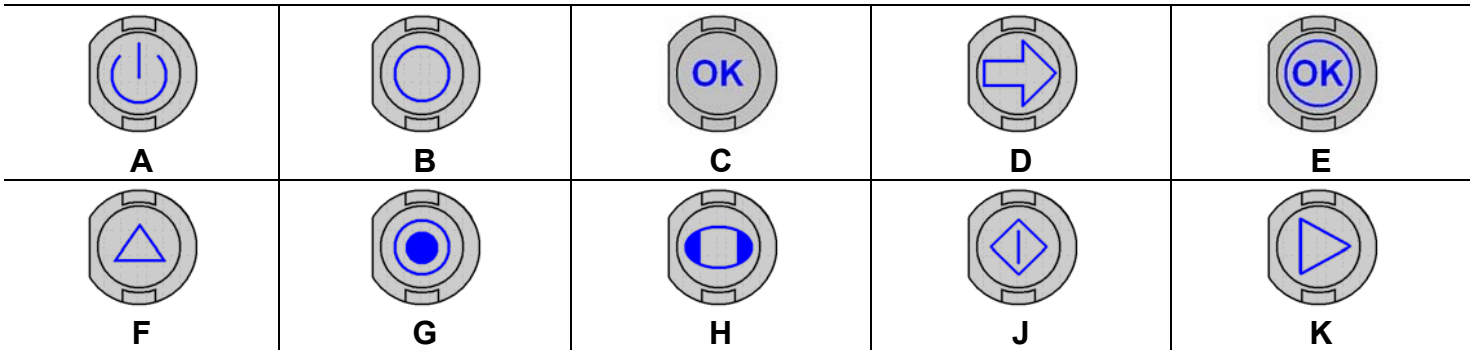
**SCHEMATIC & PC LAYOUT**



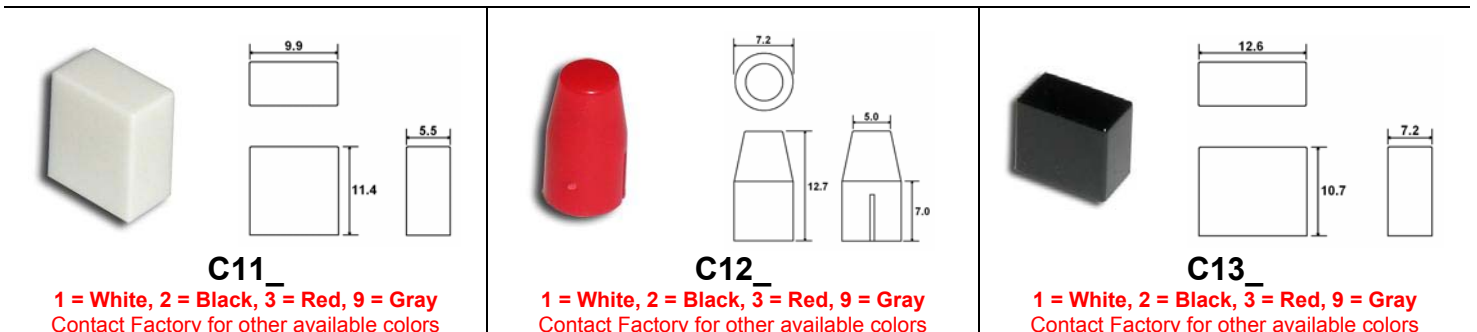
**LED SPECIFICATIONS**

LED Ratings		R	G	Y	B	W	Units
Reverse Voltage	$V_R$	5	5	5	5	5	V
Forward Current (avg / peak)	$I_F / I_{FS}$	30 / 125	30 / 125	30 / 125	30 / 125	30 / 125	mA
Reverse Current $V_R = 5V$	$I_R$	10	10	10	10	10	$\mu A$
Power Dissipation	$P_T$	69	75	75	120	120	mW
Forward Voltage (typ. / max), $I_F = 20mA$	$V_F$	1.8 / 2.3	2.0 / 2.5	2.0 / 2.5	3.5 / 4.0	3.5 / 4.0	V
Wavelength, Peak Emmission, $I_F = 20mA$	$\lambda_P$	660	572	595	455	----	nm
Spectral Line Half-Width, $I_F = 20mA$	$\Delta\lambda$	20	20	20	30	----	nm
Luminous Intensity, $I_F = 20mA$	LI	20	20	80	40	200	mcd
Viewing Angle	$\Theta$	150	150	150	150	150	Deg


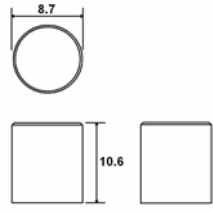

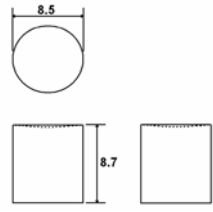
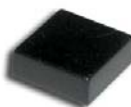
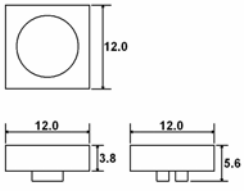

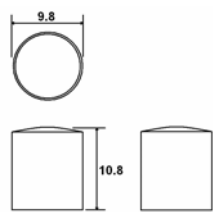

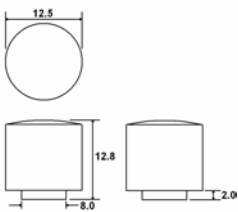

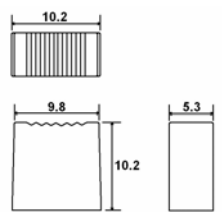

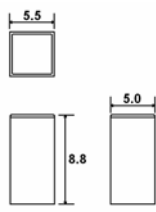

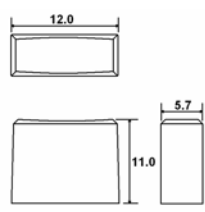

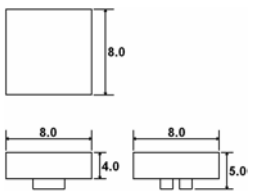

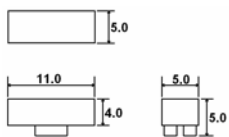
**LASER ETCHING STYLES**



**CAP OPTIONS ←FOR D ACTUATOR**



**CAP OPTIONS ←FOR D ACTUATOR**

  <p><b>C14_</b>  <b>1 = White, 2 = Black, 3 = Red, 9 = Gray</b>        Contact Factory for other available colors</p>	  <p><b>C15_</b>  <b>2 = Black, 0 = Clear</b>        Contact Factory for other available colors</p>	  <p><b>C16_</b>  <b>1 = White, 2 = Black, 3 = Red, 7 = Blue</b>        Contact Factory for other available colors</p>
  <p><b>C17_</b>  <b>2 = Black, 0 = Clear</b>        Contact Factory for other available colors</p>	  <p><b>C18_</b>  <b>1 = White, 2 = Black, 9 = Light Gray</b>        Contact Factory for other available colors</p>	  <p><b>C19_</b>  <b>1 = White, 2 = Black, 3 = Red, 8 = Dark Gray</b>        Contact Factory for other available colors</p>
  <p><b>C22_</b>  <b>2 = Black, 8 = Dark Gray, 9 = Light Gray</b>        Contact Factory for other available colors</p>	  <p><b>C26_</b>  <b>1 = White, 2 = Black, 3 = Red, 9 = Light Gray</b>        Contact Factory for other available colors</p>	  <p><b>C27_</b>  <b>1 = White, 2 = Black, 3 = Red, 7 = Blue</b>        Contact Factory for other available colors</p>
  <p><b>C28_</b>  <b>1 = White, 2 = Black, 3 = Red, 7 = Blue</b>        Contact Factory for other available colors</p>		