

Illuminated Tactile

Specifications

Electrical Ratings	50mA @ 48VDC	Dielectric Strength	250Vrms min
Electrical Life	100,000 cycles typical	Insulation Resistance	>100MΩ min
Contact Resistance	<100mΩ initial	Operating Temperature	-40°C to 85°C
Actuation Force	160 ± 50gF	Storage Temperature	-40°C to 85°C
Actuation Travel	0.7 ± 0.2mm	Sealing Degree	IP67

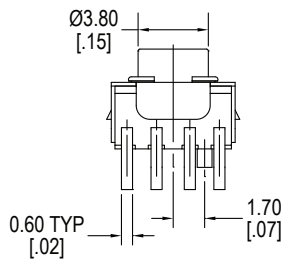
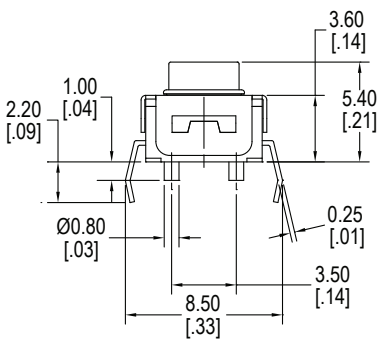
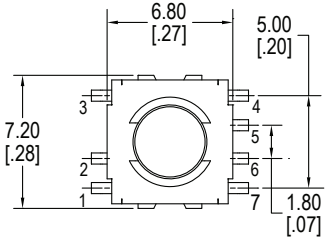
Materials

Actuator	Silicone
Housing	PPA
Cover	Stainless Steel
Dome Contact	Stainless Steel, Silver Plated
Terminals	Brass, Silver Plated

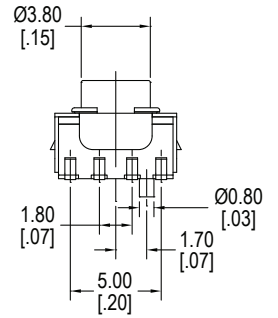
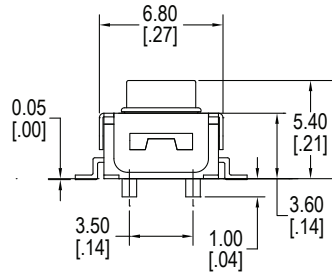
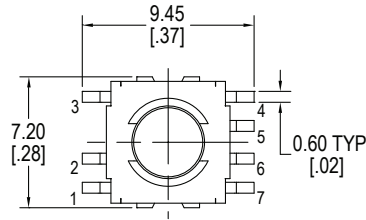
Ordering Information

1. Series	CW	1.8	F160	RB	Q																																				
CW CWV = Right Angle CWS = SMD CWJ = SMD, J Lead CWSV = SMD, Right Angle																																									
2. Actuator Height	1.8 = 1.8mm																																								
3. Actuator Force	F160 = 160gF																																								
4. LED Color	<table border="0"> <tr> <td>R = Red</td> <td>RGB (not available with Right Angle terminals)</td> <td>GB = Green / Blue dual LED</td> </tr> <tr> <td>Y = Yellow</td> <td>RY = Red / Yellow dual LED</td> <td>GW = Green / White dual LED</td> </tr> <tr> <td>G = Green</td> <td>RG = Red / Green dual LED</td> <td>GA = Green / Amber dual LED</td> </tr> <tr> <td>B = Blue</td> <td>RB = Red / Blue dual LED</td> <td>BPG = Blue / Pure Green dual LED</td> </tr> <tr> <td>W = White</td> <td>RW = Red / White dual LED</td> <td>BA = Blue / Amber dual LED</td> </tr> <tr> <td>PG = Pure Green</td> <td>RPG = Red / Pure Green dual LED</td> <td>WA = White / Amber dual LED</td> </tr> <tr> <td>A = Amber</td> <td>RA = Red / Amber dual LED</td> <td>PGA = Pure Green / Amber dual LED</td> </tr> <tr> <td></td> <td>YG = Yellow / Green dual LED</td> <td></td> </tr> <tr> <td></td> <td>YB = Yellow / Blue dual LED</td> <td></td> </tr> <tr> <td></td> <td>YW = Yellow / White dual LED</td> <td></td> </tr> <tr> <td></td> <td>YPG = Yellow / Pure Green dual LED</td> <td></td> </tr> <tr> <td></td> <td>YA = Yellow / Amber dual LED</td> <td></td> </tr> </table>					R = Red	RGB (not available with Right Angle terminals)	GB = Green / Blue dual LED	Y = Yellow	RY = Red / Yellow dual LED	GW = Green / White dual LED	G = Green	RG = Red / Green dual LED	GA = Green / Amber dual LED	B = Blue	RB = Red / Blue dual LED	BPG = Blue / Pure Green dual LED	W = White	RW = Red / White dual LED	BA = Blue / Amber dual LED	PG = Pure Green	RPG = Red / Pure Green dual LED	WA = White / Amber dual LED	A = Amber	RA = Red / Amber dual LED	PGA = Pure Green / Amber dual LED		YG = Yellow / Green dual LED			YB = Yellow / Blue dual LED			YW = Yellow / White dual LED			YPG = Yellow / Pure Green dual LED			YA = Yellow / Amber dual LED	
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5. Contact Plating	Q = Silver																																								

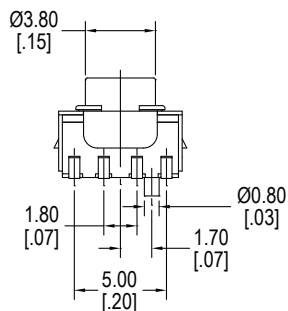
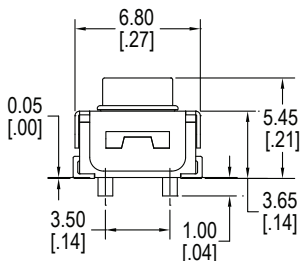
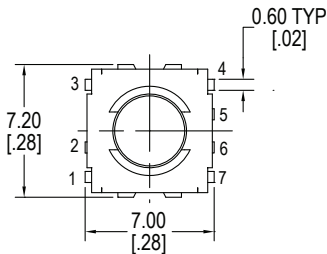
Dimensions



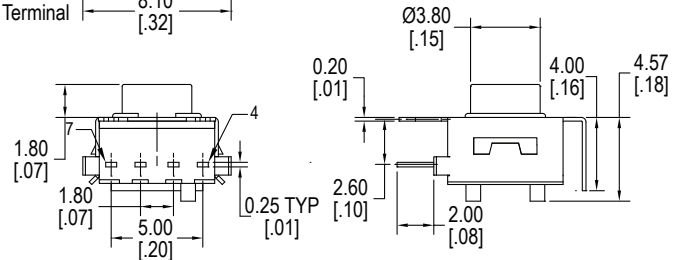
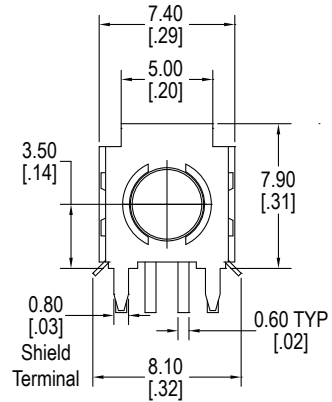
Through-Hole



SMD Gull Wing

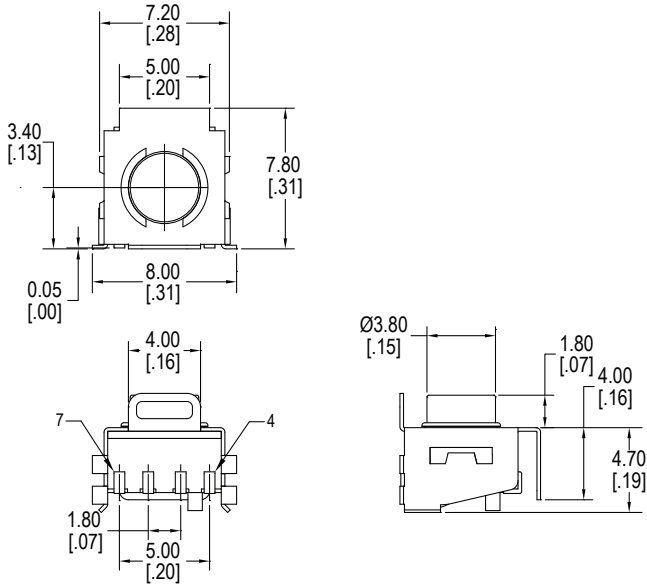


SMD J Lead



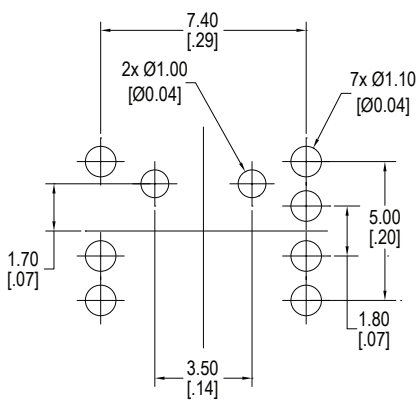
Through-Hole Right Angle

Dimensions

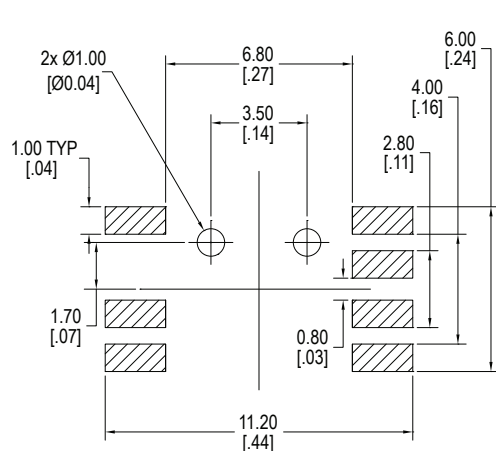


SMD Right Angle

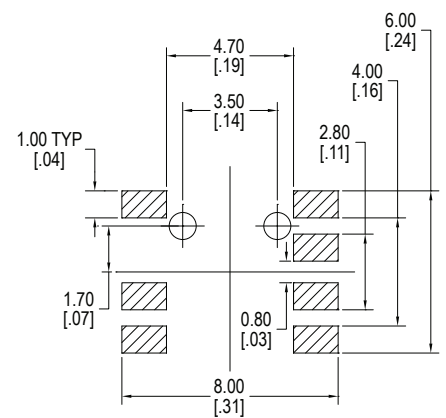
PC Layouts



Through-Hole

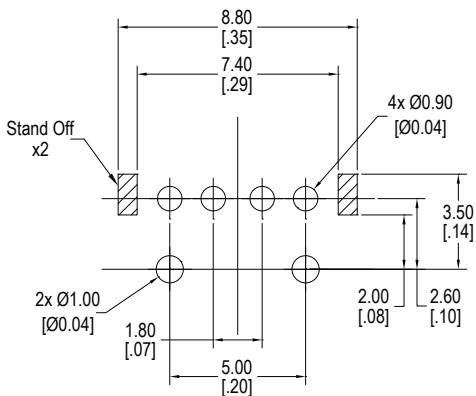


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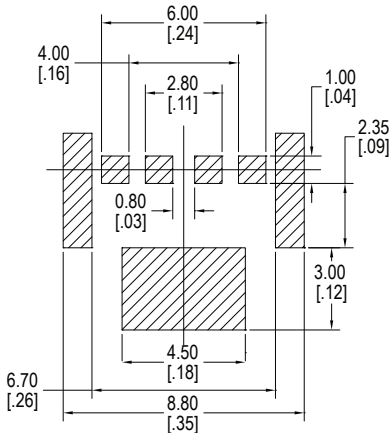


SMD J Lead

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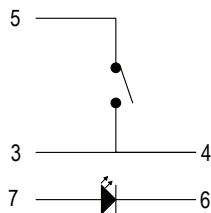


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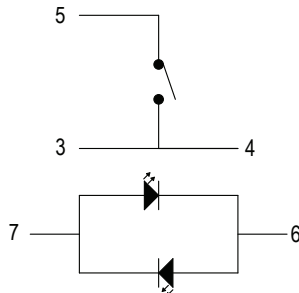


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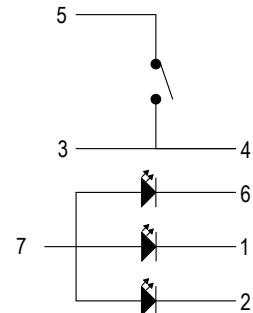
Schematics



Single LED



Dual LED



RGB

LED Characteristics

LED Ratings		RGB			LED Colors							
		R	G	B	W	B	A	PG	R	G	Y	Units
Reverse Voltage	V_R	5	5	5	5	5	5	5	5	5	5	V
Forward Current (avg)	I_F	30	30	30	30	30	30	30	30	30	30	mA
Forward Current (avg)	I_{FS}	125	125	125	125	125	125	125	125	125	125	mA
Reverse Current $V_R = 5V$	I_R	10	10	10	10	10	10	10	10	10	10	μA
Power Dissipation	P_T	75	111	111	111	111	75	111	75	75	75	mW
Operating & Storage Temperature	T_A	-40 ~ +85										$^{\circ}C$
Forward Voltage (typ) $I_F = 20mA$	V_F	2.0	3.2	3.0	3.1	3.1	2.0	3.0	2.0	2.1	2.0	V
Forward Voltage (max) $I_F = 20mA$	V_F	2.5	3.7	3.7	3.7	3.7	2.5	3.7	2.5	2.5	2.5	V
Wavelength at Peak Emission, $I_F = 20mA$	λ_P	636	523	475	n/a	465	610	525	635	575	595	nm
Spectral Line Half-Width, $I_F = 20mA$	$\Delta\lambda$	19	34	21	n/a	23	19	36	22	18	17	nm
Luminous Intensity, $I_F = 20mA$	LI	200	2500	500	1250	200	400	1600	160	125	630	mcd
Viewing Angle	Θ	120	120	120	120	120	120	120	120	120	120	deg