

LED Indicators, 6mm~25mm

Specifications

Rated Current	3mA ~ 20mA	Operating Temperature	-40°C to 85°C*
Dielectric Strength	1500Vrms min @ sea level, case to LED	Storage Temperature	-40°C to 85°C*
Insulation Resistance	≥ 100MΩ min	Sealing Degree	IP67
Shock Resistance	50Hz, amplitude 1.2mm	*contact factory for higher values	
Vibration Resistance	10G		

Materials

Face Plate	Stainless Steel (SUS 304), Stainless Steel (SUS 316L), Nickel Plated Brass, or Black Plated Brass
LED Lens	Polycarbonate (PC)
Threaded Housing	Stainless Steel (SUS 304), Stainless Steel (SUS 316L), Nickel Plated Brass, or Black Plated Brass
Terminal Support	Polybutylene Terephthalate (PBT)
Terminals	Brass, Tin Plated
Hardware	One Hex Nut & One "O" Ring Supplied

LED Characteristics

LED Ratings		Color						
		R	Y	G	B	O	W	Units
Reverse Voltage	V_R	5	5	5	5	5	5	V
Forward Current (avg)	I_F	25	25	30	30	25	30	mA
Forward Current (peak)	I_{FS}	120	120	160	160	120	160	mA
Reverse Current $V_R = 5V$	I_R	10	10	10	10	10	10	μA
Power Dissipation	P_T	80	80	120	120	80	120	mW
Operating & Storage Temperature	T_A	-40 ~ +85						C°
Forward Voltage (typ) $I_F = 20mA$	V_F	2.1	2.1	3.3	3.3	2.0	3.0	V
Forward Voltage (max) $I_F = 20mA$	V_F	2.4	2.5	3.6	3.6	2.3	3.6	V
Wavelength at Peak Emmission $I_F = 20mA$	λ_P	635	592	516	463	606	n/a	nm
Spectral Line Half-Width $I_F = 20mA$	$\Delta\lambda$	14	12	28	20	12	n/a	nm
Luminous Intensity, $I_F = 20mA$	LI	120	120	170	100	120	700	mcd
Viewing Angle	Θ	145	145	145	145	145	145	deg

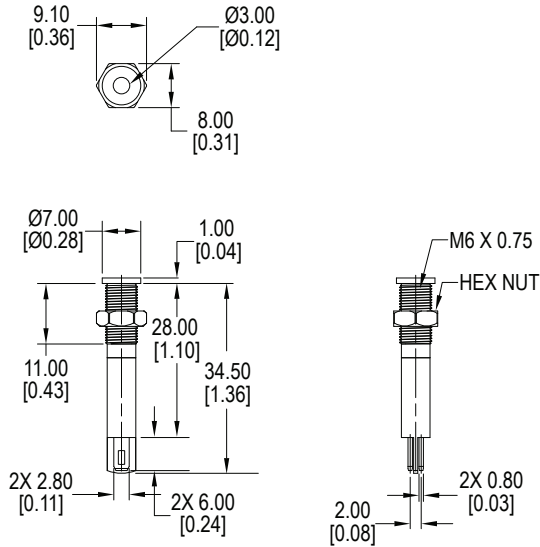
Ordering Information

1. Series	IN	8	A	S	RGBA	12	W
IN							
2. Size							
6 = 6mm							
8 = 8mm							
10 = 10mm							
12 = 12mm							
14 = 14mm							
16 = 16mm							
19 = 19mm, <i>not available with Nickel Plated Brass</i>							
22 = 22mm, <i>not available with Nickel Plated Brass</i>							
25 = 25mm, <i>not available with Nickel Plated Brass</i>							
3. Lens							
A = Flush Bezel							
B = Rounded Bezel							
4. Indicator Finish*							
S = Brushed Stainless Steel (SUS 304)							
SM = Brushed Stainless Steel (SUS 316L)							
B = Black Plated Brass							
N = Nickel Plated Brass, <i>Not available with IN19, IN22 & IN25</i>							
5. LED Color*							
R = Red			RO = Red / Orange dual		RGBA = RGB LED, <i>common anode</i>		
Y = Yellow			RY = Red / Yellow dual		RGBC = RGB LED, <i>common cathode</i>		
G = Green			RG = Red / Green dual		<i>RGBA & RGBC available with 8~12mm options</i>		
B = Blue			RB = Red / Blue dual				
W = White			OY = Orange / Yellow dual				
O = Orange			OG = Orange / Green dual				
			OB = Orange / Blue dual				
			YG = Yellow / Green dual				
			YB = Yellow / Blue dual				
			GB = Green / Blue dual				
7. LED Voltage*							
6 = 6VDC							
12 = 12VDC							
24 = 24VDC							
110 = 110VDC							
220 = 220VDC							
N = No internal resistor in series with the LED							
8. Terminal Option							
C = .100" Quick Connect, <i>not available with RGB LED options</i>							
W = 150mm Wire, <i>available with 6mm ~ 14mm sizes</i>							
Z = Screw Terminals, <i>available with 16mm ~ 25mm sizes</i>							

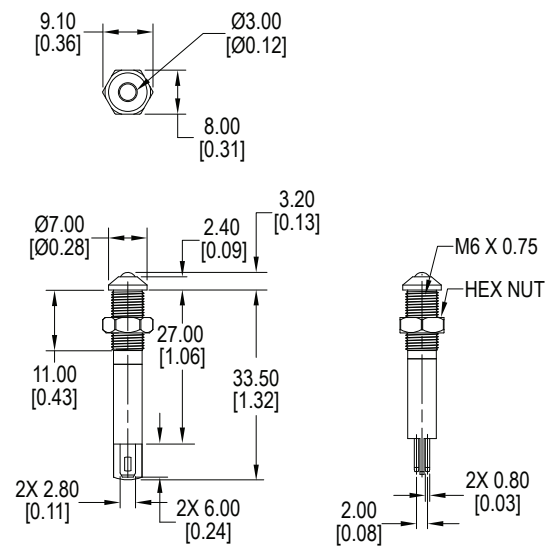
*contact factory for other finish or LED options

Dimensions

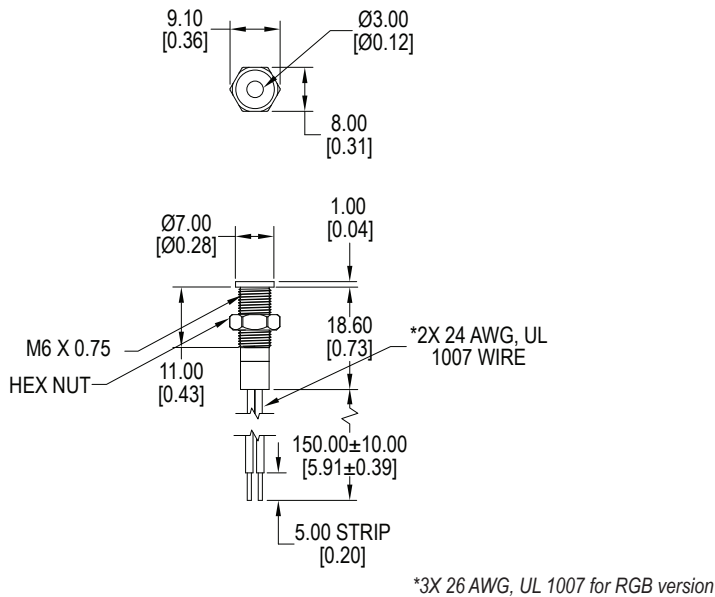
6mm, Flat Lens, Quick Connect



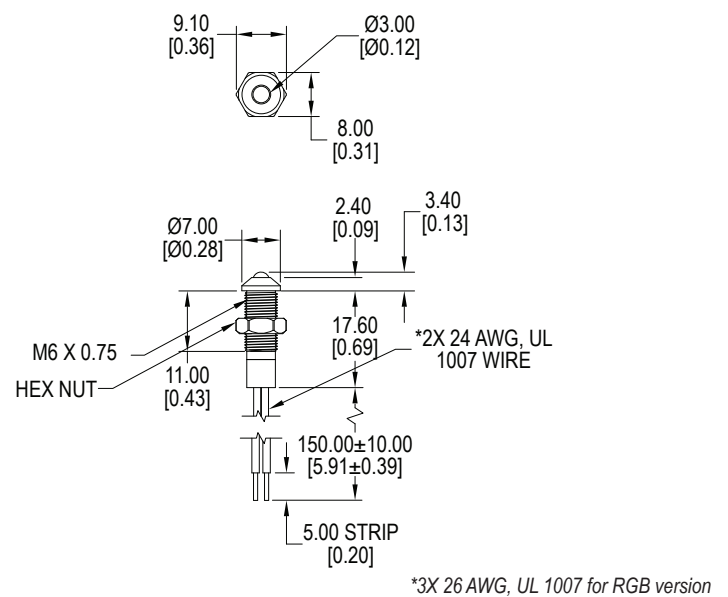
6mm, Round Lens, Quick Connect



6mm, Flat Lens, Wire



6mm, Round Lens, Wire

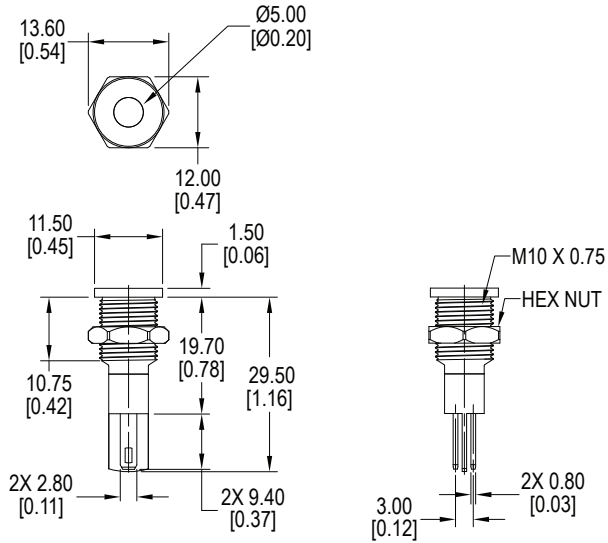


8mm, Flat Lens, Quick Connect

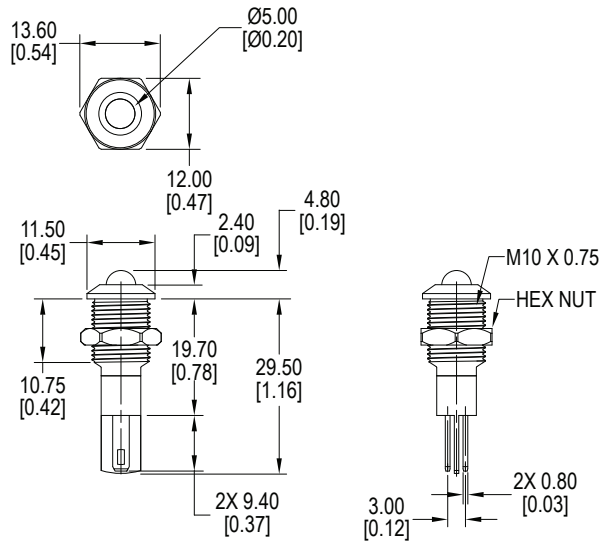


Dimensions

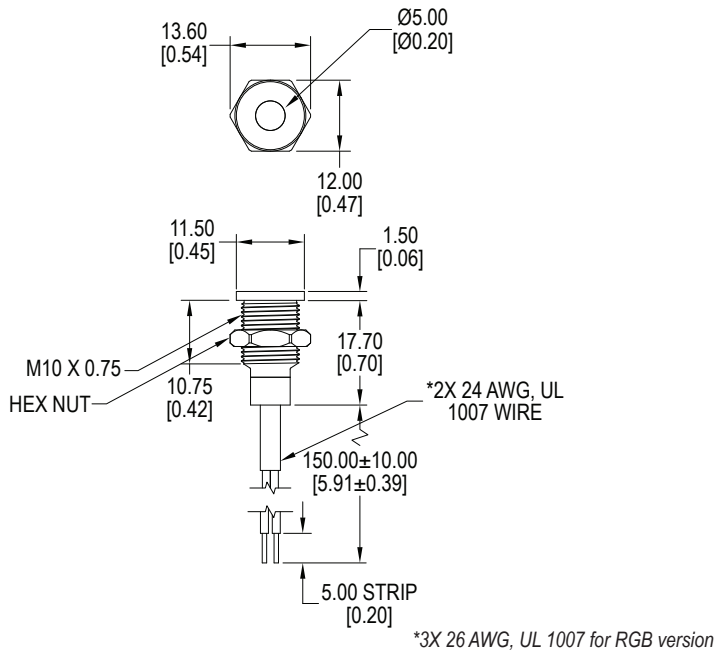
10mm, Flat Lens, Quick Connect



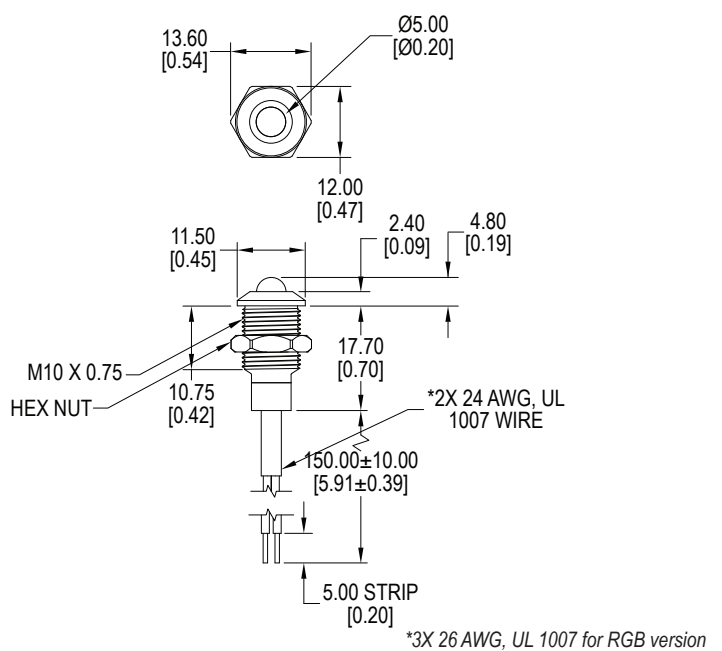
10mm, Round Lens, Quick Connect



10mm, Flat Lens, Wire

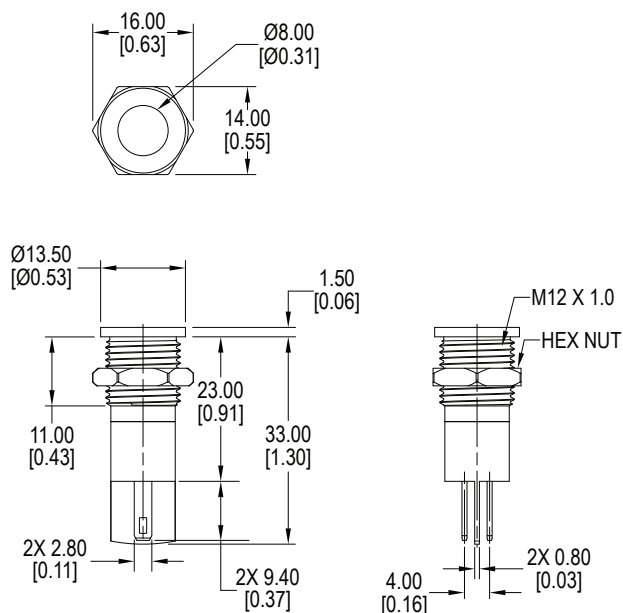


10mm, Round Lens, Wire

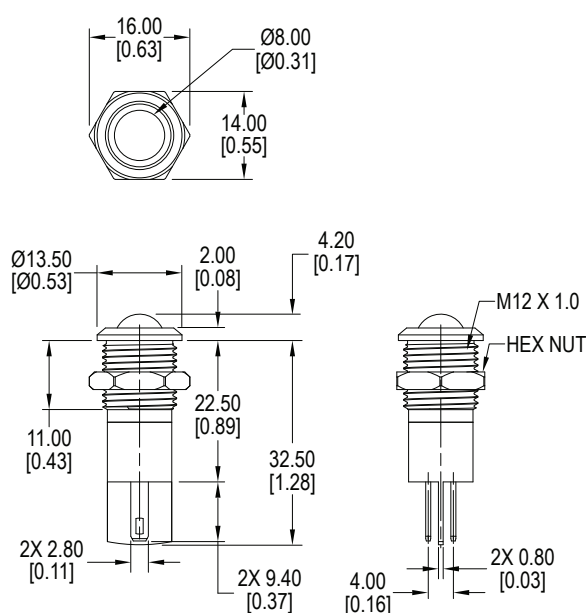


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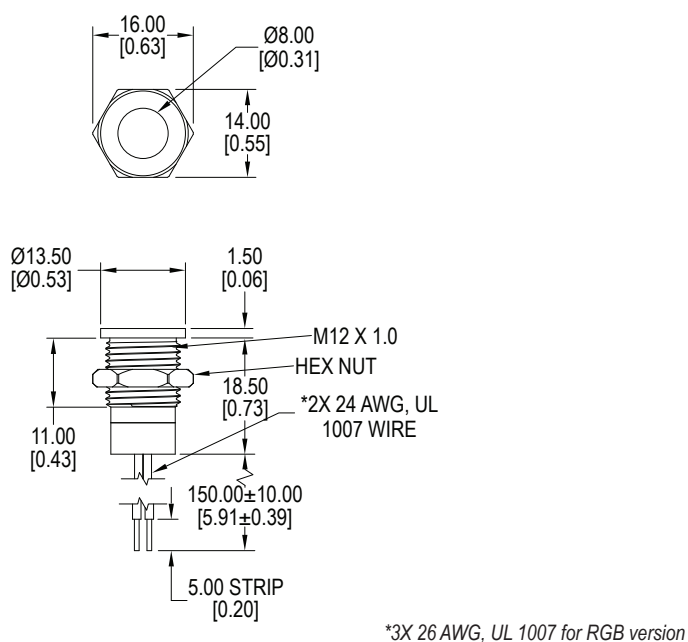
12mm, Flat Lens, Quick Connect



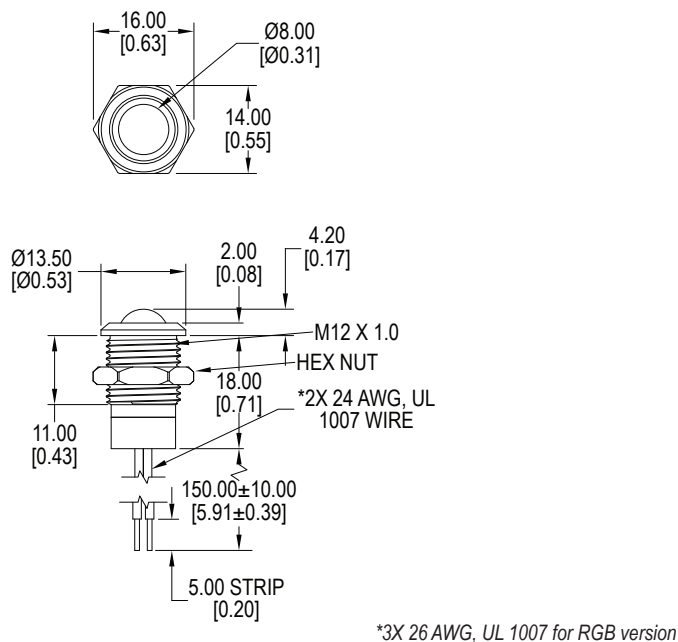
12mm, Round Lens, Quick Connect



12mm, Flat Lens, Wire

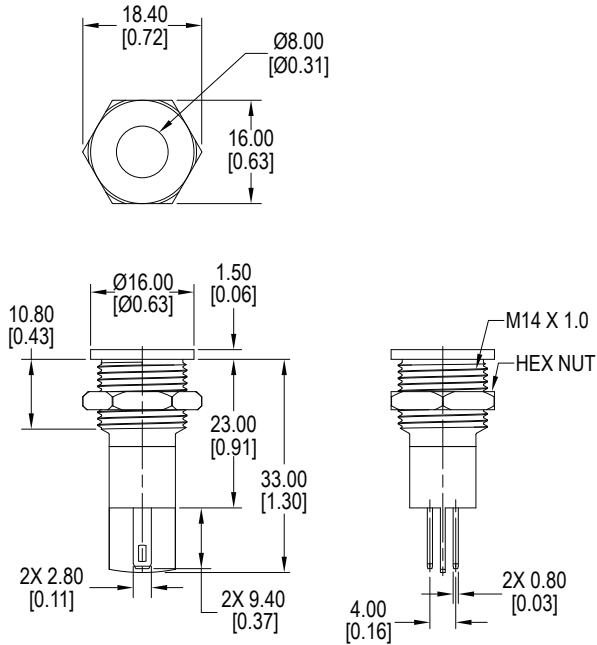


12mm, Round Lens, Wire

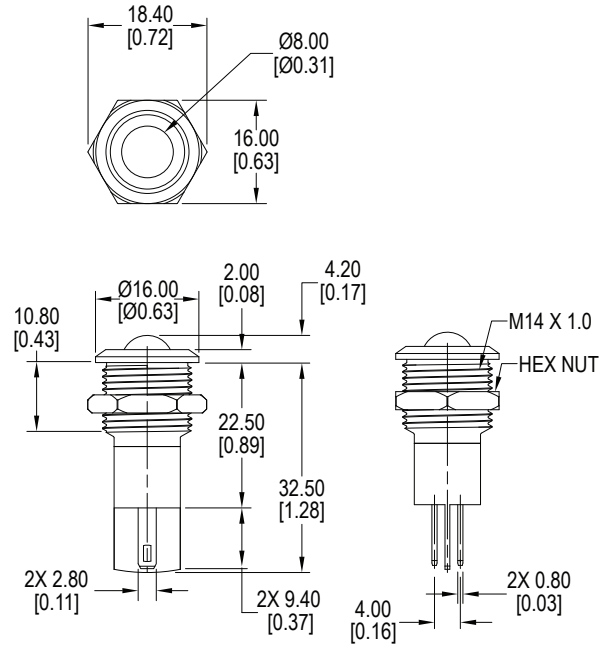


Dimensions

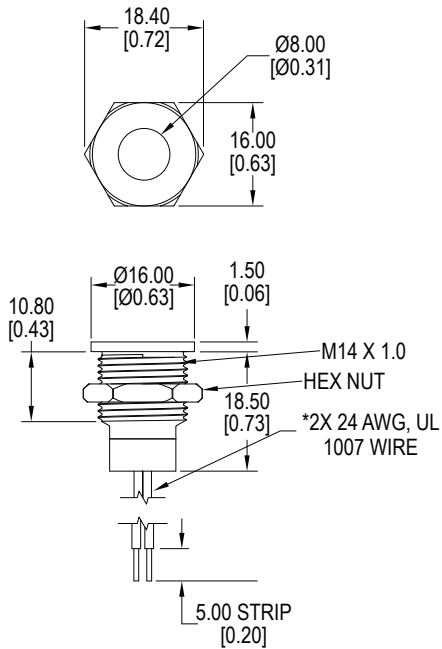
14mm, Flat Lens, Quick Connect



14mm, Round Lens, Quick Connect

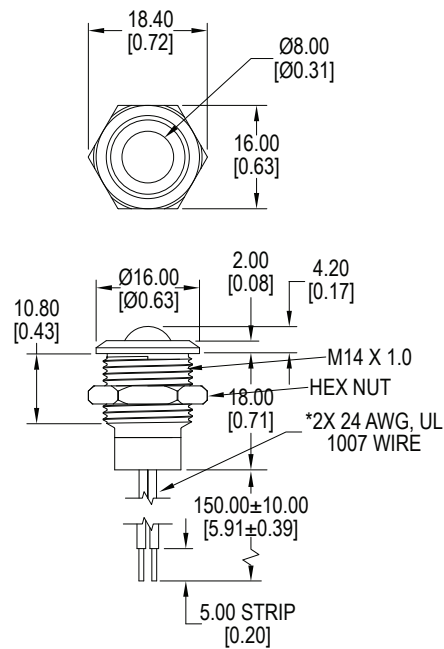


14mm, Flat Lens, Wire



*3X 26 AWG, UL 1007 for RGB version

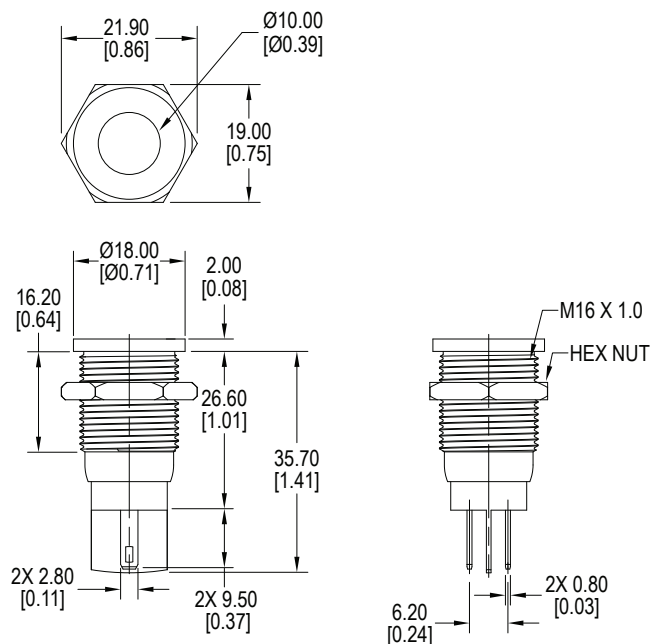
14mm, Round Lens, Wire



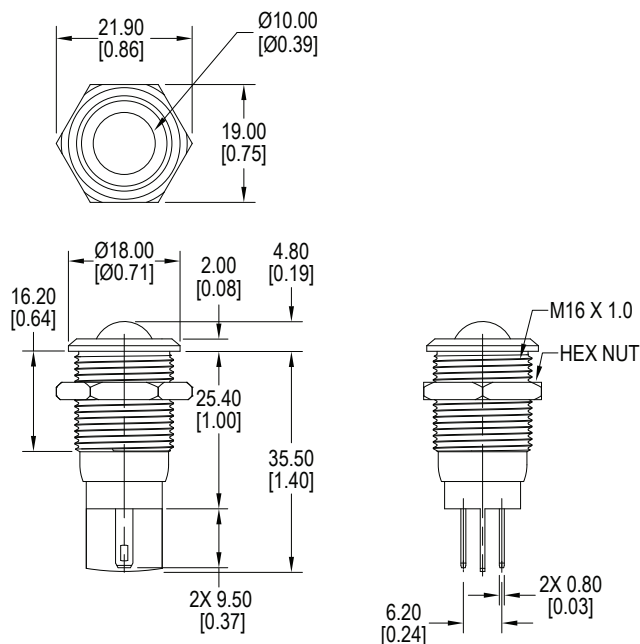
*3X 26 AWG, UL 1007 for RGB version

Dimensions

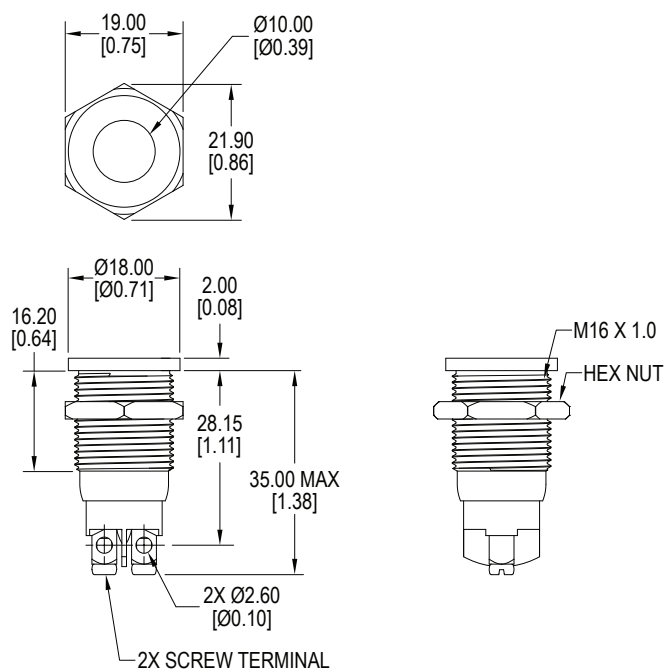
16mm, Flat Lens, Quick Connect



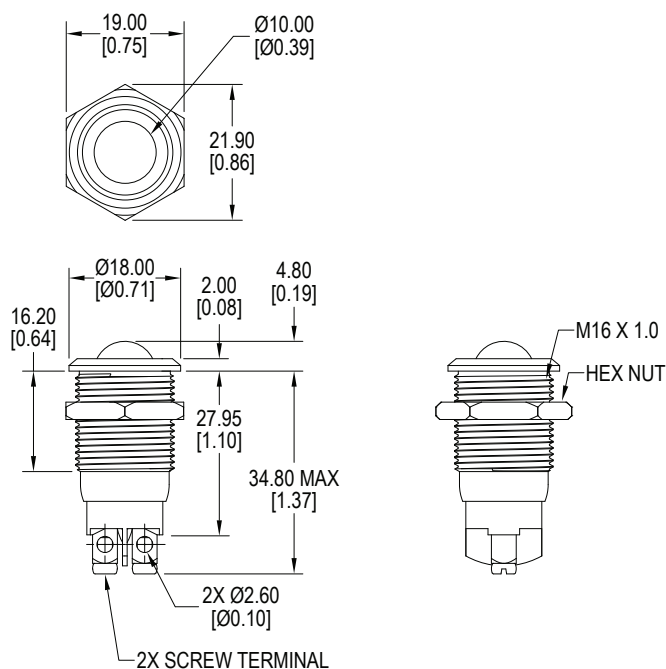
16mm, Round Lens, Quick Connect



16mm, Flat Lens, Screw Terminal

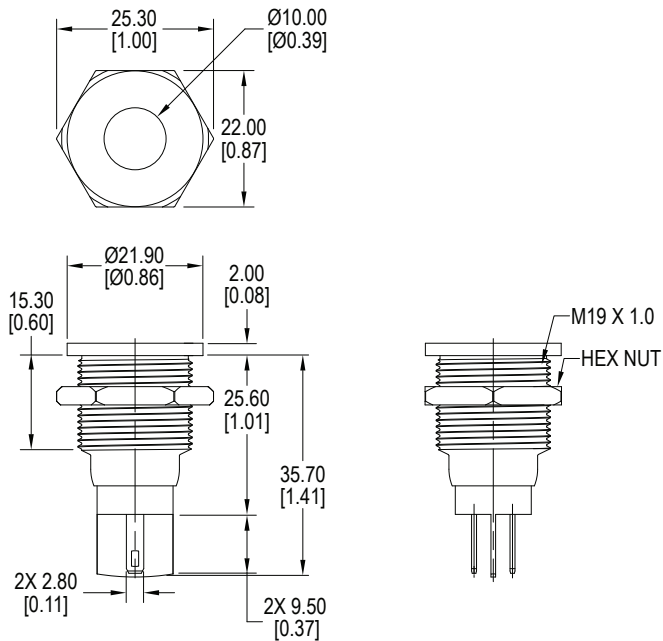


16mm, Round Lens, Screw Terminal

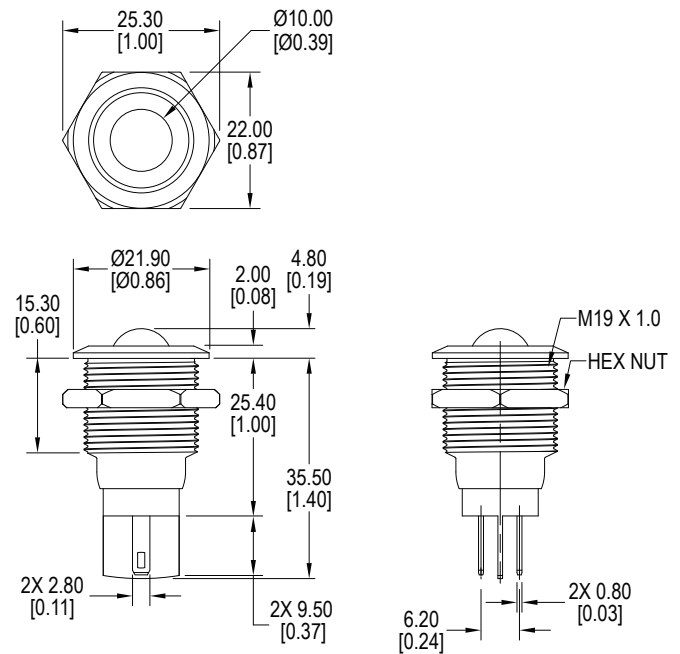


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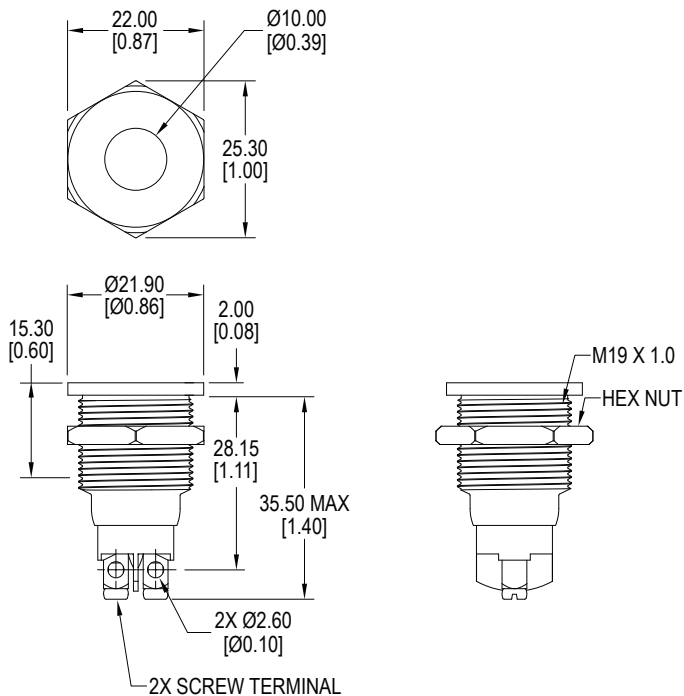
19mm, Flat Lens, Quick Connect



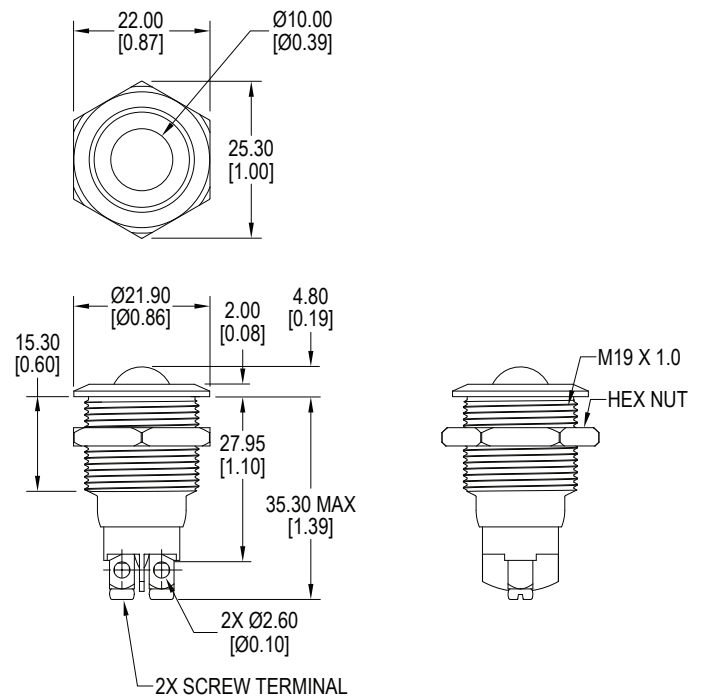
19mm, Round Lens, Quick Connect



19mm, Flat Lens, Screw Terminal

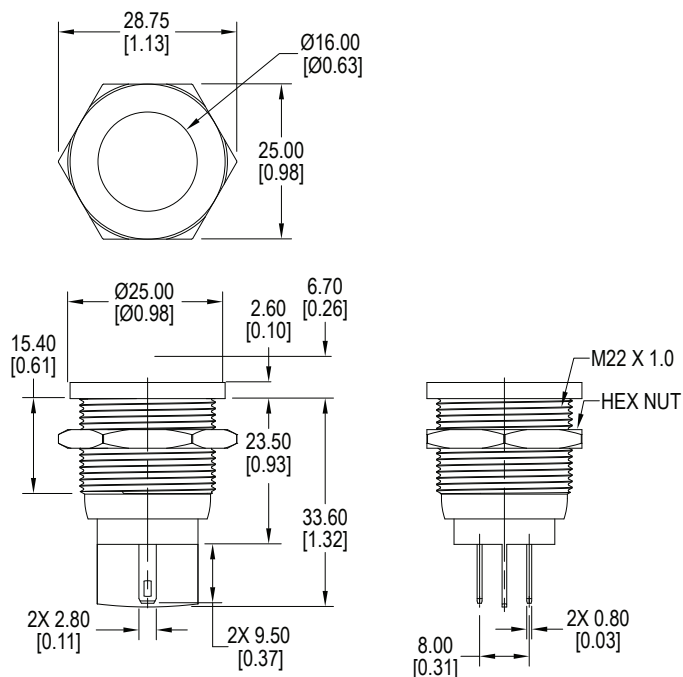


19mm, Round Lens, Screw Terminal

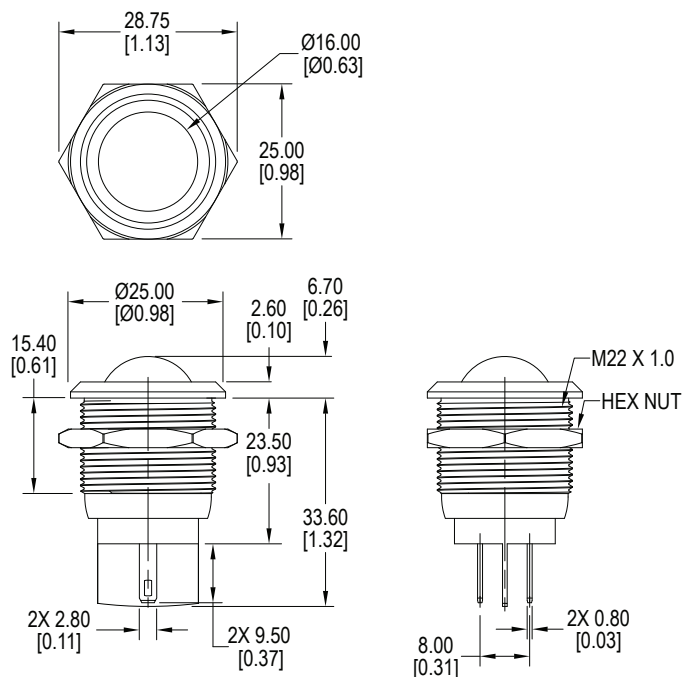


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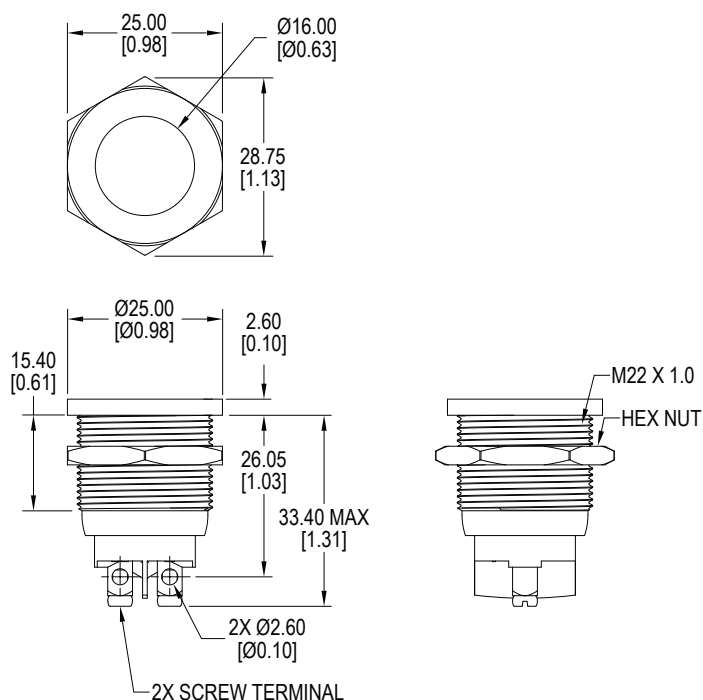
22mm, Flat Lens, Quick Connect



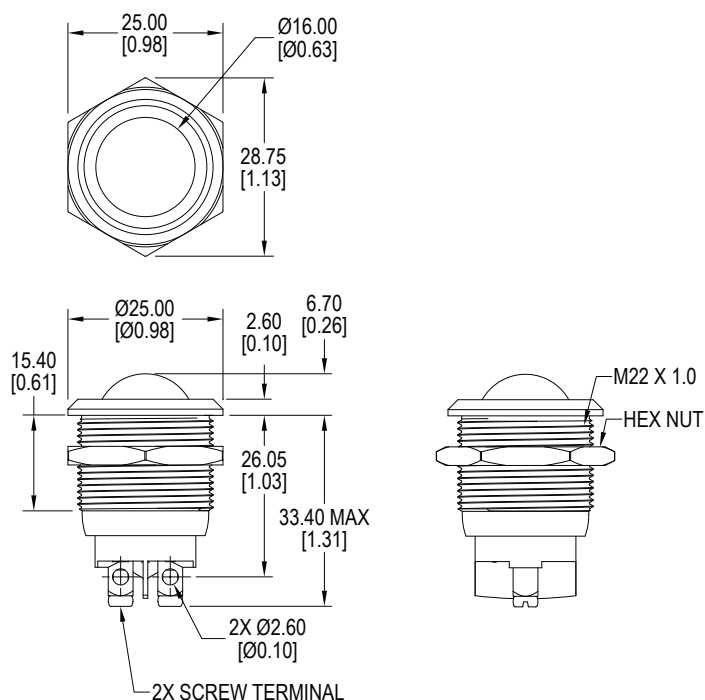
22mm, Round Lens, Quick Connect



22mm, Flat Lens, Screw Terminal

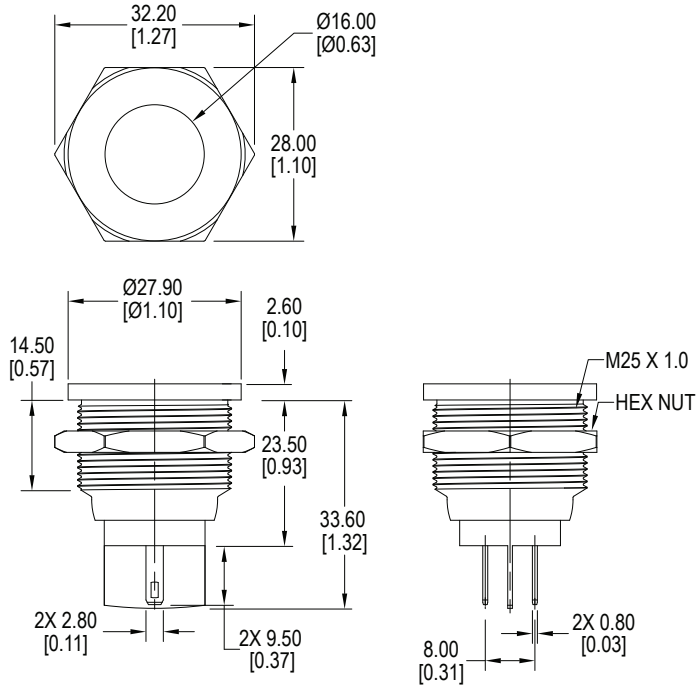


22mm, Round Lens, Screw Terminal

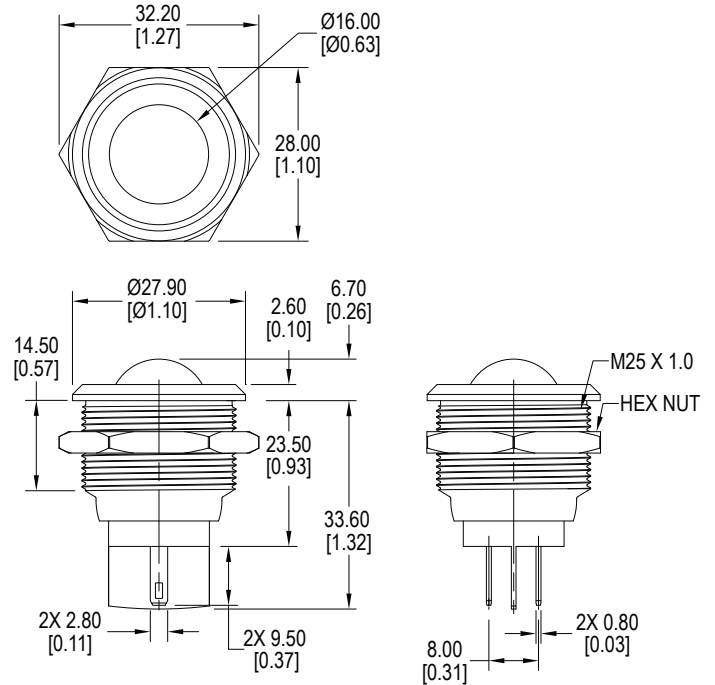


Dimensions

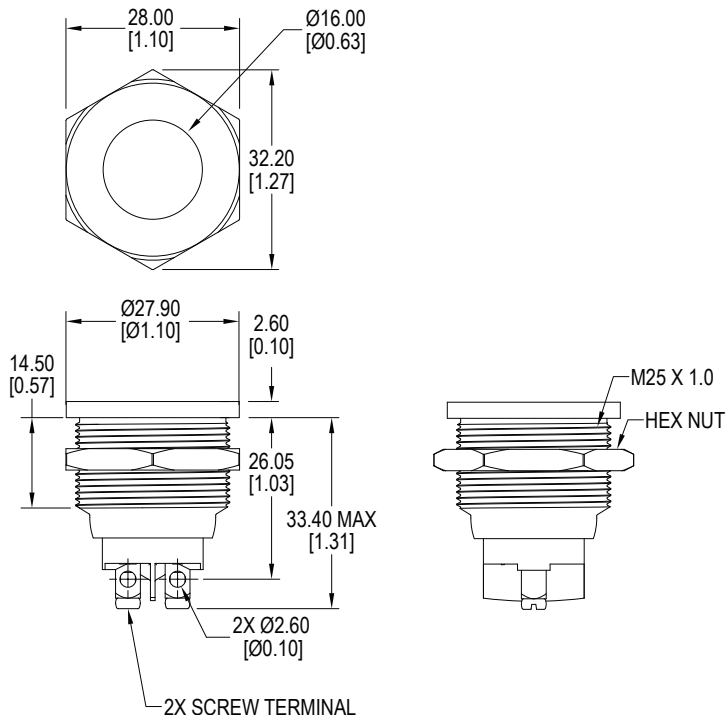
25mm, Flat Lens, Quick Connect



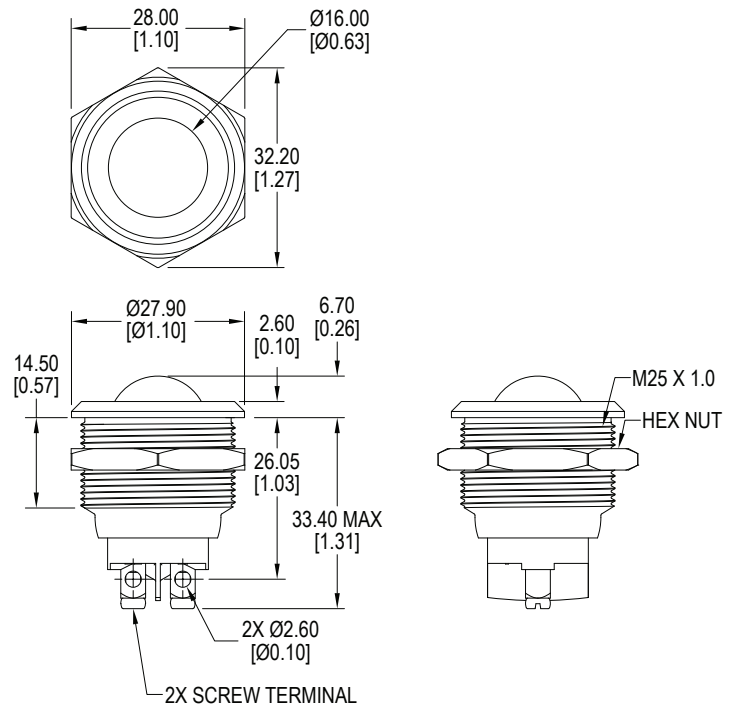
25mm, Flat Lens, Screw Terminal



25mm, Round Lens, Quick Connect

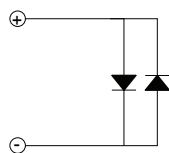


25mm, Round Lens, Screw Terminal

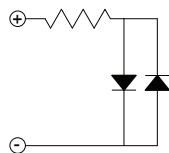


Schematics

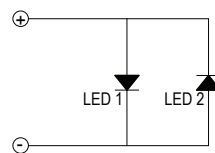
Single LED



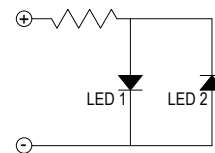
Single LED, with resistor



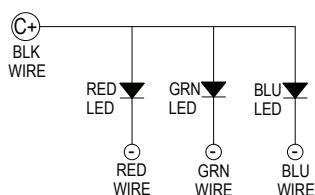
Dual LED



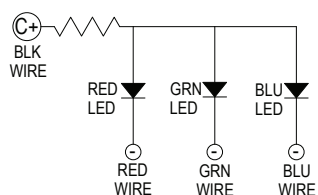
Dual LED, with resistor



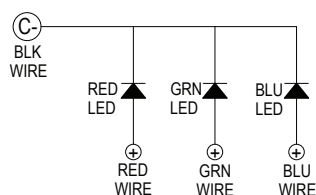
RGBA
common anode



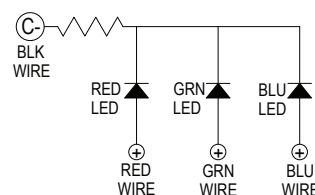
RGBA, with resistor
common anode



RGBC
common cathode

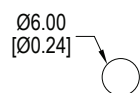


RGBC, with resistor
common cathode

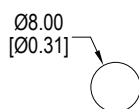


Panel Cutout

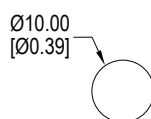
IN6



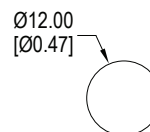
IN8



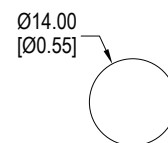
IN10



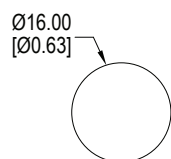
IN12



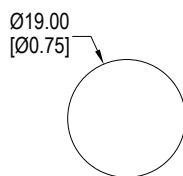
IN14



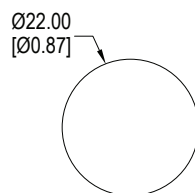
IN16



IN19



IN22



IN25

