

LED Indicators, 6mm~25mm

Specifications

Rated Current	3mA ~ 20mA
Dielectric Strength	1500Vrms min @ sea level, case to LED
Insulation Resistance	≥100MΩ min
Shock Resistance	50Hz, amplitude 1.2mm
Vibration Resistance	10G

Operating Temperature	-40ºC to 85ºC*
Storage Temperature	-40ºC to 85ºC*
Sealing Degree	IP67

**contact factory for higher values*

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						Cº
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
- 22 = 22mm
- 25 = 25mm

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, *Not available with IN19, IN22 & IN25*

5. LED Color*

R = Red	RO = Red / Orange dual	RGBA = RGB LED, *common anode*
Y = Yellow	RY = Red / Yellow dual	RGBC = RGB LED, *common cathode*
G = Green	RG = Red / Green dual	*RGBA & RGBC only available with sizes*
B = Blue	RB = Red / Blue dual	*8~25mm and wired terminal option*
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	

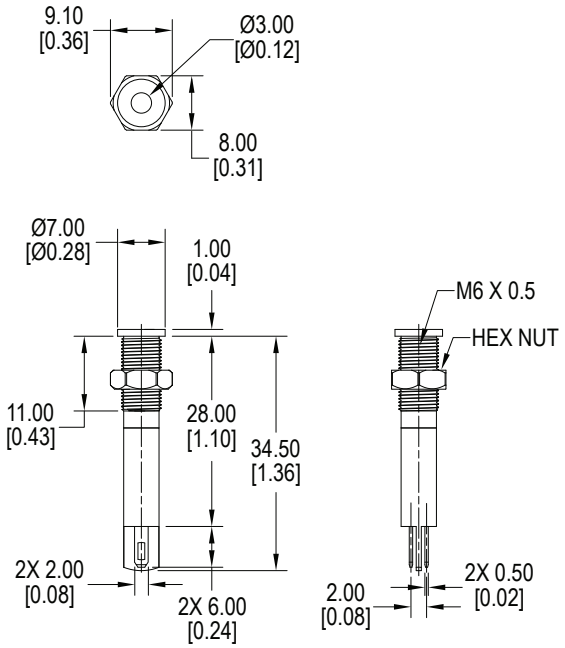
7. LED Voltage*
- 6 = 6V
- 12 = 12V
- 24 = 24V
- 110 = 110V
- 220 = 220V
- N = No internal resistor in series with the LED

8. Terminal Option
- C = .100" Quick Connect, *not available with RGB LED options*
- W = 150mm Wire
- Z = Screw Terminals, *available with 16mm ~ 25mm sizes; not available with RGB LED options*

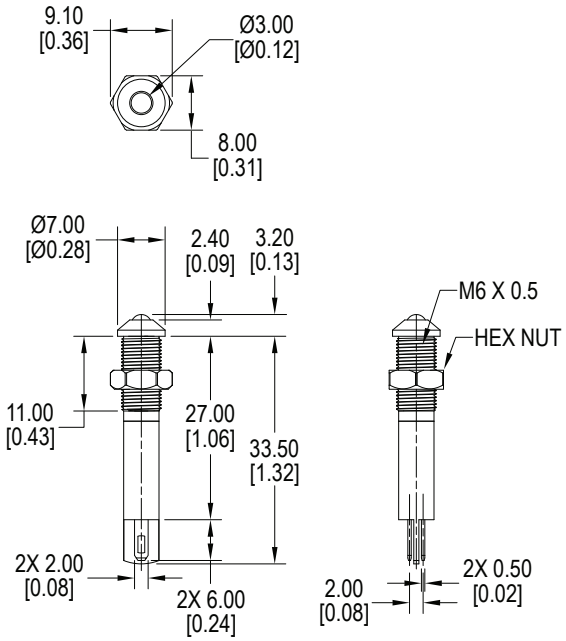
**contact factory for other finish or LED options*

Dimensions

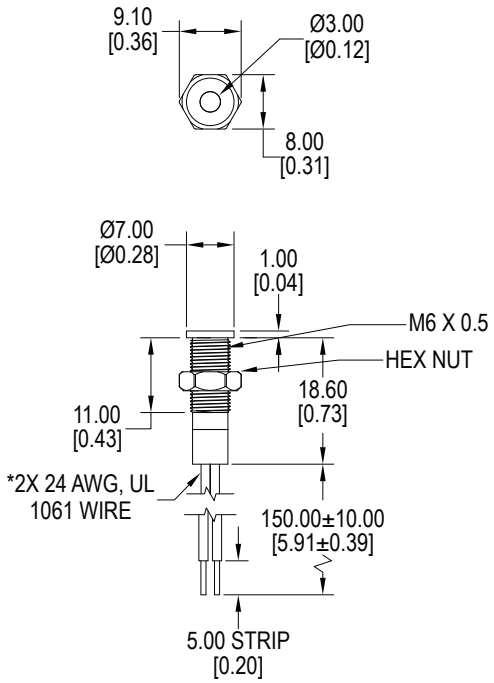
6mm, Flat Lens, Quick Connect



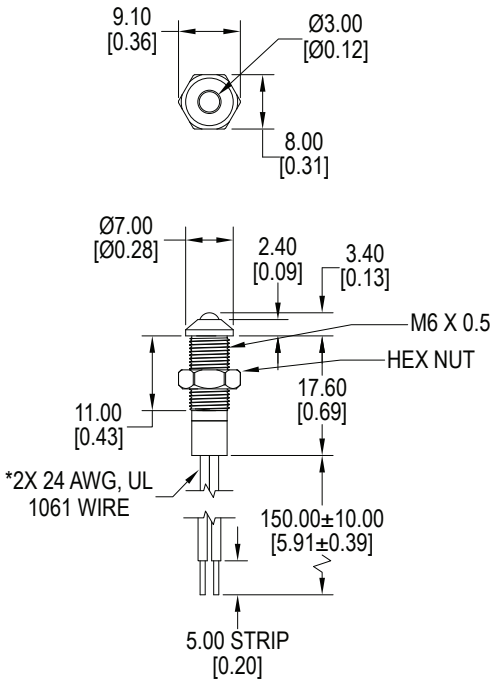
6mm, Round Lens, Quick Connect



6mm, Flat Lens, Wire

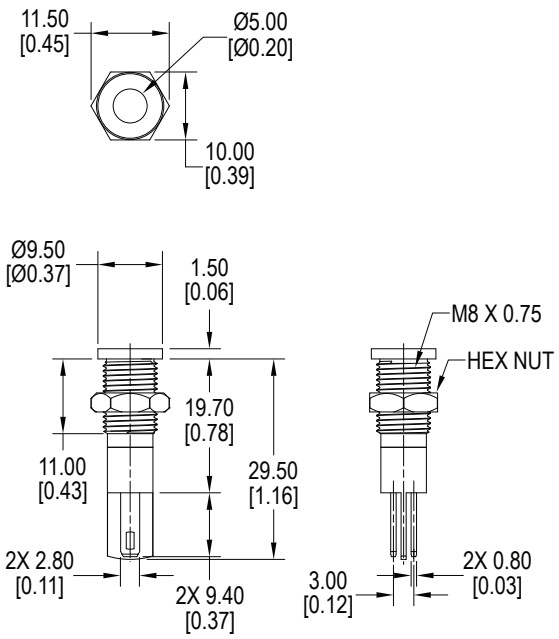


6mm, Round Lens, Wire

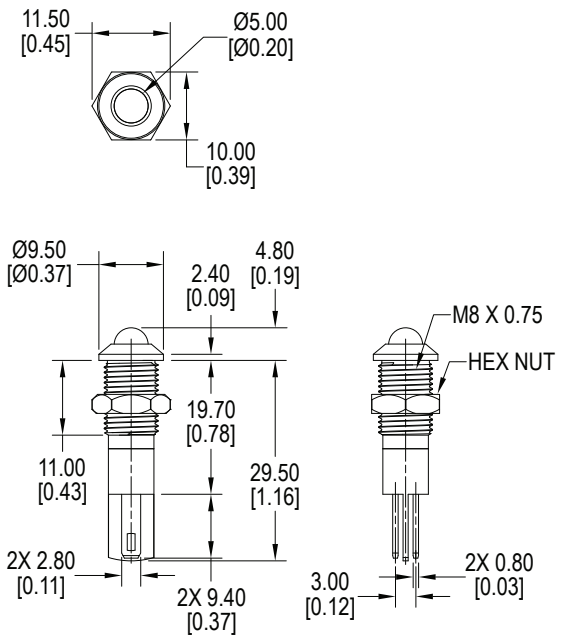


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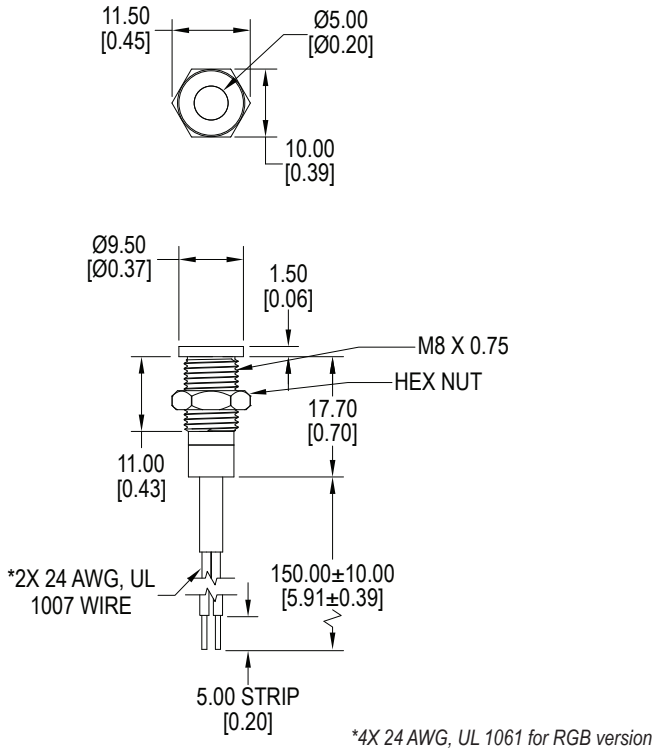
8mm, Flat Lens, Quick Connect



8mm, Round Lens, Quick Connect

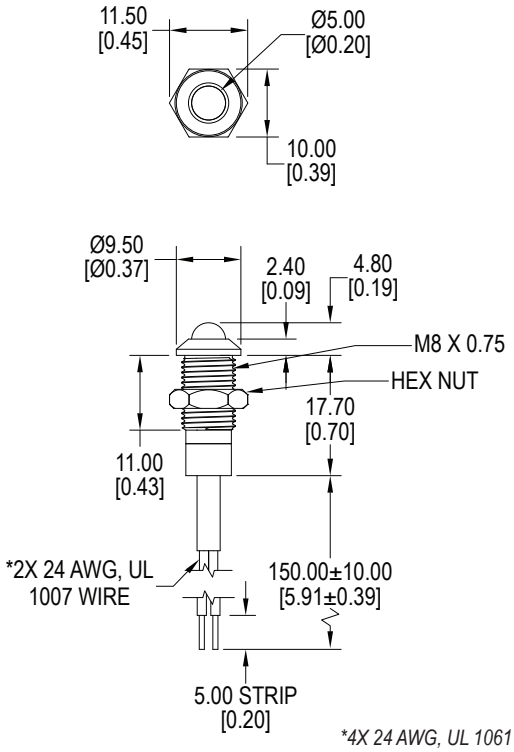


8mm, Flat Lens, Wire



*4X 24 AWG, UL 1061 for RGB version

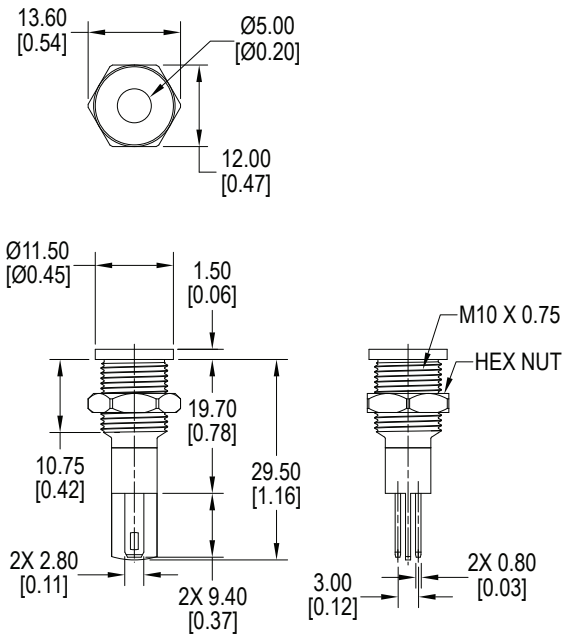
8mm, Round Lens, Wire



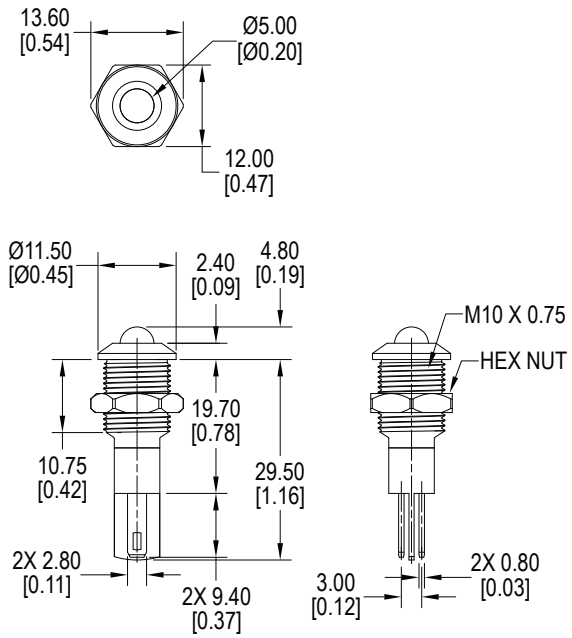
*4X 24 AWG, UL 1061 for RGB version

Dimenstions

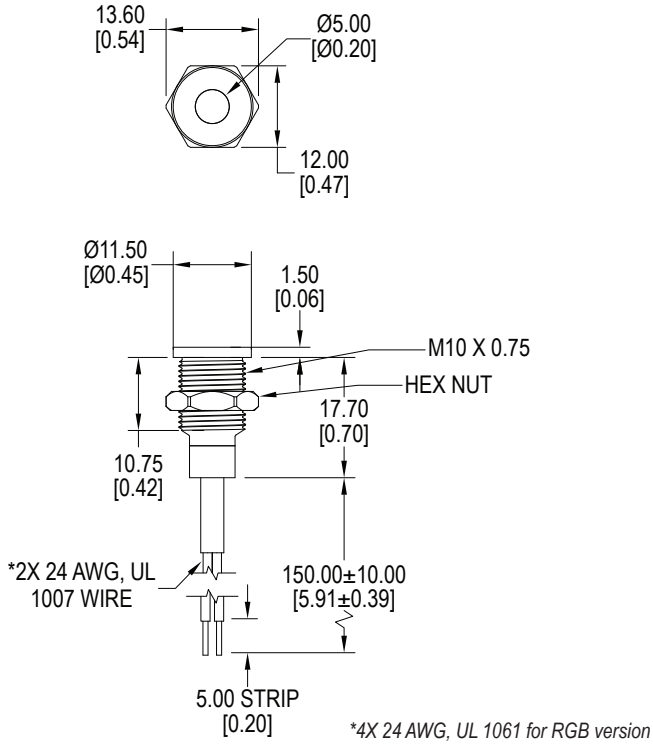
10mm, Flat Lens, Quick Connect



10mm, Round Lens, Quick Connect

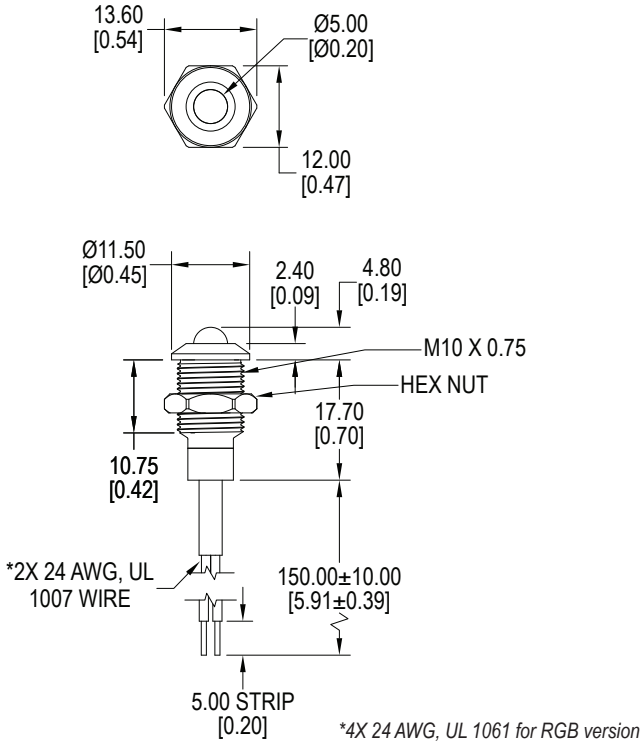


10mm, Flat Lens, Wire



**4X 24 AWG, UL 1061 for RGB version*

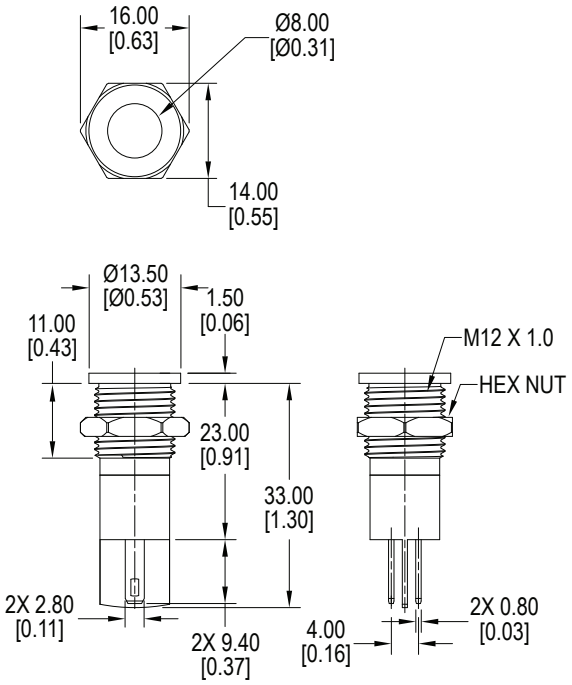
10mm, Round Lens, Wire



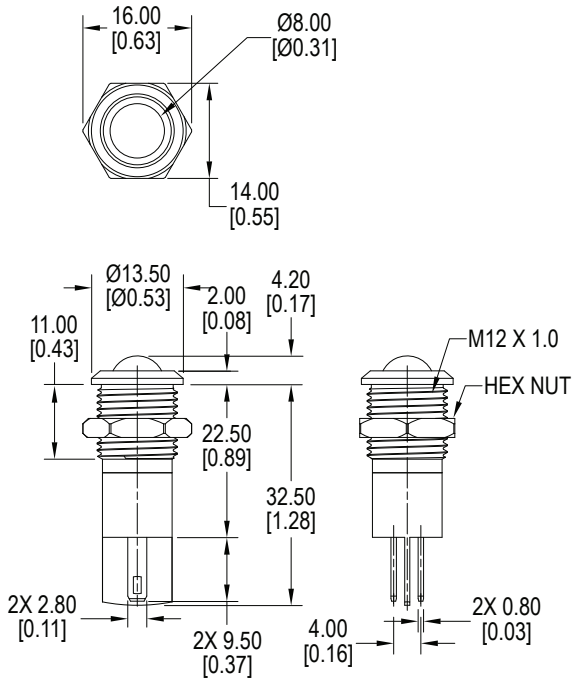
**4X 24 AWG, UL 1061 for RGB version*

Dimensions

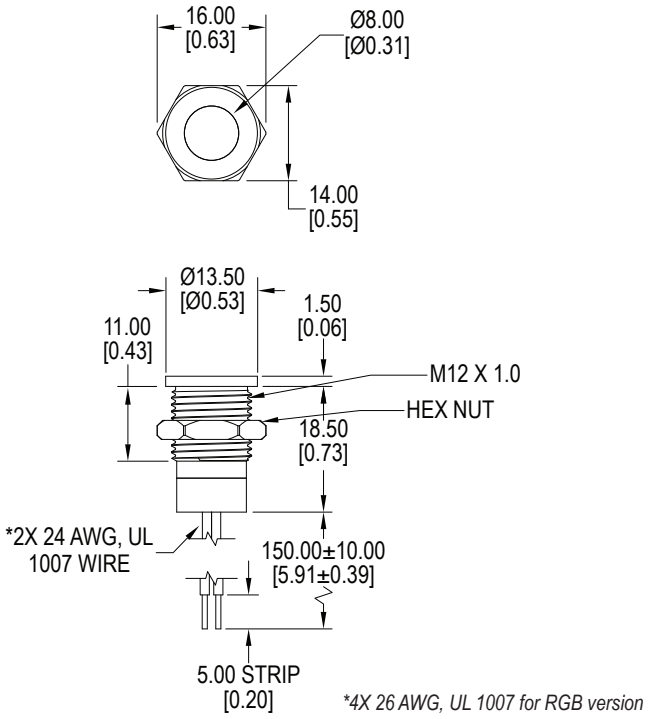
12mm, Flat Lens, Quick Connect



12mm, Round Lens, Quick Connect

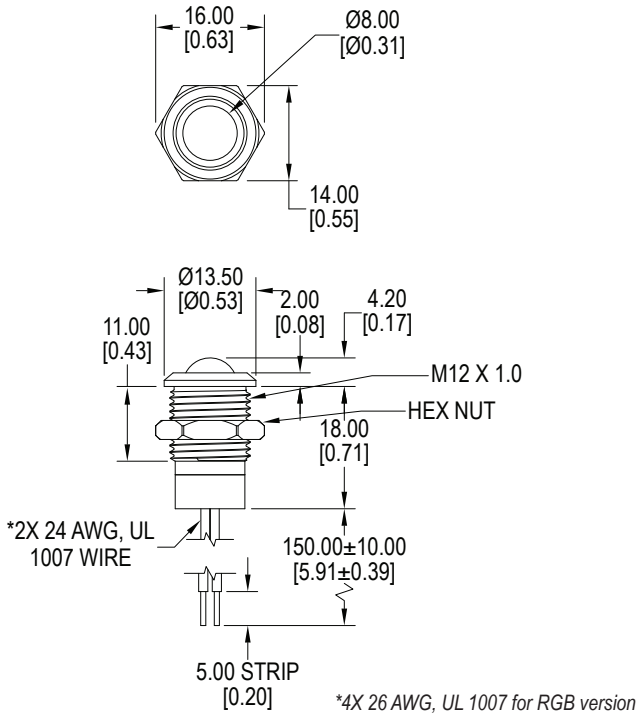


12mm, Flat Lens, Wire



*4X 26 AWG, UL 1007 for RGB version

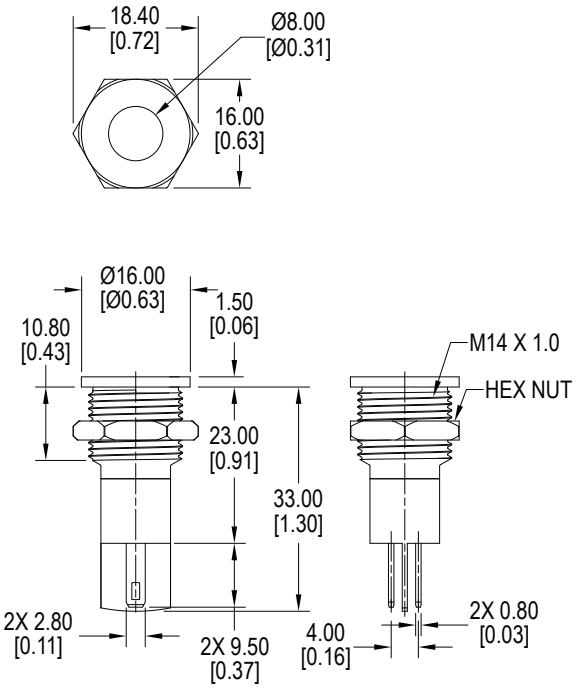
12mm, Round Lens, Wire



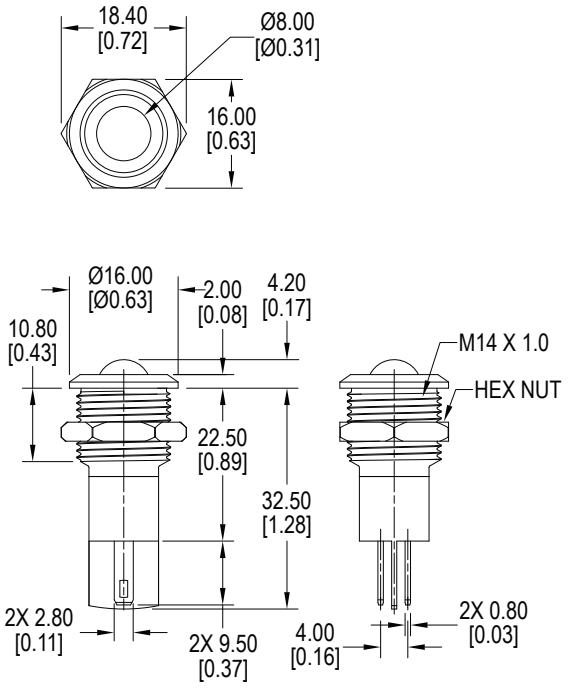
*4X 26 AWG, UL 1007 for RGB version

Dimensions

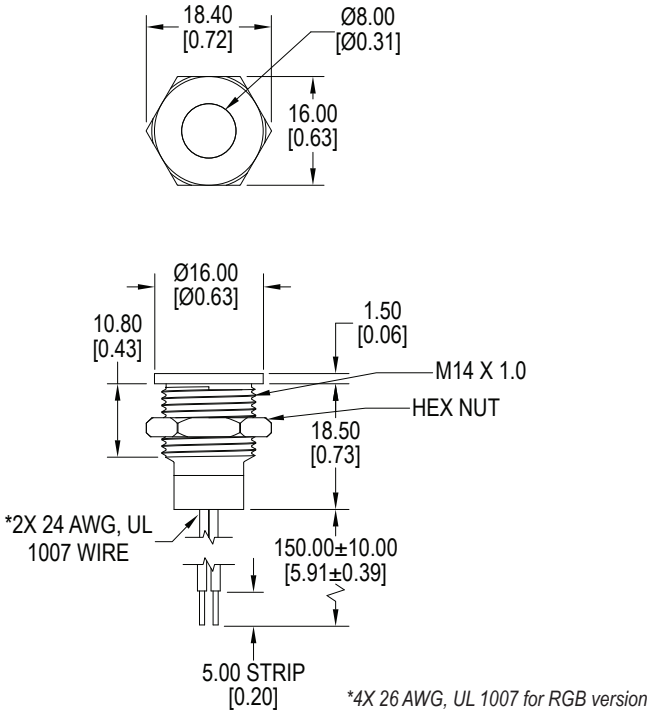
14mm, Flat Lens, Quick Connect



14mm, Round Lens, Quick Connect

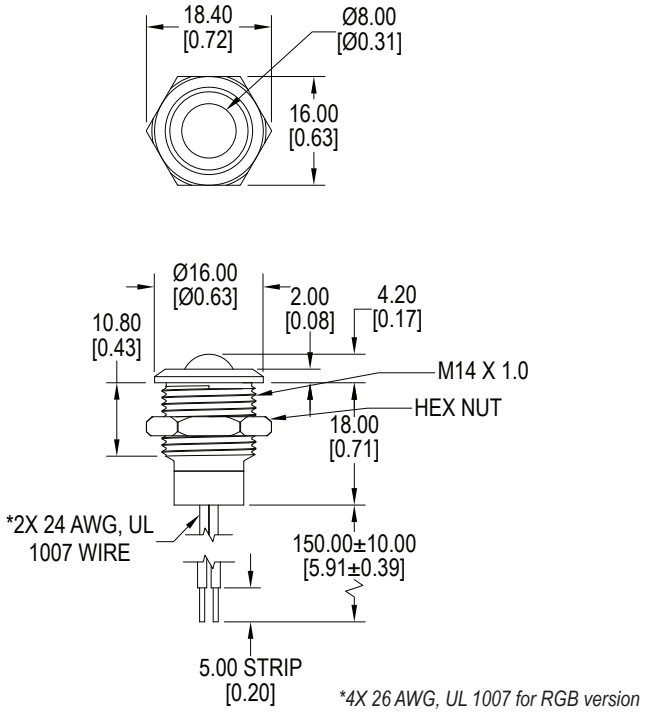


14mm, Flat Lens, Wire



**4X 26 AWG, UL 1007 for RGB version*

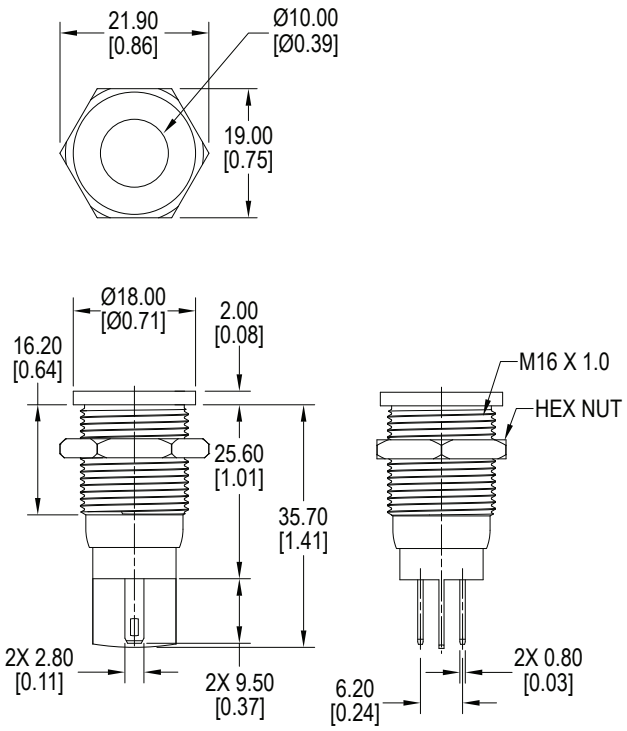
14mm, Round Lens, Wire



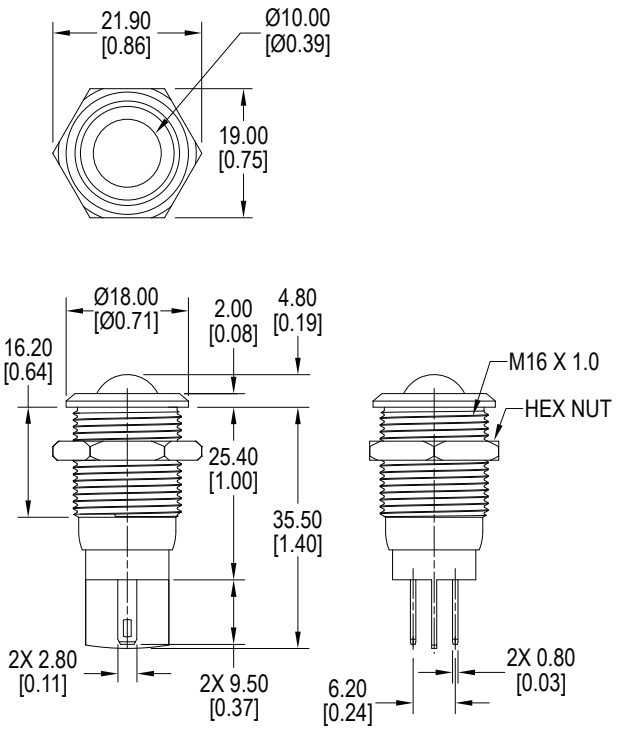
**4X 26 AWG, UL 1007 for RGB version*

Dimensions

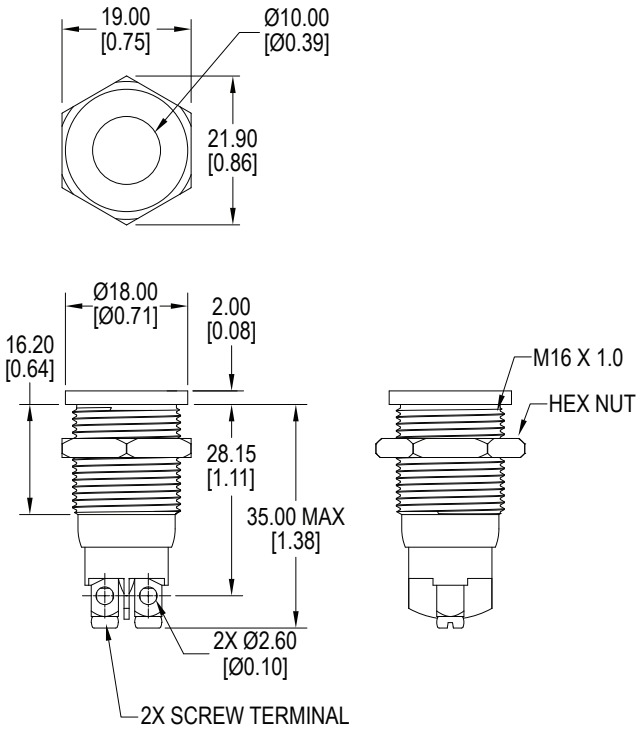
16mm, Flat Lens, Quick Connect



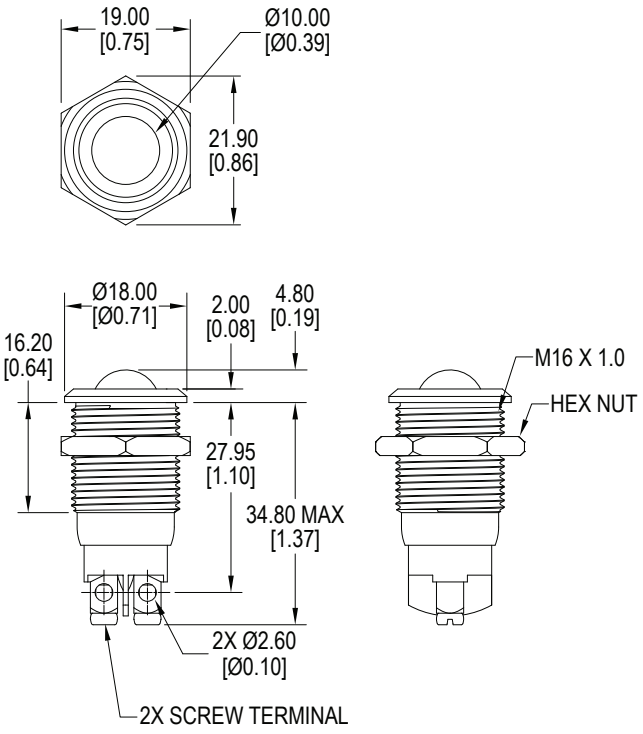
16mm, Round Lens, Quick Connect



16mm, Flat Lens, Screw Terminal

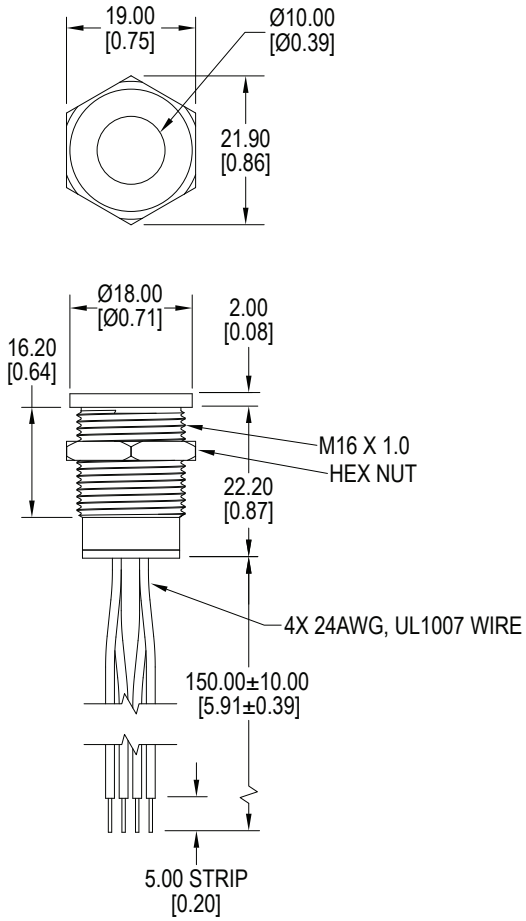


16mm, Round Lens, Screw Terminal

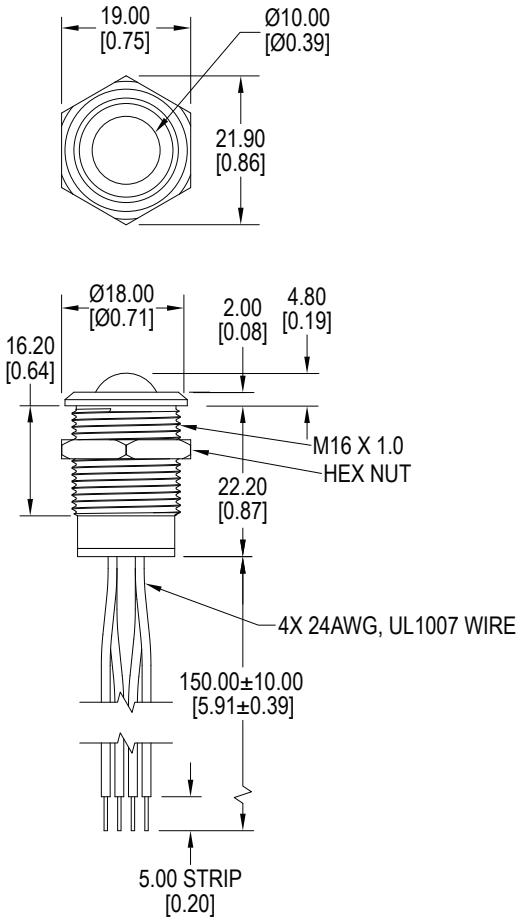


Dimensions

16mm, Flat Lens, Wire

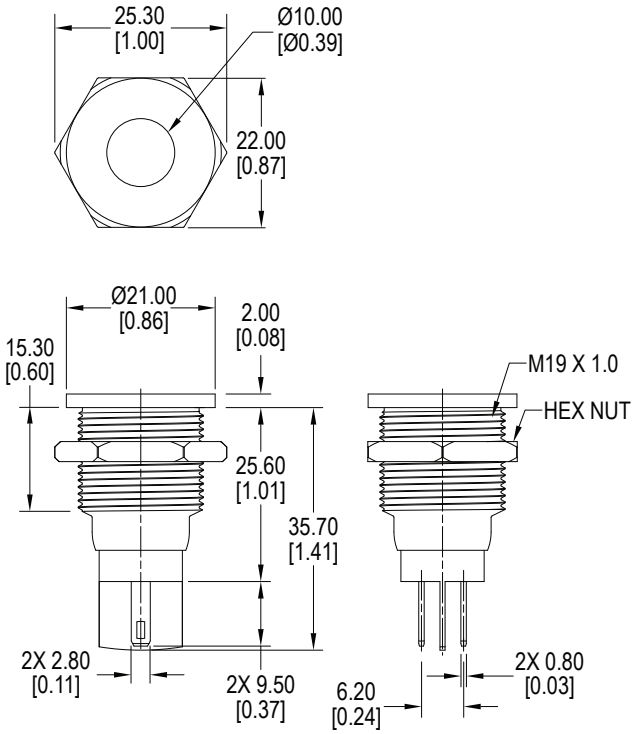


16mm, Round Lens, Wire

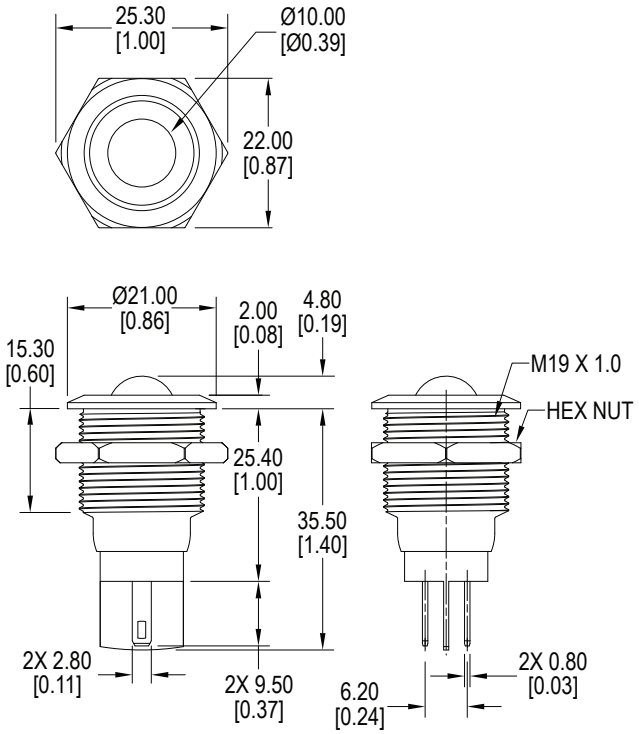


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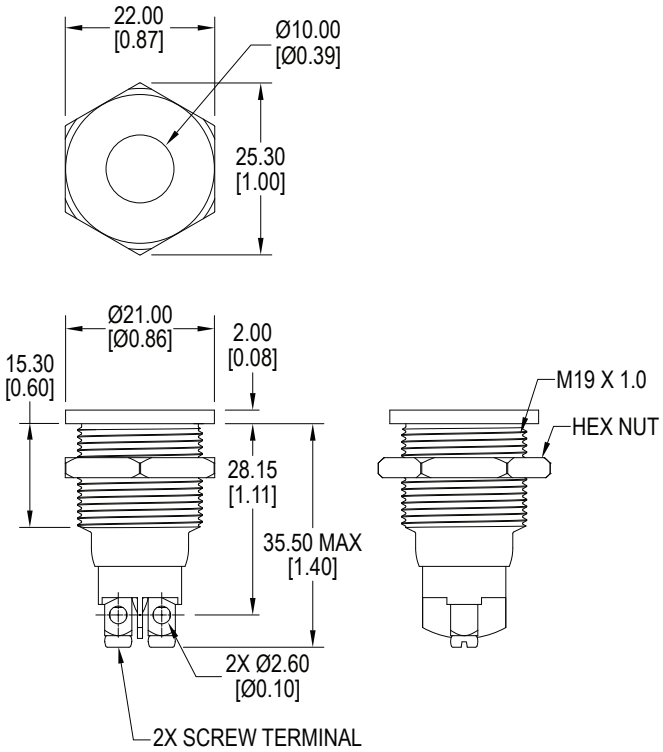
19mm, Flat Lens, Quick Connect



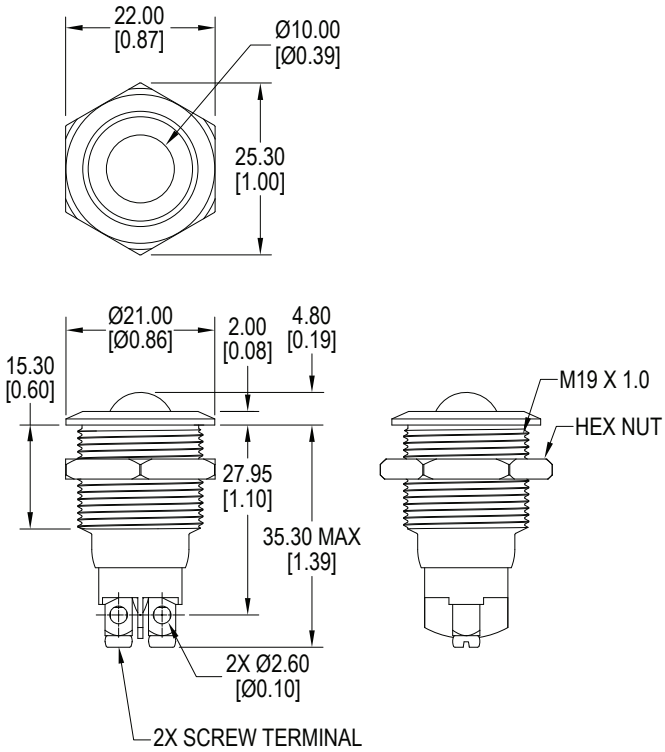
19mm, Round Lens, Quick Connect



19mm, Flat Lens, Screw Terminal

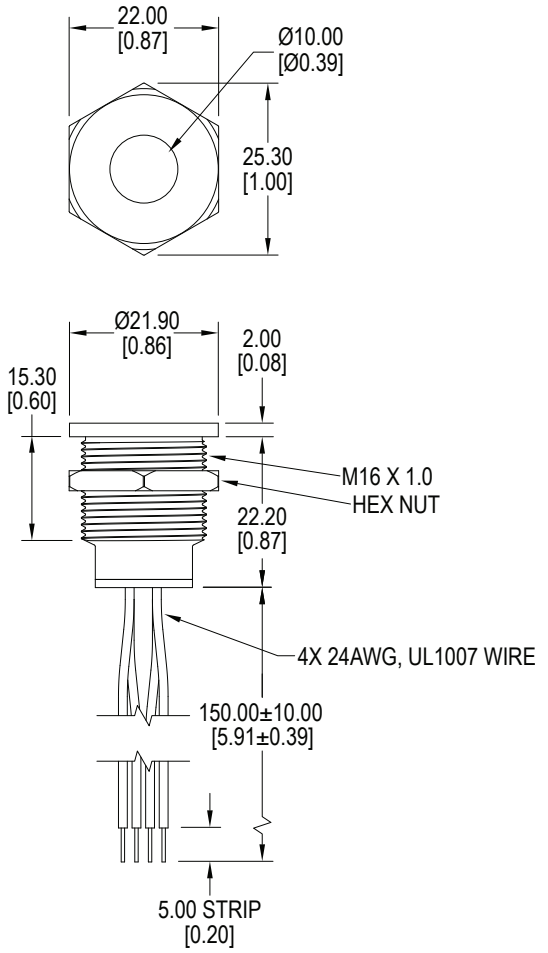


19mm, Round Lens, Screw Terminal

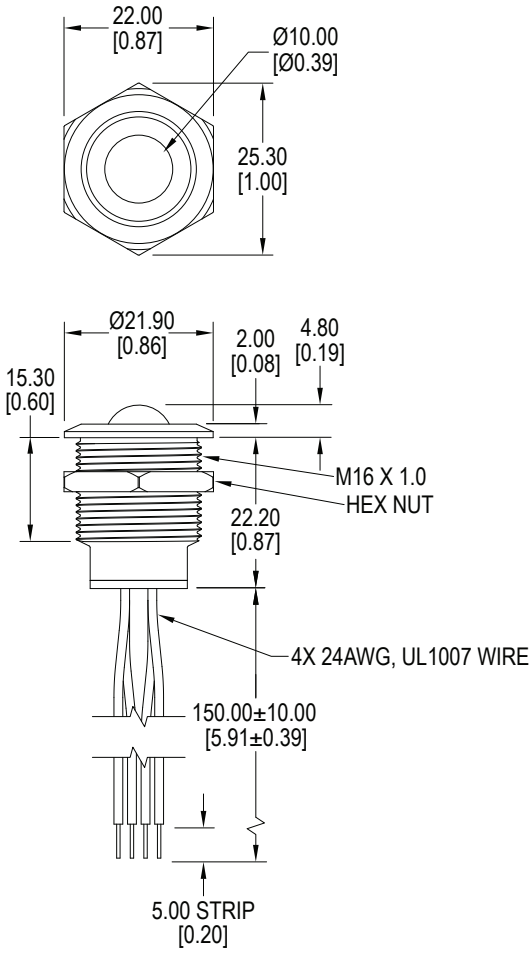


Dimensions

19mm, Flat Lens, Wire

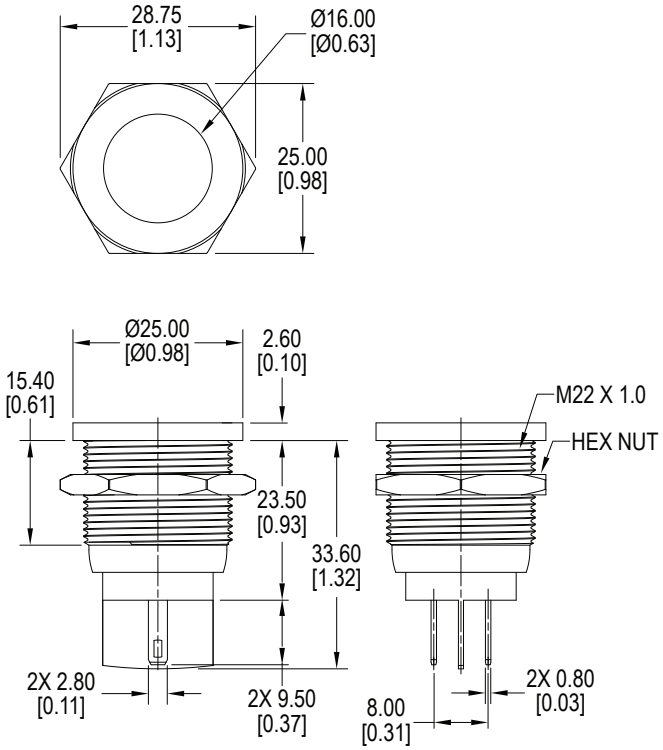


19mm, Round Lens, Wire

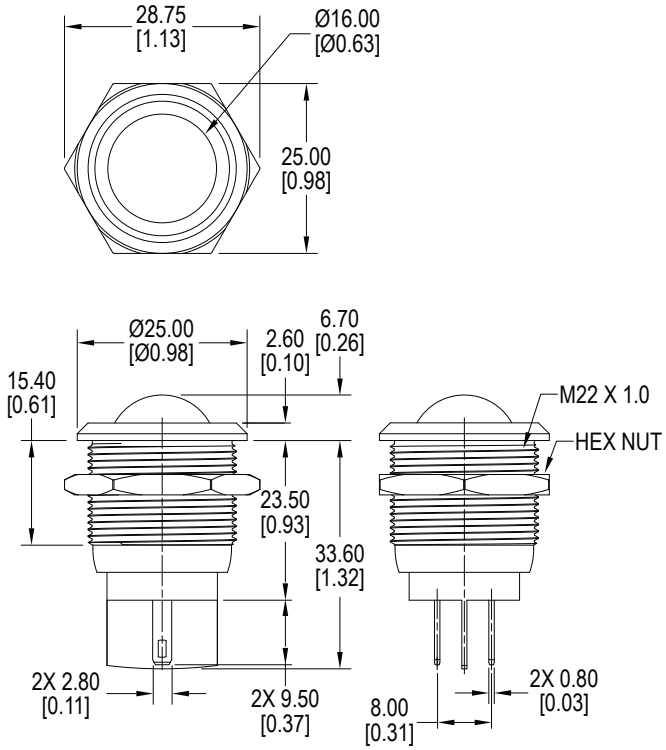


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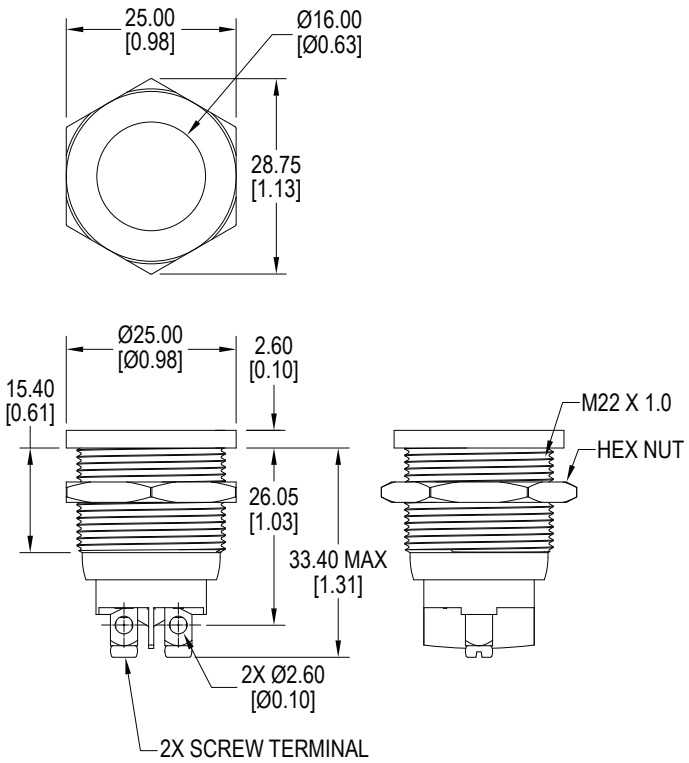
22mm, Flat Lens, Quick Connect



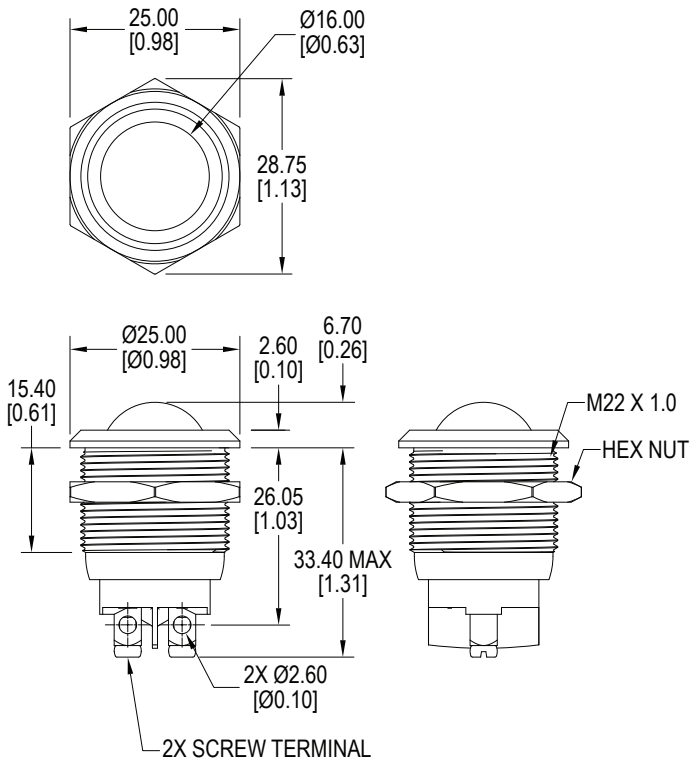
22mm, Round Lens, Quick Connect



22mm, Flat Lens, Screw Terminal

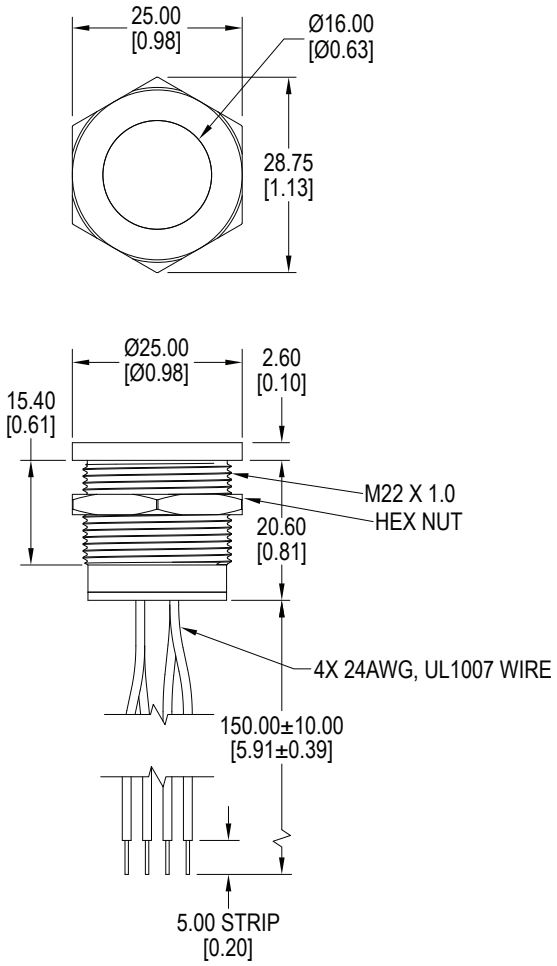


22mm, Round Lens, Screw Terminal

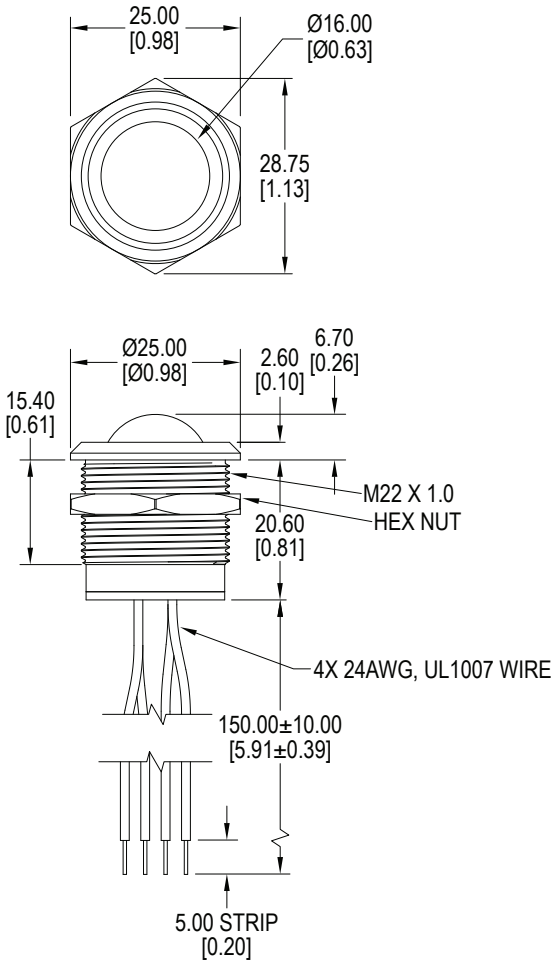


Dimensions

22mm, Flat Lens, Wire

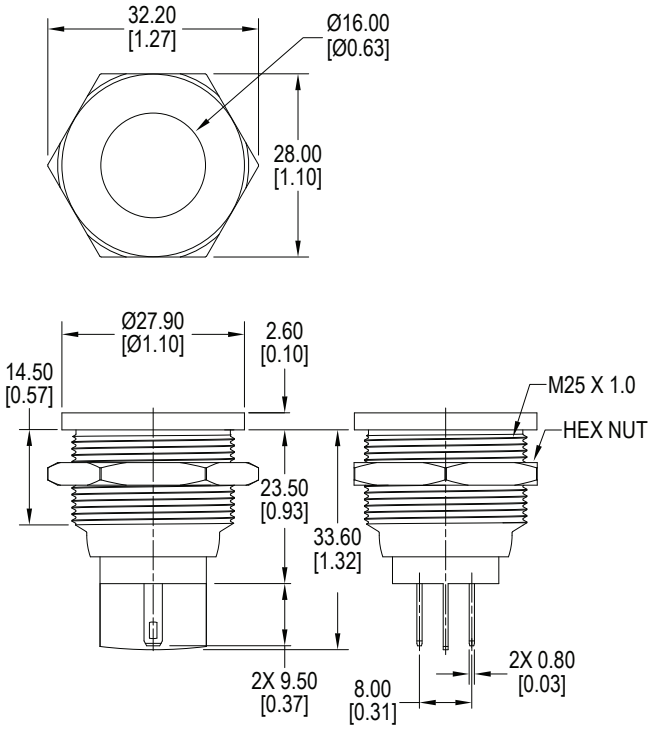


22mm, Round Lens, Wire

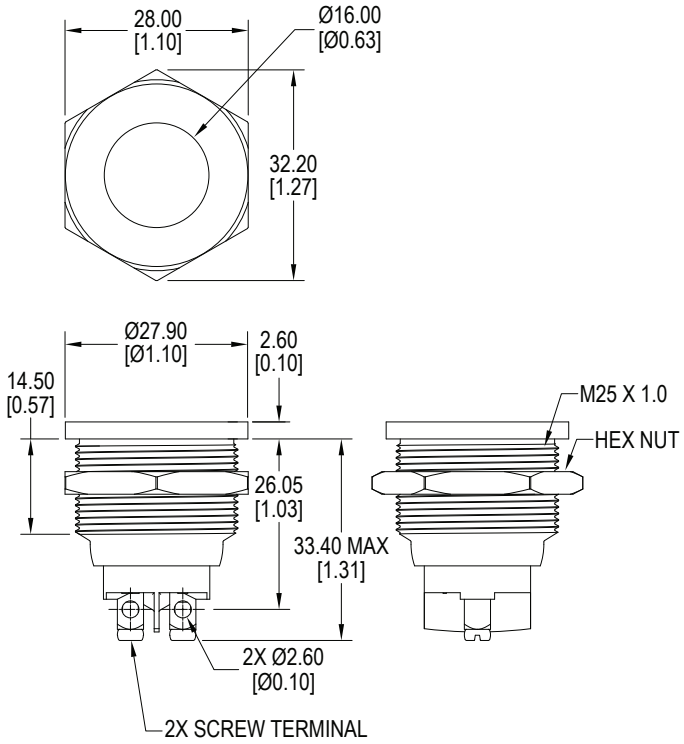


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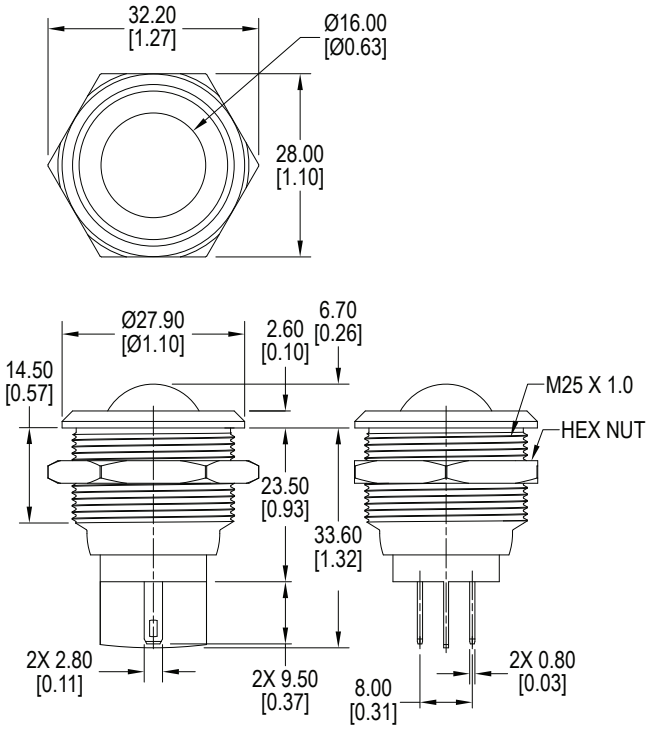
25mm, Flat Lens, Quick Connect



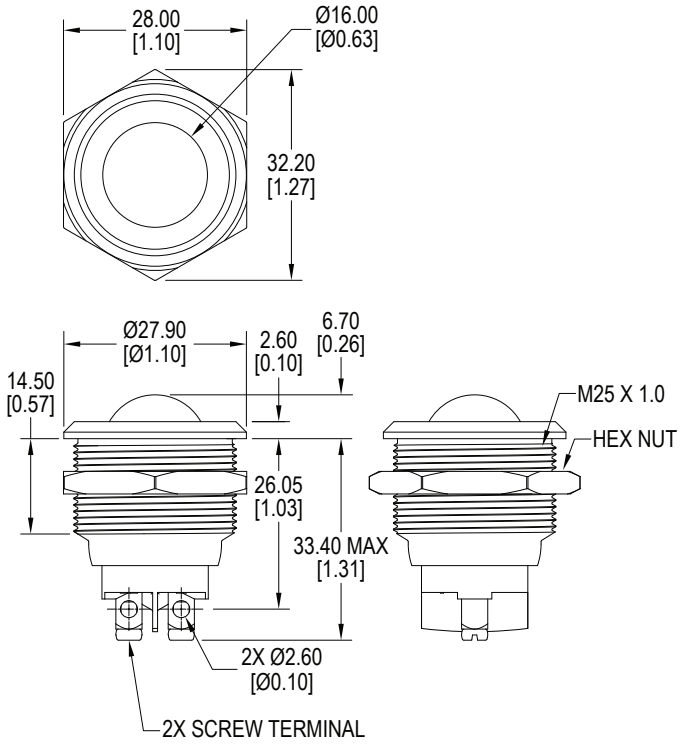
25mm, Flat Lens, Screw Terminal



25mm, Round Lens, Quick Connect

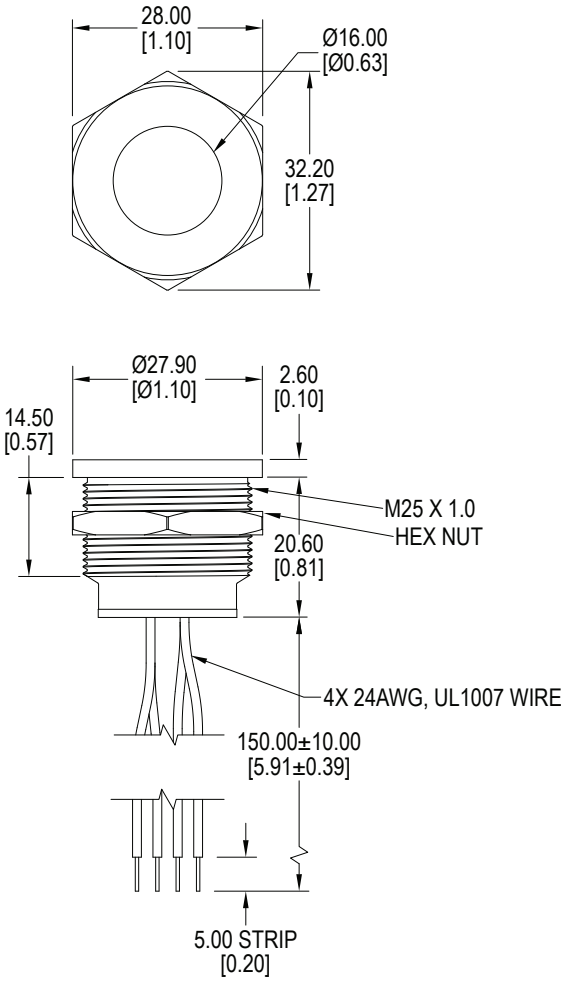


25mm, Round Lens, Screw Terminal

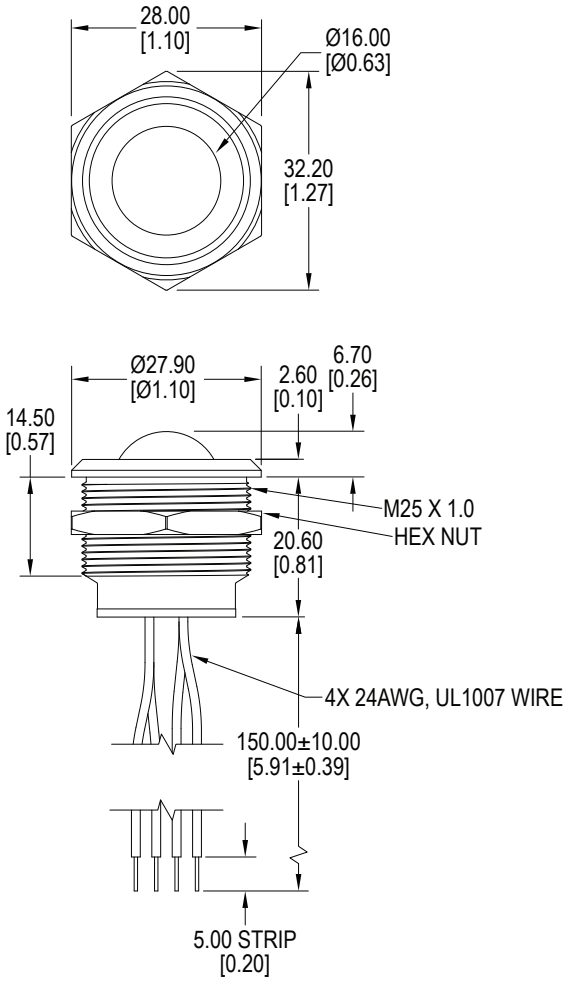


Dimensions

25mm, Flat Lens, Wire

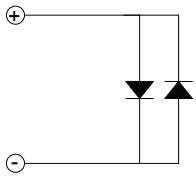


25mm, Round Lens, Wire

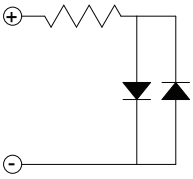


Schematics

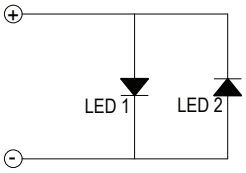
Single LED



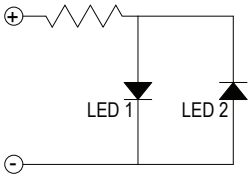
Single LED, with resistor



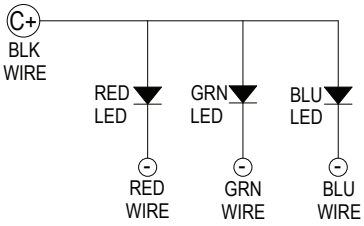
Dual LED



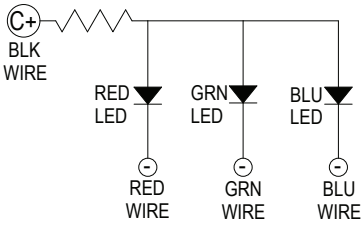
Dual LED, with resistor



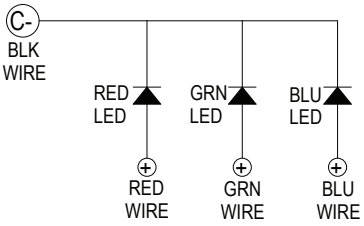
RGBA
common anode



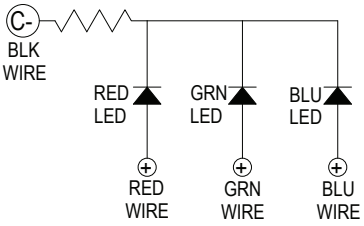
RGBA, with resistor
common anode



RGBC
common cathode

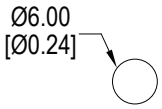


RGBC, with resistor
common cathode

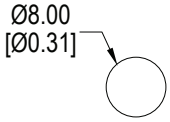


Panel Cutout

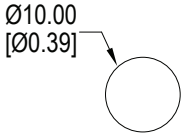
IN6



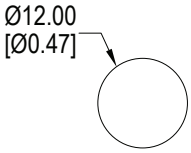
IN8



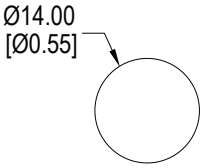
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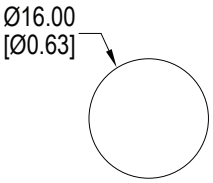
IN12



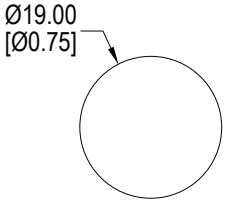
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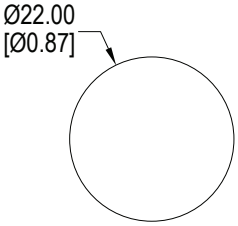
IN16



IN19



IN22



IN25

