



The QS series offers snap-in panel mount LED indicators with colored diffused flat lenses, for typical replacement of filament and neon indicators. High brightness LEDs are up to 240 times brighter than standard and can be seen in direct sunlight. Typical applications include domestic and commercial appliances, catering equipment, fire alarm panels, surge protectors, and battery chargers/power supplies.



KEY FEATURES

- 6mm, 8mm, 10mm and 12mmØ cut-out sizes
- Front panel snap-in mounting requires no additional hardware
- Colored diffused flat lenses
- Voltage range: 2VDC – 220VAC
- Standard intensity diffused LEDs or high brightness LEDs for daylight viewing
- Bi-color LED option
- UL496 recognized component



QS series

Snap-in Panel Mount LED indicators

OPTION SELECTION

SERIES	MOUNTING HOLE	TERMINALS	TYPE OF ILLUMINATION	LED COLOR	VOLTAGE
QS	6 = 6mmØ 8 = 8mmØ 10 = 10mmØ 12 = 12mmØ	1 = Solder lug/faston 3 = Wires	XX = Fixed Light YY = Bi-color	R = Red G = Green Y = Yellow B = Blue O = Orange W = White HR = High Brightness Red HG = High Brightness Green HY = High Brightness Yellow HB = High Brightness Blue HO = High Brightness Orange HW = High Brightness White RG = Red/Green	02 = 2VDC 12 = 12VDC 24 = 24VDC 28 = 28VDC 110 = 110VAC 220 = 220VAC

TECHNICAL CHARACTERISTICS

- Gold faston terminal denotes Anode (+), silver terminal denotes Cathode (-).
- Standard wire length is 200mm, red wire denotes Anode (+), black wire denotes Cathode (-). For other wires lengths consult APEM (6mm and 8mm use 24AWG, 10mm and 12mm use 22AWG).
- For LEDs with alternative voltages consult APEM.
- Bi-color LEDs, by connecting to gold faston (+) one color is produced, by reversing the supply voltage another color is produced – bi-colors are available up to 28VDC (AC products not available).
- Take care if soldering to the faston terminals.
- All 110VAC and 220VAC LED indicators will be supplied with high brightness LEDs.
- 2VDC (02) versions are resistorless – please pay attention to the forward voltage.
- Flashing LEDs are available as a special option.




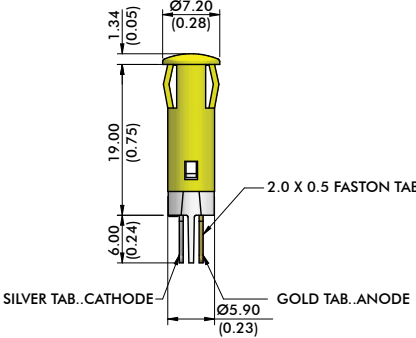
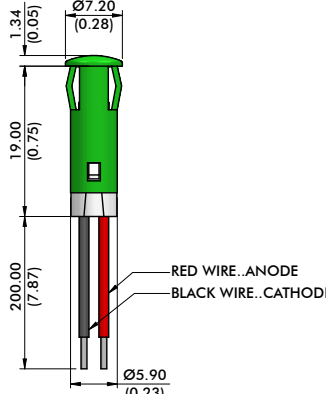

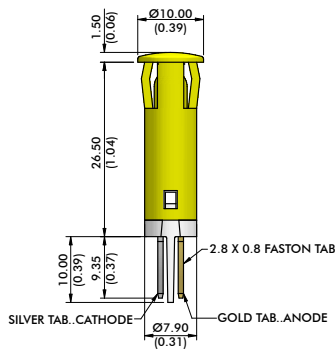
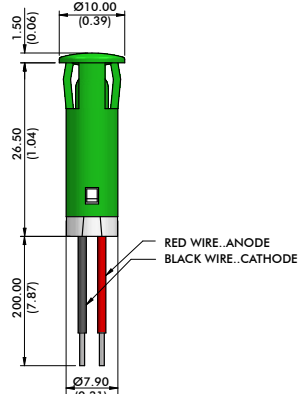

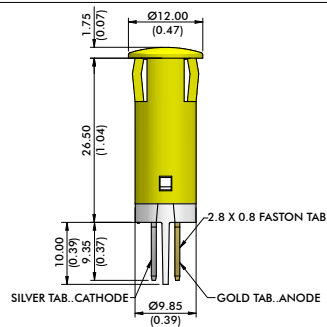
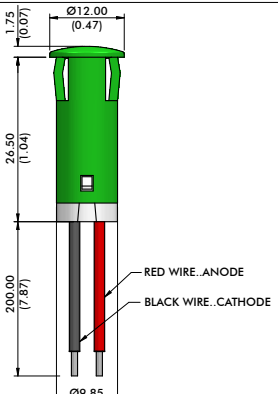

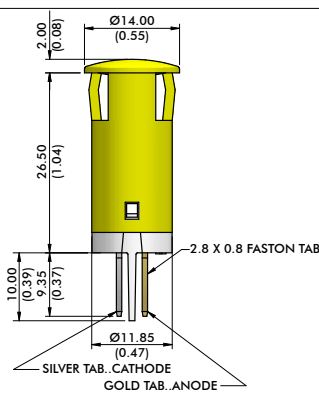
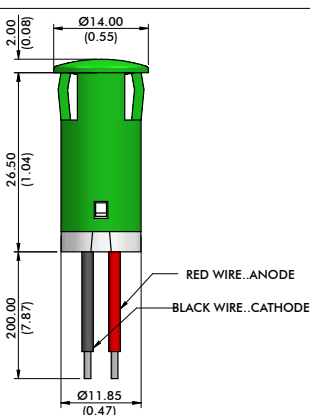
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DIMENSIONAL DRAWINGS

SOLDER LUG/FASTON

WIRES

<p>6mmØ (0.24)</p> 	 <p>SILVER TAB..CATHODE</p> <p>GOLD TAB..ANODE</p> <p>2.0 X 0.5 FASTON TAB</p>	 <p>RED WIRE..ANODE</p> <p>BLACK WIRE..CATHODE</p>
<p>8mmØ (0.31)</p> 	 <p>SILVER TAB..CATHODE</p> <p>GOLD TAB..ANODE</p> <p>2.8 X 0.8 FASTON TAB</p>	 <p>RED WIRE..ANODE</p> <p>BLACK WIRE..CATHODE</p>
<p>10mmØ (0.39)</p> 	 <p>SILVER TAB..CATHODE</p> <p>GOLD TAB..ANODE</p> <p>2.8 X 0.8 FASTON TAB</p>	 <p>RED WIRE..ANODE</p> <p>BLACK WIRE..CATHODE</p>
<p>12mmØ (0.47)</p> 	 <p>SILVER TAB..CATHODE</p> <p>GOLD TAB..ANODE</p> <p>2.8 X 0.8 FASTON TAB</p>	 <p>RED WIRE..ANODE</p> <p>BLACK WIRE..CATHODE</p>

Notes: Images shown are for illustration purposes only.
Dimensions in mm/(inch)

Note: The company reserves the right to change specifications without notice.

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SPECIFICATIONS

OPTICAL SPECIFICATIONS				
COLOR	INTENSITY STD LED (mcd)	FORWARD VOLTAGE (V)	INTENSITY	FORWARD
			HIGH BRIGHTNESS (mcd)	VOLTAGE (V)
Red	25	2.0	6000	2.2
Green	20	2.2	1200	3.3
Yellow	20	2.1	380	2.0
Blue	800	3.3	1600	3.3
Orange	30	2.0	4100	2.2
White (clear)	1200	3.3	2500	3.3

VOLTAGE	OPERATING VOLTAGE (min to max)	OPERATING CURRENT (typical all types)
2VDC (no resistor)	1.8 to 2.5VDC	20mA*
12VDC	10.8 to 13.2VDC	20mA
24VDC	21.6 to 26.4VDC	20mA
28VDC	25.2 to 30.8VDC	20mA
110VAC	99 to 130VAC	6mA
220VAC	207 to 253VAC	3mA

*Customer to supply resistor for desired operating current

TECHNICAL CHARACTERISTICS	
Max reverse voltage	- 5V
Viewing angle	- 30° (standard LED), 45° (high brightness LED)
Life expectancy	- 100,000 hours
Operating temperature range	- -30°C to +85°C (-22°F to 185°F)
Storage temperature range	- -40°C to +100°C (-40°F to 212°F)
Panel thickness (preferable)	- 0.8mm (0.031") - 1.6mm (0.062")

MATERIALS	
Lens	- Polycarbonate (UL94V-0)
Body molding	- Polycarbonate (UL94V-0)
Solder lug/faston terminals	- Gold (flash)/Silver (flash), Brass
Wires	- 6mm, 8mm = 24AWG, 10mm, 12mm = 22AWG
All wires	- PVC (UL1061)

