APEM

QS-Series Snap-in Panel Mount LED Indicators





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QS SERIES
Snap-in Panel Mount LED Indicators
Features and Specifications

FEATURES

- 6mm, 8mm, 10mm and 12mmØ cut-out sizes
- Front panel snap-in mounting requires no additional hardware
- Coloured diffused flat lenses
- Available colours: Red, Green, Yellow, Blue, Orange, White (clear)
- Voltage range: 2VDC – 220VAC
- Terminations: solder lug/faston, 6mm (2.0 x 0.5mm), 8mm, 10mm, 12mm (2.8 x 0.8mm) or wires (200mm standard length)
- Standard intensity diffused LEDs or high brightness LEDs for daylight viewing
- Bi-colour LED option
- UL496 recognised component

OPTICAL SPECIFICATIONS

Colour	Intensity Std LED (mcd)	Forward Voltage (V)	Intensity High Brightness (mcd)	Forward 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 110VAC	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° to +85°C
- Storage temperature: -40° to +100°C
- Panel thickness (preferable): 0.8mm(0.031") – 1.6mm(0.062")

MATERIALS

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





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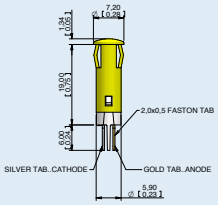
Technical Drawings

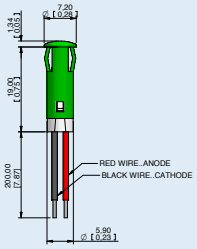
6mmØ



SOLDER LUG/FASTON



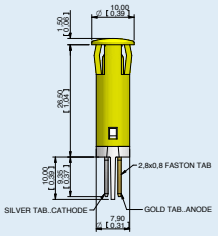
WIRES



8mmØ



SOLDER LUG/FASTON



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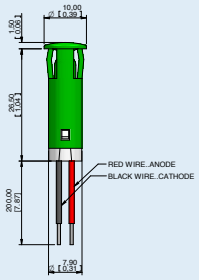
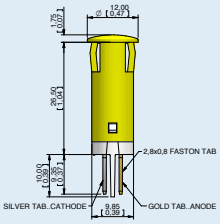


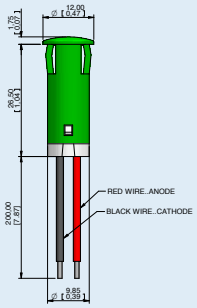
10mmØ



SOLDER LUG/FASTON



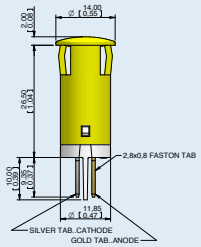
WIRES



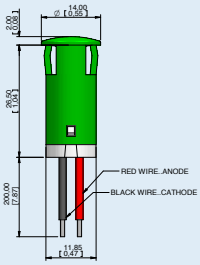
12mmØ



SOLDER LUG/FASTON



WIRES



QS SERIES
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Order Overview

QS	8	3	XX	R	220
SERIES	MOUNTING HOLE	TERMINALS	TYPE OF ILLUMINATION	LED COLOUR	VOLTAGE
QS	6 = 6mmØ 8 = 8mmØ 10 = 10mmØ 12 = 12mmØ	1 = Solder lug/ faston 3 = Wires	XX = Fixed Light YY = Bi-colour	R = Red G = Green Y = Yellow B = Blue O = Orange W = White (clear) 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 LED's with alternative voltages consult APEM
- Bi-colour LEDs, by connecting the gold faston (+) one colour is produced, by reversing the supply voltage another colour is produced – Bi-colours 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
- For resistorless versions (02) please pay attention to the forward voltage
- Flashing LEDs are available as a special option

APEM product ranges



Switches


Joysticks


Switch Panels


Indicators

APEM

Addresses of sales subsidiaries and distributors on
www.apem.com