

Q SERIES Ø8mm (.315") Panel Mount LED Indicators

Distinctive features and specification

VOY1603R3US

Features

- 8mm panel mounting LED indicator
- 5mm colored diffused epoxy lens or 5mm water clear super bright LEDs
- Plated brass bezel finished in bright chrome, black chrome or satin grey and moulded polycarbonate rear body
- Prominent, recessed and flush bezel styles
- 2VDC – 220VAC
- (2.8 x 0.8) solder lug/faston terminals, pins or (200mm long) wire terminations
(2.0 x 0.5) solder lug/faston terminals on tricolor versions
- IP67 sealing option (EN60529)
- Supplied with fixing nut and spring washer

NB: UL Recognized Component



TECHNICAL SPECIFICATIONS

Voltage	Operating Voltage (Min to Max)	Operating Current (Typical All Types)
02 (No Resistor)	1.8 to 3.3VDC	20mA max*
6VDC	5.4 to 6.6VDC	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 121VAC	6mA
220VAC	207 to 253VAC	3mA

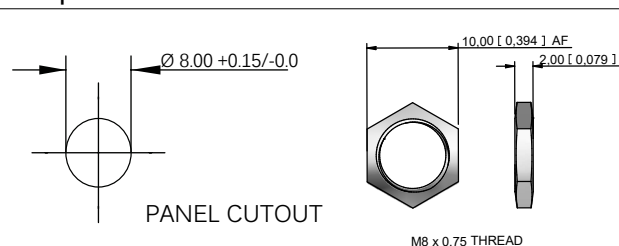
Max Reverse Voltage: 5V

Viewing Angle: 30–100° (dependant on model)

Life Expectancy: 100,000 hours

Temperature Range: –40 to +85°C (operating & storage)

Torque: 20 to 25cNm



Standard LED Intensity	Prominent and Recessed	Flush	Forward Voltage
HE Red	80mcd	8mcd	2.0V
Green	60mcd	6mcd	2.2V
Yellow	50mcd	6mcd	2.1V
Blue	1600mcd	50mcd	3.3V
White	1600mcd	500mcd	3.3V
Orange	60mcd	110mcd	2.2V
Bi-color (Typical) (Red/Green)	14/30mcd	15/10mcd	2.0V/2.2V
Tri-color (Typical) (Red/Green/Yellow)	60/15/13mcd	15/10/6mcd	2.0V/2.2V/2.1V

Bi-color - The color is changed by reversing the polarity of the supply voltage.

Tri-color - The indicator has red and green LEDs, when both connected yellow is produced.

Super Bright LED	Prominent and Recessed	Flush	Forward Voltage
HE Red	5,000mcd	1,300mcd	2.2V
Green	10,000mcd	1,200mcd	3.3V
Yellow	4,000mcd	350mcd	2.0V
Blue	2,200mcd	280mcd	3.3V
White	2,500mcd	950mcd	3.3V
Orange	4,000mcd	500mcd	2.2V

Hyper Bright LED	Prominent and Recessed	Flush	Forward Voltage
HE Red	6,000mcd	980mcd	2.2V
Green	1,900mcd	300mcd	3.3V
Yellow	1,600mcd	250mcd	2.0V
Orange	2,400mcd	110mcd	2.2V

Luminous intensity will be reduced with lower operating current.

Note: The operating voltage must not be exceeded by more than 10% as this will result in reduced life expectancy.

The company reserves the right to change specifications without notice.

* Customer to supply resistor for desired operating current.

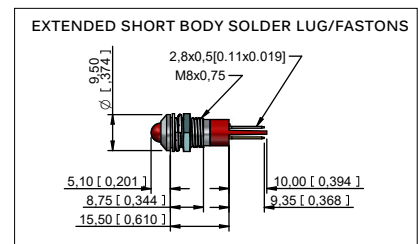
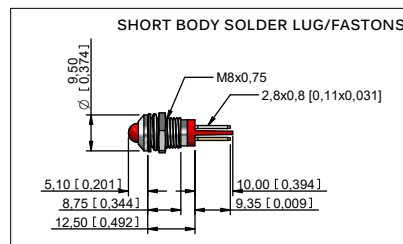
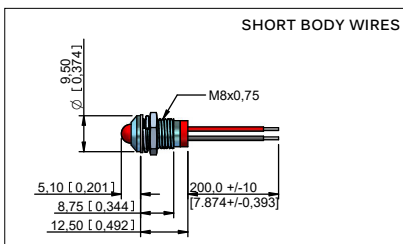
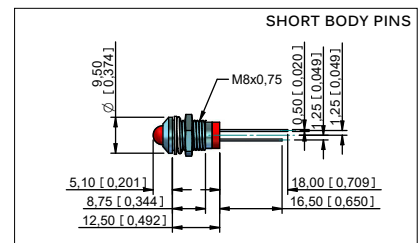
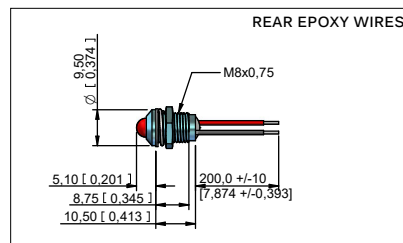
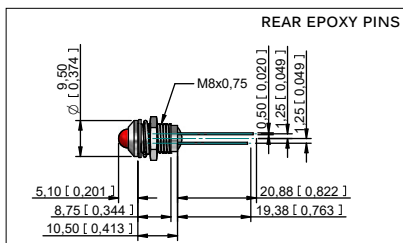
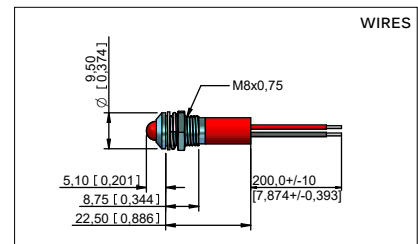
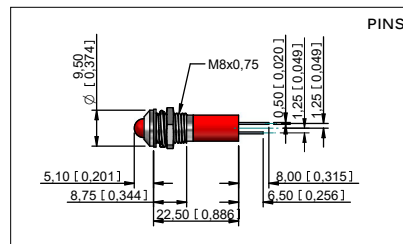
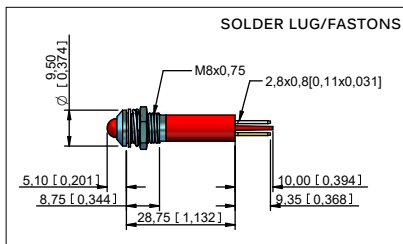
Luminous intensity is measured at 20mA on a discrete LED unless otherwise stated.

Luminous intensities and color shades of white LEDs may vary within a batch.

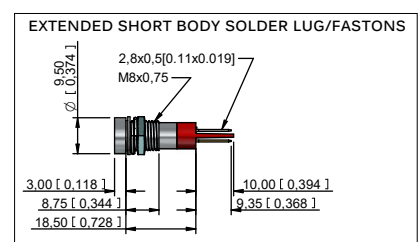
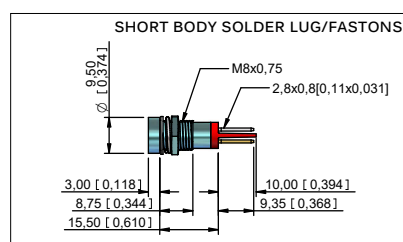
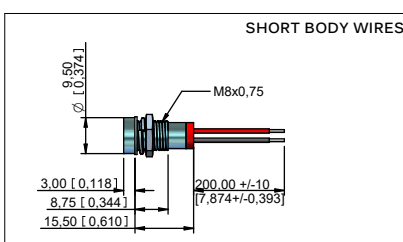
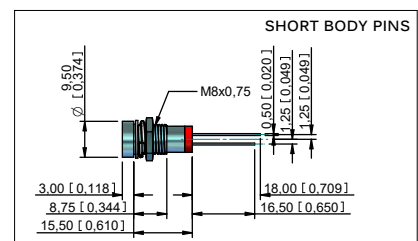
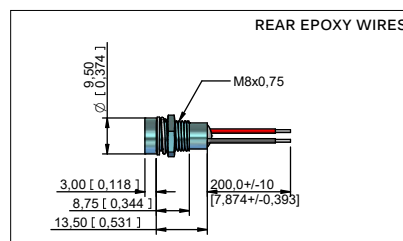
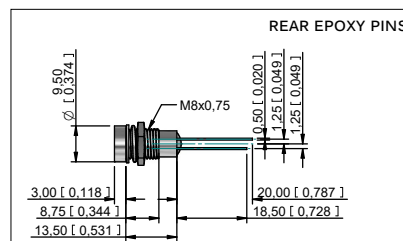
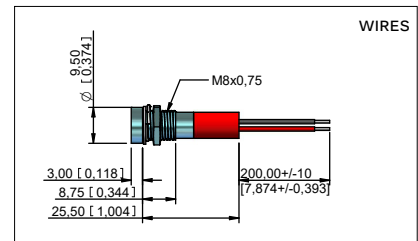
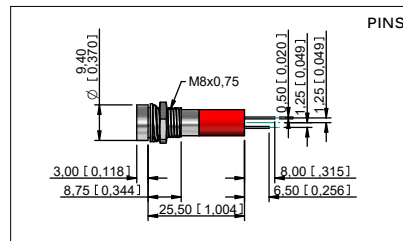
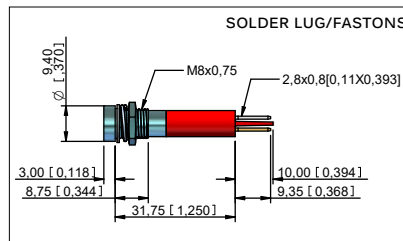
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Technical Drawings

PROMINENT BEZEL



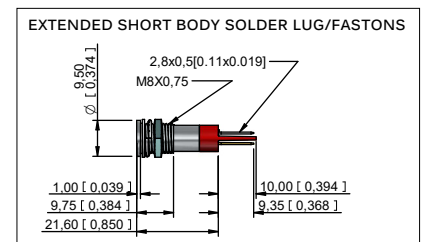
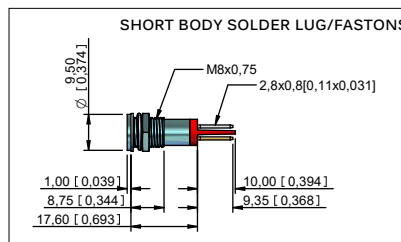
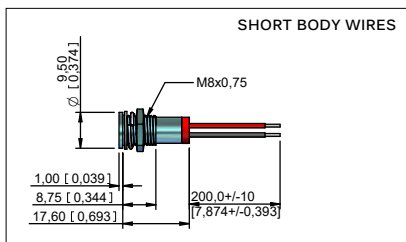
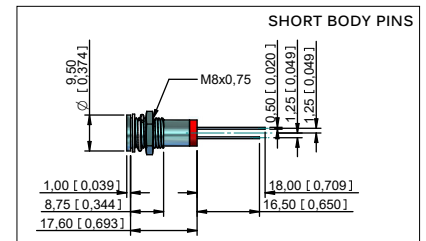
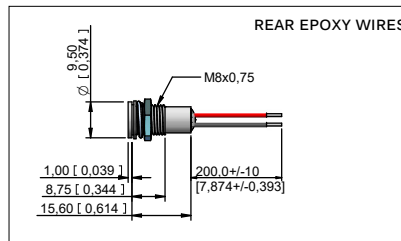
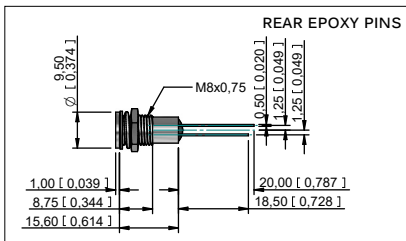
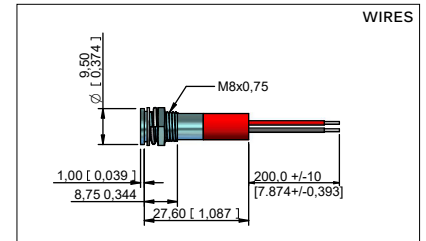
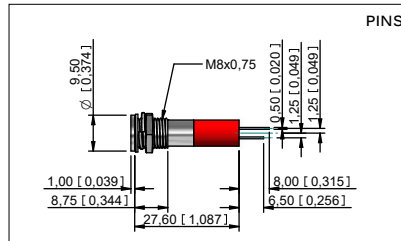
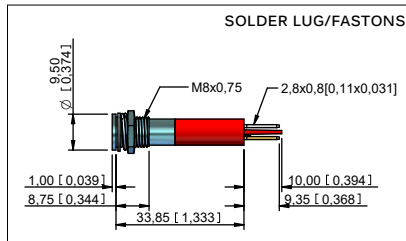
RECESSED BEZEL



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Technical Drawings

FLUSH BEZEL



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Overview

STANDARD OPTIONS

The Q8 Series is available with a range of standard options, to specify your LED, simply choose one option from each column. An example is shown below.

Q	8	P	8	G	XX	Y	12	E
SERIES	MOUNTING HOLE	BEZEL STYLE	TERMINALS	BEZEL FINISH	TYPE OF ILLUMINATION	LED COLOR	VOLTAGE	SEALING
Q	8 = Ø8mm	P = Prominent R = Recessed F = Flush	1 = Solder Lug/ Fastons (2.8 x 0.8) 2 = Pins 3 = Wires 4 = Rear epoxy Pins 5 = Rear epoxy Wires 6 = Short body Pins 7 = Short body Wires 8 = Short body Lug/ Fastons (2.8 x 0.8) 9 = Extended short body solder Lug/ Fastons (2.8 x 0.5)	C = Bright Chrome B = Black Chrome G = Satin Grey	XX = Fixed Light KK = Flashing Light (12V – 28VDC) YY = Bi-color ZZ = Tri-color	R = Red G = Green Y = Yellow B = Blue W = White O = Orange HR = Hyper Bright Red HG = Hyper Bright Green HY = Hyper Bright Yellow HO = Hyper Bright Orange SR = Super Bright Red SG = Super Bright Green SY = Super Bright Yellow SB = Super Bright Blue SW = Super Bright White SO = Super Bright Orange RG = Red/Green RY = Red/Yellow GY = Green/Yellow RYG = Red/Yellow/Green	02 = no resistor* 06 = 6VDC 12 = 12VDC 12A = 12VAC/DC 24 = 24VDC 24A = 24VAC/DC 28 = 28VDC 28A = 28VAC/DC 110 = 110VAC 220 = 220VAC	(Blank) = Unsealed E = IP67

Example Q8P3CXXY02E

Ø8mm, prominent bezel, 200mm wire termination
bright chrome finish, fixed light, yellow
2VDC LED, IP67 panel sealed



- Gold Faston terminal denotes Anode (+), silver terminal denotes Cathode (-)
- Standard wire length is 200mm, 24AWG UL1061, red wire denotes Anode (+), black wire denotes Cathode (-) for other wire lengths consult APEM
- For LEDs with alternative voltages consult APEM
- Bi-color LEDs, by connecting the 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 when soldering to the Faston terminals (recommended solder temperature 300°C - 3 sec)
- Terminal options 6,7 & 9 are only available up to 28V (DC Only) tri-color not available with terminal 9
- Terminal code 8 is only available without integral resistor
- Maximum panel thickness 7mm
- We recommend using Hyperbright or Superbright LEDs for use at 110VAC and 220VAC
- The Tri-color LED has red and green LEDs when both are connected yellow is produced
- Standard Tri-color Faston terminals are two Anodes (+) and one Cathode (-)
- Tri-color wires are one red (+) and one green (+) Anode and one black (-) Cathode
- Tri-color pins are center (-) Cathode, shortest (+) Anode pin green, longest (+) Anode pin red

* = For resistorless versions (02) please refer to the forward voltage on page 1