

# Q SERIES Ø12mm (.472") Panel Mount LED Indicators

## Distinctive features and specification

Q12\_VOY1612R3US

### Features

- 12mm panel mounting LED indicator
- 8mm colored diffused epoxy lens or 8mm 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 style
- 2VDC – 220VAC
- (2.8 x 0.8) solder lug/faston terminals, pins or (200mm long) wire terminations
- 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

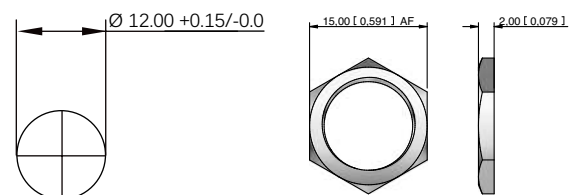
Max Reverse Voltage: 5V

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

Life Expectancy: 100,000 hours

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

Torque: 75cNm



PANEL CUTOUT

M12 x 0.75 THREAD

Standard LED Intensity	Prominent and Recessed	Flush	Forward Voltage
HE Red	350mcd	N/A	2.0V
Green	60mcd	N/A	2.2V
Yellow	50mcd	N/A	2.1V
Blue	800mcd	N/A	3.3V
Blue	N/A	330mcd	3.1V
White	1,200mcd	N/A	3.3V
White	N/A	2,180mcd	3.1V
Orange	100mcd	N/A	2.0V
Bi-color (Typical) (Red/Green)	20/10mcd	N/A	2.0V/2.2V
Tri-color (Typical) (Red/Green/Yellow)	80/15/13mcd	N/A	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	3,000mcd	N/A	2.2V
Green	8,000mcd	N/A	3.3V
Yellow	1,100mcd	N/A	2.3V
Blue	1,500mcd	N/A	3.3V
White	1,200mcd	N/A	3.3V
Orange	2,000mcd	N/A	2.2V

Hyper Bright LED	Prominent and Recessed	Flush	Forward Voltage
HE Red	N/A	1,120mcd	2.0V
Green	N/A	1,560mcd	3.3V
Yellow	N/A	1,120mcd	2.0V
Orange	N/A	1,120mcd	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.

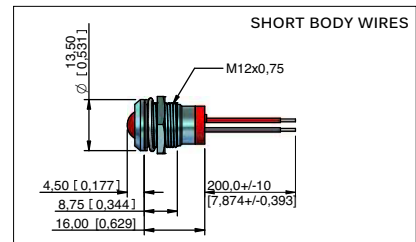
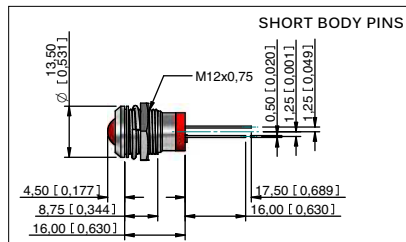
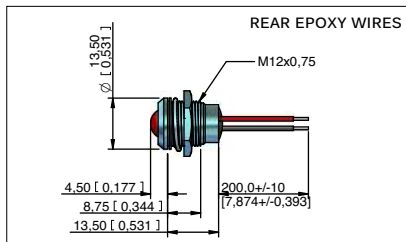
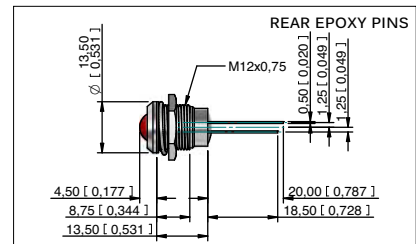
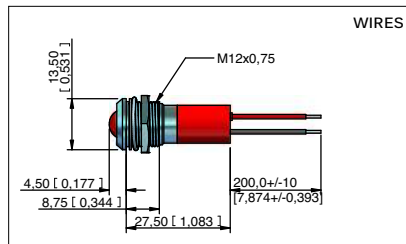
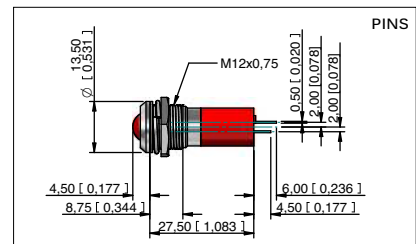
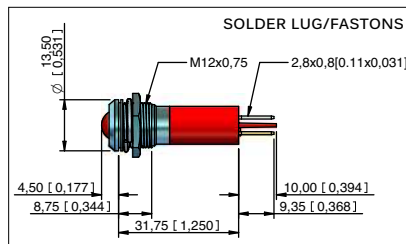
Luminous intensities and color shades of white LEDs may vary within a batch.

LED characteristics are dependent upon environmental conditions. Therefore published data should be considered nominal.

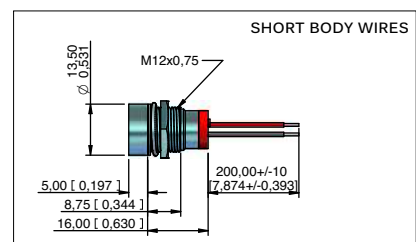
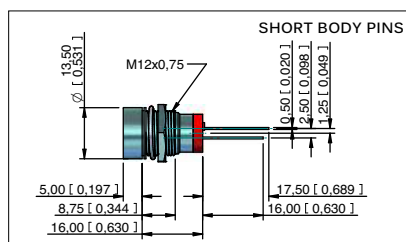
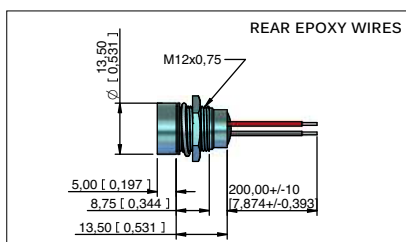
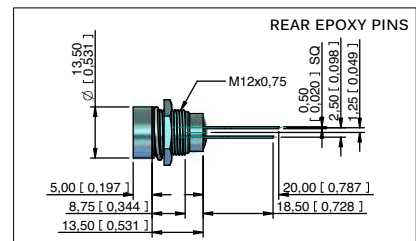
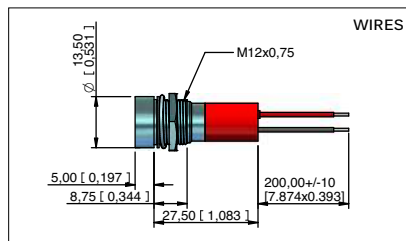
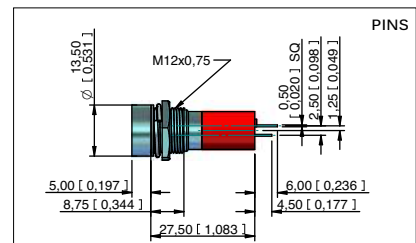
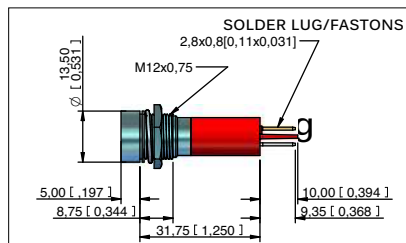
# Q SERIES Ø12mm (.472") Panel Mount LED Indicators

## Technical Drawings

### PROMINENT BEZEL



### RECESSED BEZEL



# Q SERIES Ø12mm (.472") Panel Mount LED Indicators

## Flush Bezel Overview

### STANDARD OPTIONS

The Q12 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	12	F	5	B	XX	G	12	E
SERIES	MOUNTING HOLE	BEZEL STYLE	TERMINALS	BEZEL FINISH	TYPE OF ILLUMINATION	LED COLOR	VOLTAGE	SEALING
Q	12 = Ø12mm	F = Flush	1 = Solder Lug/ Fastons (2.8 x 0.8) 4 = Rear epoxy Pins 5 = Rear epoxy Wires	C = Bright Chrome B = Black Chrome G = Satin Grey	XX = Fixed Light	HR = Hyper Bright Red HG = Hyper Bright Green HY = Hyper Bright Yellow B = Blue W = White HO = Hyper Bright Orange	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 Q12F5GXXR12E

Ø12mm, flush bezel, epoxy wires,  
bright chrome finish, fixed light,  
red, 12VDC LED, IP67 panel sealed



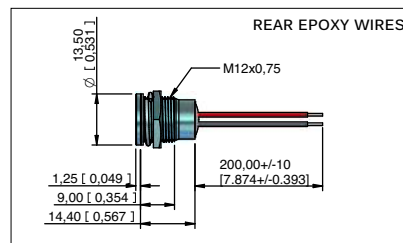
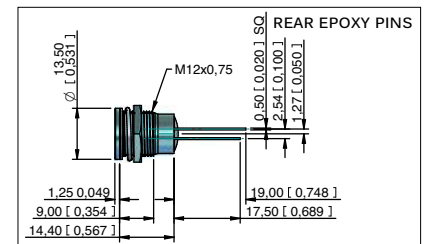
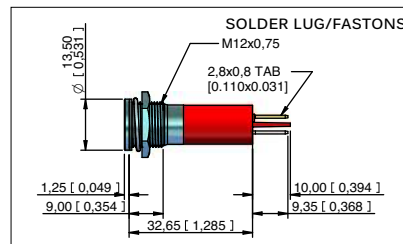
- Gold Faston terminal denotes Anode (+), silver terminal denotes Cathode (-)
- Standard wire length is 200mm, 24AWG UL1061, red wire denotes Anode (+), black wire denotes Cathode (-) for other wire lengths consult APEM
- For LEDs with alternative voltage consult APEM
- Take care when soldering to the Faston terminals (recommended solder temperature 300°C - 3 sec)
- Max voltage for pins and wires is 28V
- Maximum panel thickness 7mm
- 110VAC and 220VAC only available with solder lug/Faston terminals

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

# Q SERIES Ø12mm (.472") Panel Mount LED Indicators

## Technical Drawings

FLUSH BEZEL



# Q SERIES Ø12mm (.472") Panel Mount LED Indicators

## Prominent & Recessed Bezel Overview

### STANDARD OPTIONS

The Q12 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	12	P	1	B	XX	G	12	E
SERIES	MOUNTING HOLE	BEZEL STYLE	TERMINALS	BEZEL FINISH	TYPE OF ILLUMINATION	LED COLOR	VOLTAGE	SEALING
Q	12 = Ø12mm	P = Prominent R = Recessed	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	C = Bright Chrome B = Black Chrome G = Satin Grey	XX = Fixed Light KK = Flashing Light (12 - 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 Q12P7GXXG12E

Ø12mm, prominent bezel, short body wires, satin chrome finish, fixed light, green, 12VDC 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
- 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
- Take care when soldering to the Faston terminals (recommended solder temperature 300°C - 3 sec)
- Max voltage for pins and wires is 28V
- Maximum panel thickness 7mm
- Tri-color are not available with terminal option 1
- Tri-colors are only available behind panel epoxy sealed with wires (option 1) or pins (option 3)
- 110VAC and 220VAC not available with terminal options 6 and 7
- 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