

# Q SERIES Ø14mm (.551") Panel Mount LED Indicators

## Distinctive features and specification

Q14\_VOY1701R2US

### Features

- 14mm panel mounting LED indicator
- 10mm colored diffused epoxy lens or 10mm 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
- Custom engraving available
- 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 | Operating Current   |
|------------------|-------------------|---------------------|
|                  | (Min to Max)      | (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                 |

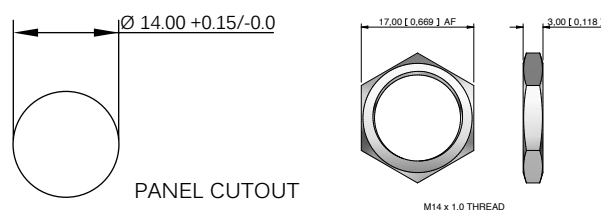
**Max Reverse Voltage:** 5V

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

**Life Expectancy:** 100,000 hours

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

**Torque:** 75cNm



PANEL CUTOUT

M14 x 1.0 THREAD

| Standard LED Intensity                 | Prominent and Recessed | Flush       | Forward Voltage |
|----------------------------------------|------------------------|-------------|-----------------|
| HE Red                                 | 80mcd                  | 10mcd       | 2.0V            |
| Green                                  | 60mcd                  | 5mcd        | 2.2V            |
| Yellow                                 | 50mcd                  | 4mcd        | 2.1V            |
| Blue                                   | 540mcd                 | 100mcd      | 3.3V            |
| White                                  | 1000mcd                | 150mcd      | 3.3V            |
| Orange                                 | 80mcd                  | 200mcd      | 2.0V            |
| Bi-color (Typical) (Red/Green)         | 15/15mcd               | 14/10mcd    | 2.0V/2.2V       |
| Tri-color (Typical) (Red/Green/Yellow) | 60/50/50mcd            | 15/10/30mcd | 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           | 17,000mcd              | 2,000mcd | 2.2V            |
| Green            | 11,000mcd              | 680mcd   | 3.5V            |
| Yellow           | 4,000mcd               | 350mcd   | 2.3V            |
| Blue             | 2,500mcd               | 250mcd   | 3.3V            |
| White            | 4,400mcd               | 250mcd   | 3.3V            |
| Orange           | 2800mcd                | 300mcd   | 2.1V            |

| Hyper Bright LED | Prominent and Recessed | Flush  | Forward Voltage |
|------------------|------------------------|--------|-----------------|
| HE Red           | 2,800mcd               | 800mcd | 2.1V            |
| Green            | 2,200mcd               | 250mcd | 3.2V            |
| Yellow           | 1,300mcd               | 250mcd | 2.0V            |
| Orange           | 850mcd                 | 200mcd | 2.1V            |

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.

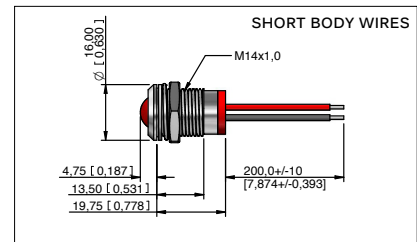
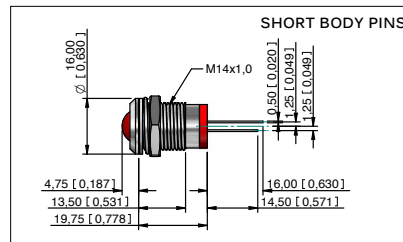
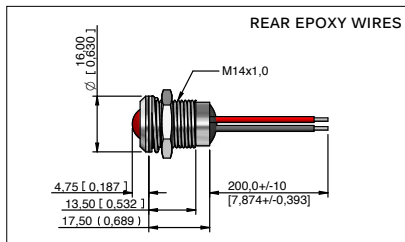
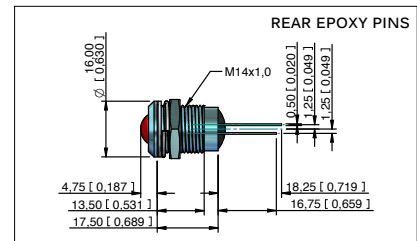
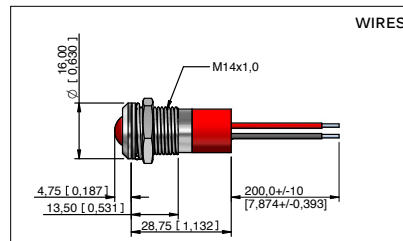
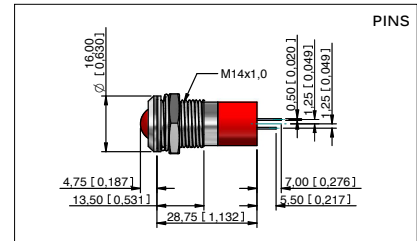
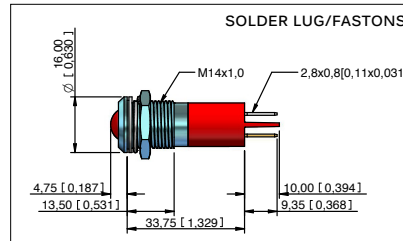
Luminous intensities and color shades of white LEDs may vary within a batch.

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

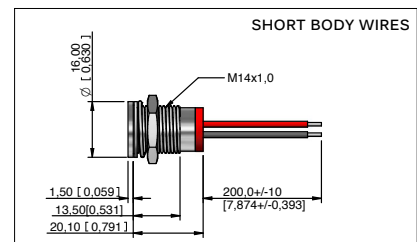
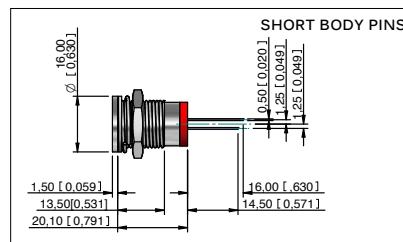
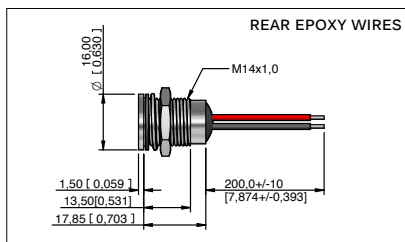
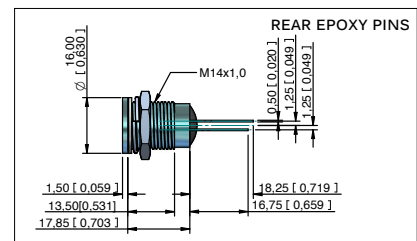
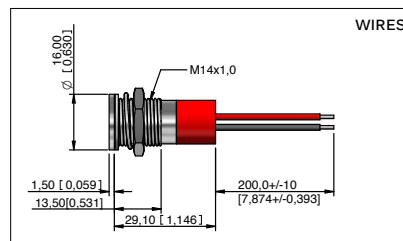
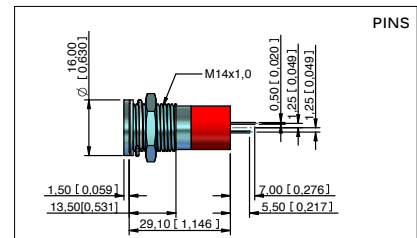
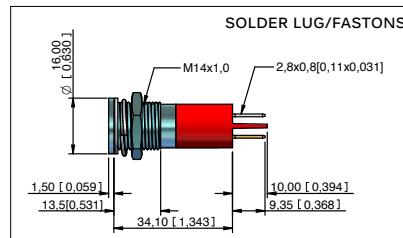
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## Technical Drawings

### PROMINENT BEZEL



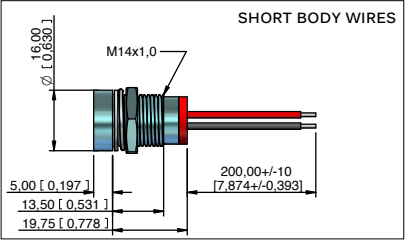
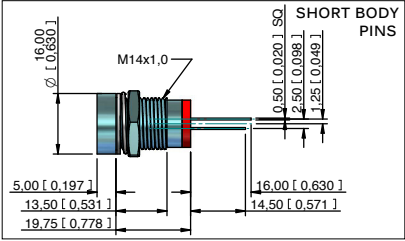
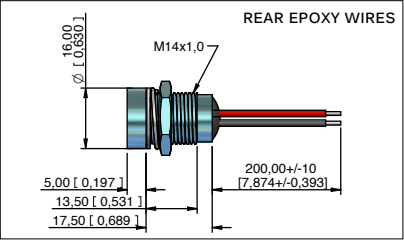
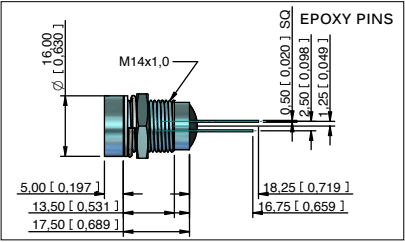
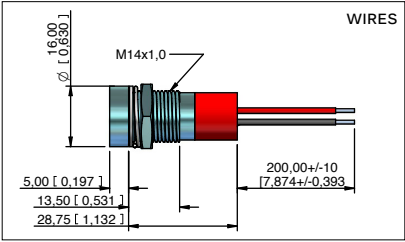
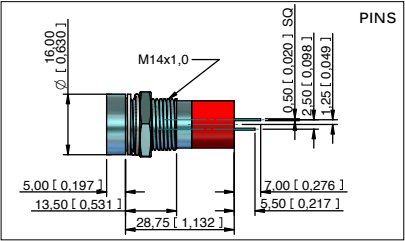
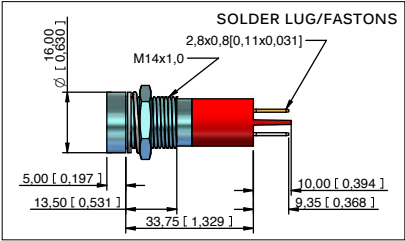
### FLUSH BEZEL



# Q SERIES Ø14mm (.551") Panel Mount LED Indicators

## Technical Drawings

### RECESSED BEZEL



# Q SERIES Ø14mm (.551") Panel Mount LED Indicators

Custom options

## CUSTOM MARKING



## Cable length & connector



For custom cable length and connectors please contact APEM

## CUSTOM ENGRAVING

Suffix the part number with legend code.

| Code | Symbol | Description       |
|------|--------|-------------------|
| -0AJ |        | High Beam         |
| -097 |        | Low Beam          |
| -027 |        | Rear Fog          |
| -026 |        | Front Fog         |
| -021 |        | Windscreen Wiper  |
| -022 |        | Windscreen Washer |
| -023 |        | Ventilator Fan    |
| -0AH |        | Turn Signal       |
| -098 |        | Side Lights       |

| Code | Symbol | Description        |
|------|--------|--------------------|
| -041 |        | Horn               |
| -013 |        | Hazard Warning     |
| -018 |        | Heating            |
| -0BU |        | Brake Test         |
| -0K6 |        | Arrow              |
| -0AG |        | Battery            |
| -0GP |        | Oil Can            |
| -020 |        | Windscreen Heating |
| -086 |        | ABS                |

| Code | Symbol | Description        |
|------|--------|--------------------|
| -0EL |        | Engine Coil        |
| -0SB |        | Seat Belt          |
| -0UB |        | USB Connection     |
| -0ST |        | Steam              |
| -0EU |        | ECU                |
| -0AD |        | Side Step          |
| -012 |        | Air Con            |
| -040 |        | Engine             |
| -0BR |        | Boot/Trunk Release |

Some common codes are listed above, for your custom requirements please contact APEM.  
Unless specified, standard engraving with white infill will be supplied.

# Q SERIES Ø14mm (.551") Panel Mount LED Indicators

## Order Overview

### STANDARD OPTIONS

The Q14 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      | 14            | P                                          | 1                                                                                                                                                                            | C                                                                                                                                             | XX                                                                                        | B                                                                                                                                                                                                                                                                                                                                                                                                                              | 28                                                                                                                                                             | E                              |
|--------|---------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| SERIES | MOUNTING HOLE | BEZEL STYLE                                | TERMINALS                                                                                                                                                                    | BEZEL FINISH                                                                                                                                  | TYPE OF ILLUMINATION                                                                      | LED COLOR                                                                                                                                                                                                                                                                                                                                                                                                                      | VOLTAGE                                                                                                                                                        | SEALING                        |
| Q      | 14 = Ø14mm    | P = Prominent<br>R = Recessed<br>F = Flush | 1 = Solder Lug/<br>Fastons<br>(2.8 x 0.8)<br>2 = Pins<br>3 = Wires<br>4 = Rear epoxy<br>Pins<br>5 = Rear epoxy<br>Wires<br>6 = Short body<br>Pins<br>7 = Short body<br>Wires | C = Bright Chrome<br>B = Black Chrome<br>G = Satin Grey<br>Anodised Flush<br>AR = Red<br>AG = Green<br>AY = Yellow<br>AB = Blue<br>AN = Black | XX = Fixed Light<br>KK = Flashing Light<br>(12- 28VDC)<br>YY = Bi-color<br>ZZ = Tri-color | R = Red<br>G = Green<br>Y = Yellow<br>B = Blue<br>W = White<br>O = Orange<br><br>HR = Hyper Bright Red<br>HG = Hyper Bright Green<br>HY = Hyper Bright Yellow<br>HO = Hyper Bright Orange<br><br>SR = Super Bright Red<br>SG = Super Bright Green<br>SY = Super Bright Yellow<br>SB = Super Bright Blue<br>SW = Super Bright White<br><br>RG = Red/Green<br>RY = Red/Yellow<br>GY = Green/Yellow<br><br>RYG = Red/Yellow/Green | 02 = no resistor*<br>06 = 6VDC<br>12 = 12VDC<br>12A = 12VAC/DC<br>24 = 24VDC<br>24A = 24VAC/DC<br>28 = 28VDC<br>28A = 28VAC/DC<br>110 = 110VAC<br>220 = 220VAC | (Blank) = Unsealed<br>E = IP67 |

#### Example Q14F5ABXXB12E

Ø14mm, Flush bezel, wire termination, blue LED  
anodized blue finish, fixed light,  
12VDC LED, IP67 panel sealed,



- Gold Faston terminal denotes Anode (+), silver terminal denotes Cathode (-)
- Standard wire length is 200mm, 22AWG UL1007, red wire denotes Anode (+), black wire denotes Cathode (-) for other wire lengths consult APEM
- For LEDs with alternative voltages consult APEM
- 110VAC and 220VAC, short body terminal options, 5, 6 and 7 please consult the factory
- 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)
- Short body pins and wires are only available up to 28VDC
- 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
- Maximum panel thickness 11mm
- We recommend using Hyper bright LEDs for use at 110VAC and 220VAC
- For multi-voltage options please consult APEM

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