#### Distinctive features and specification

Q14\_VOY1609R2US

#### **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		
Ø 14.00 +0.15/-0.0		

PANEL CUTOUT

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.

Prominent and Recessed	Flush	Forward Voltage
17,000mcd	2,000mcd	2.2V
11,000mcd	680mcd	3.5V
4,000mcd	350mcd	2.3V
2,500mcd	250mcd	3.3V
4,400mcd	250mcd	3.3V
2800mcd	300mcd	2.1V
	17,000mcd 11,000mcd 4,000mcd 2,500mcd 4,400mcd	17,000mcd       2,000mcd         11,000mcd       680mcd         4,000mcd       350mcd         2,500mcd       250mcd         4,400mcd       250mcd

Prominent and Recessed	Flush	Forward Voltage
2,800mcd	800mcd	2.1V
2,200mcd	250mcd	3.2V
1,300mcd	250mcd	2.0V
850mcd	200mcd	2.1V
	2,800mcd 2,200mcd 1,300mcd	2,800mcd 800mcd 2,200mcd 250mcd 1,300mcd 250mcd

Luminous intensity will be reduced with lower operating current.

Note: The operating voltage must not be exceeded by more that 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.

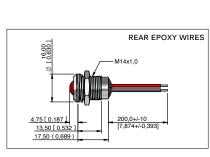
Luminous intensity is measured at 20mA on a discrete LED unless otherwise stated.

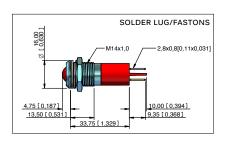
Luminous intensities and color shades of white LEDs may vary within a batch.

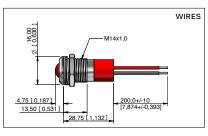
LED characteristics are dependent upon environmental conditions. Therefore published data should be considered nominal.

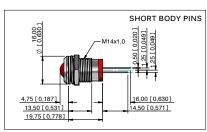
**Technical Drawings** 

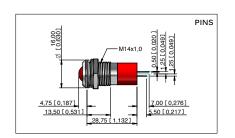


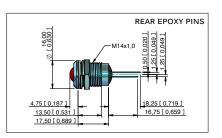


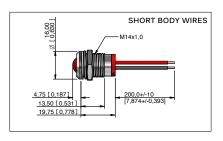






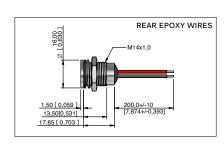


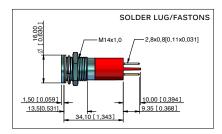


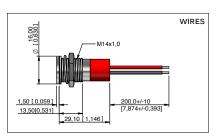


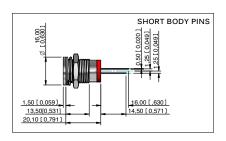


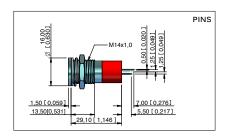


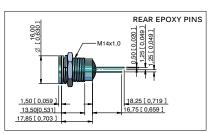


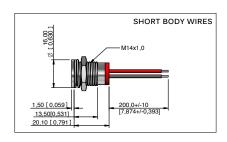




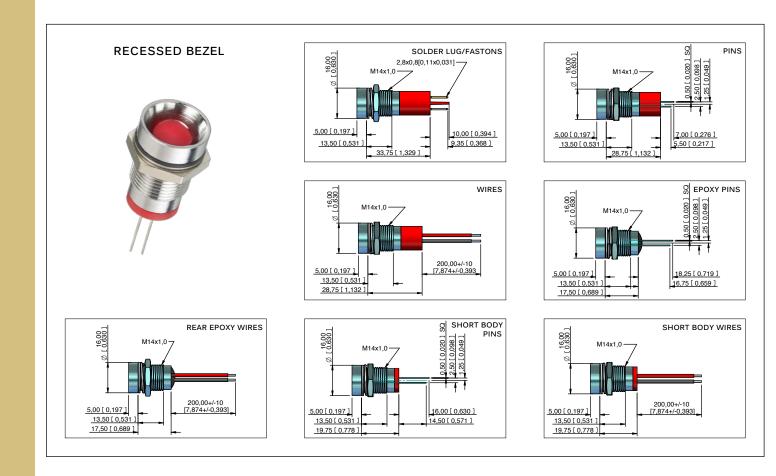








#### **Technical Drawings**



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

## **CUSTOM MARKING**

## Cable length & connector



## **CUSTOM ENGRAVING**

Suffix the part number with legend code.

Code	Symbol	Description
-0AJ		High Beam
-097		Low Beam
-027	<b>()</b>	Rear Fog
-026	<b>≢</b> 0	Front Fog
-021		Windscreen Wiper
-022		Windscreen Washer
-023	(%)	Ventilator Fan
-0AH	<b>(44)</b>	Turn Signal
-098	₹D0€	Side Lights

Code	Symbol	Description
-041		Horn
-013		Hazard Warning
-018	<u></u>	Heating
-0BU		Brake Test
-0K6	4	Arrow
-0AG	= +	Battery
-0GP		Oil Can
-020		Windscreen Heating
-086	(ABS)	ABS

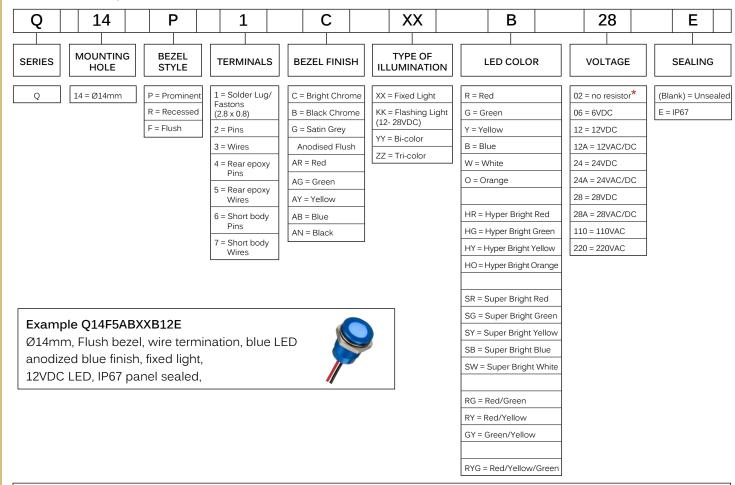
Code	Symbol	Description
-0EL	000	Engine Coil
-0SB		Seat Belt
-0UB	\frac{\psi}{2}	USB Connection
-0ST		Steam
-0EU	ECU	ECU
-0AD		Side Step
-012	$\overline{X}$	Air Con
-040		Engine
-0BR		Boot/Trunk Release

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

#### **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.



- 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
- 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