Q12-7 series

Ø12.7 mm (0.5") half inch panel mount
LED indicators

DISTINCTIVE FEATURES

8 mm colored diffused epoxy lens or 8 mm water clear
super bright LEDs

2VDC - 220VAC

(2.8 x 0.8) solder lug/faston terminals, pins or (200 mm long)
wire terminations

ENVIRONMENTAL SPECIFICATIONS

• IP67 sealing option (EN60529)

• Operating & Storage Temperature Range:
  Rear plastic body: -30 °C to +65° C (–22 °F to +149 °F)
  Rear epoxy body: -40 °C to +85° C (–40 °F to +185 °F)

GENERAL SPECIFICATIONS

• Max Reverse Voltage: 5 V

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

• Life Expectancy: 100,000 hours

• Torque: 75 cNm

• Maximum panel thickness 7 mm

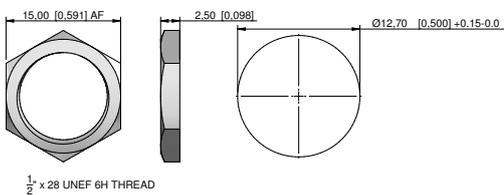• Insulation resistance : 4,000 MΩ at 500 VDC

MATERIALS

• Plated brass bezel finished in bright chrome, black or satin
  grey and moulded polycarbonate rear body

MOUNTING

15,00 [0,591] AF   2,50 [0,098]   Ø12,70   [0,500] +0.15-0.0

$\frac{1}{2}$" x 28 UNEF 6H THREAD

The company reserves the right to change specifications without notice.

All LED characteristics are dependent upon environmental conditions. Therefore published data
should be considered nominal and subject to variations.

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⚡ ELECTRICAL SPECIFICATIONS

STANDARD LED INTENSITY

LED COMPONENT SPECIFICATIONS			
	Prominent and Recessed	Flush	Forward Voltage
HE Red	350 mcd	N/A	2.0 V
Green	60 mcd	N/A	2.2 V
Yellow	50 mcd	N/A	2.1 V
Blue	800 mcd	330 mcd	3.3 V (Flush : 3.1 V)
White	1,200 mcd	1.560 mcd	3.3 V (Flush : 3.1 V)
Orange	100 mcd	N/A	2.2 V
Bi-color (Typical) (Red/Green)	20/10 mcd	N/A	2.0 V/2.2 V
Tri-color (Typical) (Red/Green/Yellow)	80/15/13 mcd	N/A	2.0 V/2.2 V/2.1 V

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 INTENSITY

LED COMPONENT SPECIFICATIONS			
	Prominent and Recessed	Flush	Forward Voltage
HE Red	3,000 mcd	N/A	2.2 V
Green	8,000 mcd	N/A	3.3 V
Yellow	1,100 mcd	N/A	2.0 V
Blue	1,500mcd	N/A	3.3 V
White	1,200 mcd	N/A	3.3 V
Orange	2,000 mcd	N/A	2.2 V

HYPER BRIGHT LED INTENSITY

LED COMPONENT SPECIFICATIONS			
	Prominent and Recessed	Flush	Forward Voltage
HE Red	1,900 mcd	1,120 mcd	2.2 V
Green	3,500 mcd	1,560 mcd	3.3 V
Yellow	N/A	1,120 mcd	2.0 V
Orange	N/A	1,120 mcd	2.2 V

• The operating voltage must not be exceeded by more that 10% as this will result in reduced life expectancy

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

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

• Luminous intensity will be reduced with lower operating current.

Voltage	Operating Voltage	Operating Current
	(Min to Max)	(Typical All Types)
02 (No Resistor)	1.8 to 3.3 VDC	20 mA max
6 VDC	5.4 to 6.6 VDC	20 mA
12 VDC	10.8 to 13.2 VDC	20 mA
24 VDC	21.6 to 26.4 VDC	20 mA
28 VDC	25.2 to 30.8 VDC	20 mA
110 VAC	99 to 121 VAC	6 mA
220 VAC	207 to 235 VAC	3 mA

* Customer to supply resistor for desired operating current.

ADDITIONNAL INFORMATION ON LED COMPONENTS

• Recommended usage:
  - Standard: Homogenous light output that is good for indoor applications.
  - Hyper Bright: Homogenous light output that is good for outside viewing and is daylight visible.
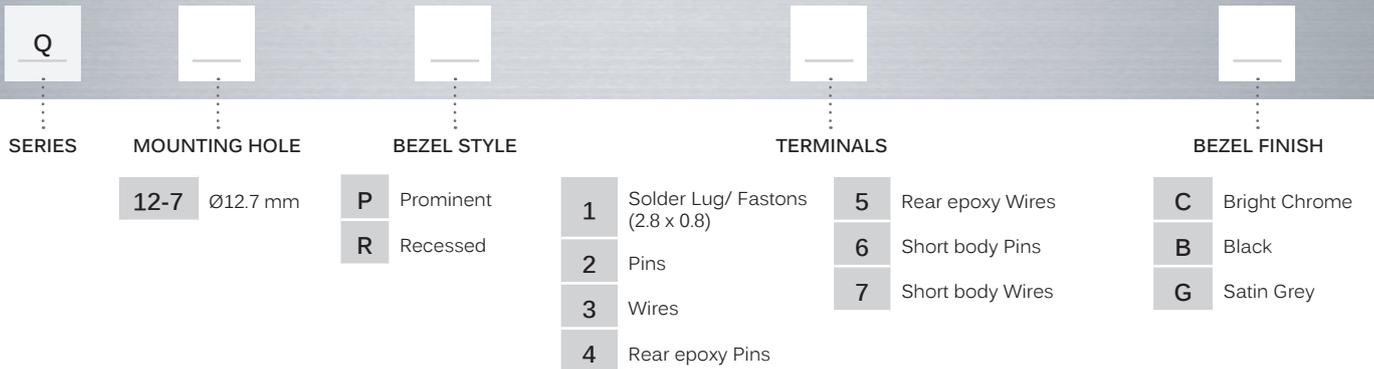 - Super Bright: A water clear LED that is good for long distance viewing and is daylight visible.

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BUILD YOUR PART NUMBER

PROMINENT AND RECESSED BEZEL

SERIES	MOUNTING HOLE	BEZEL STYLE	TERMINALS		BEZEL FINISH
Q	12-7 Ø12.7 mm	P Prominent	1 Solder Lug/ Fastons (2.8 x 0.8)	5 Rear epoxy Wires	C Bright Chrome
		R Recessed	2 Pins	6 Short body Pins	B Black
			3 Wires	7 Short body Wires	G Satin Grey
			4 Rear epoxy Pins		

TYPE OF ILLUMINATION	LED COLOR			VOLTAGE	SEALING
XX Fixed Light	R Red	HG Hyper Bright Green	SW Super Bright White	02 no resistor*	(Blank) Unsealed
KK Flashing Light (12 V – 28 VDC)	G Green	HY Hyper Bright Yellow	SO Super Bright Orange	06 6 VDC	E IP67
YY Bi-color	Y Yellow	HO Hyper Bright Orange	RG Red/Green	12 12 VDC	
ZZ Tri-color	B Blue	SR Super Bright Red	RY Red/Yellow	12A 12 VAC/DC	
	W White	SG Super Bright Green	GY Green/Yellow	24 24 VDC	
	O Orange	SY Super Bright Yellow	RYG Red/Yellow/Green	24A 24 VAC/DC	
	HR Hyper Bright Red	SB Super Bright Blue		28 28 VDC	
				28A 28 VAC/DC	* please refer to the forward voltage in electrical specifications
				110 110 VAC	
				220 220 VAC	

ABOUT THIS SERIES

Notice: please note that not all combinations of above numbers are available.

• Gold faston terminal denotes anode (+), silver terminal denotes cathode (-)

• Standard and Bi-Colour are provided in Standard wire length is 200mm, 24AWG UL1061, Red wire denotes anode (+), Black wire denotes cathode (-) for other 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 28 VDC

• Take care when soldering to the faston terminals (recommended solder temperature 300 °C - 3 sec)

• Max voltage for pins and wires is 28 V

• Tri-color are not available with terminal option 1 and behind panel epoxy sealed with wires (option 4) or pins (option 5).

• 110 VAC and 220 VAC, short body terminal options, 5, 6 and 7 please consult the factory

• We recommend using Hyperbright or Superbright LEDs for use at 110 VAC and 220 VAC

• 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

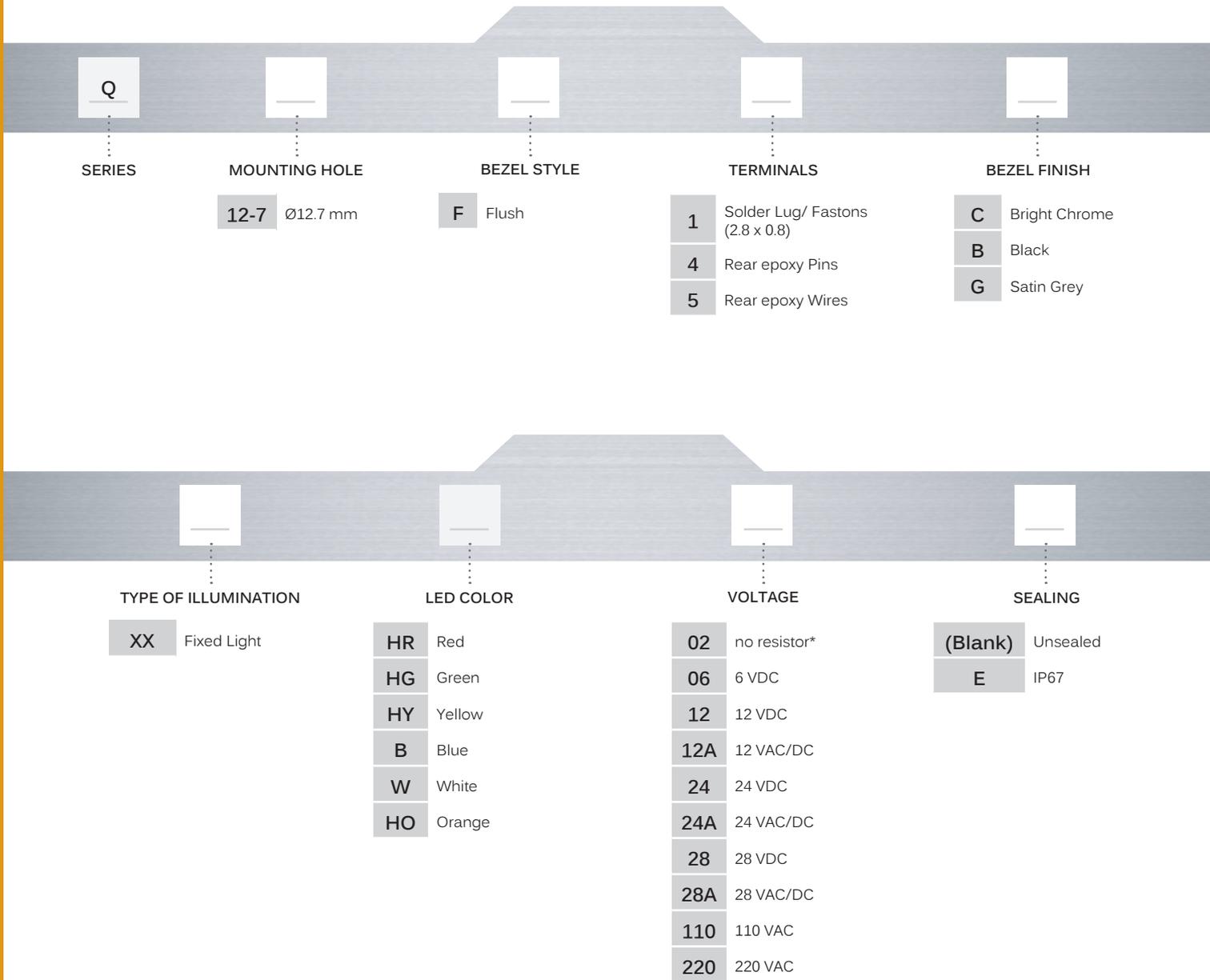• Tri-color pins are center (–) cathode, shortest (+) anode pin green, longest (+) anode pin red

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BUILD YOUR PART NUMBER

FLUSH BEZEL

SERIES	MOUNTING HOLE	BEZEL STYLE	TERMINALS	BEZEL FINISH
Q				

	12-7 Ø12.7 mm	**F** Flush	**1** Solder Lug/ Fastons (2.8 x 0.8)	**C** Bright Chrome
			4 Rear epoxy Pins	**B** Black
			5 Rear epoxy Wires	**G** Satin Grey

TYPE OF ILLUMINATION	LED COLOR	VOLTAGE	SEALING
XX Fixed Light	**HR** Red	**02** no resistor*	**(Blank)** Unsealed
	HG Green	**06** 6 VDC	**E** IP67
	HY Yellow	**12** 12 VDC	
	B Blue	**12A** 12 VAC/DC	
	W White	**24** 24 VDC	
	HO Orange	**24A** 24 VAC/DC	
		28 28 VDC	
		28A 28 VAC/DC	
		110 110 VAC	
		220 220 VAC	

ABOUT THIS SERIES

Notice: please note that not all combinations of above numbers are available.

- Gold faston terminal denotes anode (+), silver terminal denotes cathode (-)

- Standard and Bi-Colour are provided in Standard wire length is 200mm, 24AWG UL1061, Red wire denotes anode (+), Black wire denotes cathode (-) for other lengths consult APEM.

- For LEDs with alternative voltages please consult APEM.

- Take care when soldering to the faston terminals (recommended solder temperature 300 °C - 3 sec)

- • Body options 2 and 6 are only available without integral resistor (02).

- 110VAC and 220VAC only available with solder lug/Faston terminals

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PROMINENT BEZEL
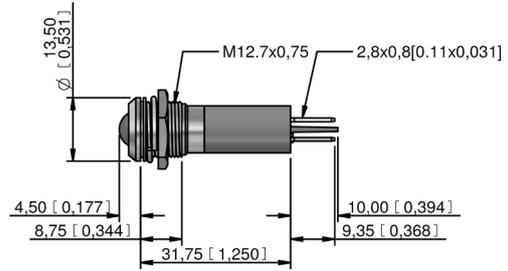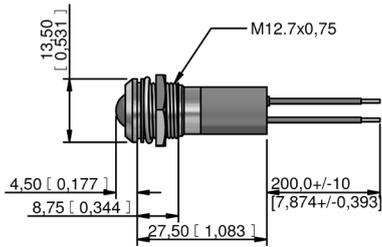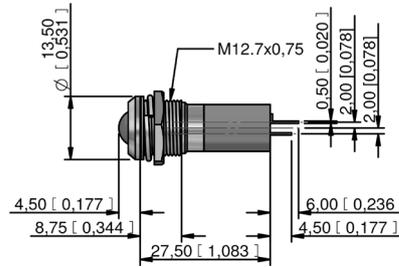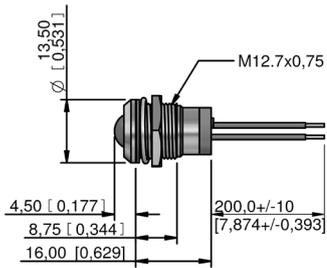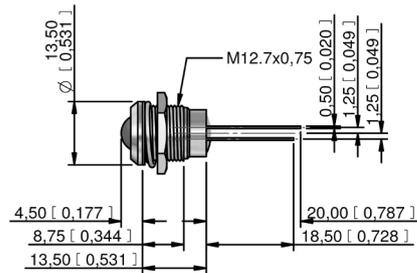
WIRES

REAR EPOXY WIRES

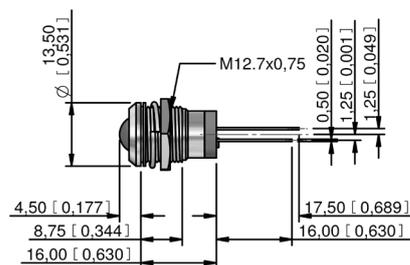### SHORT BODY WIRES

SOLDER LUG/FASTON

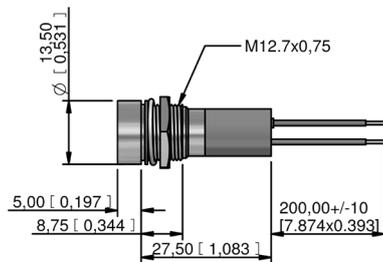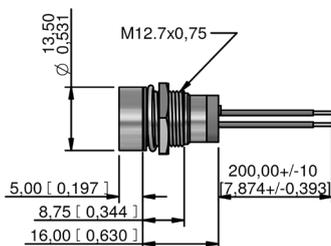
PINS
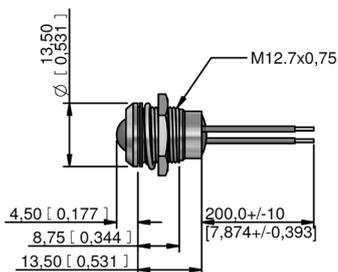
REAR EPOXY PINS

SHORT BODY PINS

Q12-7 series

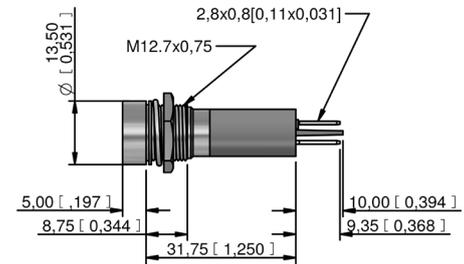Ø12.7 mm (0.5") half inch panel mount LED indicators
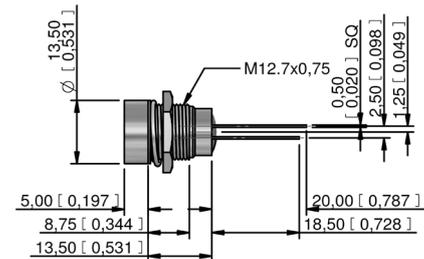
RECESSED BEZEL

WIRES

REAR EPOXY WIRES
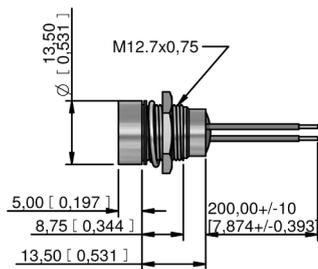
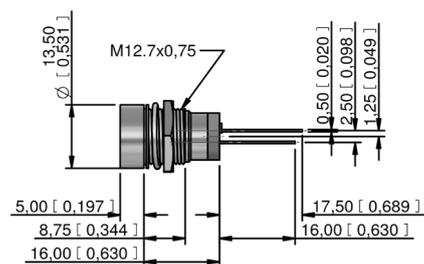### SHORT BODY WIRES

SOLDER LUG/FASTON
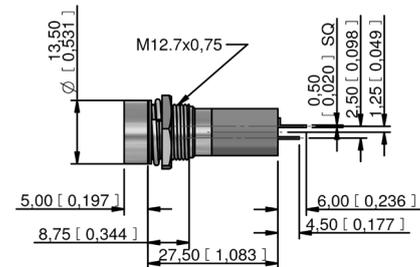
PINS

REAR EPOXY PINS

SHORT BODY PINS

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FLUSH BEZEL

SOLDER LUG/FASTON

M12.7x0,75
2,8x0,8 TAB
[0.110x0.031]
Ø 13,50 [0,531]
4,15
2,075
1,25 [0,049]
9,00 [0,354]
32,65 [1,285]
10,00 [0,394]
9,35 [0,368]

REAR EPOXY WIRES

Ø 13,50 [0,531]
M12.7x0,75
200,00+/-10
[7.874+/-0.393]
1,25 [0,049]
9,00 [0,354]
14,40 [0,567]

REAR EPOXY PINS

Ø 13,50 [0,531]
M12.7x0,75
0,50 [0,020] SQ
2,54 [0,100]
1,27 [0,050]
1,25 0,049
9,00 [0,354]
14,40 [0,567]
19,00 [0,748]
17,50 [0,689]