

Q10 series

Ø10 mm panel mount LED indicators



DISTINCTIVE FEATURES

5 mm flush diffused LED, standard, hyper bright or water clear

Flush chamfered bezel style

(200 mm long) wire terminations

Available in RGB



ENVIRONMENTAL SPECIFICATIONS

- IP67 sealing option (EN60529)
- Operating & Storage Temperature Range: -40 °C to +85 °C (-40 °F to +185 °F)



GENERAL SPECIFICATIONS

- Max Reverse Voltage: 5 V
- Viewing Angle: 60° (dependant on model)
- Life Expectancy: 100,000 hours
- Torque: 20 to 25 cNm (dependent on option)
- Maximum panel thickness 7 mm

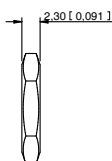
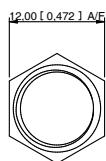


MATERIALS

- Stainless Steel 316L or Anodized Aluminium with potted rear end



MOUNTING



10,00+0,15/-0,1
[0.393+0.006/-0]



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



Q10 series

Ø10 mm panel mount LED indicators



ELECTRICAL SPECIFICATIONS

STANDARD LED INTENSITY

LED COMPONENT SPECIFICATIONS			
	Prominent and Recessed	Flush	Forward Voltage
HE Red	80 mcd	8 mcd	2.0 V
Green	60 mcd	6 mcd	2.2 V
Yellow	50 mcd	6 mcd	2.1 V
Blue	1,600 mcd	50 mcd	3.3V
White	1,600 mcd	500 mcd	3.3 V
Orange	60 mcd	110 mcd	2.2 V
Bi-color (Typical) (Red/Green)	14/30 mcd	15/10 mcd	2.0 V/2.2 V
Tri-color (Typical) (Red/Green/Yellow)	60/15/13 mcd	15/10/6 mcd	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	5,000 mcd	1,300 mcd	2.2 V
Green	10,000 mcd	1,200 mcd	3.3 V
Yellow	4,000 mcd	350 mcd	2.0 V
Blue	2,200 mcd	280 mcd	3.3 V
White	2,500 mcd	950 mcd	3.3 V
Orange	4,000 mcd	500 mcd	2.2 V

HYPER BRIGHT LED INTENSITY

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

RGB LED INTENSITY

ITEM	SYMBOL	CONDITION	TYP.
DC Forward Voltage	$V_F(R)$	$I_F=20\text{ mA}$	2.1
	$V_F(B/G)$	$I_F=20\text{ mA}$	2.1
Luminous Intensity	$I_v(\text{Red})$		330 mcd
	$I_v(\text{Green})$		750 mcd
	$I_v(\text{Blue})$		150 mcd

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

* Customer to supply resistor for desired operating current.

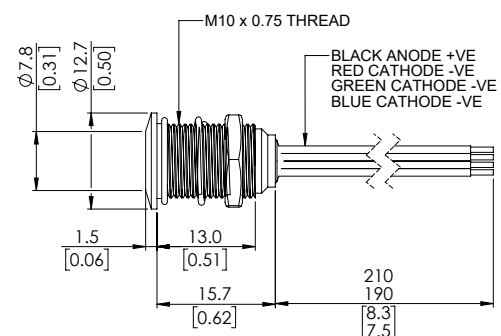
ADDITIONAL INFORMATION ON LED COMPONENTS

- Bi-color leds, by connecting the gold solder lug (+) one color is produced, by reversing the supply voltage another color is produced – Bi-colors are available up to 28 VDC. [AC products not available]
- The tri-color led has red and green leds when both are connected yellow is produced
- The operating voltage must not be exceeded by more than 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.



CONNECTIONS

REAR EPOXY WIRES FOR RGB OPTION



Q10 series

Ø10 mm panel mount LED indicators



BUILD YOUR PART NUMBER

SERIES	MOUNTING HOLE	BEZEL STYLE	TERMINALS	BEZEL FINISH								
Q	10 Ø10 mm	F Flush	5 Rear epoxy Wires	Metal S Stainless Steel Anodized Flush <table border="1"> <tr> <td>AR Red</td> <td>AN Black</td> </tr> <tr> <td>AG Green</td> <td>AK Dark olive</td> </tr> <tr> <td>AY Yellow</td> <td>AC Grey</td> </tr> <tr> <td>AB Blue</td> <td></td> </tr> </table>	AR Red	AN Black	AG Green	AK Dark olive	AY Yellow	AC Grey	AB Blue	
AR Red	AN Black											
AG Green	AK Dark olive											
AY Yellow	AC Grey											
AB Blue												

TYPE OF ILLUMINATION	LED COLOR	VOLTAGE	SEALING																																																																											
<table border="1"> <tr><td>XX</td><td>Fixed Light</td></tr> <tr><td>KK</td><td>Flashing Light (12 V – 28 VDC)</td></tr> <tr><td>YY</td><td>Bi-color</td></tr> <tr><td>ZZ</td><td>Tri-color</td></tr> </table>	XX	Fixed Light	KK	Flashing Light (12 V – 28 VDC)	YY	Bi-color	ZZ	Tri-color	<table border="1"> <tr><td>R</td><td>Red</td></tr> <tr><td>G</td><td>Green</td></tr> <tr><td>Y</td><td>Yellow</td></tr> <tr><td>B</td><td>Blue</td></tr> <tr><td>W</td><td>White</td></tr> <tr><td>O</td><td>Orange</td></tr> <tr><td>HR</td><td>Hyper Bright Red</td></tr> <tr><td>HG</td><td>Hyper Bright Green</td></tr> <tr><td>HY</td><td>Hyper Bright Yellow</td></tr> <tr><td>HO</td><td>Hyper Bright Orange</td></tr> </table>	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	<table border="1"> <tr><td>SR</td><td>Super Bright Red</td></tr> <tr><td>SG</td><td>Super Bright Green</td></tr> <tr><td>SY</td><td>Super Bright Yellow</td></tr> <tr><td>SB</td><td>Super Bright Blue</td></tr> <tr><td>SW</td><td>Super Bright White</td></tr> <tr><td>SO</td><td>Super Bright Orange</td></tr> <tr><td>RG</td><td>Red/Green</td></tr> <tr><td>RY</td><td>Red/Yellow</td></tr> <tr><td>GY</td><td>Green/Yellow</td></tr> <tr><td>RYG</td><td>Red/Yellow/Green</td></tr> <tr><td>RGB</td><td>Red/Green/Blue*</td></tr> </table> * Common anode only	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	RGB	Red/Green/Blue*	<table border="1"> <tr><td>02</td><td>no resistor**</td></tr> <tr><td>06</td><td>6V DC</td></tr> <tr><td>12</td><td>12 VDC</td></tr> <tr><td>12A</td><td>12 VAC/DC</td></tr> <tr><td>24</td><td>24 VDC</td></tr> <tr><td>24A</td><td>24 VAC/DC</td></tr> <tr><td>28</td><td>28 VDC</td></tr> <tr><td>28A</td><td>28 VAC/DC</td></tr> </table> ** please refer to the forward voltage in electrical specifications	02	no resistor**	06	6V DC	12	12 VDC	12A	12 VAC/DC	24	24 VDC	24A	24 VAC/DC	28	28 VDC	28A	28 VAC/DC	<table border="1"> <tr><td>(Blank)</td><td>Unsealed</td></tr> <tr><td>E</td><td>IP67</td></tr> <tr><td>(Blank)</td><td>Common cathode</td></tr> <tr><td>-CA</td><td>Common anode</td></tr> </table>	(Blank)	Unsealed	E	IP67	(Blank)	Common cathode	-CA	Common anode
XX	Fixed Light																																																																													
KK	Flashing Light (12 V – 28 VDC)																																																																													
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																																																																													
RGB	Red/Green/Blue*																																																																													
02	no resistor**																																																																													
06	6V DC																																																																													
12	12 VDC																																																																													
12A	12 VAC/DC																																																																													
24	24 VDC																																																																													
24A	24 VAC/DC																																																																													
28	28 VDC																																																																													
28A	28 VAC/DC																																																																													
(Blank)	Unsealed																																																																													
E	IP67																																																																													
(Blank)	Common cathode																																																																													
-CA	Common anode																																																																													



ABOUT THIS SERIES



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

- Standard wire length is 200 mm, 24 AWG UL1061, red wire denotes anode (+), black wire denotes cathode (-) for other wire lengths consult APEM.
- For LEDs with alternative voltages consult APEM
- Standard Tri-color wire terminations are two Anodes (+) and one Cathode (-)
- Tri-color wires are one red (+) and one green (+) Anode and one black (-) Cathode

Q10 series

Ø10 mm panel mount LED indicators

FLUSH BEZEL



REAR EPOXY WIRES

