FEATURES

- Ø8.5mm mounting
- Marine grade hard anodised aluminium black body
- Unique PTFE mounting / panel seal
- Sealed to IP68 - protection to 10psi
- Coloured diffused lens
- Internal potting
- 150mm flying leads as standard
- Range of LED colour options

BENEFITS

- Unique Hexagonal bezel aids mounting to panel
- Ideal for marine applications
- Sealing can withstand extreme pressure
- Continuous immersion up to 10m
- Diffused lens gives wide viewing angle
- Suitable for high vibration applications
- Rapid installation
- Suitable for status panel indication
- Outstanding reliability
- Vandal resistant

Marl Part Number	LED Colour	Typical Voltage Vf @ 20mA	Typical Current DC Iopr	Typical LED Luminous Intensity	Typical LED Wavelength λp	Operating Temp Topr *	Storage Temp Tstg
665-501-04-50	Red	2.0	20	458	625	-40 to +75	-40 to +100
665-521-04-50	Yellow	2.0	20	440	590	-40 to +75	-40 to +100
665-532-04-50	Green	3.4	20	2157	520	-40 to +75	-40 to +100
665-930-04-50	Blue	3.4	20	452	470	-40 to +75	-40 to +100
665-997-04-50	Cool White	3.4	20	1359	See Below	-40 to +75	-40 to +100
		Vdc	mA	mcd	nm	°C	°C

Typical Emission Colours Cool White LED			
X	0.275	0.28	0.29
Y	0.27	0.28	0.30

NOTES

Intensities (Iv) and colour shades of white (X-Y co-ordinates) may vary between LEDs within a batch. Additional LED Colours, Voltage Options and Flying Lead lengths available for semi-custom projects. Please contact our Sales Team. All LED components are supplied in anti-static packaging.
* For operating temperature derating graphs, please refer to sheet 2.

bsi. ISO 9001 Quality Management
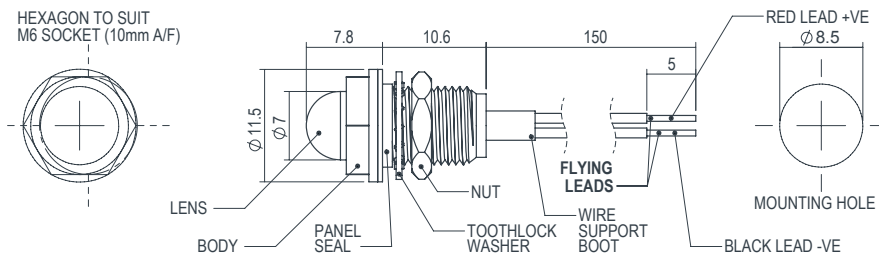Q 05480

RoHs 2002/95/EC

CE

TECHNICAL CHARACTERISTICS

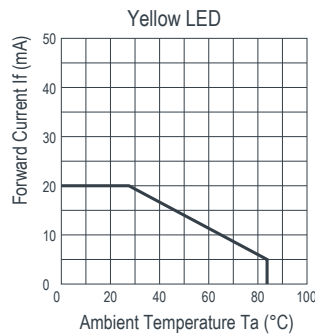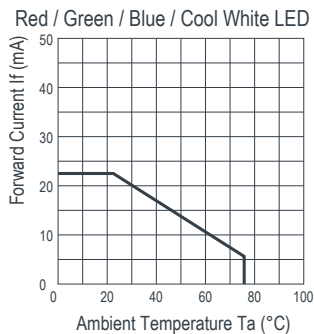| Series	Max. Power Dissipation	Max. Reverse Voltage	Panel Cutout	Nut Mounting Torque	Min. Mounting Centres	Min. - Max. Panel Thickness
665	75	3.0	8.5	1.0	14.5	1.5 - 5.0
	mW	Vdc	mm	Nm	mm	mm

TECHNICAL DRAWING

Weight (g): 10.0

Dimensions in mm (typical). Not to scale. Mounting hole to be clean and burr free. Anode termination denoted by red flying lead.

HEXAGON TO SUIT M6 SOCKET (10mm A/F)

7.8   10.6   150

RED LEAD +VE
∅ 8.5

5

∅ 11.5   ∅ 7

LENS

BODY

PANEL SEAL

NUT

TOOTHLOCK WASHER

FLYING LEADS

WIRE SUPPORT BOOT

BLACK LEAD -VE

MOUNTING HOLE

DE-RATING GRAPHS

Red / Green / Blue / Cool White LED

Yellow LED

Forward Current If (mA)

Ambient Temperature Ta (°C)

MATERIALS

Body	Hard, black anodised aluminium. Anodised to Defence Standard 03/26 50 microns
Nut	Bright Nickel Plated Brass
Panel Seal	PTFE
Fresnel Lens	Polycarbonate
Encapsulation	Black Polyurethane
Lock Washer	Spring Steel
Termination	Defence Standard 61/12, Part 18 chemical & flame retardant 150mm colour coded flying leads

DESIGN CONSIDERATIONS

Electro-Static Discharge (ESD)
Build up of electro-static discharge occurs in many situations involving people moving and handling products.The range of possible situations is very diverse but voltage levels as high as several thousand volts can and do arise in many individual situations. When an operator charged up to these levels handles a static sensitive device, there is a very probable   likelihood that the device will be irreversibly damaged. It is essential that precautions are taken at all stages during manufacture and assembly of these products. Although LEDs were never considered to be static sensitive

devices, changes in manufacturing technology and materials used to produce higher intensity products over a large range of the wavelength spectrum have changed this. Marl has an approved system of ESD control from goods in, through production and into final packing and despatch. Marl recommend all users of LED based products follow the guidelines of BS 100015.

Voltage, Current and Temperature
The forward voltage / current value of an LED is dependent upon the ambient temperature of the environment in which

it is operated. Therefore, care must be taken to operate the LED at the correct voltage / current values, depending upon the ambient temperature.

Marl should be contacted if the device is to be operated outside the temperature range specified. Marl accept no liability for any product that is operated outside the stated voltage or temperature range.

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