

#### features



- Ø25.4mm mounting
- · Black anodised aluminium housing
- RIA 12 approved versions available
- · Colour diffused lens
- Sealed to IP67
- Large LED indication
- · AC versions available
- Pack Quantity = 1 Piece

# specifications

Typical characteristics (Ta = 25°C)

| Part<br>Number | Colour | Voltage<br>Vac/dc | Current<br>DC<br>(mA) | Luminous<br>Intensity<br>(mcd) | Wave<br>Length<br>(nm) | Operating<br>Temp.<br>(°C) | Storage<br>Temp.<br>(°C) | De-rating<br>Graphs |
|----------------|--------|-------------------|-----------------------|--------------------------------|------------------------|----------------------------|--------------------------|---------------------|
| 671-290-22     | Red    | 24 Vdc            | 19                    | 68.2                           | 627                    | -40 - +85                  | -40 - +85                | Α                   |
| 671-291-22     | Yellow | 24 Vdc            | 19                    | 68.2                           | 590                    | -40 - +85                  | -40 - +85                | Α                   |
| 671-290-75     | Red    | 110               | 19                    | 68.2                           | 627                    | -40 - +85                  | -40 - +85                | А                   |
| 671-291-75     | Yellow | 110               | 19                    | 68.2                           | 590                    | -40 - +85                  | -40 - +85                | Α                   |
| 671-289-22     | Red    | 24 Vdc            | 19                    | 250                            | 660                    | -40 - +85                  | -40 - +85                | Α                   |
| 671-292-22     | Green  | 24 Vdc            | 19                    | 110                            | 565                    | -40 - +85                  | -40 - +85                | F                   |
| 671-289-75     | Red    | 110               | 10                    | 250                            | 660                    | -40 - +85                  | -40 - +85                | Α                   |
| 671-293-75     | Yellow | 110               | 10                    | 821.8                          | 590                    | -40 - +85                  | -40 - +85                | Α                   |
| 671-292-75     | Green  | 110               | 10                    | 110                            | 565                    | -40 - +85                  | -40 - +85                | F                   |

^ = Voltage for 20mA product is Vf at 20mA, not Vopr

#### to order

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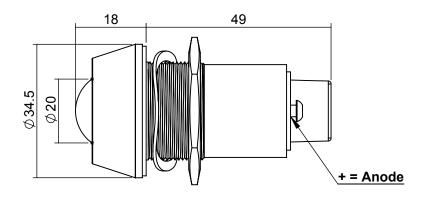


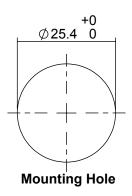
<sup>-</sup> Products must be de-rated according to the de-rating information. Each de-rating graph refers to specific LEDs. Please refer to graphs on page 3.

<sup>-</sup> Luminous intensity is measured at 20mA on a discrete LED unless otherwise stated.



## technical data





Dimensions in mm (typical)

Not to scale

Mounting hole to be clean and burr free

#### housing material

Body Black Anodised Aluminium

Nut Aluminium
Panel Seal Neoprene
Fresnel Lens Epoxy
Encapsulation PC5430 Resin
Lock Washer Spring Steel
Termination Tags Zinc Plated Steel
Header Nylon 6 A82

## technical characteristics

| Series | ; | Max. Power Dissipation | Max. Reverse<br>Voltage | Panel Cutout | Nut Mounting<br>Torque | Min. Mounting<br>Centres | Max. Panel<br>Thickness |
|--------|---|------------------------|-------------------------|--------------|------------------------|--------------------------|-------------------------|
| 671    |   | 2500                   | N/A                     | 25.4         | 1.2                    | 41.0                     | 2.0 - 10.0              |
| units  |   | mW                     | Vdc                     | mm           | Nm                     | mm                       | mm                      |

<sup>\* =</sup> Current Version ^ =

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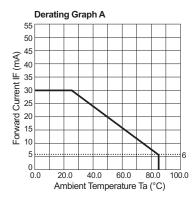


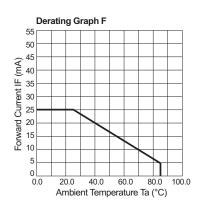


<sup>^ =</sup> Voltage Version



## de-rating information





#### also available

### Part numbers also available in the 671 series:

| Part          | Colour | Voltage       |  |  |
|---------------|--------|---------------|--|--|
| Number        | Colour | Vopr          |  |  |
| 671-063-62-50 | White  | 48-130Vac/dc  |  |  |
| 671-063-91-50 | White  | 230 Vac/dc    |  |  |
| 671-063-98-50 | White  | 24 Vac/dc     |  |  |
| 671-289-76    | Red    | 230 Vac 50 Hz |  |  |
| 671-289-87-50 | Red    | 130 Vac/dc    |  |  |
| 671-290-26    | Red    | 230 Vdc       |  |  |
| 671-290-75-50 | Red    | 110 Vac 50 Hz |  |  |
| 671-290-76    | Red    | 230 Vac 50 Hz |  |  |
| 671-290-91    | Red    | 230 Vac/dc    |  |  |
| 671-290-91-50 | Red    | 230 Vac/dc    |  |  |
| 671-291-76    | Yellow | 230 Vac 50 Hz |  |  |
| 671-291-87-50 | Yellow | 130 Vac/dc    |  |  |
| 671-291-99    | Yellow | 110 Vac/dc    |  |  |
| 671-292-00-50 | Green  | 120 Vac       |  |  |
| 671-292-76    | Green  | 230 Vac 50 Hz |  |  |
| 671-292-87-50 | Green  | 130 Vac/dc    |  |  |

| Part          | Colour | Voltage    |  |  |
|---------------|--------|------------|--|--|
| Number        | Colour | Vopr       |  |  |
| 671-293-87-50 | Yellow | 130 Vac/dc |  |  |
| 671-294-87-50 | Blue   | 130 Vac/dc |  |  |

The products listed here illustrate all of the options available to order. These products may have custom modifications that alter their operation beyond the generic information contained within this datasheet. Please contact sales for further information.

\* = These products do not contain integral resistors

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### 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.

#### **Power De-Rating**

The forward voltage/ current value of an LED is dependant 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. Consequently, a recommendation regarding operating voltages and currents is given in order to address these temperature effects. This recommendation is termed 'de-rating'. It is usual for forward voltages and currents to be specified for ambient temperature of 25°C. However, because the values of these qualities vary with temperature, please refer to the de-rating graphs for correct operation. Marl accept no liability for any product that is operated higher than the stated voltage.

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