# 652 series

## features



- **Ø12.7mm mounting**
- **Product will operate over a wide voltage range**
- **Black anodised aluminium housing**
- **Colour diffused lens with an 180º viewing angle**
- **Fully internally potted to resist shock and vibration**
- **Sealed to IP67**
- **True bi-polar product; AC and DC operation**
- **Pack Quantity = 10 Pieces**

## specifications

Typical characteristics (Ta = 25°C)

| Part Number | Colour | Voltage Vac/dc | Current DC (mA) | Luminous Intensity (mcd) | Wave Length (nm) | Operating Temp. (°C) | Storage Temp. (°C) | De-rating Graphs |
|---|---|---|---|---|---|---|---|---|
| 652-105-75 | Red | 110 Vac | 6 | 95 | 625 | -40 - +85 | -40 - +85 | B |
| 652-102-75 | Red | 110 Vac | 6 | 500 | 660 | -40 - +85 | -40 - +85 | B |
| 652-111-75 | Yellow | 110 Vac | 6 | 45 | 590 | -40 - +85 | -40 - +85 | B |
| 652-114-75 | Green | 110 Vac | 6 | 45 | 565 | -40 - +85 | -40 - +85 | C |

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

## to order

**to order please contact us on: t: +44 (0)1229 582 430**
**f: +44 (0)1229 585 155 e: sales@marl.co.uk w: www.leds.co.uk**

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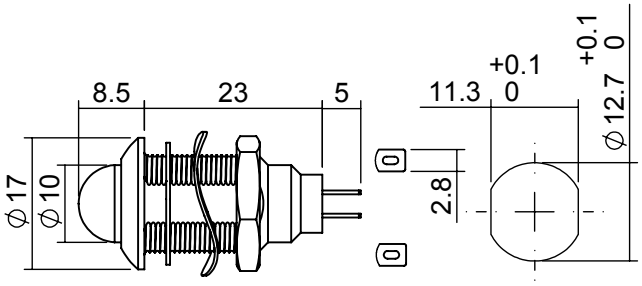
BS EN ISO 9001:2008 approved manufacturer

high performance panel lamps

# 652 series

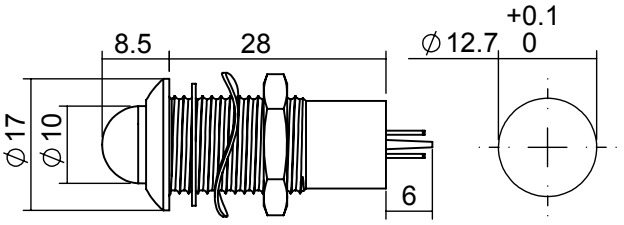
## technical data

**Below 50Vac/dc**




**Mounting Hole**

**Above 50Vac/dc**




**Mounting Hole**

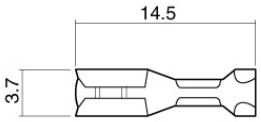
Dimensions in mm (typical)
Not to scale

Anode termination denoted by red indicator
Mounting hole to be clean and burr free

## housing material

| | |
|---|---|
| **Body** | Aluminium Grade 6063 balck anodised |
| **Nut** | Stainless Steel Grade 303 |
| **Panel Seal** | Viton |
| **Fresnel Lens** | Polycarbonate |
| **Encapsulation** | PC5430 Resin |
| **Lock Washer** | Zinc Plated Steel |
| **Termination** | Copper with silver flash finish |
| **Header** | Nylon6 A82 |

## push on connectors




925-000-00 is brass tin plated - for use with 652 series lamp
Dimensions in mm (typical). Not to scale.

## technical characteristics

| Series | Max. Power Dissipation | Max. Reverse Voltage | Panel Cutout | Nut Mounting Torque | Min. Mounting Centres | Max. Panel Thickness |
|---|---|---|---|---|---|---|
| 652 | 825 | - | 12.7 | 1.0 | 19.5 | 1.5 - 8.0 |
| **units** | mW | Vdc | mm | Nm | mm | mm |

* = Current Version ^ = Voltage Version

## optional flying lead terminations

| Order Code Suffix | Supply Voltage | Wire Colour | Wire Length | No/Diameter of Conductor | Diameter Insulation | Comments |
|---|---|---|---|---|---|---|
| 19 | DC products | Red-anode/ Black-cathode | 1000mm | - | - | Customised lengths available |

## to order

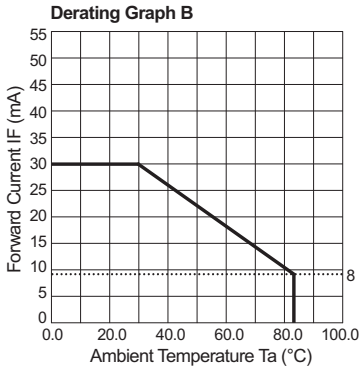
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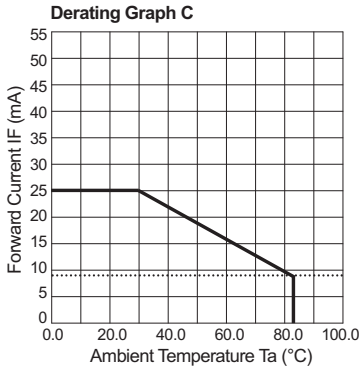
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# 652 series

## de-rating information




## also available

### Part numbers also available in the 652 series:

| Part Number | Colour | Voltage Vopr |
|---|---|---|
| 652-102-63 | Red | 12-28Vac/dc |
| 652-105-63 | Red | 12-28Vac/dc |
| 652-111-63 | Yellow | 12-28Vac/dc |
| 652-114-63 | Green | 12-28Vac/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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