

514 RS series



features



- Ø12.7mm mounting
- Robust bright nickel plated brass housing
- Raised profile styling with a colour diffused lens
- Sealed to IP67
- Suitable for high vibration applications
- Internal reverse protection diode fitted as standard in all voltage models
- Pack Quantity = 10 Pieces

specifications

Typical characteristics (Ta = 25°C)

| RS Part Number | Marl Part Number | Colour | Voltage Vac/dc | Current DC (mA) | Luminous Intensity (mcd) | Wave Length (nm) | Operating Temp. (°C) | Storage Temp. (°C) | De-rating Graphs |
|----------------|------------------|--------|-----------------------|-----------------|--------------------------|------------------|----------------------|--------------------|------------------|
| 3605311 | 514-102-04 | Red | 1.85 [^] Vdc | 20 | 500 | 660 | -40 - +85 | -40 - +85 | B |
| 3605096 | 514-102-21 | Red | 12 Vdc | 20 | 500 | 660 | -40 - +85 | -40 - +85 | B |
| 3605147 | 514-102-22 | Red | 24 Vdc | 19 | 500 | 660 | -40 - +85 | -40 - +85 | B |
| 3605226 | 514-102-75 | Red | 110 Vac | 9 | 500 | 660 | -40 - +85 | -40 - +85 | B |
| 3605276 | 514-102-76 | Red | 230 Vac | 4 | 500 | 660 | -40 - +85 | -40 - +85 | B |
| 3605333 | 514-105-04 | Red | 2 [^] Vdc | 20 | 95 | 625 | -40 - +85 | -40 - +85 | B |
| 3605119 | 514-105-21 | Red | 12 Vdc | 20 | 95 | 625 | -40 - +85 | -40 - +85 | B |
| 3605153 | 514-105-22 | Red | 24 Vdc | 19 | 95 | 625 | -40 - +85 | -40 - +85 | B |
| 3605197 | 514-105-72 | Red | 24 Vac | 20 | 95 | 625 | -40 - +85 | -40 - +85 | B |
| 3605282 | 514-105-76 | Red | 230 Vac | 4 | 95 | 625 | -40 - +85 | -40 - +85 | B |
| 3605175 | 514-111-22 | Yellow | 24 Vdc | 19 | 45 | 590 | -40 - +85 | -40 - +85 | B |
| 3605305 | 514-111-76 | Yellow | 230 Vac | 4 | 45 | 590 | -40 - +85 | -40 - +85 | B |
| 3605349 | 514-114-04 | Green | 2.2 [^] Vdc | 20 | 45 | 565 | -40 - +85 | -40 - +85 | C |
| 3605125 | 514-114-21 | Green | 12 Vdc | 20 | 45 | 565 | -40 - +85 | -40 - +85 | C |
| 3605169 | 514-114-22 | Green | 24 Vdc | 19 | 45 | 565 | -40 - +85 | -40 - +85 | C |
| 3605204 | 514-114-72 | Green | 24 Vac | 19 | 45 | 565 | -40 - +85 | -40 - +85 | C |
| 3605248 | 514-114-75 | Green | 110 Vac | 9 | 45 | 565 | -40 - +85 | -40 - +85 | C |
| 3605298 | 514-114-76 | Green | 230 Vac | 4 | 45 | 565 | -40 - +85 | -40 - +85 | C |

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

- 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.

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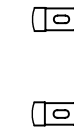
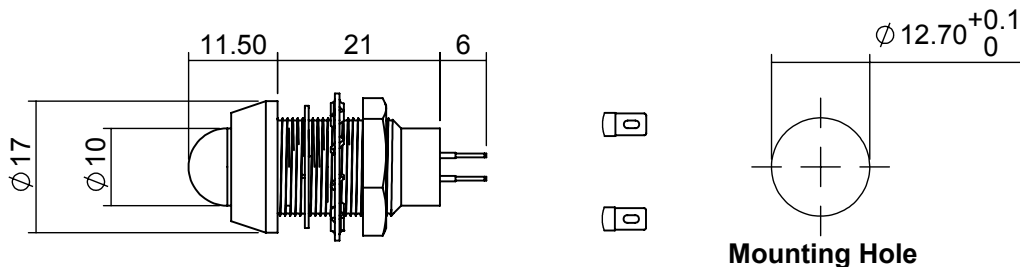


BS EN ISO 9001:2008 approved manufacturer

514 RS series



technical data



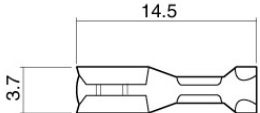
Mounting Hole

Anode termination indicated by red sleeve.
Mounting hole to be clean and burr free.

Dimensions in mm (typical)
Not to scale

housing material

push on connectors

| | | |
|---------------------------|--|---|
| Body | Brass to BS 2874 CZ121, Nickel plated to BS 1224 |  <p>925-000-00 is brass tin plated - for use with 514 series lamps</p> <p>Dimensions in mm (typical). Not to scale.</p> |
| Nut | Brass to BS 2874 CZ121, Nickel plated to BS 1224 | |
| Panel Seal | Viton | |
| Termination | Brass to BS 2874 CZ108. Copper flash base, silver flash finish | |
| Lens | - | |
| Encapsulation | PC5430 Resin | |
| Lock Washer Header | Zinc Plated Steel | |

technical characteristics

| Series | Max. Power Dissipation | Max. Reverse Voltage | Panel Cutout | Nut Mounting Torque | Min. Mounting Centres | Max. Panel Thickness |
|--------|------------------------|----------------------|--------------|---------------------|-----------------------|----------------------|
| 514 | 1000 | 3*/1000^ | 12.7 | 1.0 | 19.5 | 1.5 - 8.0 |
| units | mW | Vdc | mm | Nm | mm | mm |

* = Current version

^ = Voltage version

optional flying lead terminators

| Order Code Suffix | Supply Voltage | Wire Colour | Wire Length | No/Diameter of Conductor | Diameter Insulation | Comments |
|-------------------|----------------|--------------------------|-------------|--------------------------|---------------------|------------------------------|
| 15 | DC products | Red-anode/ Black-cathode | 150mm | 19/0.15mm | 1.2mm | Customised lengths available |
| 15 | AC products | Brown-live/ Blue-neutral | 150mm | | | |
| 19 | DC products | Red-anode/ Black-cathode | 1000mm | | | |
| 19 | AC products | Brown-live/ Blue-neutral | 1000mm | | | |

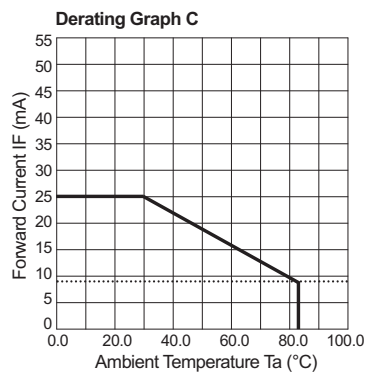
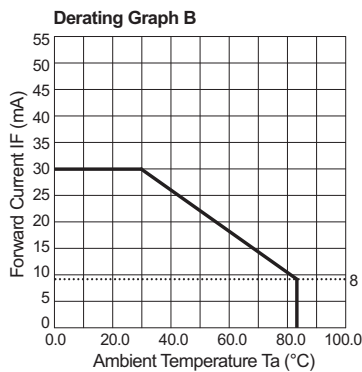
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de-rating information



also available

Part numbers also available in the 514 series:

| Part Number | Colour | Voltage Vopr |
|---------------|--------|---------------|
| 514-102-20 | Red | 5/6 Vdc |
| 514-102-23 | Red | 28 Vdc |
| 514-102-25 | Red | 110 Vdc |
| 514-102-72 | Red | 24 Vac 50 Hz |
| 514-105-23 | Red | 28 Vdc |
| 514-105-25 | Red | 110 Vdc |
| 514-105-55-15 | Red | 130 Vdc |
| 514-105-72-19 | Red | 24 Vac 50 Hz |
| 514-105-75 | Red | 110 Vac 50 Hz |
| 514-111-04 | Yellow | 20 mA dc |
| 514-111-21 | Yellow | 12 Vdc |
| 514-111-23 | Yellow | 28 Vdc |
| 514-111-72 | Yellow | 24 Vac 50 Hz |
| 514-111-72-19 | Yellow | 24 Vac 50 Hz |
| 514-111-75 | Yellow | 110 Vac 50 Hz |
| 514-111-75-19 | Yellow | 110 Vac 50 Hz |
| 514-114-23 | Green | 28 Vdc |
| 514-114-55-15 | Green | 130 Vdc |
| 514-501-04 | Red | 20 mA 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.

RP = Reverse Polarity

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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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