

● PCB MOUNTING LEDs - Ø 5mm

## FEATURES



### 104 SERIES

PACK QUANTITY = 250 PIECES

- Material conforms to UL94 V-O flammability ratings
- Bi-colour options available
- Reverse polarity options available
- Product illustrated 104-505-04
- Typically available ex stock

## SPECIFICATIONS

Ordering Information & Typical Technical Characteristics (Ta = 25°C)

Mean Time Between Failure up to = 100,000 Hours. Luminous intensity figures refer to the unmodified discrete LED.

| PART NUMBER        | COLOUR    | LENS            | VOLTAGE DC<br>Vopr | CURRENT DC<br>Iopr | LUMINOUS INTENSITY<br>Iv@20mA | WAVE LENGTH<br>λp | OPERATING TEMP<br>Topr | STORAGE TEMP<br>Tstg |     |
|--------------------|-----------|-----------------|--------------------|--------------------|-------------------------------|-------------------|------------------------|----------------------|-----|
| STANDARD INTENSITY |           |                 |                    |                    |                               |                   |                        |                      |     |
|                    |           |                 |                    |                    |                               |                   |                        |                      |     |
| 104-505-04         | Red       | Colour Diffused | 2.0*               | 20                 | 60                            | 627               | -40 ~ +85 <sup>^</sup> | -40 ~ +85            | Yes |
| 104-511-04         | Yellow    | Colour Diffused | 2.1*               | 20                 | 40                            | 590               | -40 ~ +85 <sup>^</sup> | -40 ~ +85            | Yes |
| 104-514-04         | Green     | Colour Diffused | 2.2*               | 20                 | 40                            | 565               | -40 ~ +85 <sup>^</sup> | -40 ~ +85            | Yes |
| 104-530-04         | Red/Green | White Diffused  | 2.0/2.2*           | 20                 | 30/25                         | 627/565           | -40 ~ +85 <sup>^</sup> | -40 ~ +85            | Yes |
| 104-581-20         | Red       | Colour Diffused | 5                  | 10                 | 50                            | 627               | -40 ~ +70              | -40 ~ +85            | Yes |
| 104-582-20         | Yellow    | Colour Diffused | 5                  | 10                 | 20                            | 590               | -40 ~ +70              | -40 ~ +85            | Yes |
| 104-583-20         | Green     | Colour Diffused | 5                  | 10                 | 20                            | 565               | -40 ~ +70              | -40 ~ +85            | Yes |
| <b>UNITS</b>       |           |                 | <b>Vdc</b>         | <b>mA</b>          | <b>mcd</b>                    | <b>nm</b>         | <b>°C</b>              | <b>°C</b>            |     |

\* = Voltage DC for 20mA product is Vf@20mA, not Vopr

<sup>^</sup> = Products must be derated according to the derating information. Each derating graph refers to specific LEDs.

**How to Order:**

website: [www.marl.co.uk](http://www.marl.co.uk) • email: [sales@marl.co.uk](mailto:sales@marl.co.uk) •

• Telephone +44 (0)1229 582430 • Fax: +44 (0)1229 585155

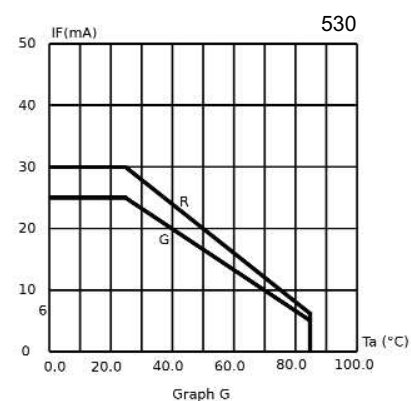
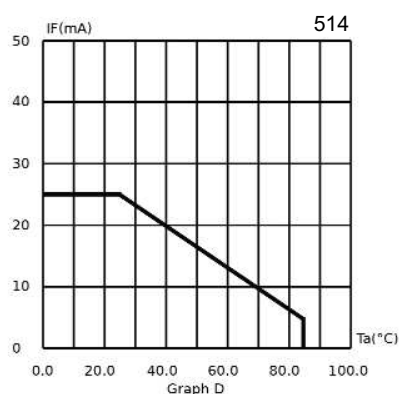
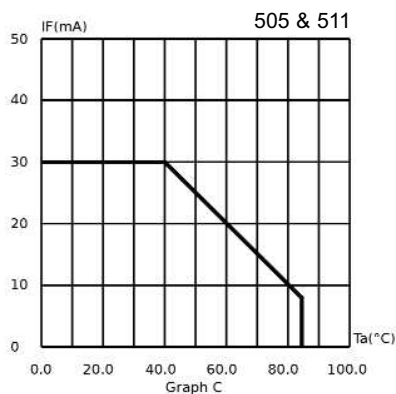
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## DERATING INFORMATION



## ALSO AVAILABLE

Part numbers also available in the 104 Series:

| PART NO.      | COLOUR | VOLTAGE DC<br>(Vdc) Vopr |
|---------------|--------|--------------------------|
| 104-505-01    | Red    | 2mA                      |
| 104-505-01-29 | Red    | 2mA                      |
| 104-511-01    | Yellow | 2mA                      |
| 104-514-01    | Green  | 2mA                      |
| 104-514-01-29 | Green  | 2mA                      |
| 104-514-04-24 | Green  | 20mA                     |
| 104-514-13-24 | Green  | 20mA RP                  |
| 104-555-04    | Red    | 20mA                     |
| 104-561-04    | Yellow | 20mA                     |
| 104-564-01    | Green  | 2mA                      |
| 104-564-04    | Green  | 20mA                     |
| 104-583-20-29 | Green  | 5/6Vdc                   |
| UNITS         |        |                          |

The products listed above 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.

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