

● PCB MOUNTING LEDs - Ø 2mm

## FEATURES



### 142-150 SERIES

PACK QUANTITY = 50 PIECES

- Housing conforms to UL94 V-O flammability ratings
- 2 to 10 way configurations
- Reverse polarity options available
- Multi-colour permutations available
- Product illustrated 148-214-02
- Typically available ex-stock

## SPECIFICATIONS

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

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

PART NUMBER	COLOUR	LENS	VOLTAGE DC Vopr	CURRENT DC Iopr	LUMINOUS INTENSITY lv@20mA	WAVE LENGTH λp	OPERATING TEMP Topr	STORAGE TEMP Tstg	
<b>STANDARD INTENSITY</b>									
142-205-02	Red	Colour Diffused	1.8	10	10	627	-55 ~ +100^	-55 ~ +100	Yes
142-211-02	Yellow	Colour Diffused	2.0	10	9	590	-55 ~ +100^	-55 ~ +100	Yes
142-214-02	Green	Colour Diffused	2.1	10	7	565	-40 ~ +100^	-55 ~ +100	Yes
142-205-20	Red	Colour Diffused	5	10	10	635	-55 ~ +100^	-55 ~ +100	Yes
142-211-20	Yellow	Colour Diffused	5	10	9	583	-55 ~ +100^	-55 ~ +100	Yes
142-214-20	Green	Colour Diffused	5	10	7	565	-40 ~ +100^	-55 ~ +100	Yes
<b>UNITS</b>			<b>Vdc</b>	<b>mA</b>	<b>mcd</b>	<b>nm</b>	<b>°C</b>	<b>°C</b>	



↑  
SERIES  
OPTIONS  
↓  
**148**

↑  
COLOUR  
OPTIONS  
↓  
**-214**

↑  
VOLTAGE  
OPTIONS  
↓  
**-02**

= Make up of Order Code **148 - 214 - 02**

- 142 - (2 LED segment device)
- 143 - (3 LED segment device)
- 144 - (4 LED segment device)
- 145 - (5 LED segment device)
- 146 - (6 LED segment device)
- 147 - (7 LED segment device)
- 148 - (8 LED segment device)
- 149 - (9 LED segment device)
- 150 - (10 LED segment device)

For multi-array devices, replace initial 3 digits of part number to reflect the number of LED segments required.

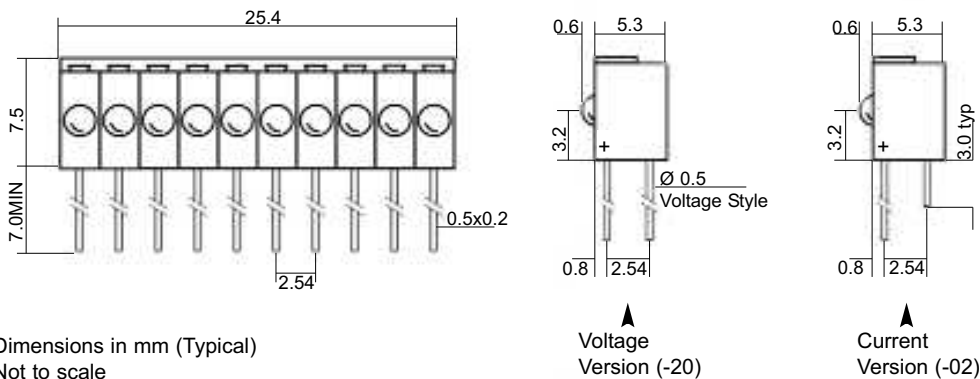
### How to Order:

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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## 142-150 Series



## Housing Material

### Polycarbonate

This material offers UL94 V-0 flame retardancy\* and a high impact strength. This material has a melt point of 290-340°C and is suitable for use in the majority of automatic soldering processes.

\*Material test thickness 1.6mm

## LEDs

### LED Polarity

Anode identification is shown in the dimensional diagram. The long lead of a non-cropped unit can also be used to help identify the anode. For the 2 pin Bi-colour units the standard colour configuration is red anode to the '+' sign.

### Reverse Polarity

This is offered on all PCB units, with the exception of the 125 series, if requested to help overcome the problem of systems with reverse polarity connections. Multiple units can also be supplied in reverse polarity but not with mixed polarities. The 2 pin and 3 pin Bi-colours can be supplied in reverse colour configuration.

### Electro-static Discharge (ESD)

Build up of electrostatic 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. We recommend all users of LED based products follow the guidelines of BS 100015.

Note: All luminous intensity figures refer to the unmodified discrete LED.

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BS EN ISO 9001:2000  
Approved Manufacturer

## ALSO AVAILABLE

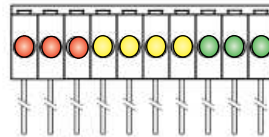
Part numbers also available in the 142-150 Series:

PART NO.	COLOUR (Vdc) Vopr	VOLTAGE DC
142-205-01	Red	2mA
142-211-01	Yellow	2mA
142-214-01	Green	2mA
143-205-02	Red	10mA
143-211-02	Yellow	10mA
143-214-02	Green	10mA
144-203-20	Red	5/6Vdc
144-205-01	Red	2mA
144-205-02	Red	10mA
144-205-20	Red	5/6Vdc
144-209-02	Yellow	10mA
144-211-01	Yellow	2mA
144-211-02	Yellow	10mA
144-211-20	Yellow	5/6Vdc
144-212-02	Green	10mA
144-214-01	Green	2mA
144-214-02	Green	10mA
144-214-03	Green	17mA
144-214-20	Green	5/6Vdc
145-214-04	Green	20mA
UNITS		VDC

PART NO.	COLOUR (Vdc) Vopr	VOLTAGE DC
148-205-20	Red	5/6Vdc
148-211-02	Yellow	10mA
148-211-20	Yellow	5/6Vdc
148-214-02	Green	10mA
148-214-02-50	Green	10mA
150-000-02-50**	RRRYYYGGG	10mA
150-205-04	Red	20mA
150-205-20	Red	5/6Vdc
150-214-01	Green	2mA
150-214-02	Green	10mA
UNITS		VDC

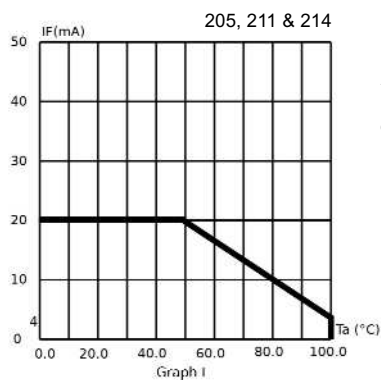
\*\* = Multi-colour options are verified as example:

150-000-02-50



These are customer specific and specially created part numbers. If you require more information or a specific part not detailed in the above list please contact sales for further information.

## De-rating



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

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