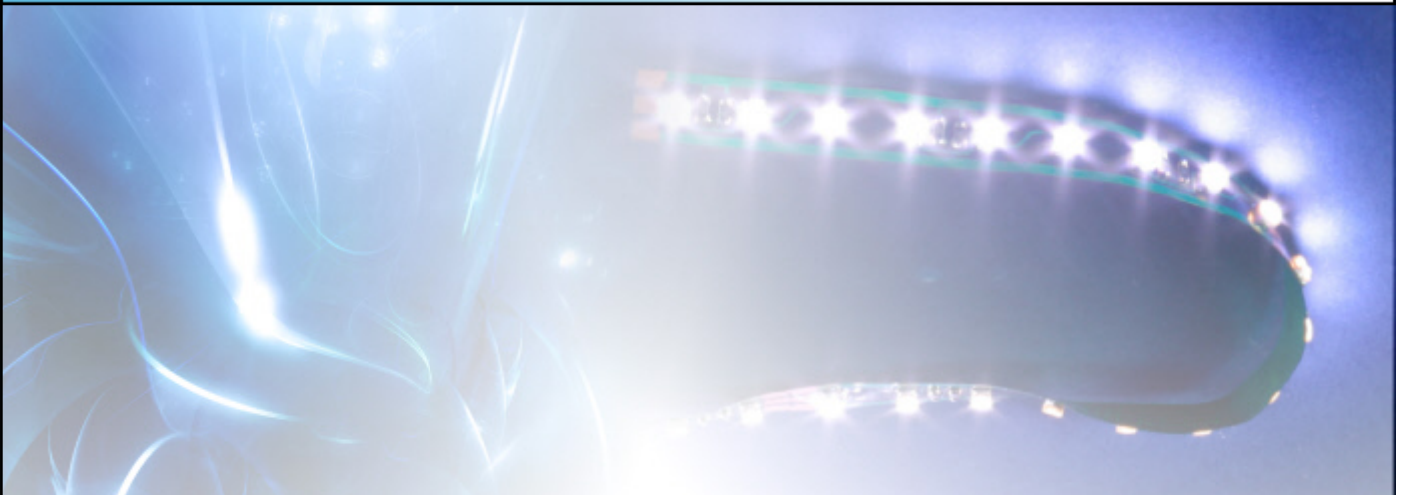
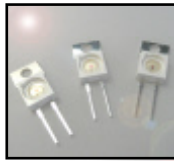
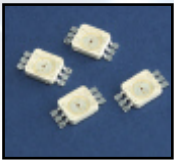




The Optoelectronic Manufacturing Corporation



IP67 LED Module Series





Technical Datasheet

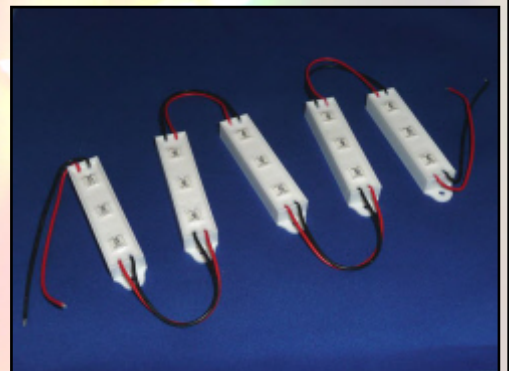
A range of high performance, IP67 rated, screw-mountable 12V LED modules, providing an easy and cost-effective solution for the application of LED lighting to industrial, architectural, signage and many other illumination and lighting applications.

Key Features:

- Very easy to use and cost-effective
- IP67 rated, suitable for exterior use
- Energy efficient, 12V DC operation
- High light output, wide beam angle
- Low power consumption (<0.25W per module)
- Output characterised for lighting applications
- Supplied in joined strings of 5 modules
- Individual modules can be snipped from string
- Strings can be joined to form long runs
- Built-in reverse polarity and electrostatic protection
- 4-pin LEDs for added physical resilience
- Screw-mountable
- Up to 50m can be powered from one end
- Low cost LED lighting solution
- RoHS Compliant

Typical Applications:

- Replacement of fluorescent light sources
- Built-up and flat-cut letter illumination
- Light box illumination
- Accent lighting
- Backlighting
- Battery and solar-powered lighting
- Exterior and interior decorative lighting
- Lighting for machinery
- Furniture illumination
- Long-life alternative to neon
- Low energy lighting
- Lighting for point-of-sale applications
- Simple and cost-effective LED lighting for almost any application





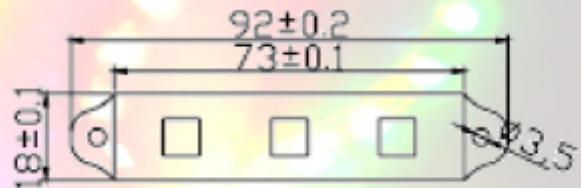
Typical electro-optical characteristics at applied voltage = 12V DC and Ta=25°C

| Part no. | LEDs per Module | Light output per String | Beam angle 2θ½ | LEDs per string |
|----------|-----------------------|-------------------------|----------------|-----------------|
| LMMW1 | 3 x Ultrabright White | 40 lumens | 120° | 15 |
| LMMR1 | 3 x Ultrabright Red | 14 lumens | 120° | 15 |
| LMMG1 | 3 x Ultrabright Green | 37 lumens | 120° | 15 |
| LMMB1 | 3 x Ultrabright Blue | 12 lumens | 120° | 15 |
| LMMY1 | 3 x Ultrabright Amber | 30 lumens | 120° | 15 |

Colours are for ease of reference only and do not indicate exact shade of LED output.

Mechanical information

- ◆ Module length 92mm
- ◆ Module width 18mm
- ◆ Module height 11.5mm
- ◆ 3 LEDs per module
- ◆ 5 Modules per String
- ◆ Length of joining wires 100mm



Absolute maximum ratings (Ta=25°C where applicable)

| Quantity | Rating |
|------------------------------|-----------------|
| Module Applied Voltage | 12V DC |
| LED Reverse Voltage | 5V |
| Operating Temperature Range | -35°C to +65°C |
| LED Forward Current | 20mA |
| Temperature Range in Storage | -35°C to +100°C |
| Module Forward DC Current | 20mA |



Application notes

- ◆ Do not apply voltages greater than 12V DC to this product or damage may occur.
- ◆ Although electrostatic protection is built into this product, as with any semiconductor device it is recommended to avoid unnecessary electrostatic discharge.
- ◆ Connect supply anode to red wire, supply cathode to black wire
- ◆ To link strings, connect red wire to red wire, black wire to black wire
- ◆ Joining of strings can be achieved either through soldering, fitting connectors, or simply through the use of standard electrical screw terminals.
- ◆ For exterior joins between strings, please ensure that the join has been waterproofed e.g. through the use of conformal coating, silicone sealant, a waterproof connector or waterproof sleeving.
- ◆ For series lengths greater than 50 strings, wiring in a "ring main" style configuration (i.e. a power feed at each end) is recommended to reduce voltage drop. For longer runs it is recommended to connect a power feed back to the supply after every 100 strings.
- ◆ Use of a regulated 12V DC supply is recommended.
- ◆ Module ingress protection rating is IP67 making them suitable for exterior use. Modules are not designed to be submersible for extended periods or in water deeper than 1m.

The Optoelectronic Manufacturing Corporation (UK) Ltd.

Cardrew Industrial Estate,
Redruth,
Cornwall
TR15 1SS

Tel: 01209 215424

Fax: 01209 215197

General e-mail: omc-sales@omc-uk.com

www.omc-uk.com