

Kitronik Ltd – 5mm RGB LED

TECHNOLOGY DATA SHEET & SPECIFICATIONS



Device Selection Guide

| Chip | | Lens Color |
|----------|---------------|-------------|
| Material | Emitted Color | |
| AlGaInP | Red | Water clear |
| InGaN | Green | |
| InGaN | Blue | |

Features

- Uniform light output.
- Low power consumption.
- I.C. compatible.
- Long life solderability.
- **Common Anode.**

Descriptions

- The Red source colour devices are made with AlGaInP on GaAs substrate.
- The Green source colour devices are made with InGaN on sic.
- The Blue source colour devices are made with InGaA1N on sic.

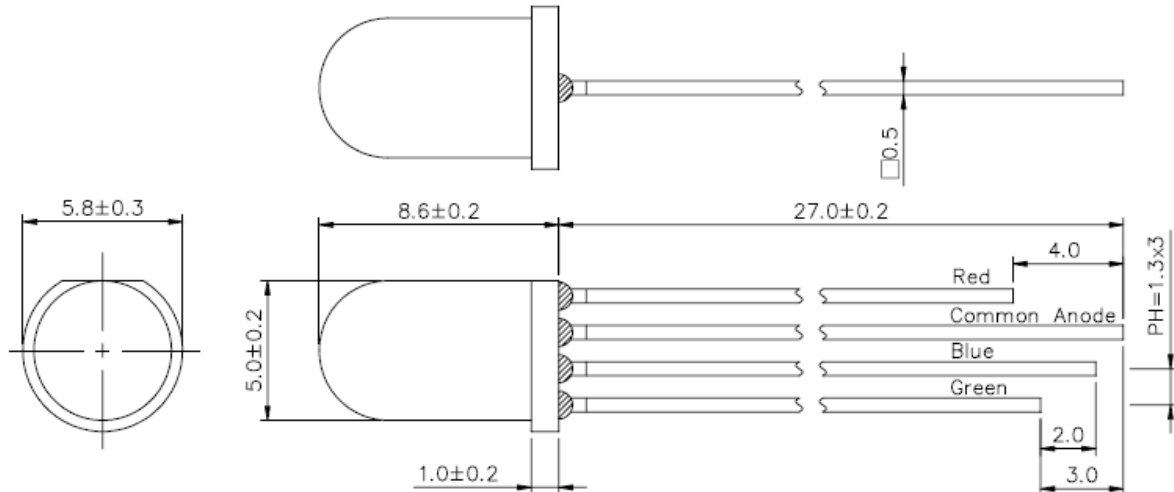
Usage Notes:

- The ultra bright LED is an electrostatic sensitive device, so static electricity and surge will damage the LED.
- It is required to wear a wrist-band when handling the LED. All device, equipment, machinery, desk and ground must be properly grounded.
- When using LED, it must use a protective resistor in series with DC current about 20mA.

Applications

- Status indicators.
- Commercial use.
- Advertising signs.
- Back lighting.

Package Dimensions



Notes:

- Other dimensions are in millimeters, tolerance is 0.25mm except being specified.
- Protruded resin under flange is 1.5mm Max LED.
- Bare copper alloy is exposed at tie-bar portion after cutting.

Absolute Maximum Rating (Ta=25°C)

| Parameter | Symbol | Absolute Maximum Rating | Unit |
|-----------------------|--------|---|------|
| Forward Pulse Current | IFPM | R :60 G: 100 B: 100 | mA |
| Forward Current | IFM | 20 | mA |
| Reverse Voltage | VR | 5 | V |
| Power Dissipation | PD | R :60 G: 130 B: 130 | mW |
| Operating Temperature | Topr | -40~+80 | °C |
| Storage Temperature | Tstg | -40~+100 | °C |
| Soldering Temperature | Tsol | Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec. | °C |

Electro-Optical Characteristics (Ta=25°C)

| Parameter | Symbol | Device | Min. | Typ. | Max. | Unit | Test Condition |
|--------------------------|--------|----------------------|----------------------|----------------------|----------------------|------|----------------|
| Luminous Intensity | Iv | Red Green Blue | 1500 2000 1500 | 1800 2300 1800 | 2300 2700 2200 | mcd | IF=20mA |
| Viewing Angle | 2θ1/2 | Red Green Blue | 30 | 45 | 50 | Deg | (Note 1) |
| Peak Emission Wavelength | λp | Red Green Blue | 635 520 460 | 640 525 465 | 650 530 470 | nm | IF=20mA |
| Spectral Line Half-Width | Δλ | Red Green Blue | 15 15 25 | 20 20 30 | 25 25 35 | nm | IF=20mA |
| Forward Voltage | VF | Red Green Blue | 1.9 2.9 2.9 | --- --- --- | 2.5 3.5 3.5 | V | IF=20mA |
| Reverse Current | IR | Red Green Blue | --- | --- | 10 | μA | VR=5V |