

# TO-5050BC-MRPBFGF

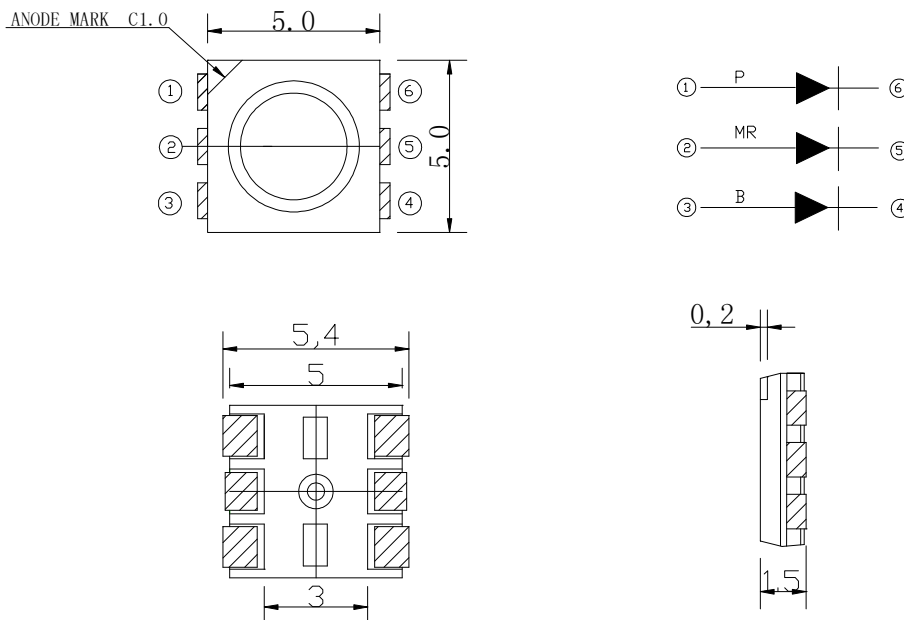
## Surface Mount Device LED

| Part Number       | Chip     |                  | Lens Color  |
|-------------------|----------|------------------|-------------|
|                   | Material | Source Color     |             |
| TO-5050BC-MRPBFGF | AlGaInP  | Ultra Bright Red | Water Clear |
|                   | InGaN    | Pure Green       |             |
|                   | InGaN    | Blue             |             |

### Features

- IC compatible
- Compatible with automatic placement equipment
- Compatible with infrared and vapor phase reflow soldering process
- Top view type
- Pack in 12 mm tape on 7" diameter reel
- RoHS compliant
- Moisture sensitivity Level: level 3

### Dimensions



**Notes:**

1. All dimensions are in millimeter.
2. Tolerance is  $\pm 0.1$ mm unless individual mark noted.

### Absolute Maximum Rating @ Ta=25°C

| Parameter  | Maximum Rating  |     |     | Unit |
|--|-----------------|-----|-----|------|
|  | MR              | P   | B   |      |
| Peak Forward Current<br>(1/10 Duty Cycle, 0.1ms Pulse Width) | 80              | 80  | 80  | mA   |
| Power Dissipation  | 75              | 105 | 105 | mW   |
| Continuous Forward Current                                   | 25              | 25  | 25  | mA   |
| Reverse Voltage  | 5               | 5   | 5   | V    |
| Operating Temperature Range                                  | -55°C to +85°C  |     |     |      |
| Storage Temperature Range                                    | -55°C to +105°C |     |     |      |
| IR Reflow Soldering Profile For Lead Free Soldering          | 260°C           |     |     |      |

### Electrical / Optical Characteristic @ Ta=25°C

| Parameter                | Symbol            | MR   |      |      | P    |      |      | B    |      |      | Unit | Test Condition       |
|--------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|----------------------|
|                          |                   | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. |      |                      |
| Luminous Intensity       | I <sub>v</sub>    | 146  |      | 417  | 705  |      | 1550 | 190  |      | 542  | mcd  | I <sub>F</sub> =20mA |
| Viewing Angle            | 2θ <sub>1/2</sub> |      | 120  |      |      | 120  |      |      | 120  |      | deg  | I <sub>F</sub> =20mA |
| Forward Voltage          | V <sub>F</sub>    |      | 1.9  |      |      | 3.2  |      |      | 3.2  |      | V    | I <sub>F</sub> =20mA |
| Dominant Wavelength      | λ <sub>d</sub>    |      | 630  |      |      | 525  |      |      | 468  |      | nm   | I <sub>F</sub> =20mA |
| Spectral Line Half-Width | Δλ                |      | 17   |      |      | 36   |      |      | 26   |      | nm   | I <sub>F</sub> =20mA |
| Reverse Current          | I <sub>R</sub>    |      |      | 10   |      |      | 10   |      |      | 10   | μA   | V <sub>R</sub> =5V   |