

# BRIGHT LED ELECTRONICS CORP.

BL-R453P

#### Features:

1. Chip material: GaAsP /GaP

2. Emitted color :Hi-Eff Red

3. Lens Appearance: Red Diffused

4. Low power consumption.

5. Most suitable for use like level indicator.

6. Excellent uniformity of light emittance.

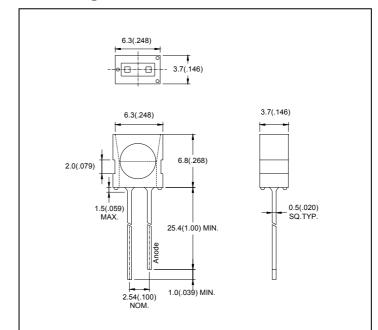
7. Long life solid state reliability.

8. This product don't contained restriction substance, compliance ROHS standard.

## Applications:

- 1. TV set
- 2. Monitor
- 3. Telephone
- 4. Computer
- 5. Circuit board

### Package dimensions



#### Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±0.25mm (0.01") unless otherwise specified.
- 3. Lead spacing is measured where the leads emerge from the package.
- 4. Specifications are subject to change without notice.

# ■ Absolute maximum ratings(Ta=25°C)

| Parameter              | Symbol         | Rating                | Unit |
|------------------------|----------------|-----------------------|------|
| Power Dissipation      | Pd             | 80                    | mW   |
| Forward Current        | l <sub>F</sub> | 30                    | mA   |
| Peak Forward Current*1 | 丁葉形            | 分有1507/15             | mA   |
| Reverse Voltage        | $V_R$          | 5                     | V    |
| Operating Temperature  | Topr           | 1-40℃780℃             |      |
| Storage Temperature    | Tstg           | • U1 U-40°C~85°C U111 |      |
| Soldering Temperature  | Tsol           | 260°C (for 5 seconds) |      |

<sup>\*1</sup>Condition for I<sub>FP</sub> is pulse of 1/10 duty and 0.1msec width.



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## Electrical and optical characteristics(Ta=25°℃)

| Parameter                | Symbol            | Condition            | Min. | Тур. | Max. | Unit |
|--------------------------|-------------------|----------------------|------|------|------|------|
| Forward Voltage          | $V_{F}$           | I <sub>F</sub> =20mA | -    | 2.1  | 2.6  | V    |
| Luminous Intensity       | lv                | I <sub>F</sub> =20mA | -    | 8.0  | -    | mcd  |
| Reverse Current          | I <sub>R</sub>    | V <sub>R</sub> =5V   | -    | -    | 100  | μA   |
| Peak Wave Length         | λр                | I <sub>F</sub> =20mA | -    | 640  | -    | nm   |
| Dominant Wave Length     | λd                | I <sub>F</sub> =20mA | 617  | -    | 638  | nm   |
| Spectral Line Half-width | Δλ                | I <sub>F</sub> =20mA | -    | 40   | -    | nm   |
| Viewing Angle            | 2θ <sub>1/2</sub> | I <sub>F</sub> =20mA | -    | 120  | -    | deg  |

### Typical electro-optical characteristics curves

Fig.1 Relative intensity vs. Wavelength

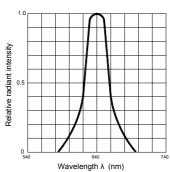


Fig.2 Forward current derating curve vs. Ambient temperature

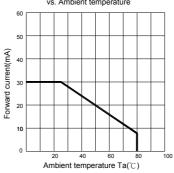


Fig.3 Forward current vs. Forward voltage

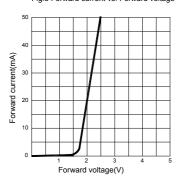


Fig.4 Relative luminous intensity vs. Ambient temperature

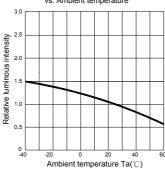


Fig.5 Relative luminous intensity vs. Forward current

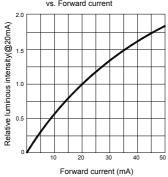


Fig.6 Radiation diagram

