

# LB2512R3

## Hi-Eff Red

6.3 x3.7mm, Rectangle Body, 6.8mm Height  
120° viewing angle

DWG BY:

BL / GP

01-19-07

CHK BY:

PL

08-22-07

QA:

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MFG:

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REVISION LTR: -

08-21-07

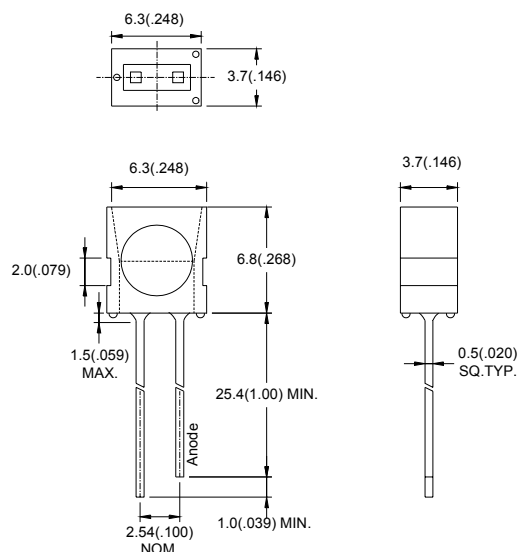
## ● Features:

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 is RoHS compliant.

## ● 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  $\pm 0.25\text{mm}$  (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( $T_a=25^\circ\text{C}$ )

| Parameter                          | Symbol    | Rating                                    | Unit |
|------------------------------------|-----------|-------------------------------------------|------|
| Power Dissipation                  | $P_d$     | 80                                        | mW   |
| Forward Current                    | $I_F$     | 30                                        | mA   |
| Peak Forward Current <sup>*1</sup> | $I_{FP}$  | 150                                       | mA   |
| Reverse Voltage                    | $V_R$     | 5                                         | V    |
| Operating Temperature              | $T_{opr}$ | $-40^\circ\text{C} \sim 80^\circ\text{C}$ |      |
| Storage Temperature                | $T_{stg}$ | $-40^\circ\text{C} \sim 85^\circ\text{C}$ |      |
| Soldering Temperature              | $T_{sol}$ | $260^\circ\text{C}$ (for 5 seconds)       |      |

<sup>\*1</sup>Condition for  $I_{FP}$  is pulse of 1/10 duty and 0.1msec width.

● **Electrical and optical characteristics(Ta=25°C)**

| Parameter                | Symbol          | Condition         | Min. | Typ. | Max. | Unit             |
|--------------------------|-----------------|-------------------|------|------|------|------------------|
| Forward Voltage          | $V_F$           | $I_F=20\text{mA}$ | -    | 2.0  | 2.6  | V                |
| Luminous Intensity       | $I_v$           | $I_F=20\text{mA}$ | -    | 12   | -    | mcd              |
| Reverse Current          | $I_R$           | $V_R=5\text{V}$   | -    | -    | 100  | $\mu\text{A}$    |
| Peak Wave Length         | $\lambda_p$     | $I_F=20\text{mA}$ | 639  | 642  | 648  | nm               |
| Dominant Wave Length     | $\lambda_d$     | $I_F=20\text{mA}$ | 624  | 629  | 633  | nm               |
| Spectral Line Half-width | $\Delta\lambda$ | $I_F=20\text{mA}$ | -    | 42   | -    | nm               |
| Viewing Angle            | $2\theta_{1/2}$ | $I_F=20\text{mA}$ | -    | 120  | -    | deg              |
| Radiant Intensity        |                 | $I_F=20\text{mA}$ | -    | -    | -    | $\mu\text{W/sr}$ |
| Chromaticity Coordinates | X               | $I_F=20\text{mA}$ | -    | 0.70 | -    |                  |
|                          | Y               |                   | -    | 0.29 | -    |                  |

● **Typical electro-optical characteristics curves**

Fig.1 Relative intensity vs. Wavelength

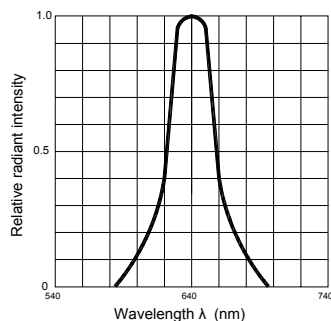


Fig.2 Forward current derating curve vs. Ambient temperature

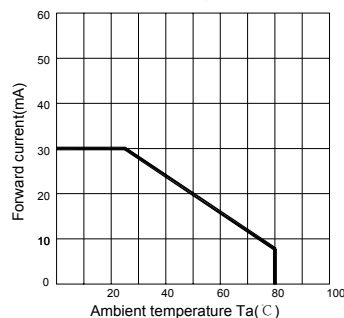


Fig.3 Forward current vs. Forward voltage

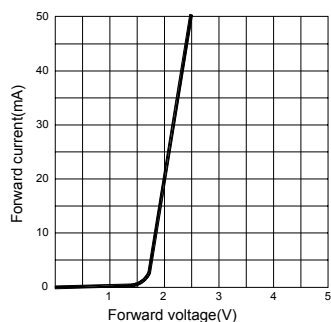


Fig.4 Relative luminous intensity vs. Ambient temperature

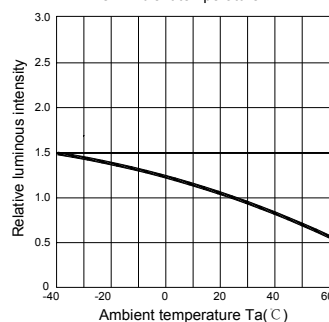


Fig.5 Relative luminous intensity vs. Forward current

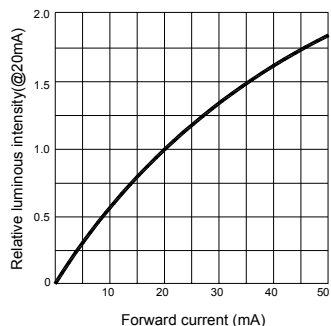


Fig.6 Radiation diagram

