

## 4mm SOLID STATE LAMPS

L-44HD BRIGHT RED

L-44GD GREEN

L-44ID HIGH EFFICIENCY RED

L-44YD YELLOW

### Features

- LOW POWER CONSUMPTION.
- HIGH INTENSITY.
- VERSATILE MOUNTING ON P.C. BOARD OR PANEL.
- POPULAR 4mm DIAMETER, 1" LEAD LENGTH.
- RELIABLE AND RUGGED.
- VERSION IS AVAILABLE.

### Description

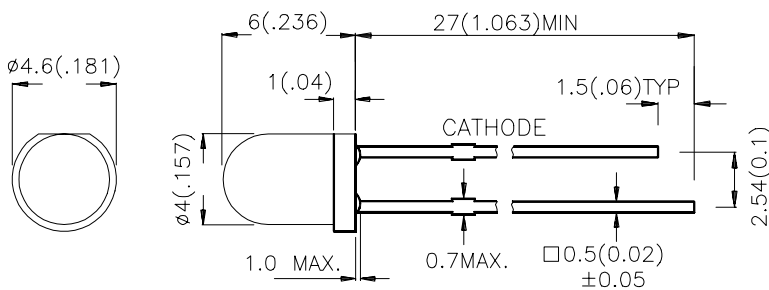
The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subject to change without notice.

## Selection Guide

| Part No. | Dice                            | Lens Type       | Iv (mcd)<br>@ 10 mA |      | Viewing<br>Angle |
|----------|---------------------------------|-----------------|---------------------|------|------------------|
|          |                                 |                 | Min.                | Typ. | 2θ1/2            |
| L-44HD   | BRIGHT RED (GaP)                | RED DIFFUSED    | 0.8                 | 2    | 80°              |
| L-44ID   | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED    | 5                   | 15   | 80°              |
| L-44GD   | GREEN (GaP)                     | GREEN DIFFUSED  | 3                   | 12   | 80°              |
| L-44YD   | YELLOW (GaAsP/GaP)              | YELLOW DIFFUSED | 3                   | 10   | 80°              |

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

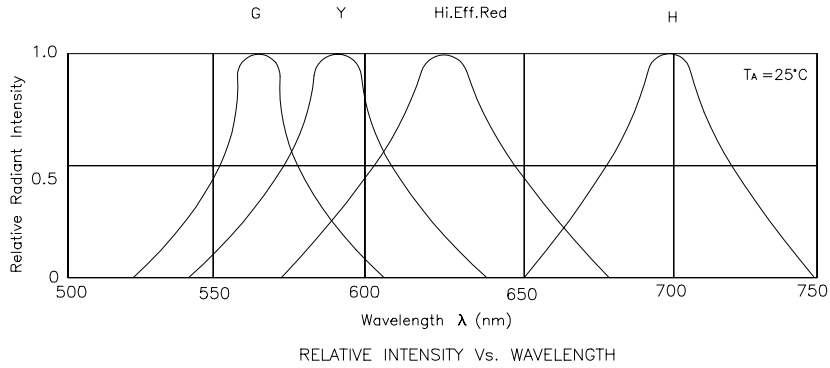
| Symbol            | Parameter               | Device   | Typ.                      | Max.                     | Units | Test Conditions |
|-------------------|-------------------------|--|---------------------------|--------------------------|-------|-----------------|
| λ <sub>peak</sub> | Peak Wavelength         | Bright Red<br>High Efficiency Red<br>Green<br>Yellow | 700<br>627<br>565<br>590  |                          | nm    | IF=20mA         |
| λ <sub>D</sub>    | Dominate Wavelength     | Bright Red<br>High Efficiency Red<br>Green<br>Yellow | 660<br>625<br>568<br>588  |                          | nm    | IF=20mA         |
| Δλ <sub>1/2</sub> | Spectral Line Halfwidth | Bright Red<br>High Efficiency Red<br>Green<br>Yellow | 45<br>45<br>30<br>35      |                          | nm    | IF=20mA         |
| C                 | Capacitance             | Bright Red<br>High Efficiency Red<br>Green<br>Yellow | 40<br>15<br>15<br>20      |                          | pF    | VF=0V;f=1MHz    |
| V <sub>F</sub>    | Forward Voltage         | Bright Red<br>High Efficiency Red<br>Green<br>Yellow | 2.25<br>2.0<br>2.2<br>2.1 | 2.5<br>2.5<br>2.5<br>2.5 | V     | IF=20mA         |
| I <sub>R</sub>    | Reverse Current         | All  |                           | 10                       | μA    | VR = 5V         |

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

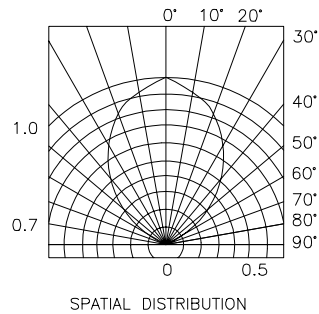
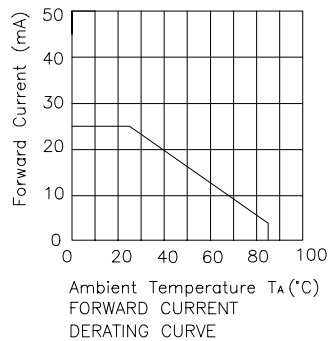
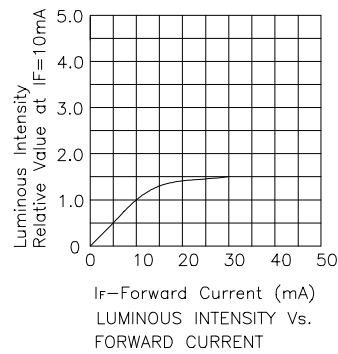
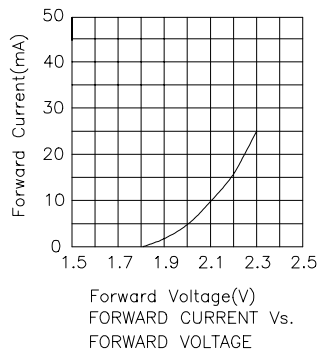
| Parameter                     | Bright Red          | High Efficiency Red | Green | Yellow | Units |
|-------------------------------|---------------------|---------------------|-------|--------|-------|
| Power dissipation             | 120                 | 105                 | 105   | 105    | mW    |
| DC Forward Current            | 25                  | 30                  | 25    | 30     | mA    |
| Peak Forward Current [1]      | 120                 | 160                 | 140   | 140    | mA    |
| Reverse Voltage               | 5                   | 5                   | 5     | 5      | V     |
| Operating/Storage Temperature | -40°C To +85°C      |                     |       |        |       |
| Lead Solder Temperature [2]   | 260°C For 5 Seconds |                     |       |        |       |

Notes:

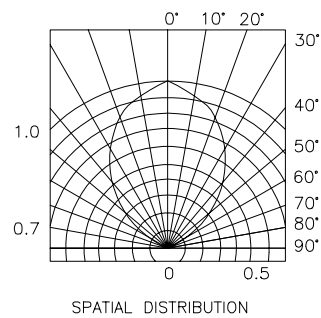
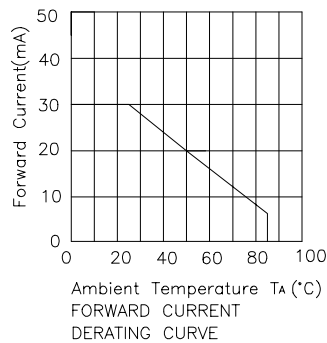
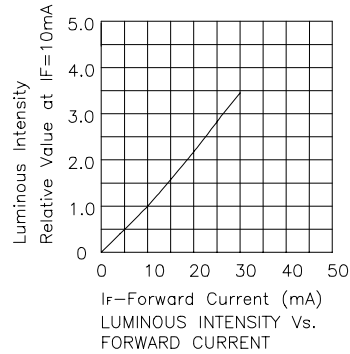
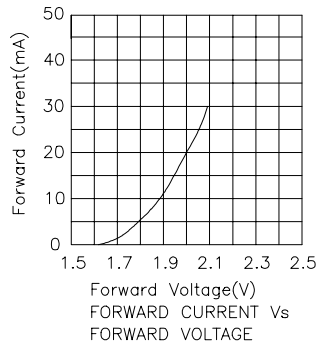
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



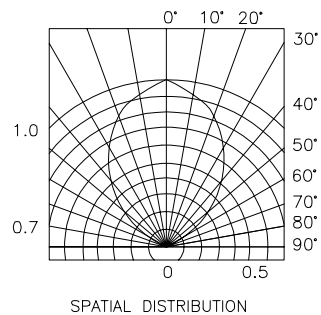
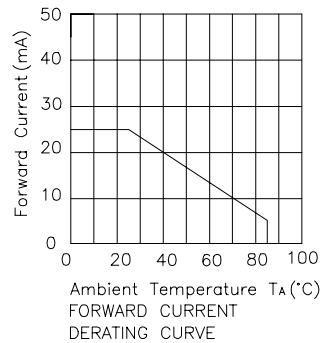
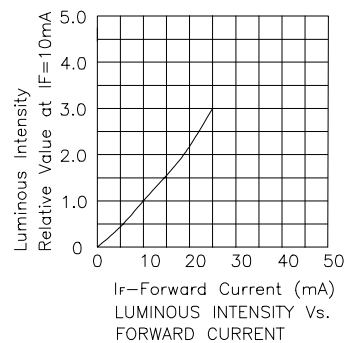
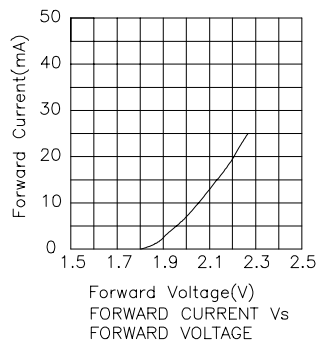
## Bright Red L-44HD



## High Efficiency Red L-44ID



## Green L-44GD



## Yellow L-44YD

