

L-53ID-14V HIGH EFFICIENCY RED  
 L-53GD-14V GREEN  
 L-53YD-14V YELLOW  
 L-53SGD-14V SUPER BRIGHT GREEN  
 L-53SRD-14V SUPER BRIGHT RED

### Features

- 14 VOLT SERIES IN T-1 PACKAGES.
- INTEGRAL CURRENT LIMITING RESISTOR.
- NO EXTERNAL CURRENT LIMITER REQUIRED WITH 14 VOLT SUPPLY.
- COST EFFECTIVE - SAVE SPACE AND RESISTOR COST.
- WIDE VIEWING ANGLE.
- AVAILABLE IN ALL COLORS.
- 14V INTERNAL RESISTOR.

### Description

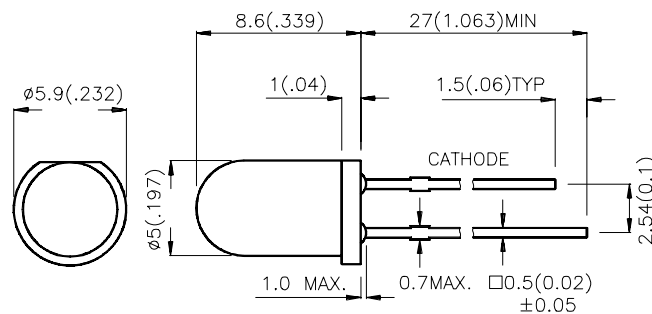
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Green and Super Bright 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.

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red 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>VF=14V |      | Viewing<br>Angle |
|-------------|--------------------------------|-----------------|--------------------|------|------------------|
|             |                                |                 | Min.               | Typ. |                  |
| L-53ID-14V  | HIGH EFFICIENCY RED(GaAsP/GaP) | RED DIFFUSED    | 18                 | 65   | 60°              |
| L-53GD-14V  | GREEN (GaP)                    | GREEN DIFFUSED  | 5                  | 18   | 60°              |
| L-53YD-14V  | YELLOW (GaAsP/GaP)             | YELLOW DIFFUSED | 5                  | 16   | 60°              |
| L-53SGD-14V | SUPER BRIGHT GREEN(GaP)        | GREEN DIFFUSED  | 5                  | 18   | 60°              |
| L-53SRD-14V | SUPER BRIGHT RED(GaAlAs)       | RED DIFFUSED    | 70                 | 160  | 60°              |

Note:

1.  $\theta_{1/2}$  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

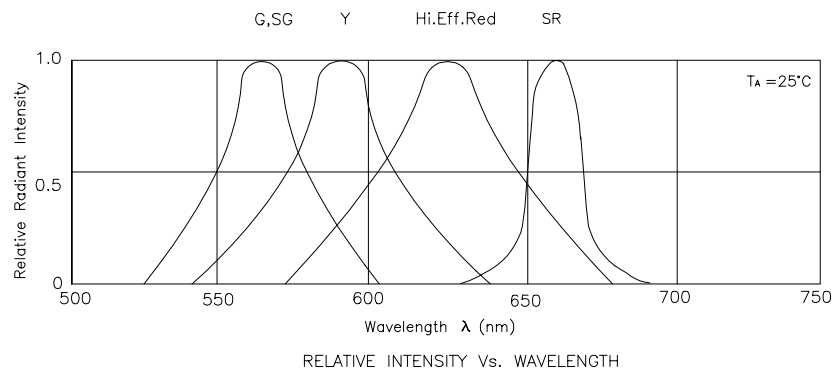
| Symbol                | Parameter               | Device                                                                           | Typ.                            | Units | Test Conditions |
|-----------------------|-------------------------|----------------------------------------------------------------------------------|---------------------------------|-------|-----------------|
| $\lambda_{peak}$      | Peak Wavelength         | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red<br>Super Bright Green | 627<br>565<br>590<br>660<br>565 | nm    | VF=14V          |
| $\lambda_D$           | Wavelength current      | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red<br>Super Bright Green | 625<br>568<br>588<br>640<br>568 | nm    | VF=14V          |
| $\Delta\lambda_{1/2}$ | Spectral Line Halfwidth | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red<br>Super Bright Green | 45<br>30<br>35<br>20<br>30      | nm    | VF=14V          |
| I <sub>F</sub>        | Forward Current         | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red<br>Super Bright Green | 10<br>10<br>10<br>10<br>10      | mA    | VF=14V          |
| I <sub>R</sub>        | Reverse Current         | All                                                                              | 10                              | uA    | VR = 5V         |

## Absolute Maximum Ratings at $T_A=25^{\circ}\text{C}$

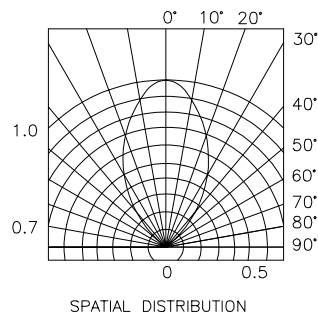
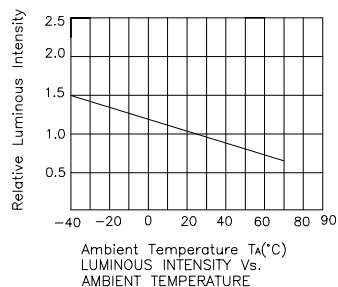
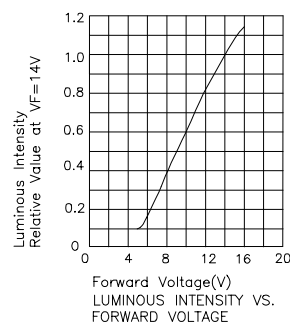
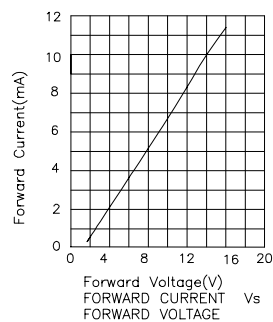
| Parameter                   | High Efficiency Red                            | Green | Yellow | Super Bright Red | Super Bright Green | Units |
|-----------------------------|------------------------------------------------|-------|--------|------------------|--------------------|-------|
| Power dissipation           | 130                                            | 160   | 160    | 160              | 160                | mW    |
| Forward voltage (max)       | 16                                             | 16    | 16     | 16               | 16                 | V     |
| Reverse Voltage             | 5                                              | 5     | 5      | 5                | 5                  | V     |
| Operating Temperature       | $-40^{\circ}\text{C}$ To $+70^{\circ}\text{C}$ |       |        |                  |                    |       |
| Storage Temperature         | $-40^{\circ}\text{C}$ To $+85^{\circ}\text{C}$ |       |        |                  |                    |       |
| Lead Solder Temperature [1] | 260 $^{\circ}\text{C}$ For 5 Seconds           |       |        |                  |                    |       |

Note:

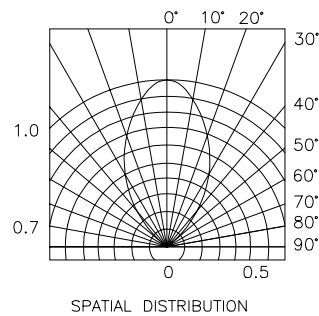
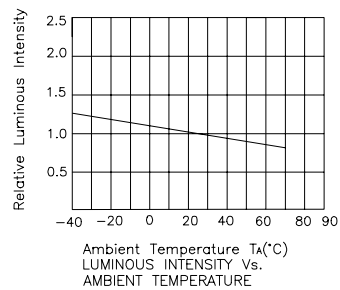
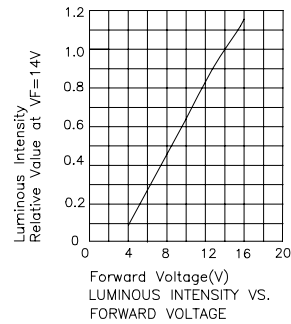
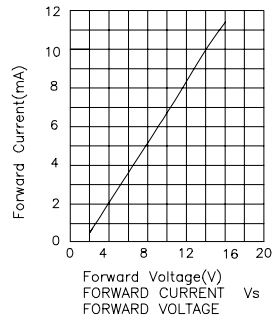
1. 4mm below package base.



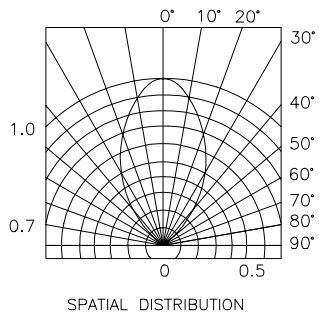
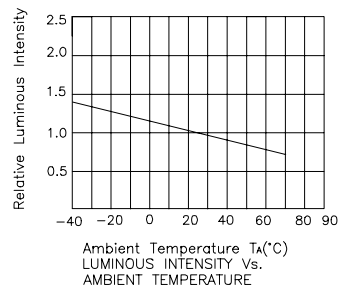
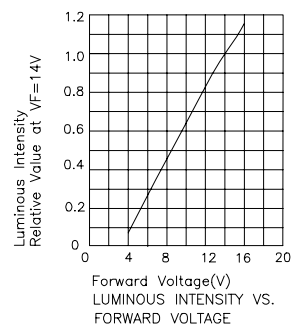
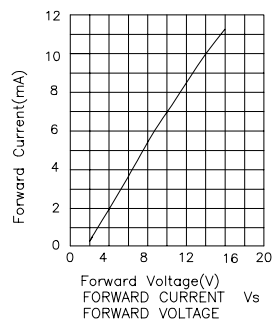
## High Efficiency Red L-53ID-14V



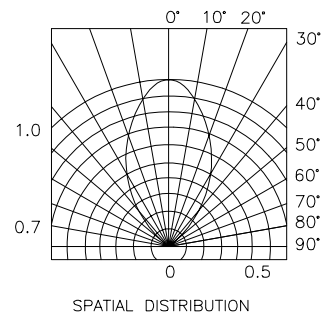
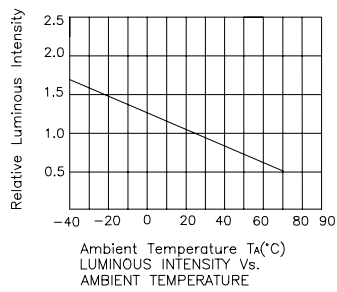
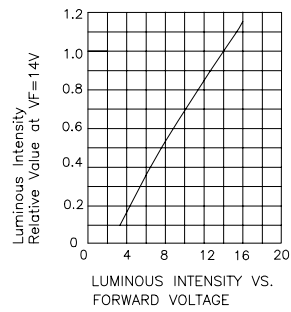
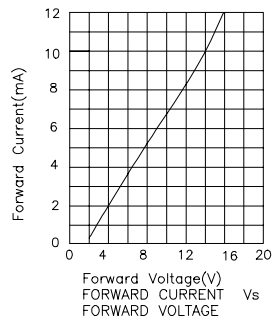
## Green L-53GD-14V



## Yellow L-53YD-14V



## Super Bright Red L-53SRD-14V



## Super Bright Green L-53SGD-14V

