

|                             |                     |
|-----------------------------|---------------------|
| L1154Gx GREEN               | L1154Yx YELLOW      |
| L1154Ix HIGH EFFICIENCY RED | L1154PGx PURE GREEN |
| L1154Nx PURE ORANGE         |                     |

### Features

- HIGH INTENSITY.
- LOW POWER CONSUMPTION.
- POPULAR T-1 DIAMETER PACKAGE.
- GENERAL PURPOSE LEADS.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- AVAILABLE ON TAPE AND REEL.

### Description

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

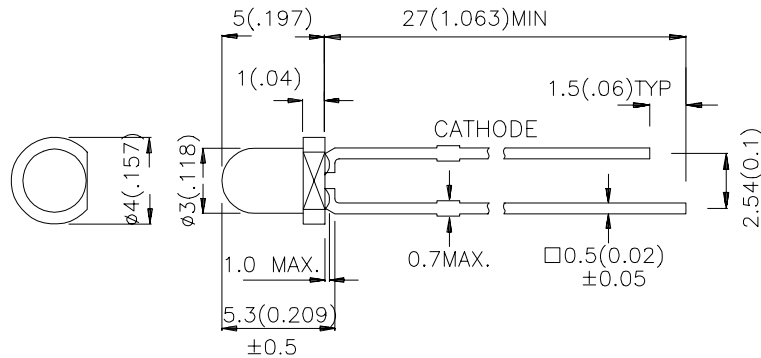
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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

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

The Pure Green source color devices are made with Gallium Phosphide Pure Green 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          | I <sub>v</sub> (mcd)<br>@ 10 mA |      | Viewing<br>Angle |
|----------|---------------------------------|--------------------|---------------------------------|------|------------------|
|          |                                 |                    | Min.                            | Typ. | θ1/2             |
| L1154ID  | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED       | 8                               | 25   | 60°              |
| L1154IT  |                                 | RED TRANSPARENT    | 20                              | 60   | 50°              |
| L1154GD  | GREEN (GaP)                     | GREEN DIFFUSED     | 8                               | 15   | 60°              |
| L1154GT  |                                 | GREEN TRANSPARENT  | 20                              | 40   | 50°              |
| L1154YD  | YELLOW (GaAsP/GaP)              | YELLOW DIFFUSED    | 5                               | 15   | 60°              |
| L1154YT  |                                 | YELLOW TRANSPARENT | 8                               | 20   | 50°              |
| L1154ND  | PURE ORANGE (GaAsP/GaP)         | ORANGE DIFFUSED    | 8                               | 30   | 60°              |
| L1154NT  |                                 | ORANGE TRANSPARENT | 20                              | 50   | 50°              |
| L1154PGD | PURE GREEN (GaP)                | GREEN DIFFUSED     | 2                               | 5    | 60°              |
| L1154PGT |                                 | GREEN TRANSPARENT  | 3                               | 10   | 50°              |

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

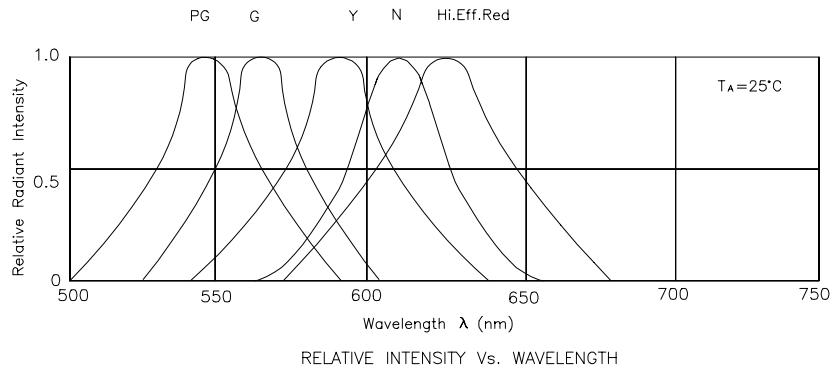
| Symbol            | Parameter               | Device  | Typ.                              | Max.                            | Units | Test Conditions |
|-------------------|-------------------------|---|-----------------------------------|---------------------------------|-------|-----------------|
| λ <sub>peak</sub> | Peak Wavelength         | High Efficiency Red<br>Green<br>Yellow<br>Pure Orange<br>Pure Green | 627<br>565<br>590<br>607<br>555   |                                 | nm    | IF=20mA         |
| λ <sub>D</sub>    | Dominate Wavelength     | High Efficiency Red<br>Green<br>Yellow<br>Pure Orange<br>Pure Green | 625<br>568<br>588<br>610<br>555   |                                 | nm    | IF=20mA         |
| Δλ <sub>1/2</sub> | Spectral Line Halfwidth | High Efficiency Red<br>Green<br>Yellow<br>Pure Orange<br>Pure Green | 45<br>30<br>35<br>35<br>30        |                                 | nm    | IF=20mA         |
| C                 | Capacitance             | High Efficiency Red<br>Green<br>Yellow<br>Pure Orange<br>Pure Green | 15<br>15<br>20<br>15<br>45        |                                 | pF    | VF=0V;f=1MHz    |
| V <sub>F</sub>    | Forward Voltage         | High Efficiency Red<br>Green<br>Yellow<br>Pure Orange<br>Pure Green | 2.0<br>2.2<br>2.1<br>2.05<br>2.25 | 2.5<br>2.5<br>2.5<br>2.5<br>2.5 | V     | IF=20mA         |
| I <sub>R</sub>    | Reverse Current         | All   |                                   | 10                              | uA    | VR = 5V         |

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

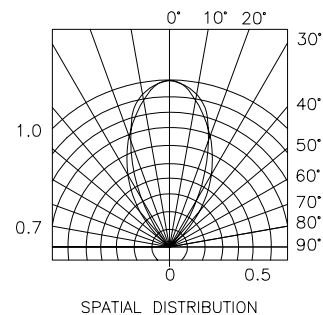
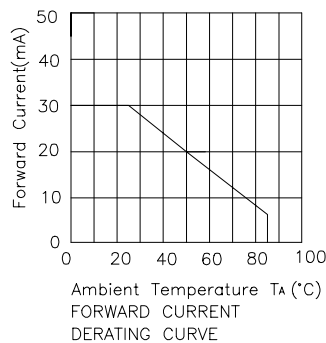
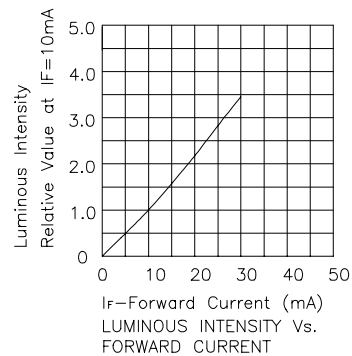
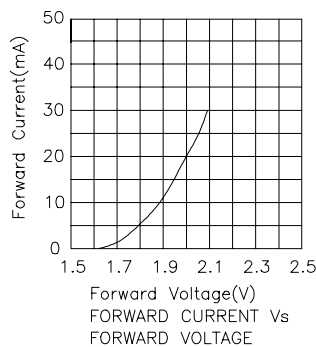
| Parameter                     | High Efficiency Red | Green | Yellow | Pure Orange | Pure Green | Units |
|-------------------------------|---------------------|-------|--------|-------------|------------|-------|
| Power dissipation             | 105                 | 105   | 105    | 105         | 105        | mW    |
| DC Forward Current            | 30                  | 25    | 30     | 30          | 25         | mA    |
| Peak Forward Current [1]      | 160                 | 140   | 140    | 145         | 135        | mA    |
| Reverse Voltage               | 5                   | 5     | 5      | 5           | 5          | V     |
| Operating/Storage Temperature | -40°C To +85°C      |       |        |             |            |       |
| Lead Solder Temperature [2]   | 260°C For 5 Seconds |       |        |             |            |       |

**Notes:**

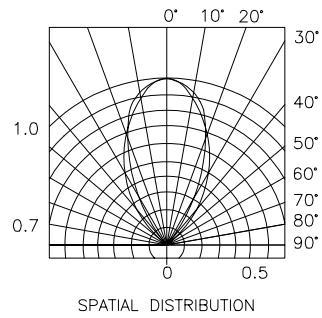
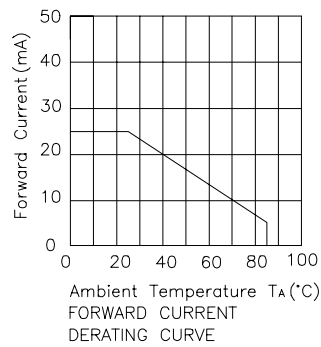
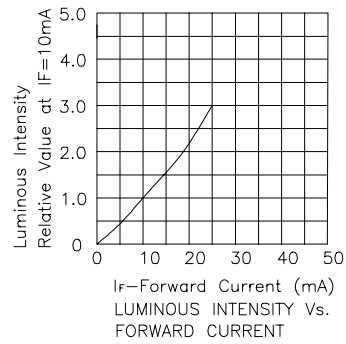
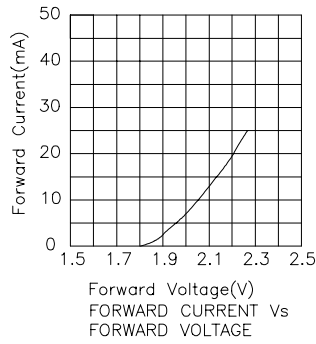
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



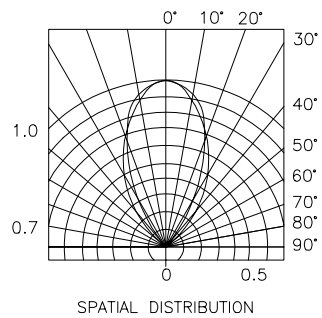
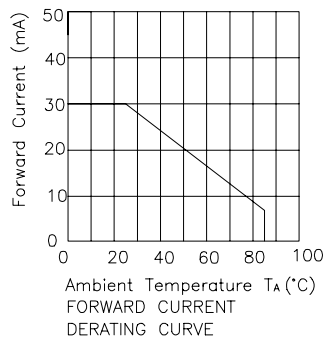
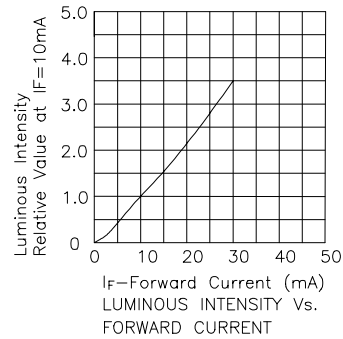
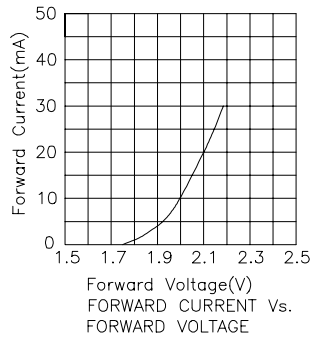
## High Efficiency Red L1154ID,L1154IT



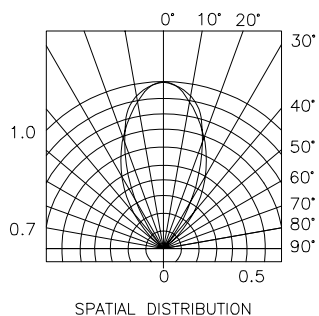
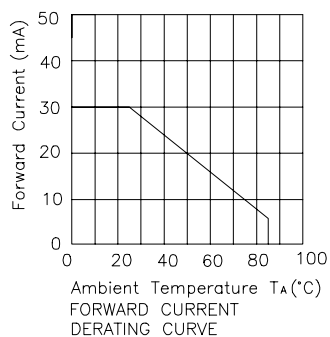
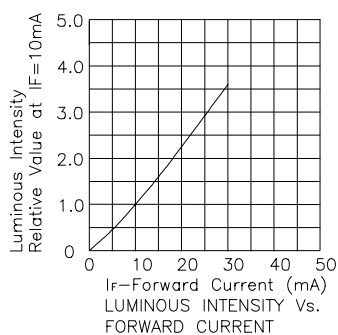
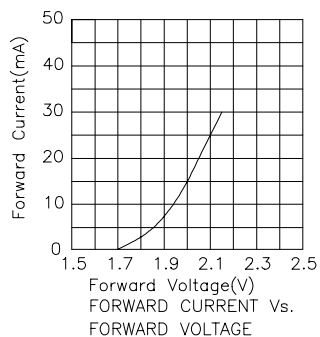
## Green L1154GD,L1154GT



## Yellow L1154YD,L1154YT



## Pure Orange L1154ND,L1154NT



## Pure Green L1154PGD,L1154PGT

