

| | |
|-----------------------------|----------------|
| L153HDT BRIGHT RED | L153GDT GREEN |
| L153IDT HIGH EFFICIENCY RED | L153EDT ORANGE |
| L153SRDT SUPER BRIGHT RED | L153YDT YELLOW |

Features

- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.

Description

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

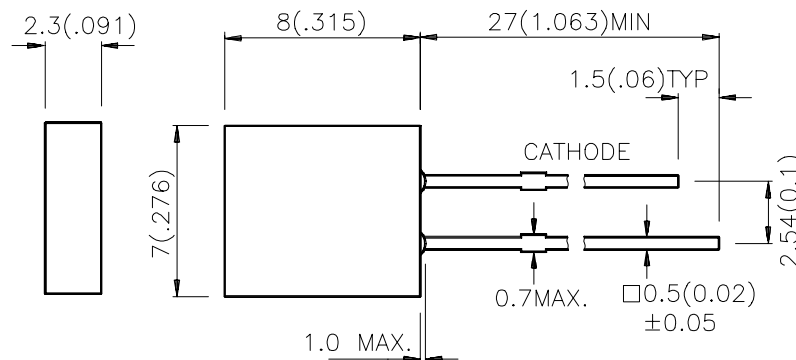
The High Efficiency Red and Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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 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) @ 10 mA *20mA | | Viewing Angle |
|----------|---------------------------------|-----------------|---------------------------|------|------------------|
| | | | Min. | Typ. | 2θ1/2 |
| L153HDT | BRIGHT RED (GaP) | RED DIFFUSED | 0.3 | 0.6 | 110° |
| L153IDT | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED | 3 | 5 | 110° |
| L153EDT | ORANGE (GaAsP/GaP) | ORANGE DIFFUSED | 3 | 5 | 110° |
| L153GDT | GREEN (GaP) | GREEN DIFFUSED | 1 | 3 | 110° |
| L153YDT | YELLOW (GaAsP/GaP) | YELLOW DIFFUSED | 1 | 3 | 110° |
| L153SRDT | SUPER BRIGHT RED (GaAlAs) | RED DIFFUSED | *40 | *60 | 110° |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. * Luminous intensity with asterisk is measured at 20mA.

Electrical / Optical Characteristics at T_A=25°C

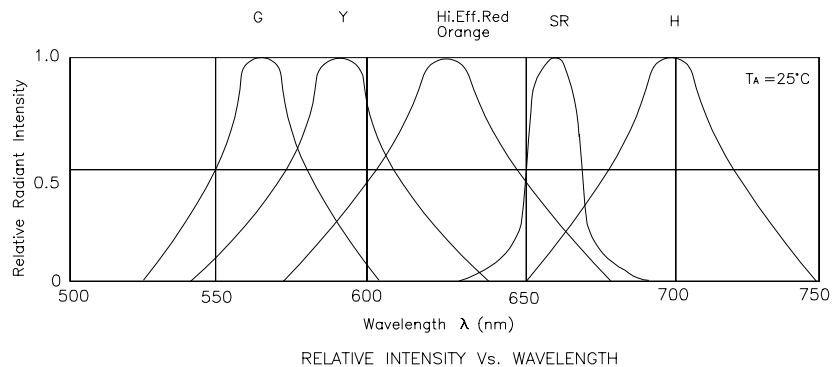
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-------------------|-------------------------|--|--|--|-------|-----------------|
| λ _{peak} | Peak Wavelength | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red | 700 627 627 565 590 660 | | nm | IF=20mA |
| λ _D | Dominate Wavelength | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red | 660 625 625 568 588 640 | | nm | IF=20mA |
| Δλ _{1/2} | Spectral Line Halfwidth | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red | 45 45 45 30 35 20 | | nm | IF=20mA |
| C | Capacitance | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red | 40 15 15 15 20 45 | | pF | VF=0V;f=1MHz |
| V _F | Forward Voltage | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red | 2.25 2.0 2.0 2.2 2.1 1.85 | 2.5 2.5 2.5 2.5 2.5 2.5 | V | IF=20mA |
| I _R | Reverse Current | All | | 10 | uA | VR = 5V |

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

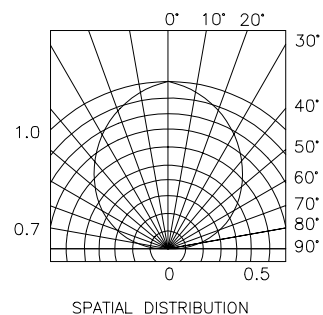
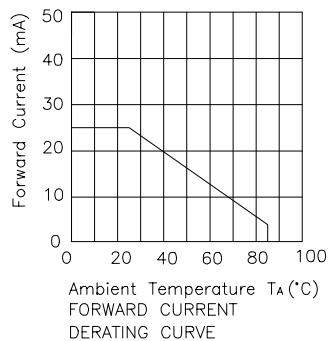
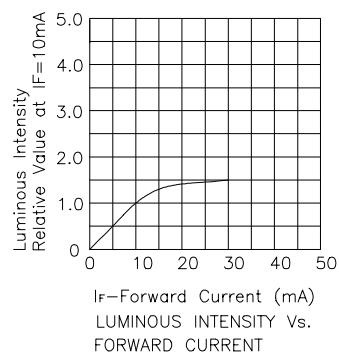
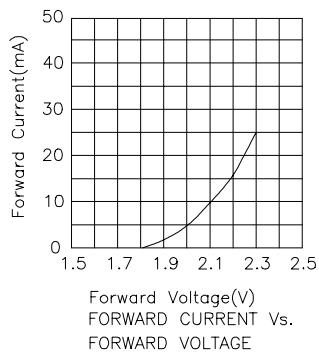
| Parameter | Bright Red | High Efficiency Red | Orange | Green | Yellow | Super Bright Red | Units |
|-------------------------------|---------------------|---------------------|--------|-------|--------|------------------|-------|
| Power dissipation | 120 | 105 | 105 | 105 | 105 | 100 | mW |
| DC Forward Current | 25 | 30 | 30 | 25 | 30 | 30 | mA |
| Peak Forward Current [1] | 120 | 160 | 160 | 140 | 140 | 155 | mA |
| Reverse Voltage | 5 | 5 | 5 | 5 | 5 | 5 | V |
| Operating/Storage Temperature | -40°C To +85°C | | | | | | |
| Lead Solder Temperature [2] | 260°C For 5 Seconds | | | | | | |

Notes:

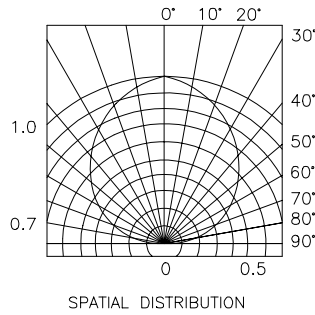
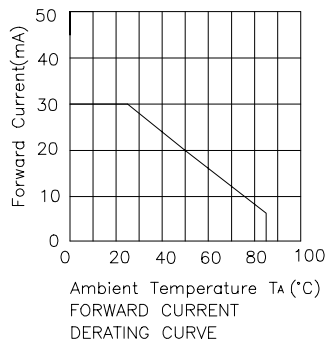
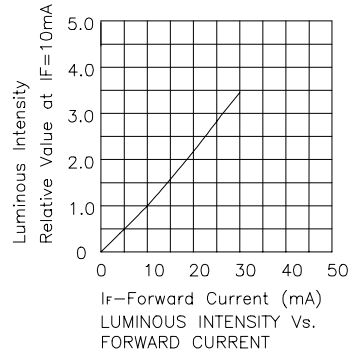
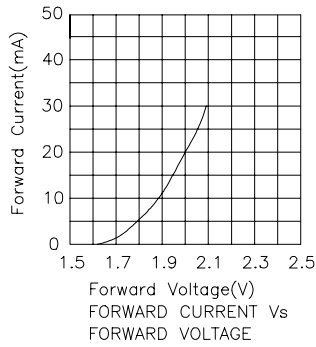
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



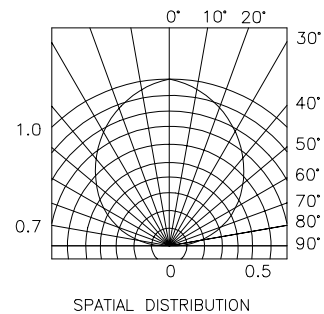
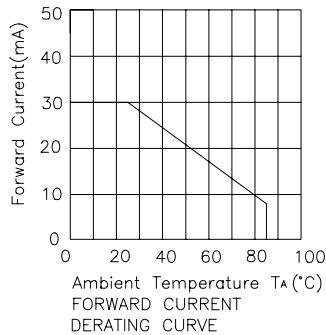
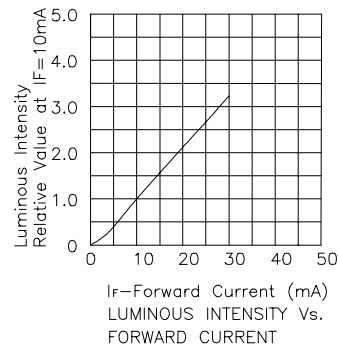
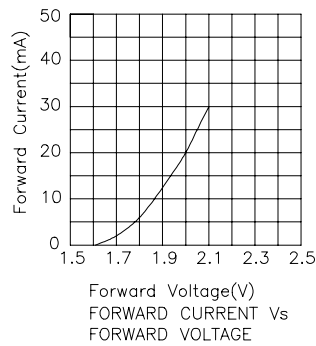
Bright Red L153HDT



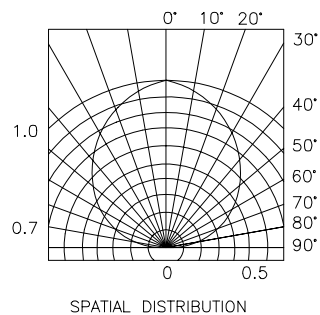
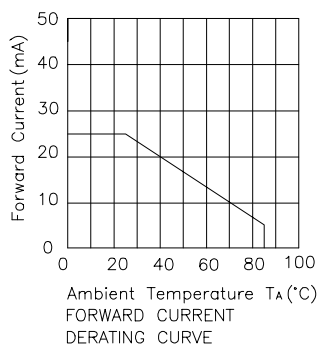
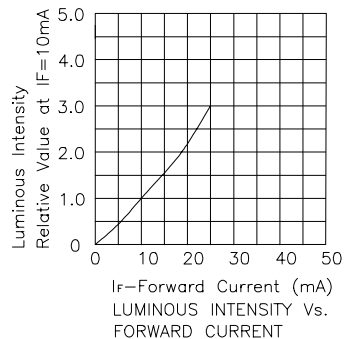
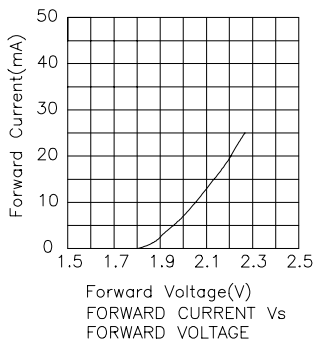
High Efficiency Red L153IDT



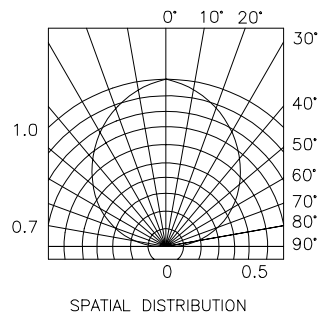
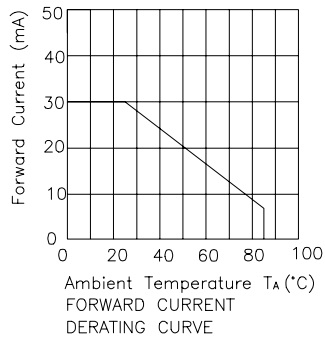
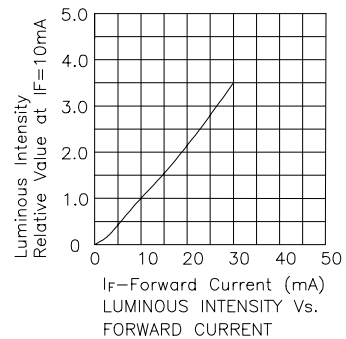
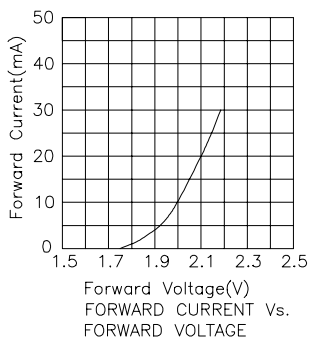
Orange L153EDT



Green L153GDT



Yellow L153YDT



Super Bright Red L153SRDT

