

L483HDT BRIGHT RED L483GDT GREEN
 L483IDT HIGH EFFICIENCY RED L483EDT ORANGE
 L483YDT YELLOW
 L483SRSGW SUPER BRIGHT RED/SUPER BRIGHT GREEN

Features

- CYLINDRICAL TYPE, TOP DIFFUSED.
- LOW POWER CONSUMPTION.
- SUPER BRIGHT RED AND SUPER GREEN BI-COLOR VERSION IS AVAILABLE.
- I.C. COMPATIBLE.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- AVAILABLE ON TAPE AND REEL.

Description

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

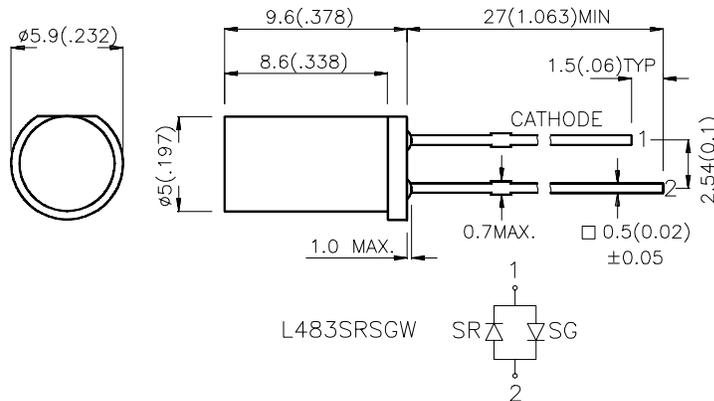
The Green and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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

The 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 |
| L483HDT | BRIGHT RED (GaP) | RED DIFFUSED | 0.5 | 1 | 100° |
| L483IDT | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED | 2 | 5 | 100° |
| L483EDT | ORANGE (GaAsP/GaP) | ORANGE DIFFUSED | 3 | 7 | 100° |
| L483GDT | GREEN (GaP) | GREEN DIFFUSED | 1 | 4 | 100° |
| L483YDT | YELLOW (GaAsP/GaP) | YELLOW DIFFUSED | 1 | 4 | 100° |
| L483SRSGW | SUPER BRIGHT RED (GaAlAs) | WHITE DIFFUSED | *20 | *50 | 80° |
| | SUPER BRIGHT GREEN (GaP) | | *5 | *10 | |

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

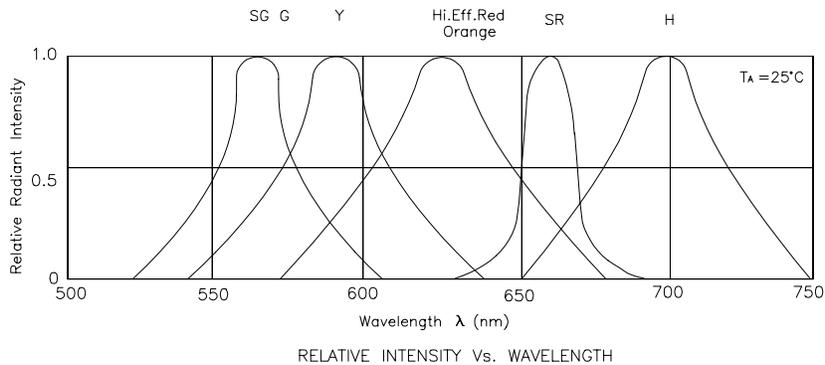
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-------------------|-------------------------|--|---|---|-------|-----------------|
| λ _{peak} | Peak Wavelength | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green | 700 627 627 565 590 660 565 | | nm | IF=20mA |
| λ _D | Dominate Wavelength | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green | 660 625 625 568 588 640 568 | | nm | IF=20mA |
| Δλ _{1/2} | Spectral Line Halfwidth | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green | 45 45 45 30 35 20 30 | | nm | IF=20mA |
| C | Capacitance | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green | 40 15 15 15 20 45 15 | | pF | VF=0V;f=1MHz |
| V _F | Forward Voltage | Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green | 2.25 2.0 2.0 2.2 2.1 1.85 2.2 | 2.5 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 $T_A=25^\circ\text{C}$

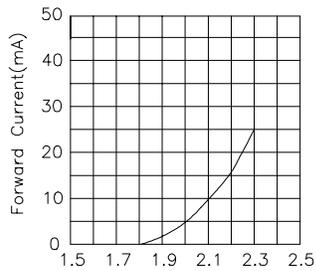
| Parameter | Bright Red | High Efficiency Red | Orange | Green | Yellow | Super Bright Red | Super Bright Green | Units |
|-------------------------------|---------------------|---------------------|--------|-------|--------|------------------|--------------------|-------|
| Power dissipation | 120 | 105 | 105 | 105 | 105 | 100 | 105 | mW |
| DC Forward Current | 25 | 30 | 30 | 25 | 30 | 30 | 25 | mA |
| Peak Forward Current [1] | 120 | 160 | 160 | 140 | 140 | 155 | 140 | mA |
| Reverse Voltage | 5 | 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:

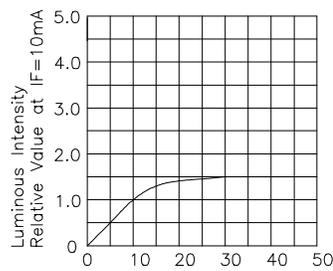
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



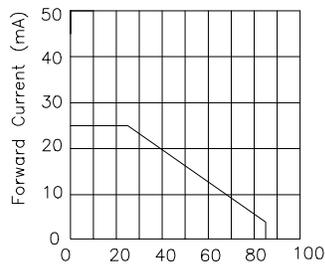
Bright Red L483HDT



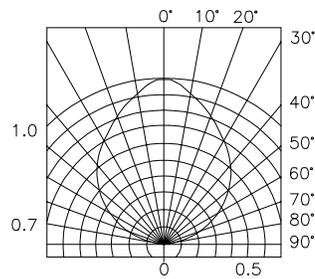
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT

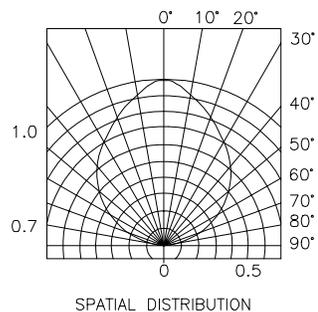
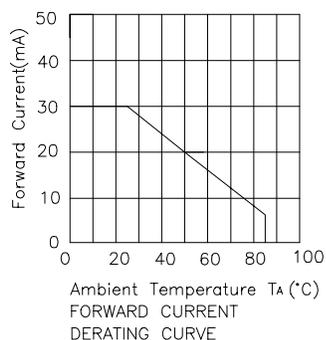
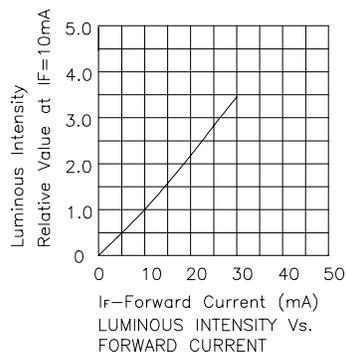
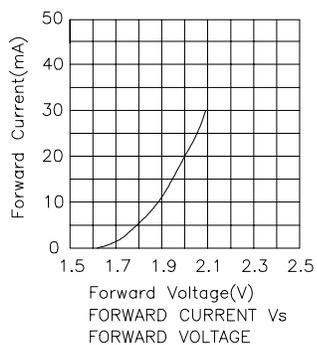


DERATING CURVE

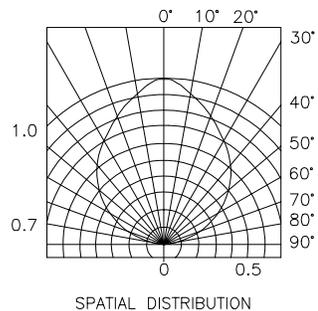
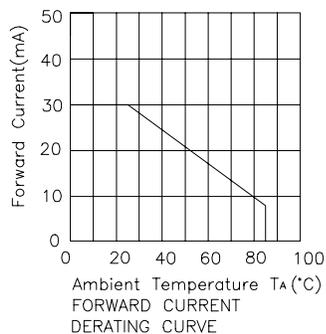
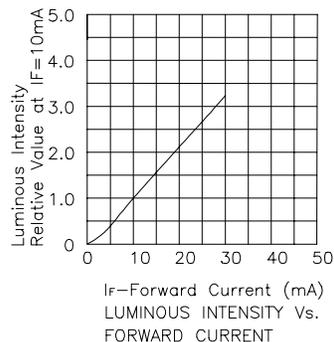
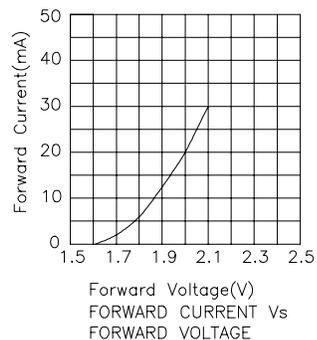


SPATIAL DISTRIBUTION

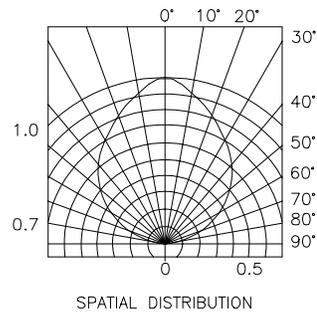
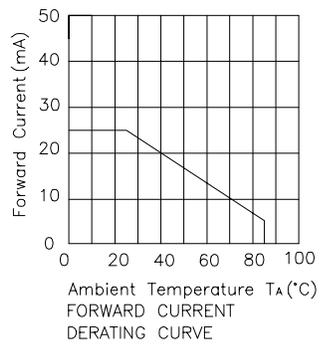
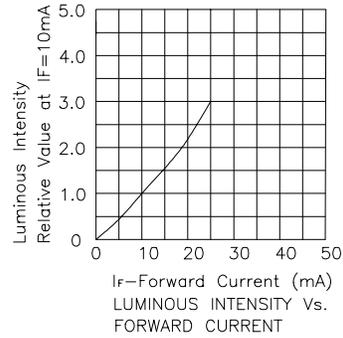
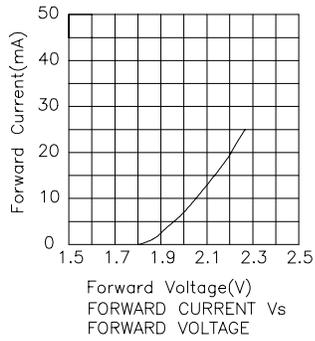
High Efficiency Red L483IDT



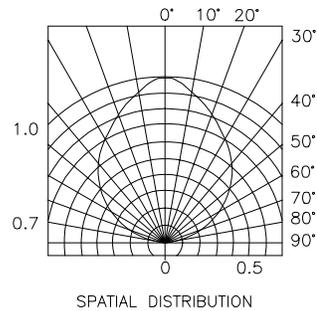
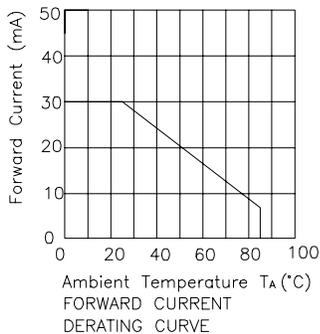
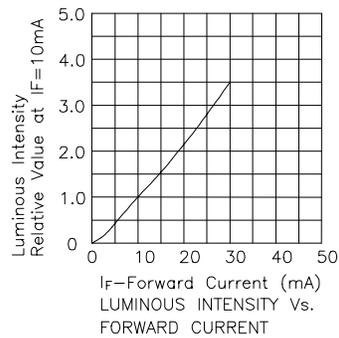
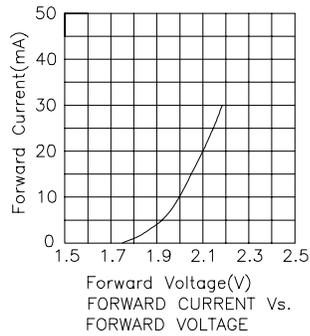
Orange L483EDT



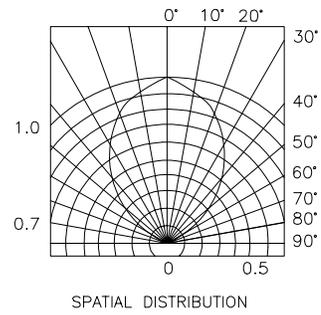
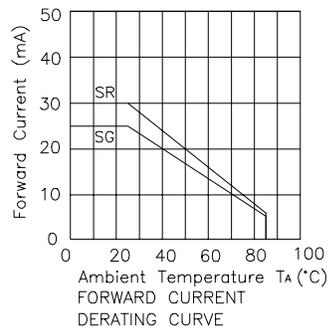
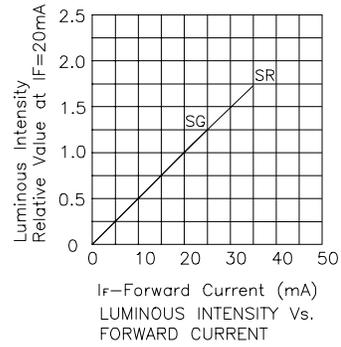
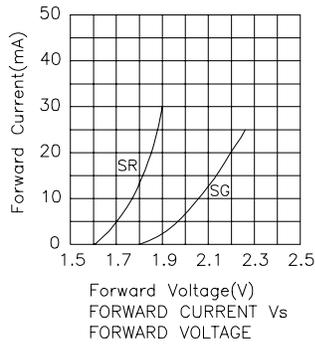
Green L483GDT



Yellow L483YDT



Super Bright Red / Super Bright Green L483SRSGW



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