

Features

- LOW POWER CONSUMPTION.
- ULTRA BRIGHTNESS IS AVAILABLE .
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LONG LIFE - SOLID STATE RELIABILITY.

L144HDT BRIGHT RED

L144GDT GREEN

L144IDT HIGH EFFICIENCY RED

L144EDT ORANGE

L144SRDT SUPER BRIGHT RED

L144YDT YELLOW

Description

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

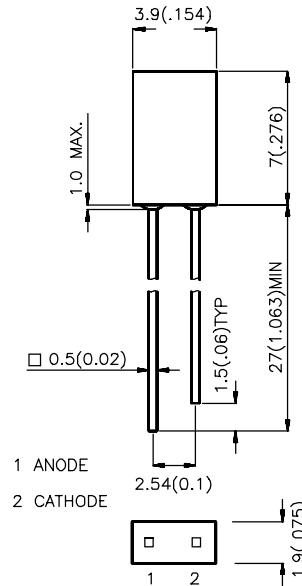
The High Efficiency Red and Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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 subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle
			Min.	Typ.	
L144HDT	BRIGHT RED (GaP)	RED DIFFUSED	0.5	1	110°
L144IDT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3	6	110°
L144EDT	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	3	6	110°
L144GDT	GREEN (GaP)	GREEN DIFFUSED	2	4	110°
L144YDT	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	2	3	110°
L144SRDT	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	*40	*70	110°

Notes:

1. $\theta 1/2$ 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

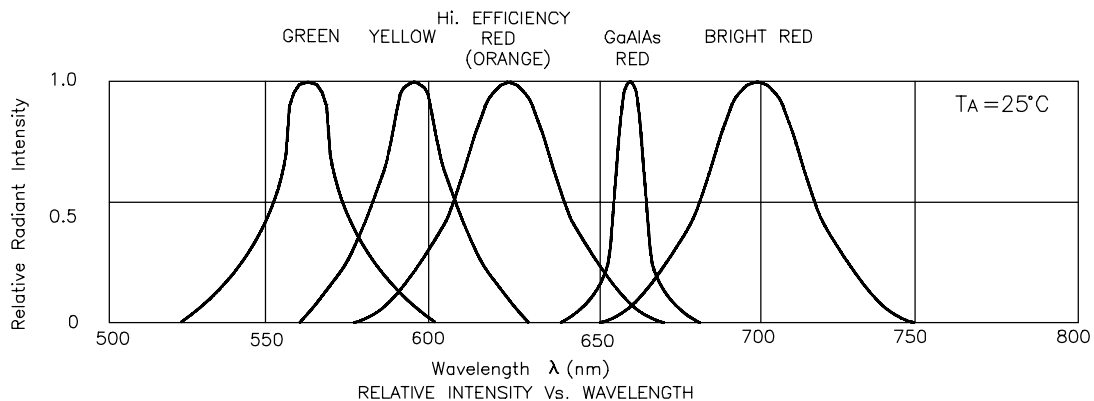
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red	700 625 625 565 590 660		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red	45 45 45 30 35 20		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red	40 12 12 45 10 95		pF	VF=0V;f=1MHz
V _F	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red	2.0 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°C

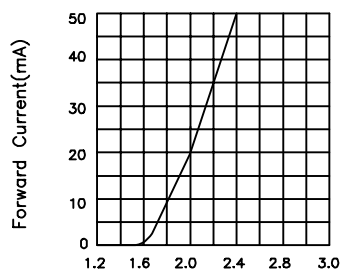
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Super Bright Red	Units
Power dissipation	120	105	105	105	105	100	mW
DC Forward Current	25	30	30	25	30	30	mA
Peak Forward Current [1]	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C						
Lead Soldering Temperature [2]	260°C For 5 Seconds						

Notes:

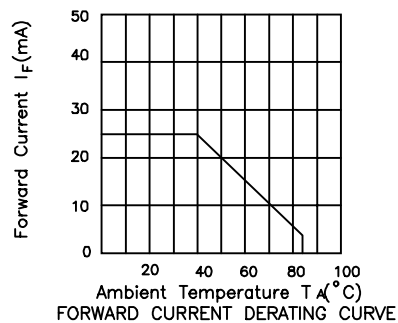
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



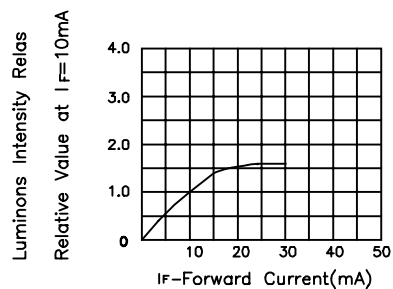
Bright Red L144HDT



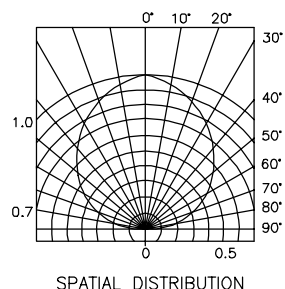
FORWARD CURRENT Vs. FORWARD VOLTAGE



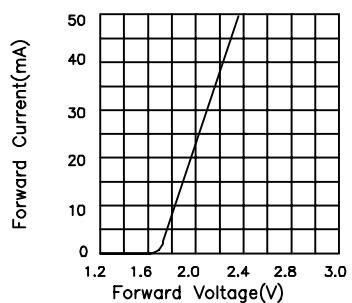
FORWARD CURRENT DERATING CURVE



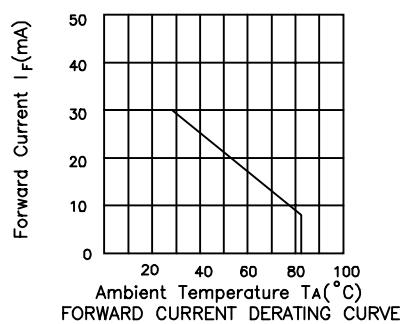
LUMINOUS INTENSITY Vs. FORWARD CURRENT



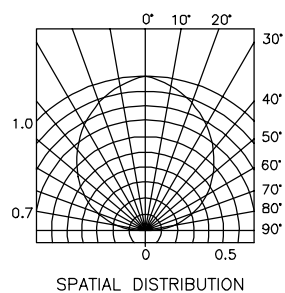
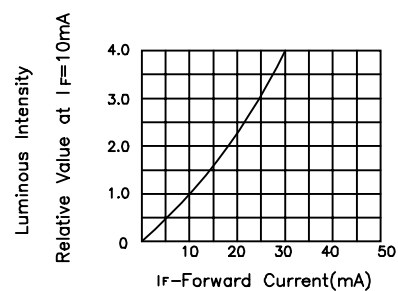
High Efficiency Red L144IDT Orange L144EDT



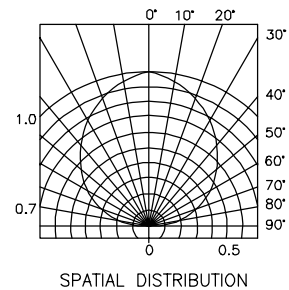
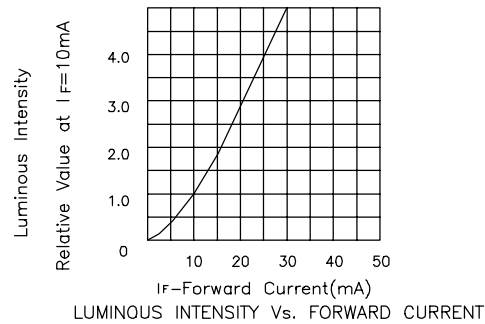
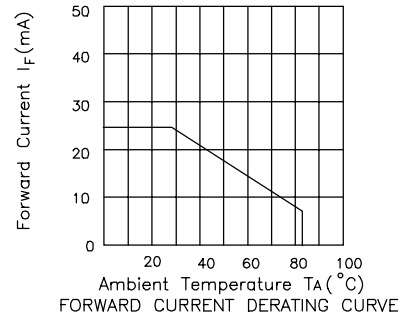
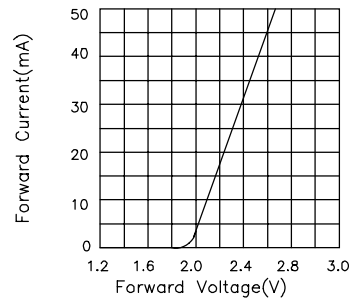
FORWARD CURRENT Vs. FORWARD VOLTAGE



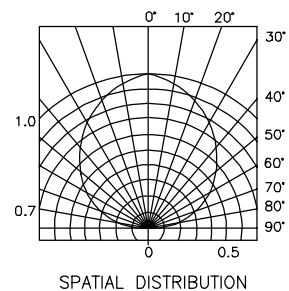
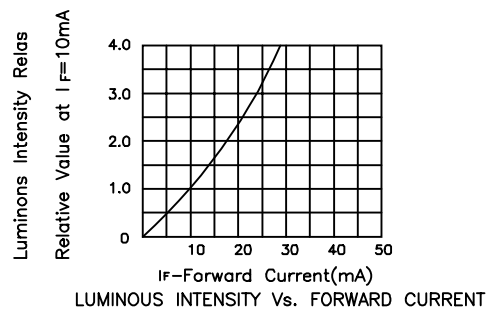
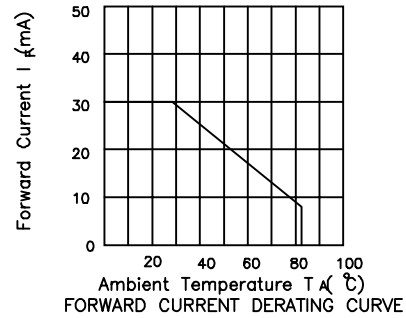
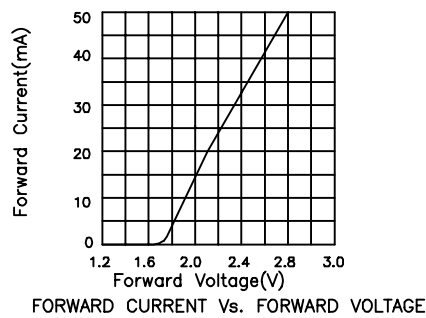
FORWARD CURRENT DERATING CURVE



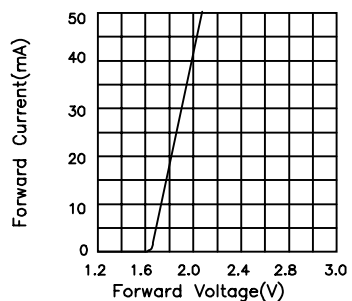
Green L144GDT



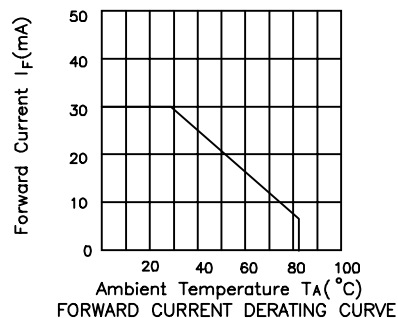
Yellow L144YDT



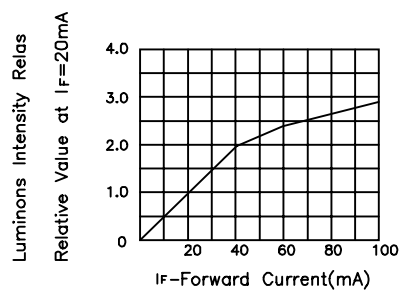
Super Bright Red L144SRDT



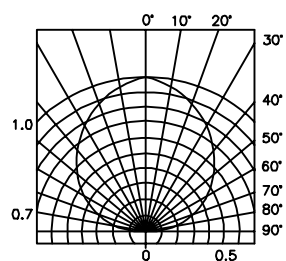
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION