

L53HD BRIGHT RED	L53Gx GREEN
L53lx HIGH EFFICIENCY RED	L53Yx YELLOW
L53EC HIGH EFFICIENCY RED	L53ED ORANGE
L53Nx PURE ORANGE	L53PGx PURE GREEN

### Features

- HIGH INTENSITY.
- LOW POWER CONSUMPTION.
- POPULAR T-1 3/4 DIAMETER PACKAGE.
- GENERAL PURPOSE LEADS.
- 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 source color devices are made with Gallium Phosphide Green Light Emitting Diode.

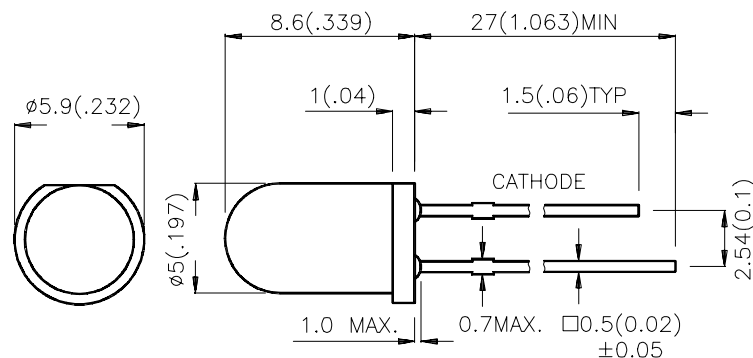
The High Efficiency Red and Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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

The 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	Iv (mcd) @ 10 mA		Viewing Angle
			Min.	Typ.	θ1/2
L53HD	BRIGHT RED (GaP)	RED DIFFUSED	2	5	60°
L53ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	25	60°
L53IT		RED TRANSPARENT	30	80	30°
L53EC		WATER CLEAR	30	80	30°
L53ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	8	30	60°
L53GD	GREEN (GaP)	GREEN DIFFUSED	5	20	60°
L53GT		GREEN TRANSPARENT	20	60	30°
L53GC		WATER CLEAR	20	60	30°
L53YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	20	60°
L53YT		YELLOW TRANSPARENT	20	40	30°
L53YC		WATER CLEAR	20	40	30°
L53ND	PURE ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	12	30	60°
L53NT		ORANGE TRANSPARENT	50	80	30°
L53NC		WATER CLEAR	50	80	30°
L53PGD	PURE GREEN (GaP)	GREEN DIFFUSED	2	5	60°
L53PGT		GREEN TRANSPARENT	5	10	30°
L53PGC		WATER CLEAR	5	10	30°

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

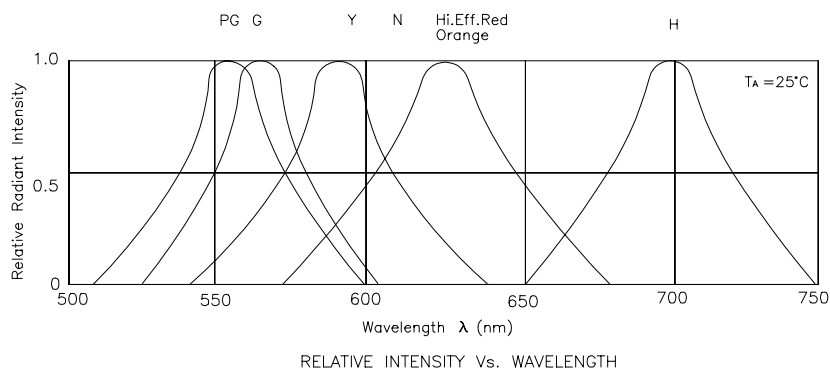
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Pure Orange	Pure Green	Units
Power dissipation	120	105	105	105	105	105	105	mW
DC Forward Current	25	30	30	25	30	30	25	mA
Peak Forward Current [1]	120	160	160	140	140	145	135	mA
Reverse Voltage	5	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C							
Lead Soldering Temperature [2]	260°C For 5 Seconds							

Notes:

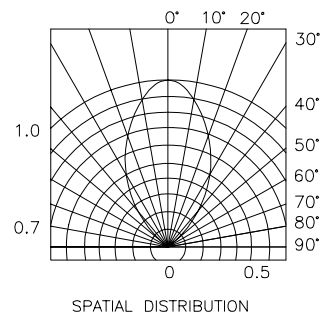
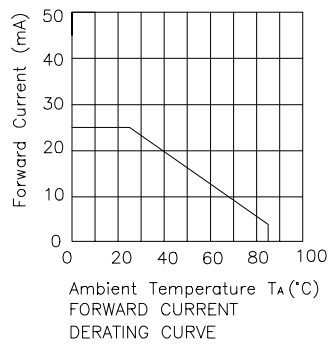
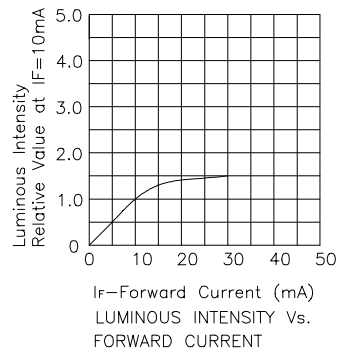
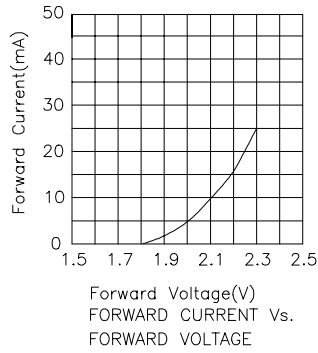
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

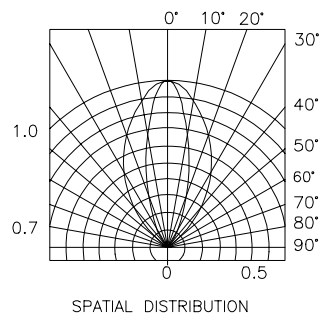
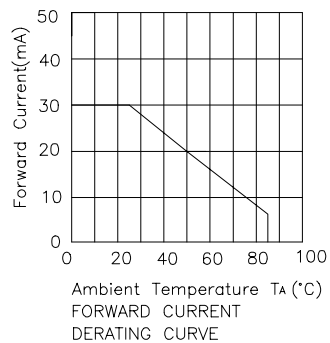
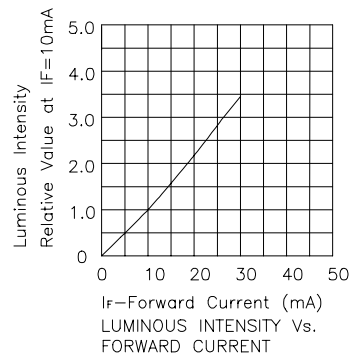
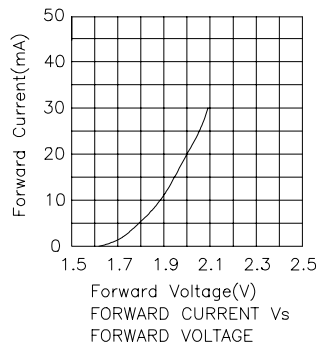
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	700 627 627 565 590 607 555		nm	IF=20mA
$\lambda_D$	Dominate Wavelength	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	660 625 625 568 588 610 555		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	45 45 45 30 35 35 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	40 15 15 15 20 15 45		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	2.25 2.0 2.0 2.0 2.1 2.05 2.25	2.5 2.5 2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	VR = 5V



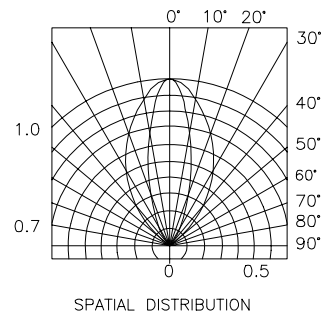
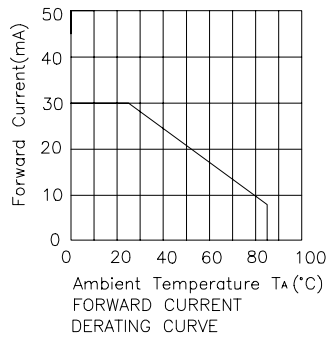
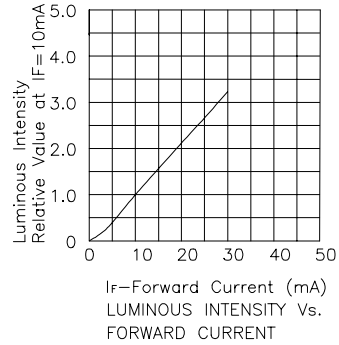
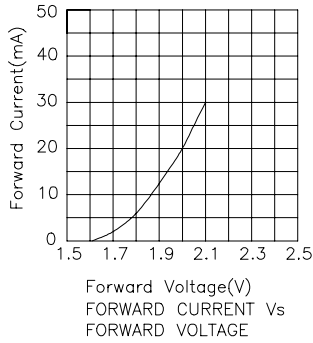
## Bright Red L53HD



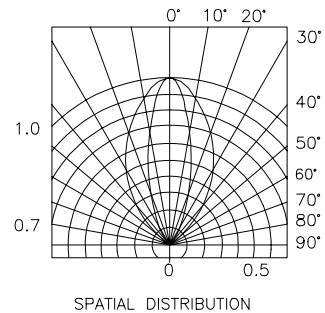
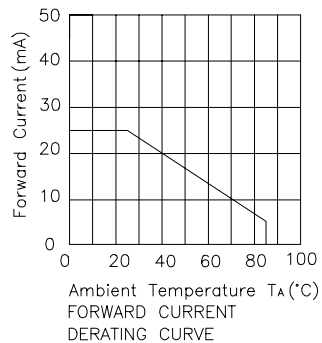
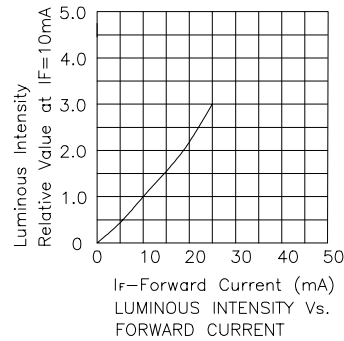
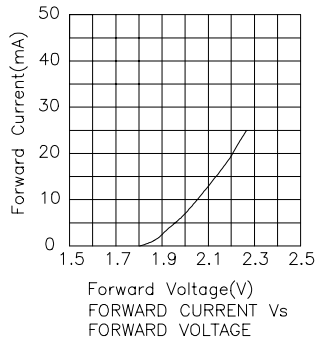
## High Efficiency Red L53ID,L53IT



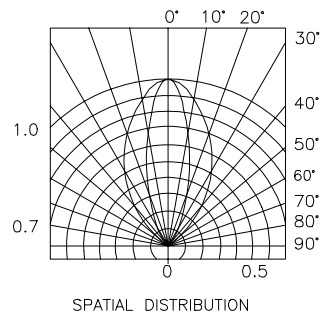
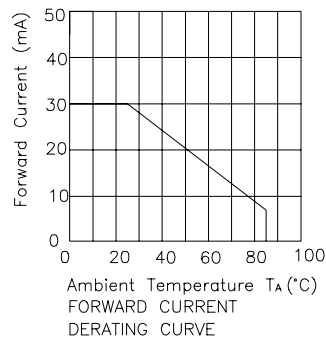
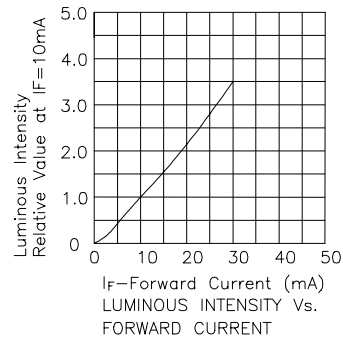
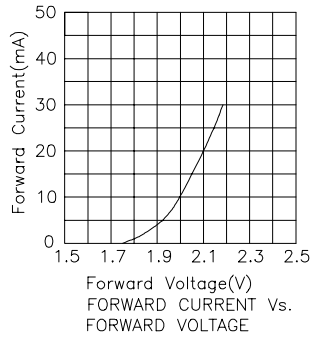
## High Efficiency Red L53EC Orange L53ED



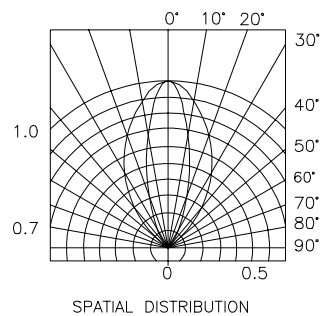
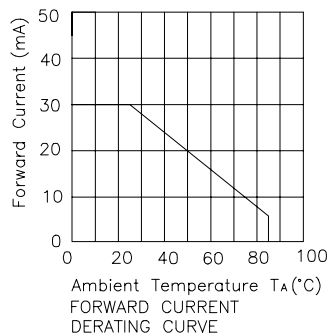
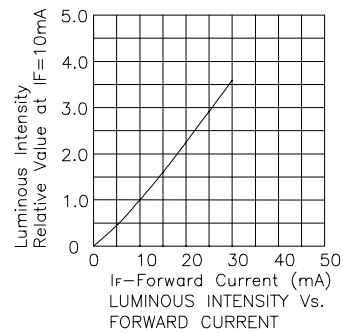
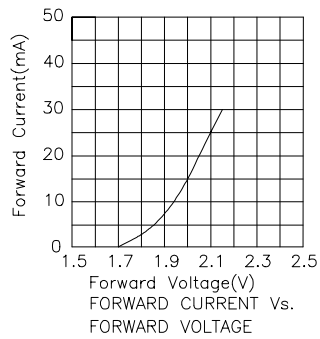
## Green L53GD,L53GC,L53GT



## Yellow L53YD,L53YC,L53YT



## Pure Orange L53ND,L53NC,L53NT



## Pure Green L53PGD,L53PGC,L53PGT

