

### Features

- LOW POWER CONSUMPTION.
- I.C. COMPATIBLE.
- ROUNDED END RECTANGULAR SHAPE.
- LONG LIFE-SOLID STATE RELIABILITY.

L173HD BRIGHT RED

L173GD GREEN

L173ID HIGH EFFICIENCY RED

L173YD YELLOW

L173ED ORANGE

### Package Dimensions

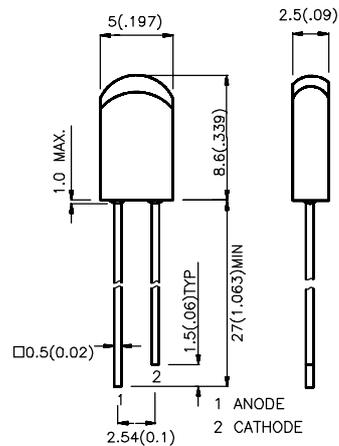
### Description

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.



### 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.	
L173HD	BRIGHT RED (GaP)	RED DIFFUSED	0.8	1.5	100°
L173ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	5	8	100°
L173ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	5	8	100°
L173GD	GREEN (GaP)	GREEN DIFFUSED	2	5	100°
L173YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	2	5	100°

### Note:

1.  $\theta_{1/2}$  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

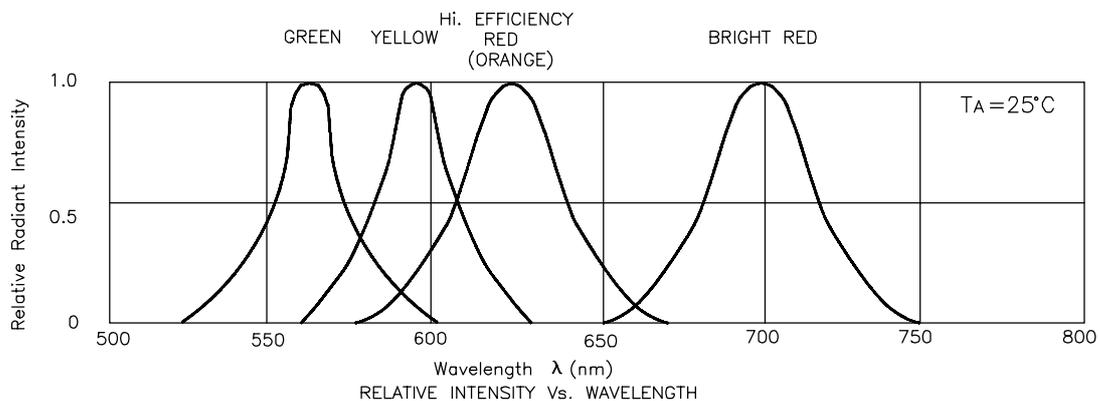
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow	700 625 625 565 590		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow	45 45 45 30 35		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow	40 12 12 45 10		pF	VF=0V;F=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow	2.0 2.0 2.0 2.2 2.1	2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	VR=5V

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

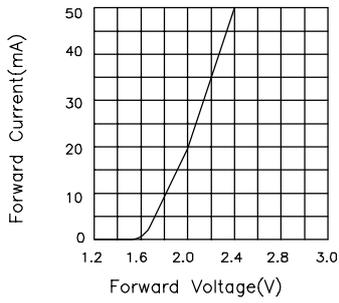
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Units
Power dissipation	120	105	105	105	105	mW
DC Forward Current	25	30	30	25	30	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operation/Storage Temperature	-40°C To +85°C					
Lead Solder Temperature [2]	260°C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

### Notes:

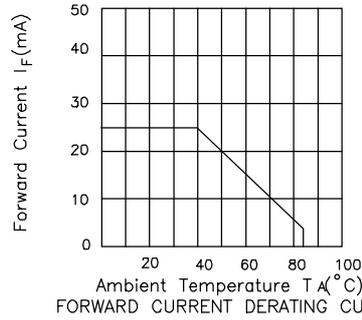
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



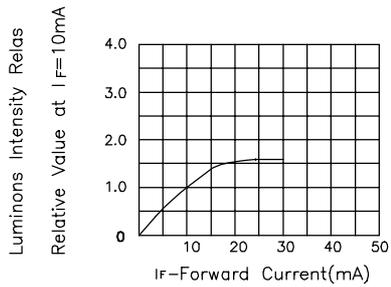
## Bright Red L173HD



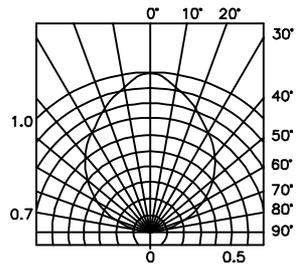
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

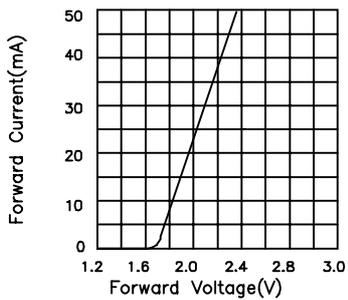


LUMINOUS INTENSITY Vs. FORWARD CURRENT

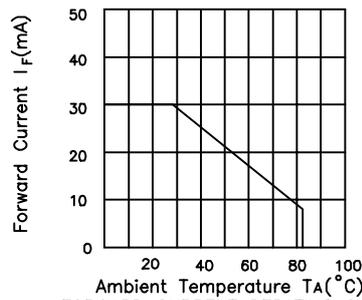


SPATIAL DISTRIBUTION

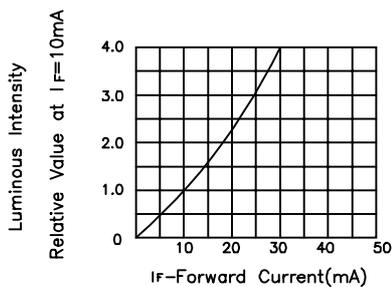
## High Efficiency Red L173ID Orange L173ED



FORWARD CURRENT Vs. FORWARD VOLTAGE

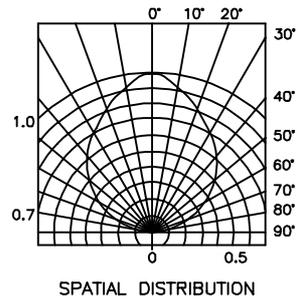
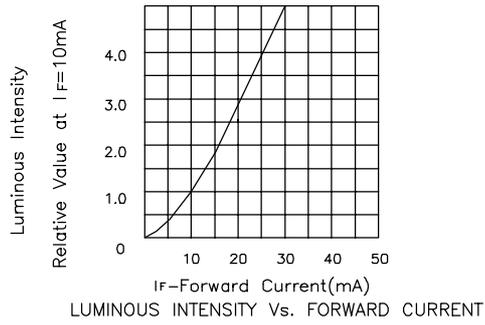
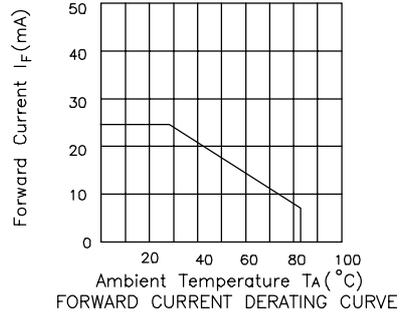
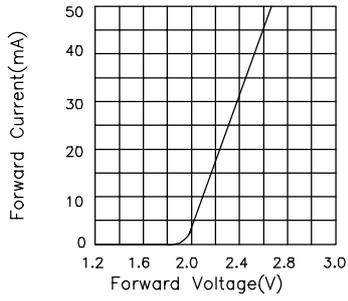


FORWARD CURRENT DERATING CURVE



SPATIAL DISTRIBUTION

## Green L173GD



## Yellow L173YD

