

L813ID HIGH EFFICIENCY RED

L813GD GREEN

L813ED ORANGE

L813YD YELLOW

### Features

- 10mm DIAMETER BIG LAMP.
- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.

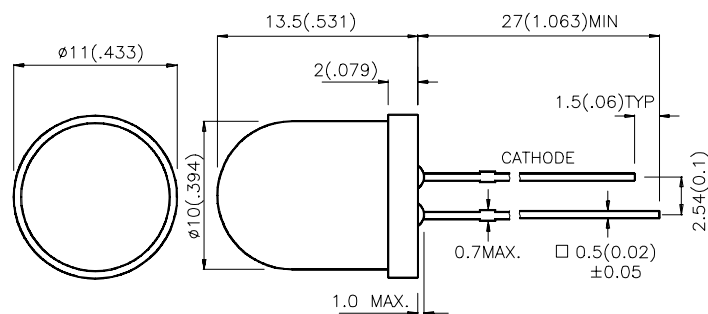
### Description

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.

### 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) @ 20 mA		Viewing Angle
			Min.	Typ.	θ1/2
L813ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	40	100	60°
L813ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	40	100	60°
L813GD	GREEN (GaP)	GREEN DIFFUSED	20	60	60°
L813YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	20	50	60°

Note:

1. θ1/2 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

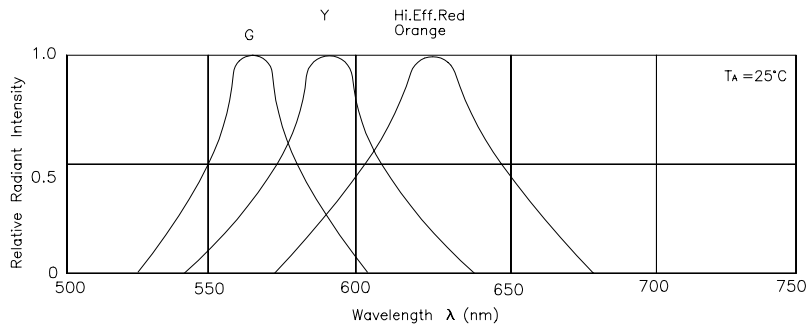
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	High Efficiency Red Orange Green Yellow	627 627 565 590		nm	IF=20mA
λ <sub>D</sub>	Dominate Wavelength	High Efficiency Red Orange Green Yellow	625 625 568 588		nm	IF=20mA
Δλ <sub>1/2</sub>	Spectral Line Halfwidth	High Efficiency Red Orange Green Yellow	45 45 30 35		nm	IF=20mA
C	Capacitance	High Efficiency Red Orange Green Yellow	15 15 15 20		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Orange Green Yellow	2.0 2.0 2.2 2.1	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	High Efficiency Red	Orange	Green	Yellow	Units
Power dissipation	105	105	105	105	mW
DC Forward Current	30	30	25	30	mA
Peak Forward Current [1]	160	160	140	140	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 5 Seconds				

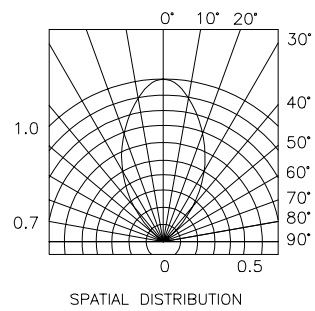
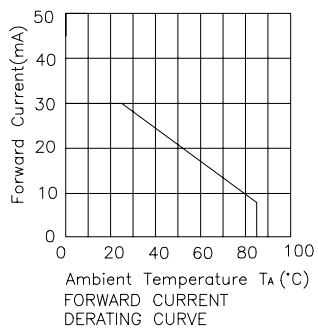
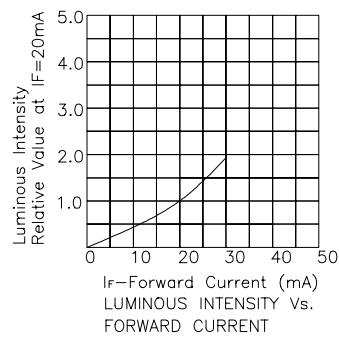
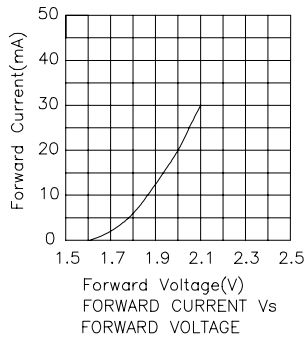
Notes:

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



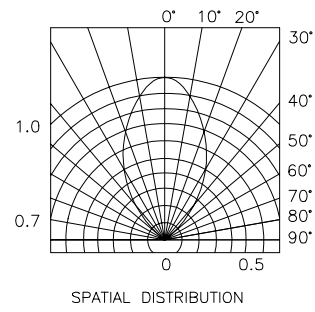
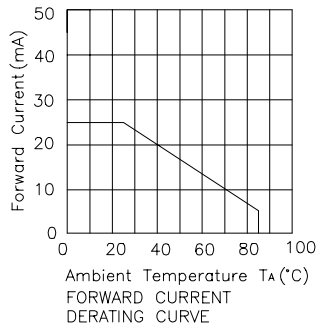
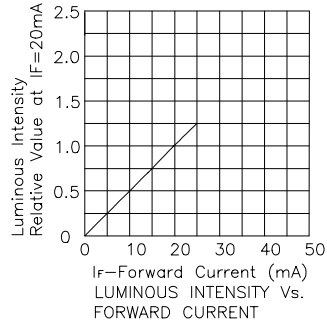
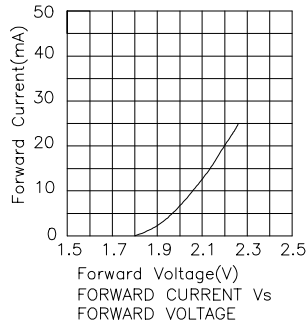
RELATIVE INTENSITY Vs. WAVELENGTH

## High Efficiency Red L813ID Orange L813ED



# Kingbright

## Green L813GD



## Yellow L813YD

