

Kingbright®

8mm BIG SOLID STATE LAMPS

L-793I HIGH EFFICIENCY RED

L-793G GREEN

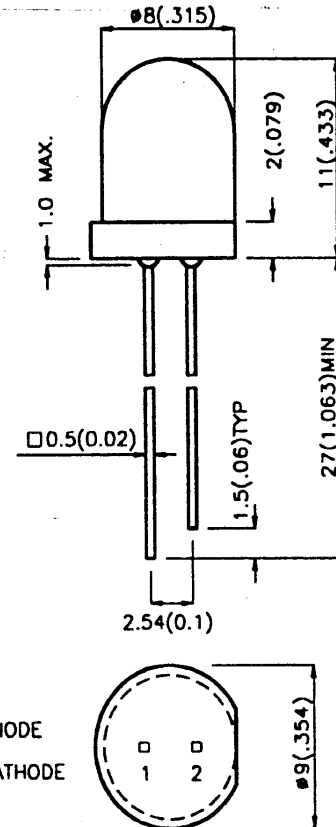
L-793E ORANGE

L-793Y YELLOW

Features

- 8mm DIAMETER BIG LAMP.
- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.

Package Dimensions



1 ANODE
2 CATHODE

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.

Description

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.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle 2θ1/2
			Min.	Max.	
L-793ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	20.0	100.0	50°
L-793ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	20.0	100.0	
L-793GD	GREEN (GaP)	GREEN DIFFUSED	20.0	70.0	
L-793YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	20.0	70.0	

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 $T_A=25^\circ\text{C}$

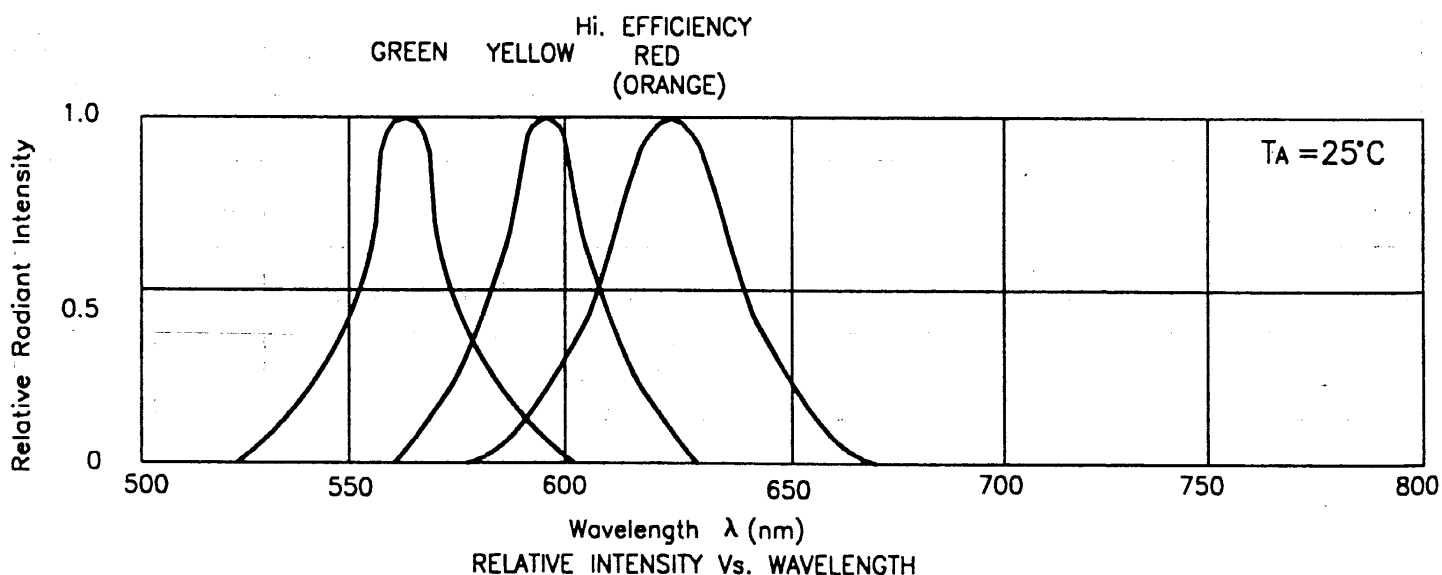
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Orange Green Yellow	625 625 565 590		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Orange Green Yellow	45 45 30 35		nm	IF=20mA
C	Capacitance	High Efficiency Red Orange Green Yellow	12 12 45 10		pF	VF=0V;f=1MHz
V_F	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_R	Reverse Current	All	10		μA	VR = 5V

Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

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]	150	150	150	150	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				
Lead Soldering Temperature [2]	260°C For 5 Seconds				

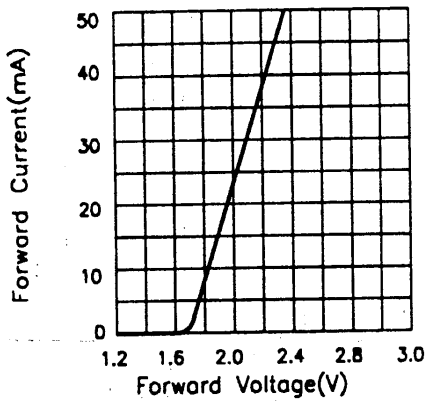
Notes:

- $\tau \leq 10\mu\text{s}$.
- 4mm below package base.

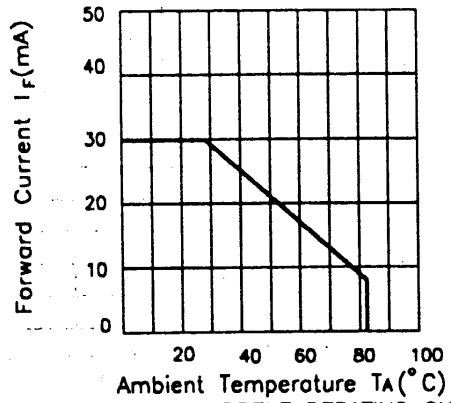


High Efficiency Red L-793ID

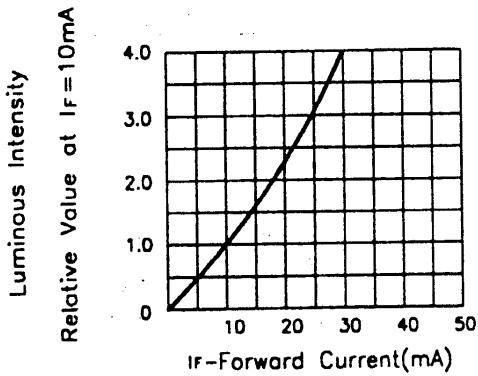
Orange L-793ED



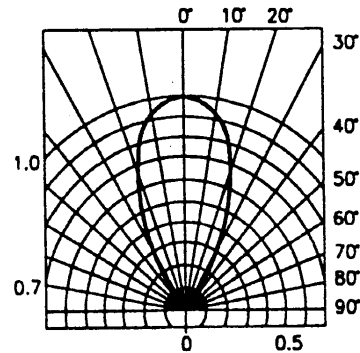
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

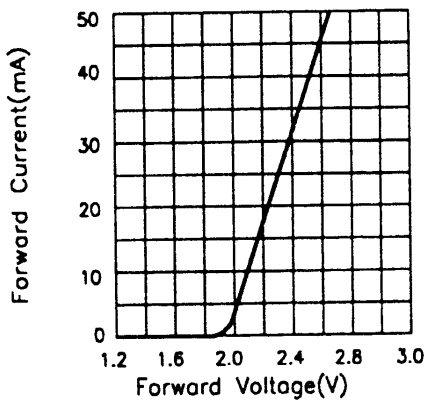


LUMINOUS INTENSITY Vs. FORWARD CURRENT

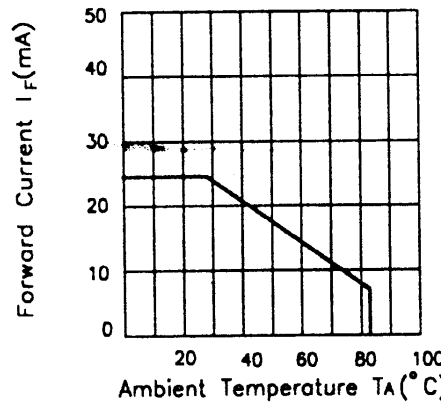


SPATIAL DISTRIBUTION

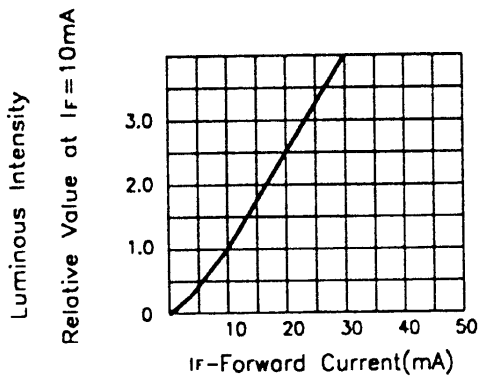
Green L-793GD



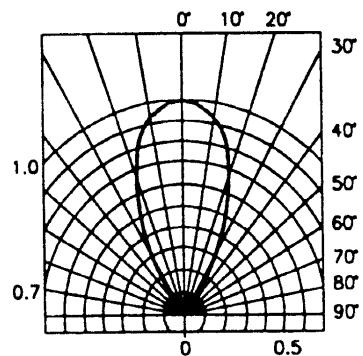
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

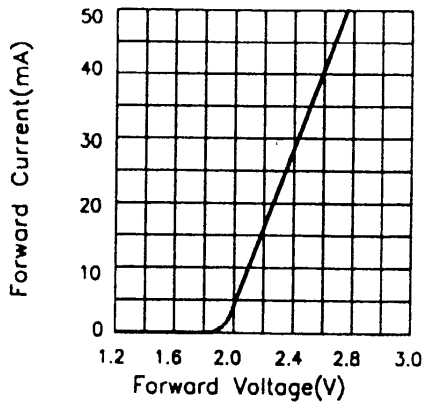


LUMINOUS INTENSITY Vs. FORWARD CURRENT

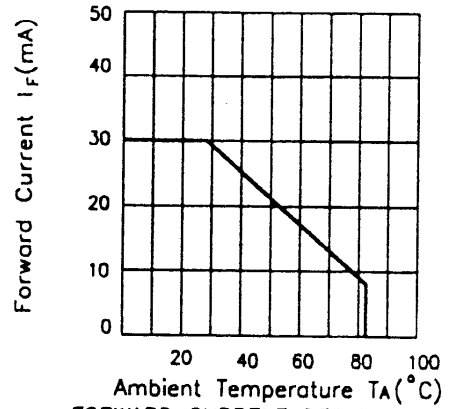


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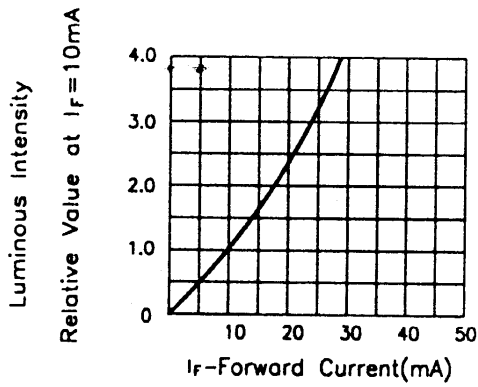
Yellow L-793YD



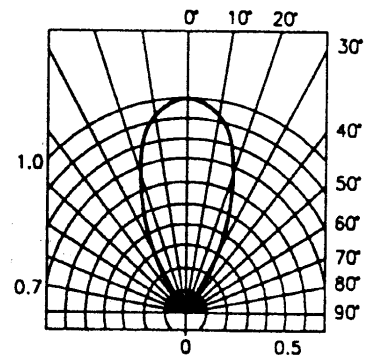
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION