

8mm LEDs

Order code	Manufacturer code	Description
55-0400	L-793ID	HIGH INTENSITY 8MM RED LED
55-0405	L-793GD	HIGH INTENSITY 8MM GREEN LED
55-0410	L-793YD	HIGH INTENSITY 8MM YELLOW LED

8mm LEDs	Page 1 of 5
The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

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.

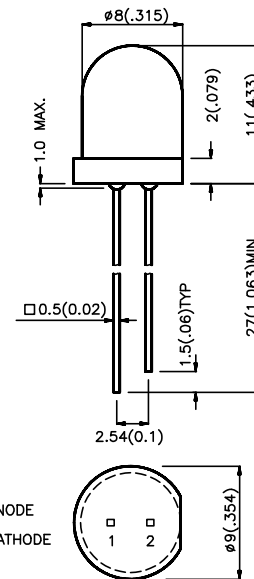
Description

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.

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.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Max.	2 θ 1/2
L-793ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	40	150	50°
L-793ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	40	150	50°
L-793GD	GREEN (GaP)	GREEN DIFFUSED	20	70	50°
L-793YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	20	70	50°

Note:

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

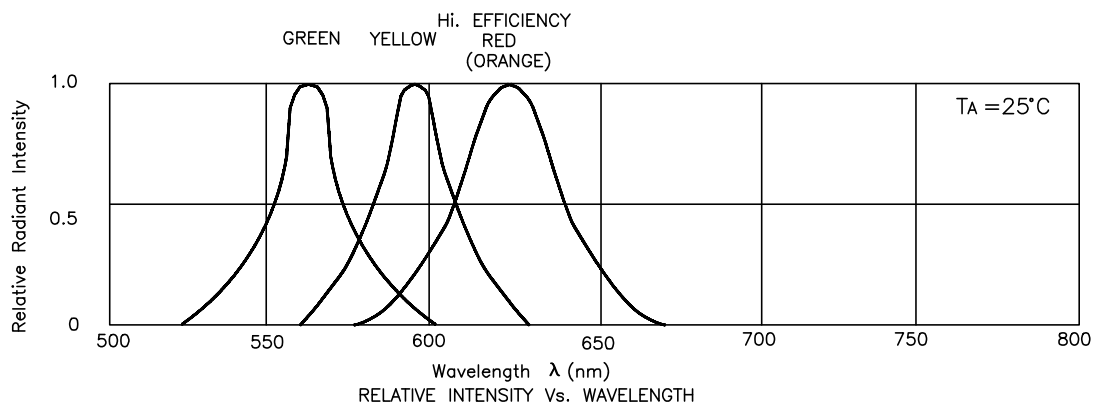
Electrical / Optical Characteristics at T_A=25°C

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		uA	VR = 5V

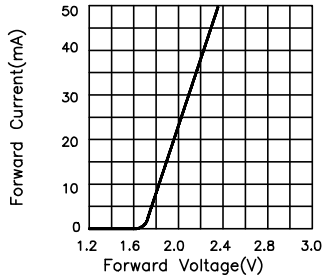
Absolute Maximum Ratings at T_A=25°C

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]	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				

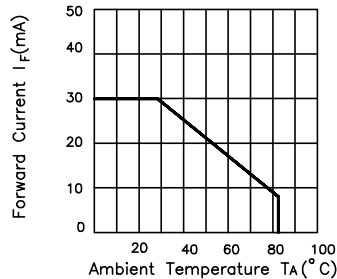
Notes:
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
 2. 4mm below package base.



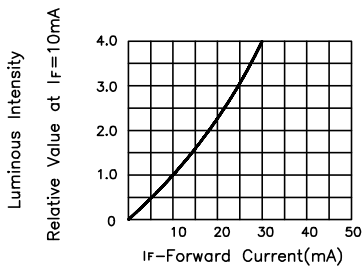
High Efficiency Red L-793ID
Orange L-793ED



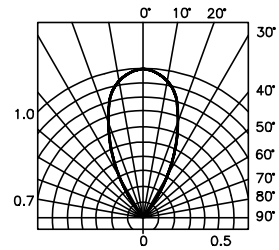
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

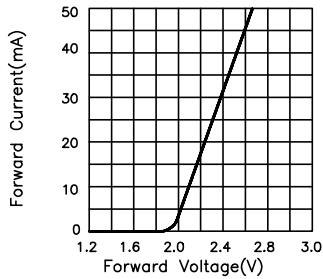


LUMINOUS INTENSITY Vs. FORWARD CURRENT

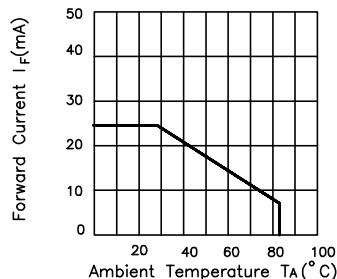


SPATIAL DISTRIBUTION

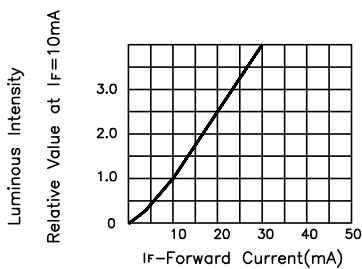
Green L-793GD



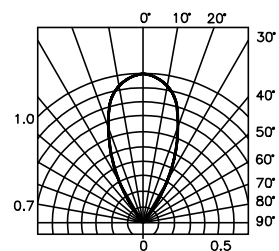
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

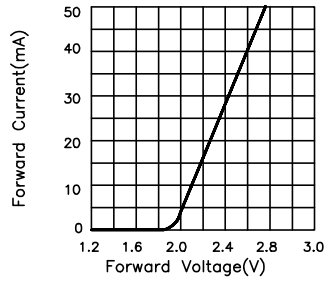


LUMINOUS INTENSITY Vs. FORWARD CURRENT

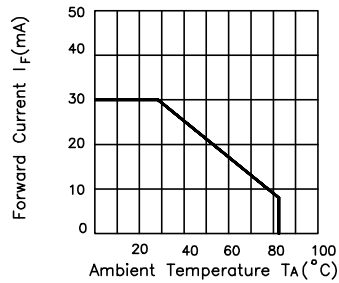


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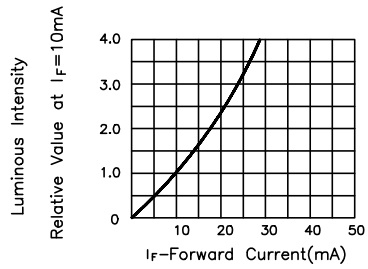
Yellow L-793YD



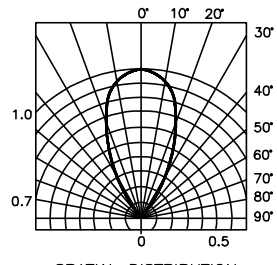
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION