

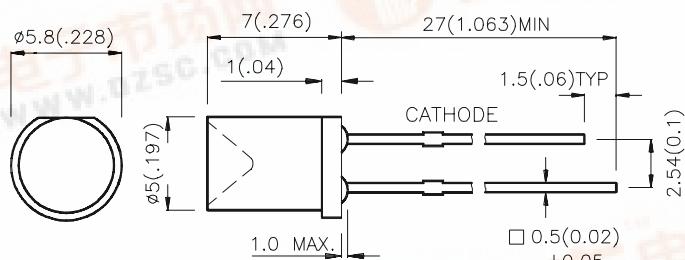
Features

- WIDE VIEWING ANGLE.
- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- TRANSPARENT AND WATER CLEAR TYPE AVAILABLE.

Description

The High Efficiency Red 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.

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Selection Guide

Part No.	Dice	Lens Type	I _v (mcd) @ 10 mA		Viewing Angle
			Min.	Typ.	
L493IT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED TRANSPARENT	2	6	140°
L493EC		WATER CLEAR	2	6	140°
L493GT	GREEN (GaP)	GREEN TRANSPARENT	2	5	140°
L493GC		WATER CLEAR	2	5	140°
L493YT	YELLOW (GaAsP/GaP)	YELLOW TRANSPARTENT	1	4	140°
L493YC		WATER CLEAR	1	4	140°

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°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	High Efficiency Red Green Yellow	627 565 590		nm	IF=20mA
λ D	Dominate Wavelength	High Efficiency Red Green Yellow	625 568 588		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	High Efficiency Red Green Yellow	45 30 35		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow	15 15 20		pF	VF=0V;f=1MHz
V _F	Forward Voltage	High Efficiency Red Green Yellow	2.0 2.0 2.1	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

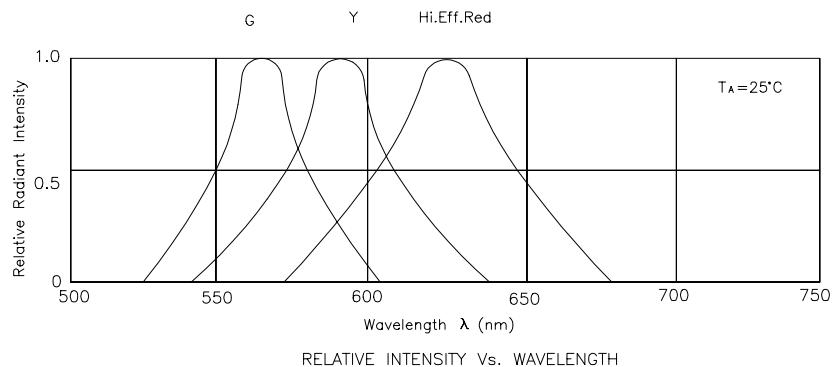
Parameter	High Efficiency Red	Green	Yellow	Units
Power dissipation	105	105	105	mW
DC Forward Current	30	25	30	mA
Peak Forward Current [1]	160	140	140	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 5 Seconds			

Notes:

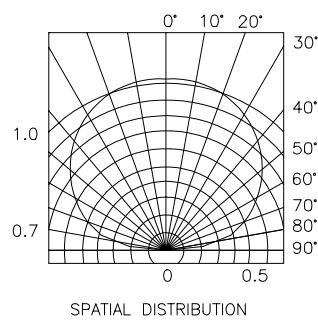
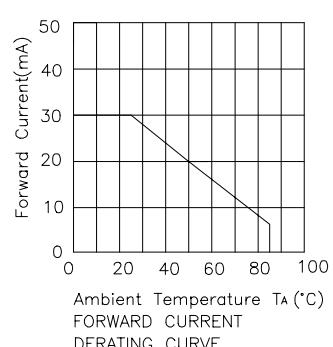
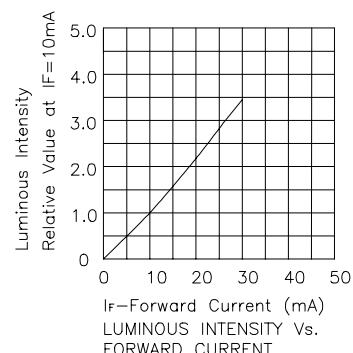
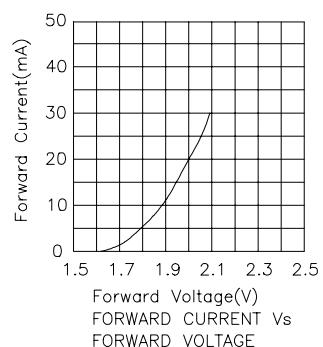
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

2. 4mm below package base.

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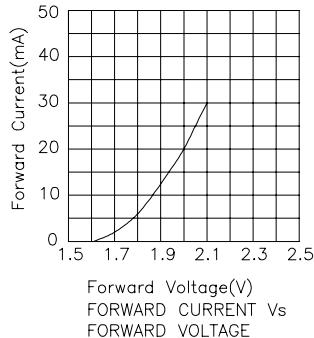


High Efficiency Red L493IT

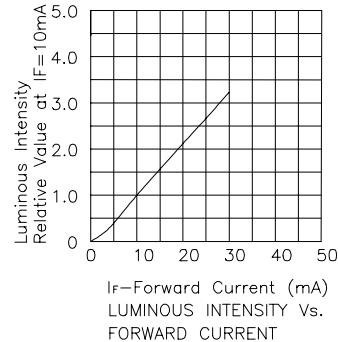


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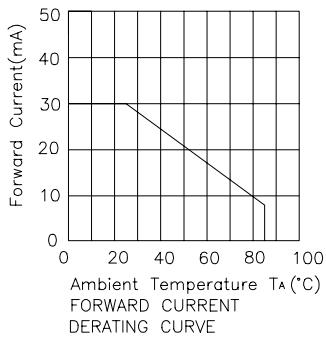
High Efficiency Red L493EC



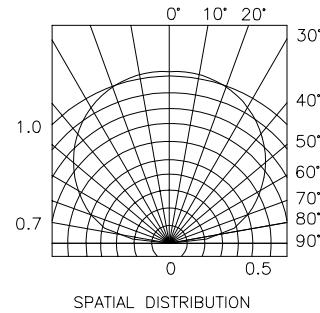
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



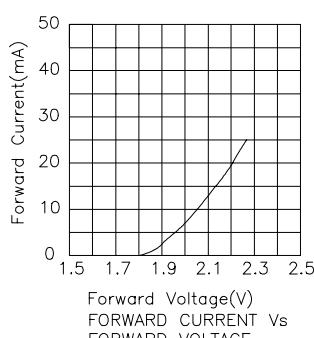
I_F—Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



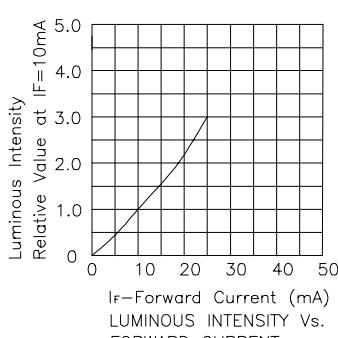
Ambient Temperature T_A (°C)
FORWARD CURRENT
DERATING CURVE



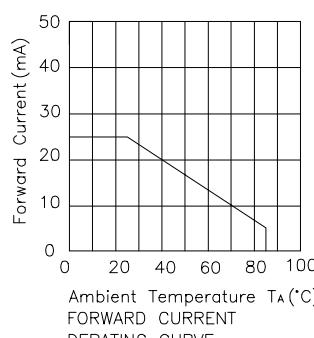
SPATIAL DISTRIBUTION



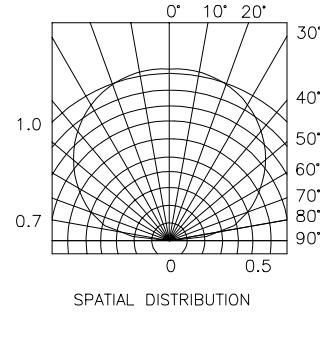
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



I_F—Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature T_A (°C)
FORWARD CURRENT
DERATING CURVE



SPATIAL DISTRIBUTION

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Yellow L493YC,L493YT

