L7113H BRIGHT RED
L7113G GREEN
L7113I HIGH EFFICIENCY RED
L7113E ORANGE
L7113N PURE ORANGE
L7113Y YELLOW
L7113PG PURE GREEN

Features

- ●HIGH INTENSITY.
- ●LOW POWER CONSUMPTION.
- ●POPULAR T-1 DIAMETER PACKAGE.
- ●GENERAL PURPOSE LEADS.
- ●RELIABLE AND RUGGED.
- ●LONG LIFE - SOLID STATE RELIABILITY.
- ●AVAILABLE ON TAPE AND REEL.

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.

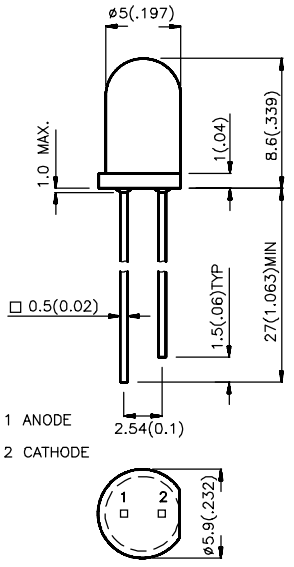
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

The Pure Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Pure Orange Light Emitting Diode.

The Pure Green source color devices are made with Gallium Phosphide Pure Green Light Emitting Diode.

Package Dimensions



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±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.	2θ1/2
L7113HD	BRIGHT RED (GaP)	RED DIFFUSED	2	5	30°
L7113ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	12	30	30°
L7113IT		RED TRANS.	50	80	20°
L7113EC		WATER CLEAR	50	80	20°
L7113ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	12	30	30°
L7113GD	GREEN (GaP)	GREEN DIFFUSED	5	20	30°
L7113GT		GREEN TRANS.	20	50	20°
L7113GC		WATER CLEAR	20	50	20°
L7113YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	20	30°
L7113YT		YELLOW TRANS.	20	40	20°
L7113YC		WATER CLEAR	20	40	20°
L7113ND	PURE ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	12	30	30°
L7113NT		ORANGE TRANS.	50	80	20°
L7113NC		WATER CLEAR	50	80	20°
L7113PGD	PURE GREEN (GaP)	GREEN DIFFUSED	2	5	30°
L7113PGT		GREEN TRANS.	5	10	20°
L7113PGC		WATER CLEAR	5	10	20°

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

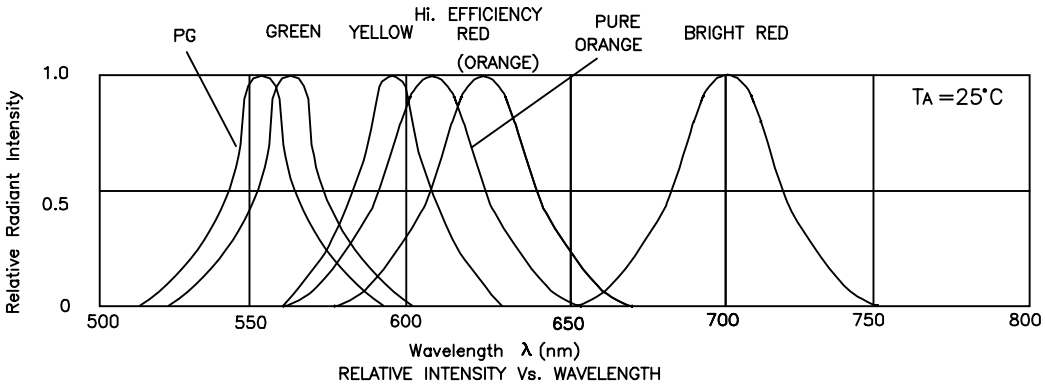
Electrical / Optical Characteristics at T_A=25ºC

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	700 625 625 565 590 610 555		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	45 45 45 30 35 35 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	40 12 12 45 10 15 45		pF	VF=0V;f=1MHz
V_F	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	2.0 2.0 2.0 2.2 2.1 2.0 2.25	2.5 2.5 2.5 2.5 2.5 2.6 2.6	V	IF=20mA
I_R	Reverse Current	All	10		uA	VR = 5V

Absolute Maximum Ratings at T_A=25ºC

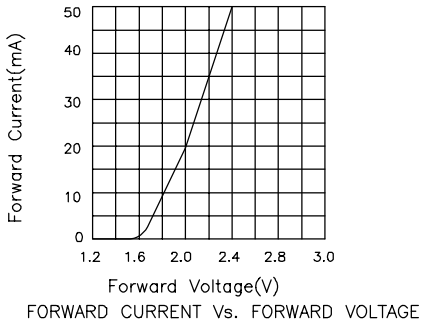
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Pure Orange	Pure Green	Units
Power dissipation	120	105	105	105	105	105	105	mW
DC Forward Current	25	30	30	25	30	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C 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.

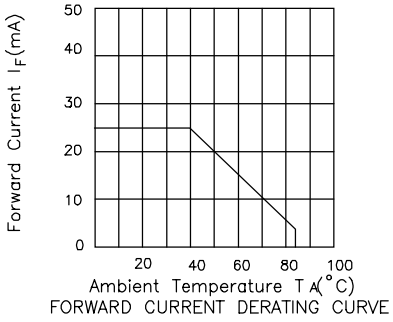


RELATIVE INTENSITY Vs. WAVELENGTH

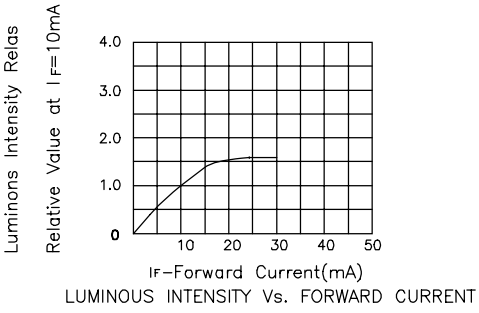
Bright Red L7113HD



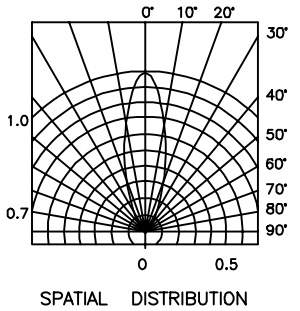
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

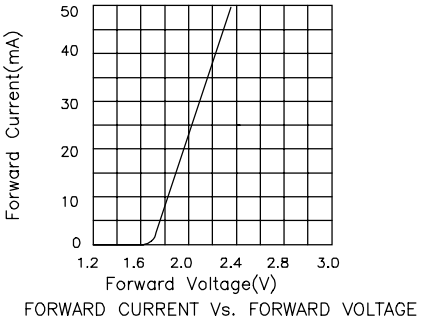


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

High Efficiency Red L7113ID,L7113IT
Orange L7113ED,L7113EC



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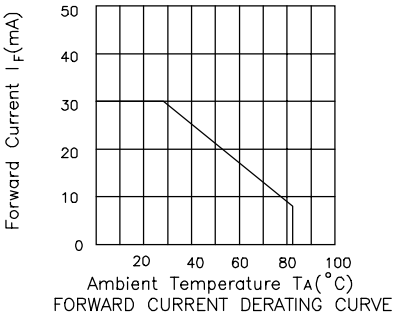

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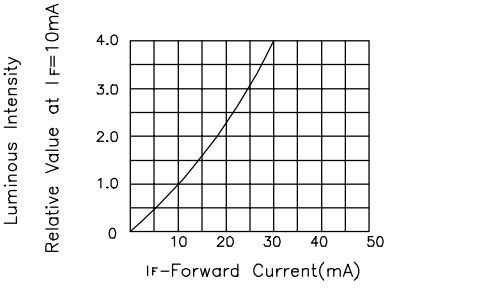
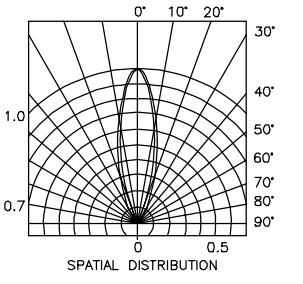
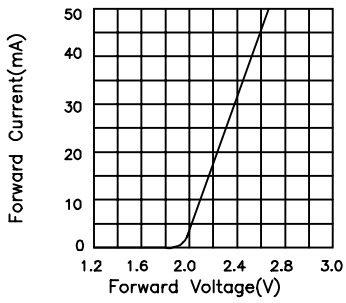
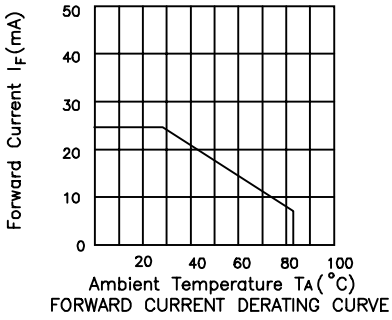




Green L7113GD,L7113GC,L7113GT





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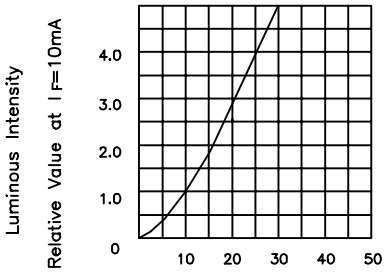
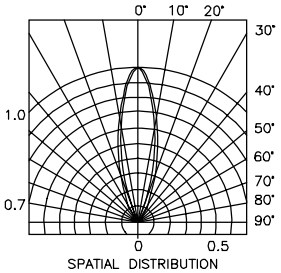
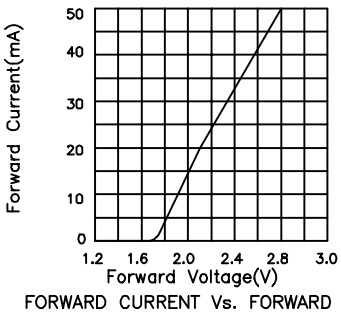


LUMINOUS INTENSITY Vs. FORWARD CURRENT

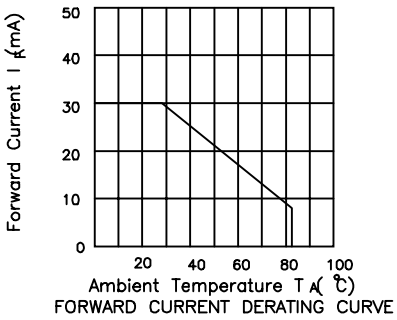


SPATIAL DISTRIBUTION

Yellow L7113YD,L7113YC,L7113YT



FORWARD CURRENT Vs. FORWARD VOLTAGE



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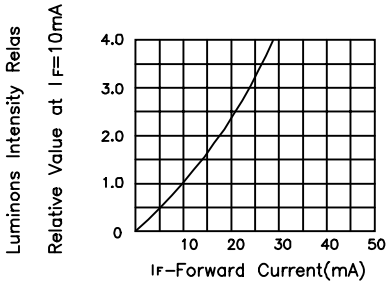
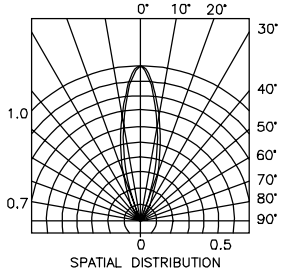
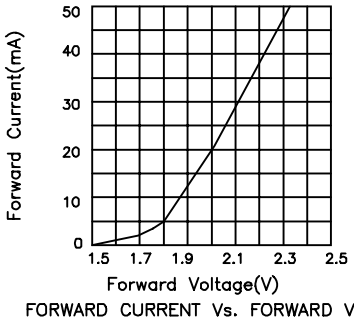


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

Pure Orange L7113ND,L7113NC,L7113NT



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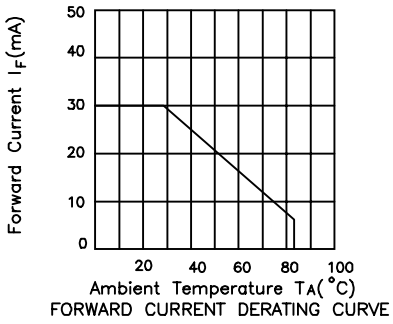

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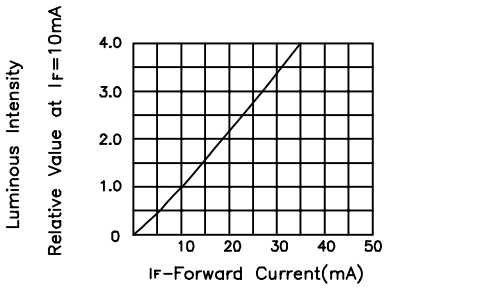
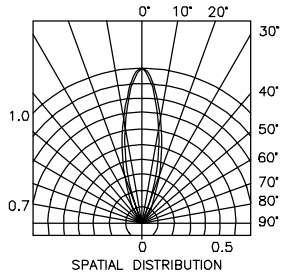
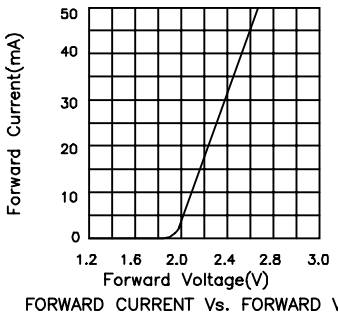


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

Pure Green L7113PGD,L7113PGC,L7113PGT



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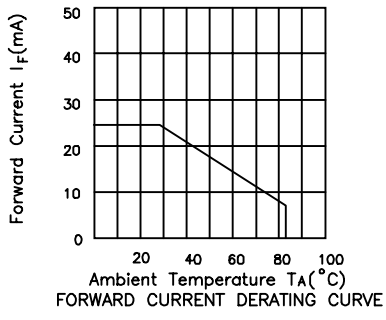

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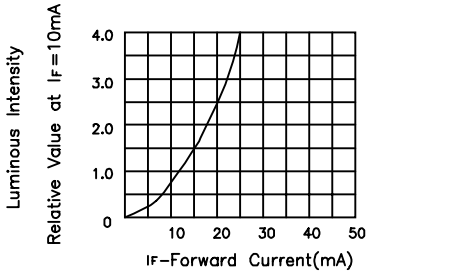
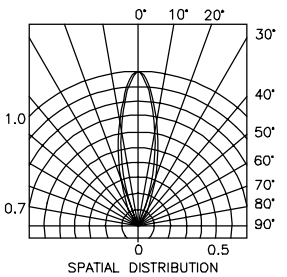


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION