L7104H BRIGHT RED
L7104G GREEN
L7104I HIGH EFFICIENCY RED
L7104E ORANGE
L7104N PURE ORANGE
L7104Y YELLOW
L7104PG 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.

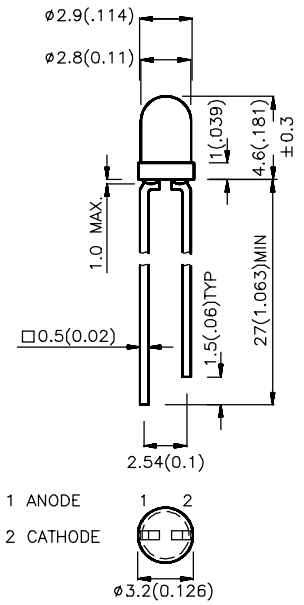
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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
L7104HD	BRIGHT RED (GaP)	RED DIFFUSED	1.3	3	40°
L7104ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	20	40°
L7104IT		RED TRANS.	20	80	34°
L7104EC		WATER CLEAR	20	80	34°
L7104ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	8	20	40°
L7104GD	GREEN (GaP)	GREEN DIFFUSED	8	15	40°
L7104GT		GREEN TRANS.	20	40	34°
L7104GC		WATER CLEAR	20	40	34°
L7104YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	8	15	40°
L7104YT		YELLOW TRANS.	10	20	34°
L7104YC		WATER CLEAR	10	20	34°
L7104ND	PURE ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	8	30	40°
L7104NT		ORANGE TRANS.	20	50	34°
L7104NC		WATER CLEAR	20	50	34°
L7104PGD	PURE GREEN (GaP)	GREEN DIFFUSED	2	5	40°
L-7104PGT		GREEN TRANS.	3	10	34°
L7104PGC		WATER CLEAR	3	10	34°

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

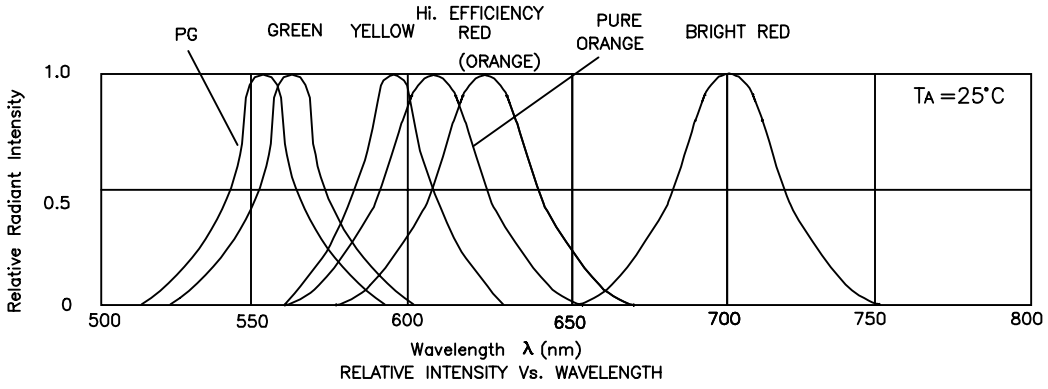
Electrical / Optical Characteristics at T_A=25ºC

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

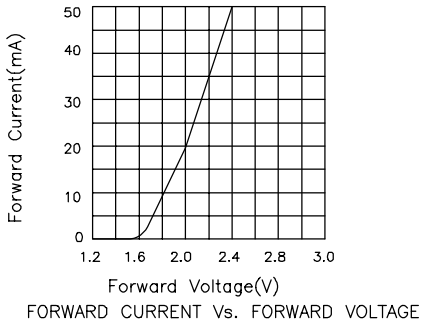
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Pure Orange	Pure Green	Units
Power dissipation	120	105	105	105	105	105	105	mW
DC Forward Current	25	30	30	25	30	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C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

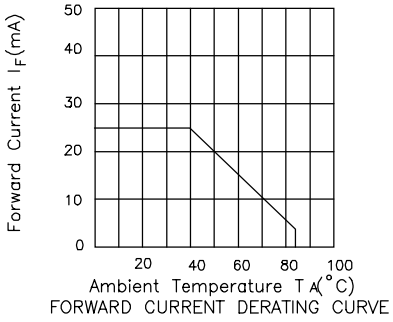


RELATIVE INTENSITY Vs. WAVELENGTH

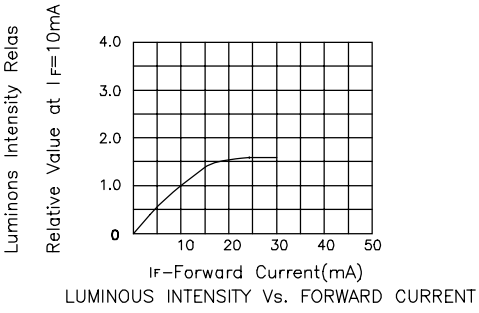
Bright Red L7104HD



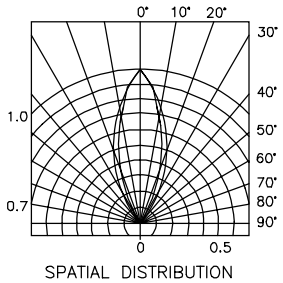
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

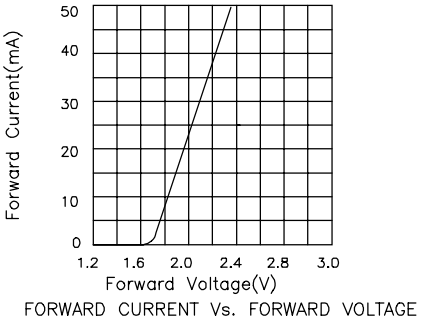


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

High Efficiency Red L7104ID,L7104IT
Orange L7104ED,L7104EC



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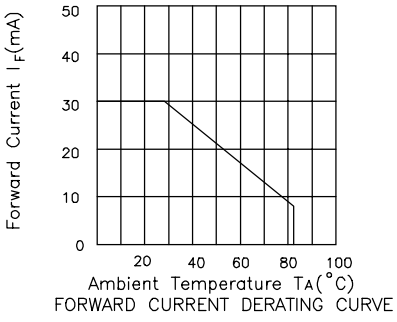

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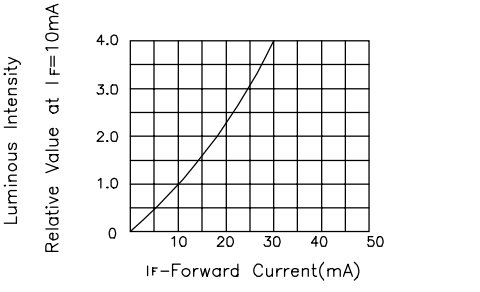
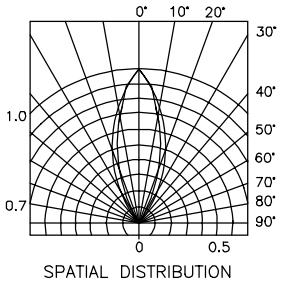
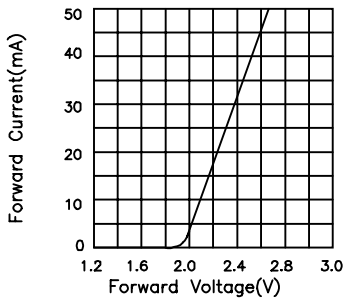
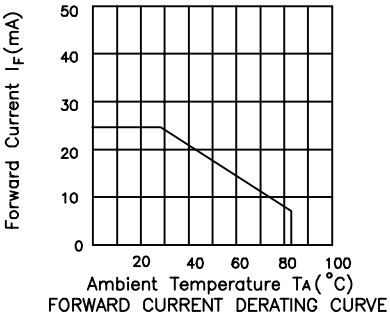




SPATIAL DISTRIBUTION

Green L7104GD,L7104GC,L7104GT





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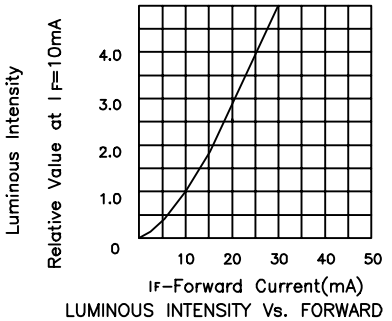
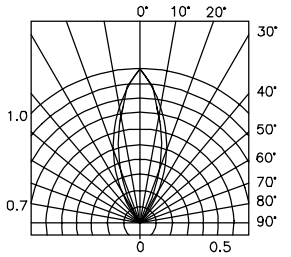
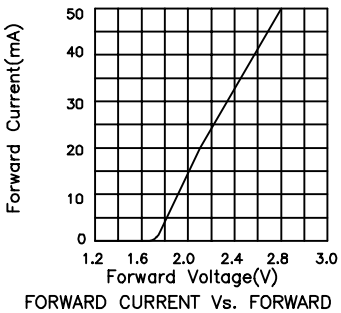


LUMINOUS INTENSITY Vs. FORWARD CURRENT

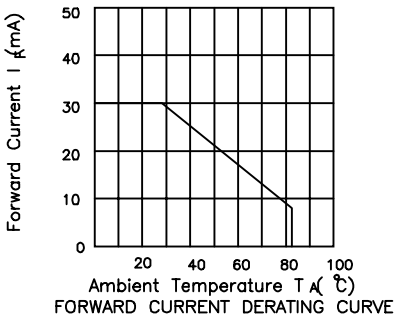


SPATIAL DISTRIBUTION

Yellow L7104YD,L7104YC,L7104YT



FORWARD CURRENT Vs. FORWARD VOLTAGE



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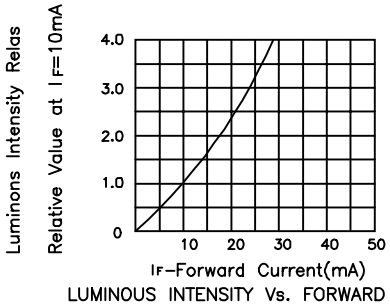
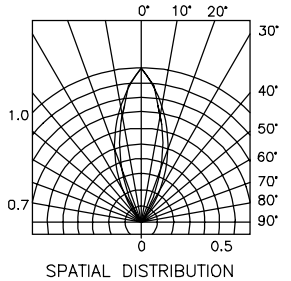
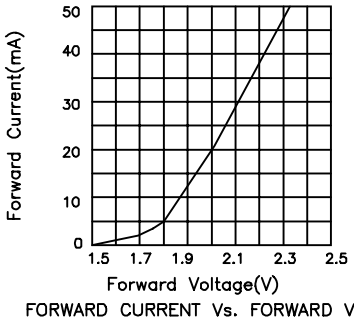


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

Pure Orange L7104ND,L7104NC,L7104NT



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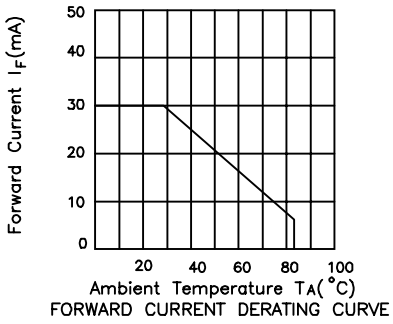

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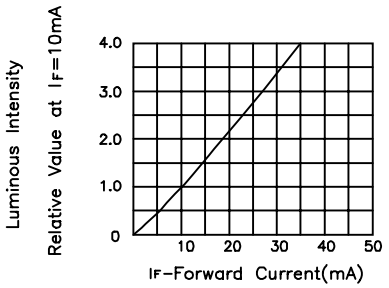
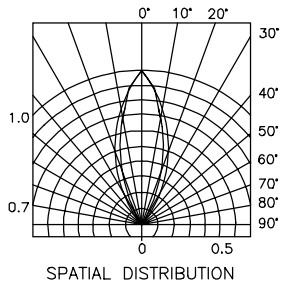
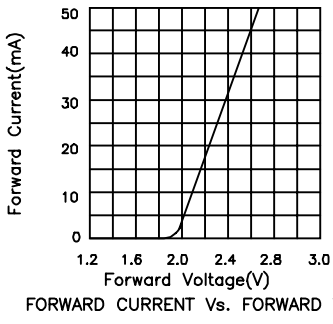


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

Pure Green L7104PGD,L7104PGC,L7104PGT



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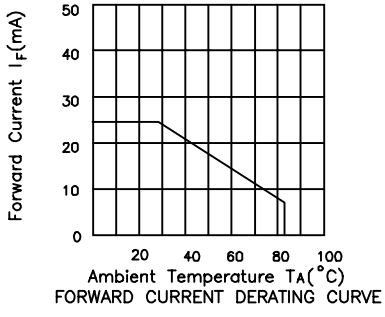

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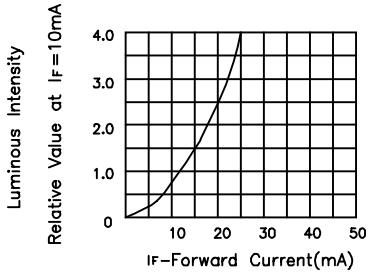
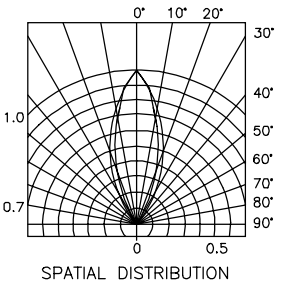


LUMINOUS INTENSITY Vs. FORWARD CURRENT



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