

Kingbright®

T-1 (3mm) ROUND LED LAMPS

L-1154H BRIGHT RED

L-1154G GREEN

L-1154I HIGH EFFICIENCY RED

L-1154Y YELLOW

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

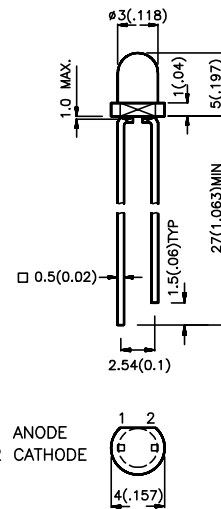
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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

The Pure Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow 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 2ϕ1/2
			Min.	Max.	
L-1154HD	BRIGHT RED (GaP)	RED DIFFUSED	1.3	5	60°
L-1154HT		RED TRANSPARENT	2	8	50°
L-1154ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	50	60°
L-1154IT		RED TRANSPARENT	20	125	50°
L-1154GD	GREEN (GaP)	GREEN DIFFUSED	8	32	50°
L-1154GT		GREEN TRANSPARENT	20	80	60°
L-1154YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	8	32	50°
L-1154YT		YELLOW TRANSPARENT	10	50	60°
L-1154ND	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	8	50	50°
L-1154NT		ORANGE TRANSPARENT	20	125	60°
L-1154PGD	PURE GREEN (GaP)	GREEN DIFFUSED	2	8	50°
L-1154PGT		GREEN TRANSPARENT	3.2	20	60°

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

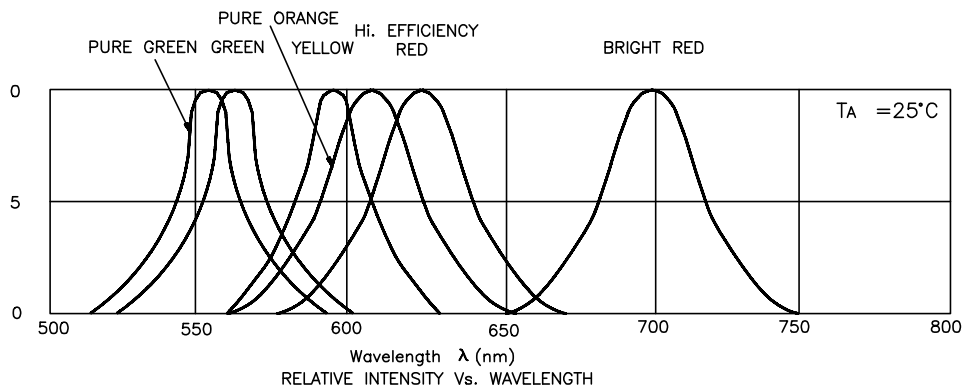
Electrical / Optical Characteristics at T_A=25° C

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

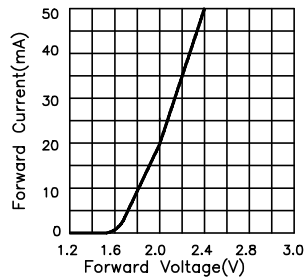
Absolute Maximum Ratings at T_A=25° C

Parameter	Bright Red	High Efficiency Red	Green	Yellow	Pure Orange	Pure Green	Units
Power dissipation	120	105	105	105	105	105	mW
DC Forward Current	25	30	25	30	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	V
Operating/Storage Temperature	-40° C To +85 ° C						
Lead Soldering Temperature [2]	260° C For 5 Seconds						

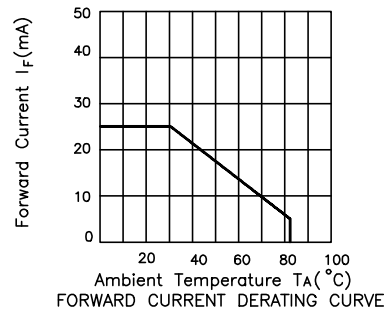
Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



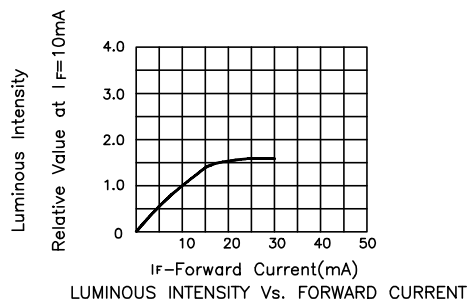
Bright Red L-1154HD, L-1154HT



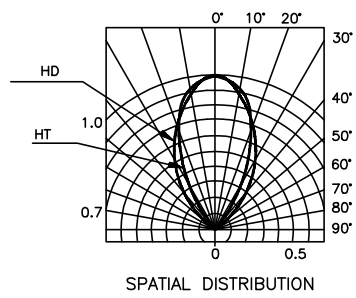
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

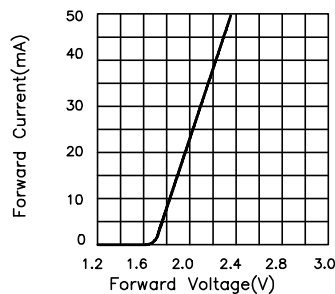


LUMINOUS INTENSITY Vs. FORWARD CURRENT

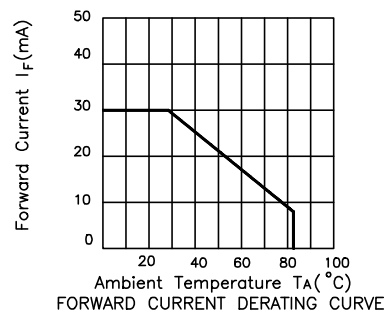


SPATIAL DISTRIBUTION

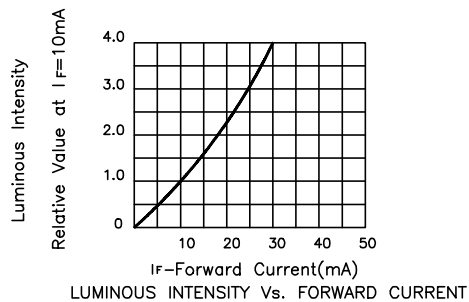
High Efficiency Red L-1154ID, L-1154IT



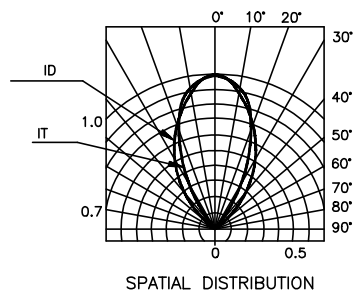
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

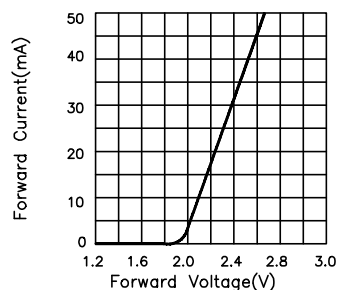


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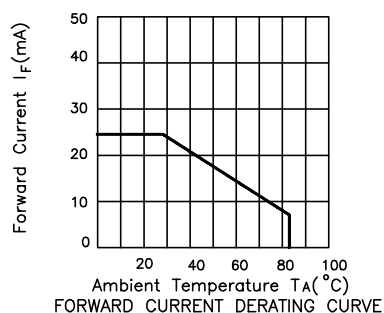


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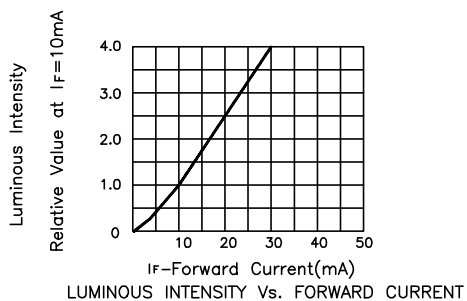
Green L-1154GD, L-1154GT



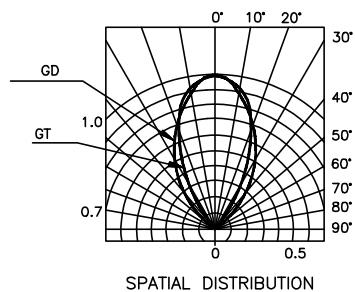
FORWARD CURRENT Vs. FORWARD VOLTAGE



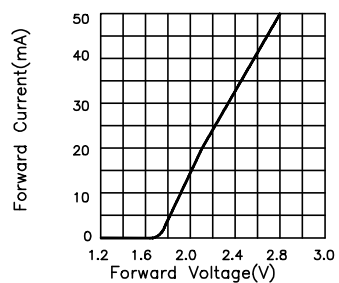
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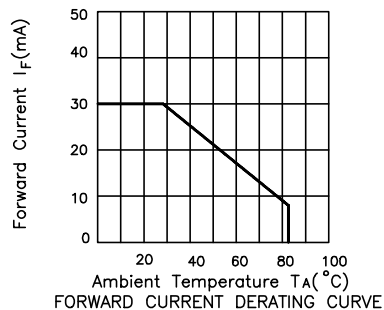
LUMINOUS INTENSITY Vs. FORWARD CURRENT



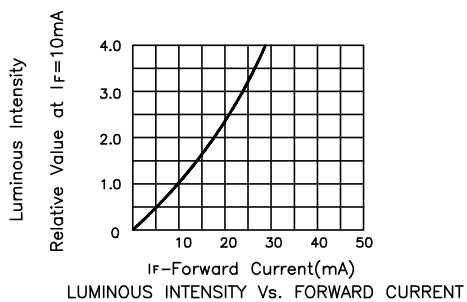
Yellow L-1154YD, L-1154YT



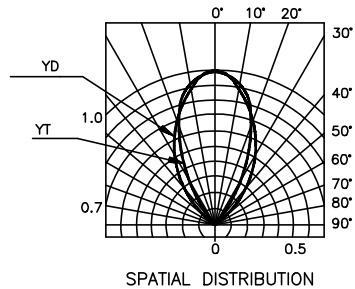
FORWARD CURRENT Vs. FORWARD VOLTAGE



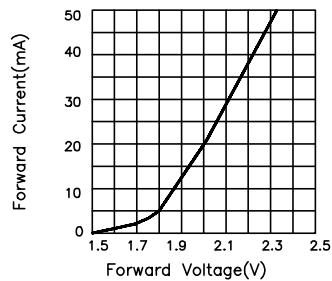
FORWARD CURRENT DERATING CURVE



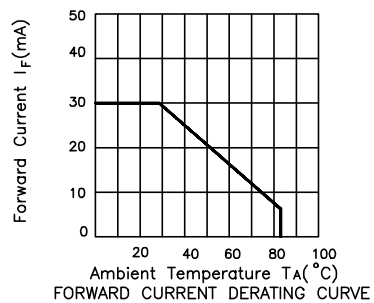
LUMINOUS INTENSITY Vs. FORWARD CURRENT



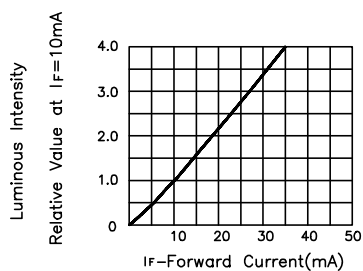
Pure Orange L-1154ND, L-1154NT



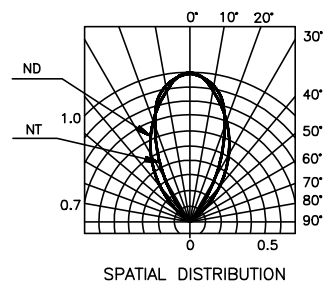
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

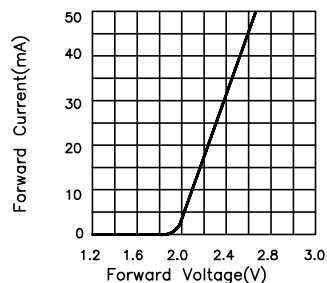


LUMINOUS INTENSITY Vs. FORWARD CURRENT

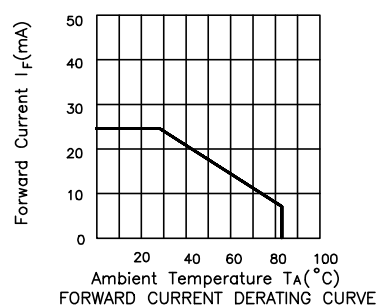


SPATIAL DISTRIBUTION

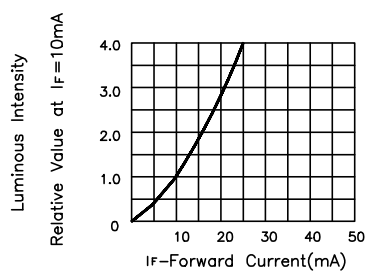
Pure Green L-1154PGD, L-1154PGT



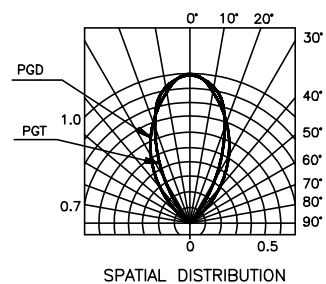
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION