L-513HDT BRIGHT RED
L-513GDT GREEN
L-513IDT HIGH EFFICIENCY RED
L-513EDT ORANGE
L-513SGDT SUPER BRIGHT GREEN
L-513YDT YELLOW

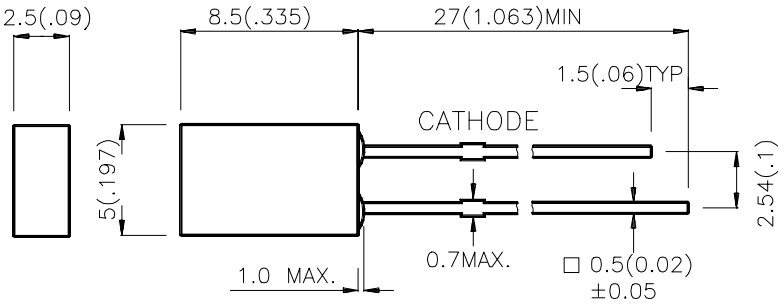
Features

- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.

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 and Super Bright 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 ±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.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA *20mA		Viewing Angle
			Min.	Typ.	2θ1/2
L-513HDT	BRIGHT RED (GaP)	RED DIFFUSED	0.5	1	110°
L-513IDT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3	5	110°
L-513EDT	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	3	5	110°
L-513GDT	GREEN (GaP)	GREEN DIFFUSED	2	3	110°
L-513YDT	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	2	3	110°
L-513SGDT	SUPER BRIGHT GREEN (GaP)	GREEN DIFFUSED	*8	*10	110°

Notes:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. * Luminous intensity with asterisk is measured at 20mA.

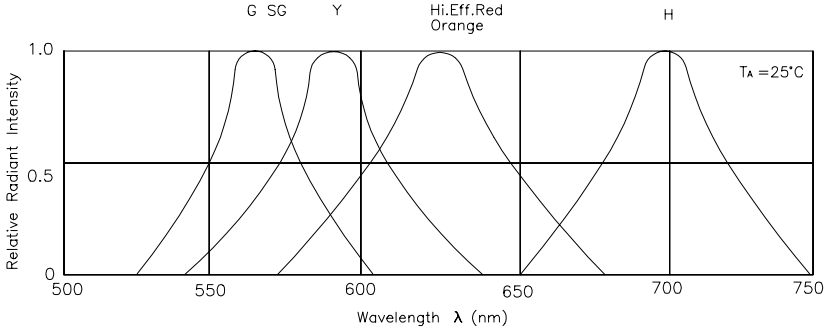
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	700 627 627 565 590 565		nm	IF=20mA
λ D	Dominate Wavelength	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	660 625 625 568 588 568		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	45 45 45 30 35 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	40 15 15 15 20 15		pF	VF=0V;f=1MHz
V_F	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	2.25 2.0 2.0 2.2 2.1 2.2	2.5 2.5 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

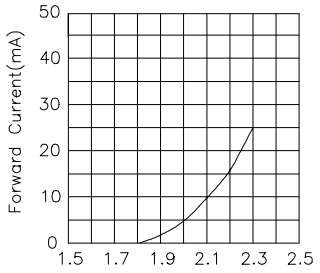
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Super Bright Green	Units
Power dissipation	120	105	105	105	105	105	mW
DC Forward Current	25	30	30	25	30	25	mA
Peak Forward Current [1]	120	160	160	140	140	140	mA
Reverse Voltage	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C						
Lead Solder Temperature [2]	260°C For 5 Seconds						

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

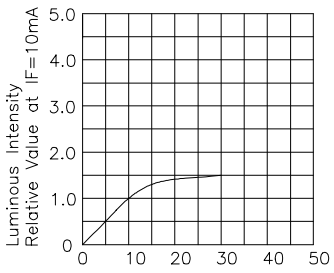


RELATIVE INTENSITY Vs. WAVELENGTH

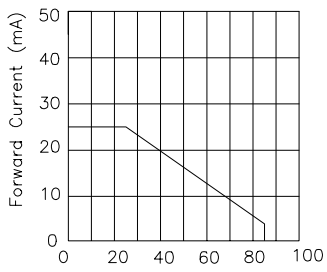
Bright Red L-513HDT



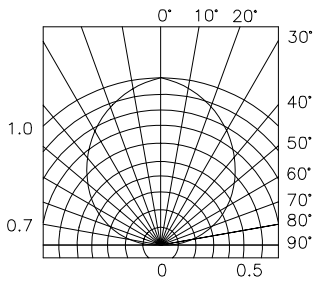
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT

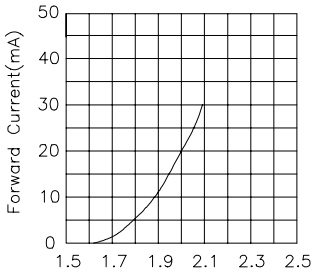


FORWARD CURRENT DERATING CURVE

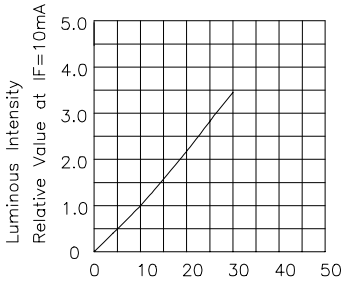


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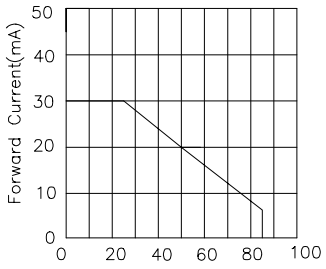
High Efficiency Red L-513IDT



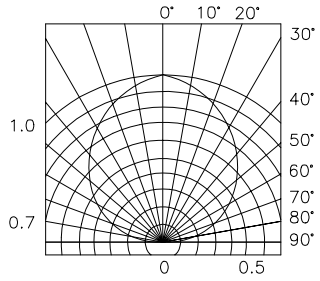
FORWARD CURRENT Vs
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

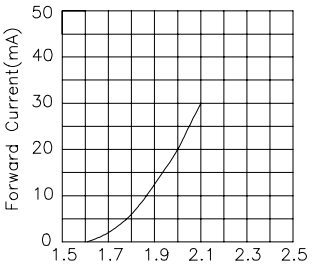


FORWARD CURRENT
DERATING CURVE

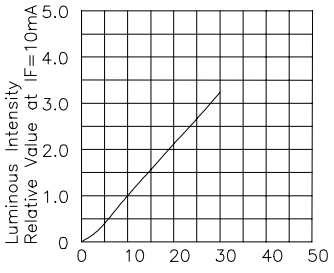


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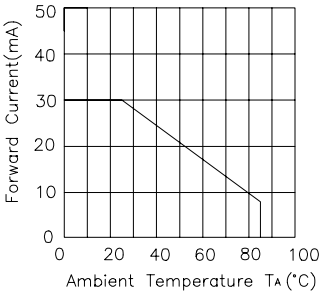
Orange L-513EDT



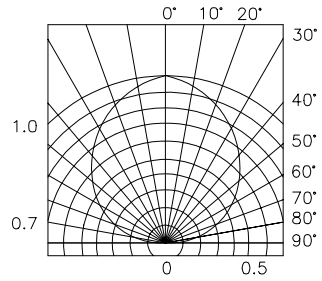
FORWARD CURRENT Vs
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

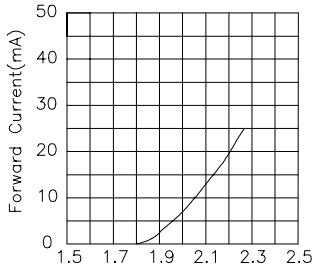


FORWARD CURRENT
DERATING CURVE

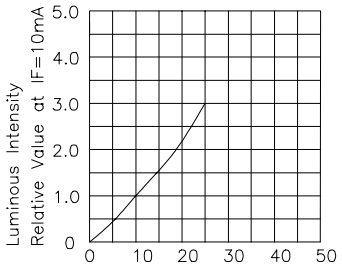


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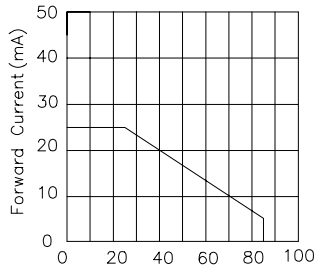
Green L-513GDT



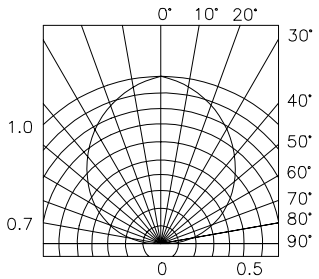
FORWARD CURRENT Vs
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

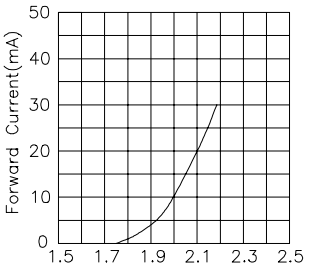


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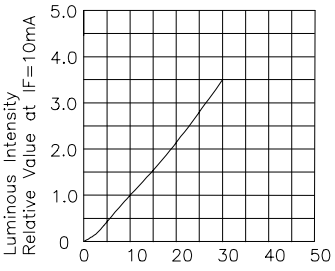


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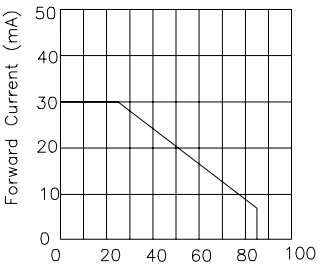
Yellow L-513YDT



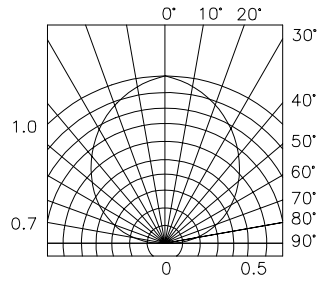
FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

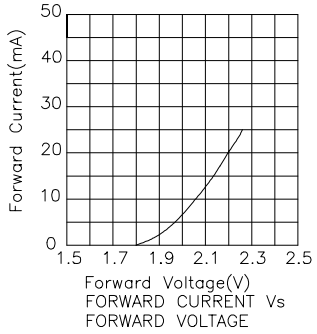


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DERATING CURVE

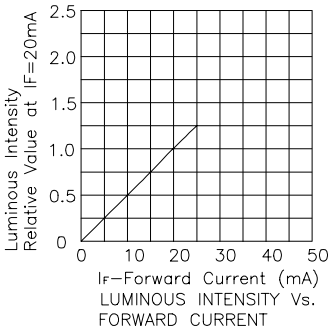


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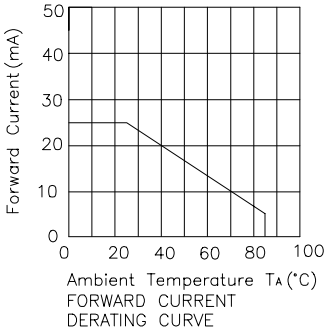
Super Bright Green L-513SGDT



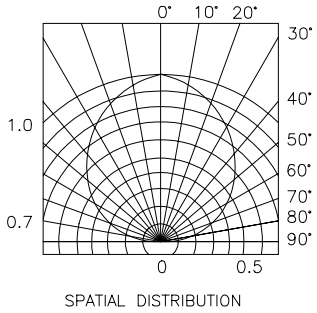
FORWARD CURRENT Vs
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



SPATIAL DISTRIBUTION

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