

L-503HDT BRIGHT RED

L-503GDT GREEN

L-503IDT HIGH EFFICIENCY RED

L-503YDT YELLOW

Features

- LOW POWER CONSUMPTION.
- ULTRA BRIGHTNESS IS AVAILABLE.
- WIDE VIEWING ANGLE.
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- IDEAL AS FLUSH MOUNTED PANEL INDICATORS.
- LONG LIFE - SOLID STATE RELIABILITY.

Description

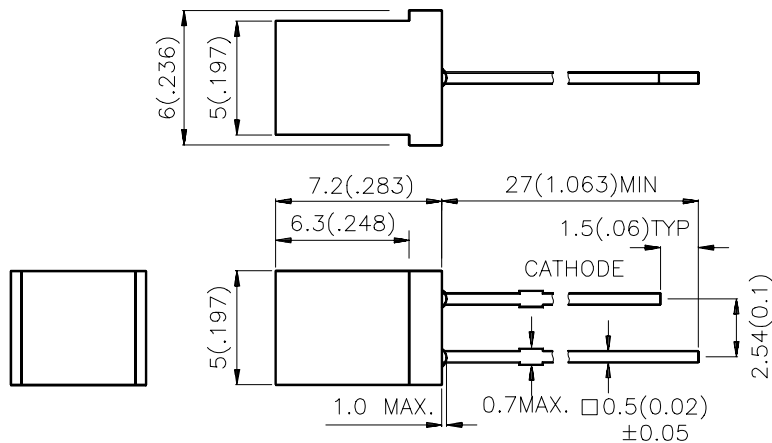
The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.

The High Efficiency Red 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.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle
			Min.	Typ.	2θ1/2
L-503HDT	BRIGHT RED (GaP)	RED DIFFUSED	0.5	1	110°
L-503IDT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3	6	110°
L-503GDT	GREEN (GaP)	GREEN DIFFUSED	1	3	110°
L-503YDT	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	1	3	110°

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

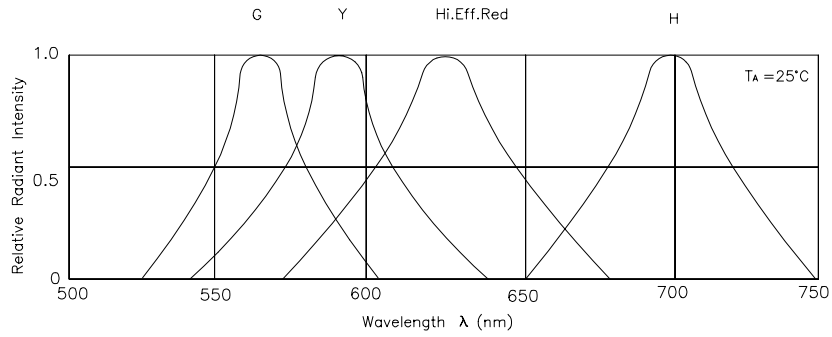
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Bright Red High Efficiency Red Green Yellow	700 627 565 590		nm	IF=20mA
λ _D	Dominate Wavelength	Bright Red High Efficiency Red Green Yellow	660 625 568 588		nm	IF=20mA
Δλ _{1/2}	Spectral Line Halfwidth	Bright Red High Efficiency Red Green Yellow	45 45 30 35		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Green Yellow	40 15 15 20		pF	V _F =0V;f=1MHz
V _F	Forward Voltage	Bright Red High Efficiency Red Green Yellow	2.25 2.0 2.2 2.1	2.5 2.5 2.5 2.5	V	IF=20mA
I _R	Reverse Current	All		10	uA	V _R = 5V

Absolute Maximum Ratings at T_A=25°C

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

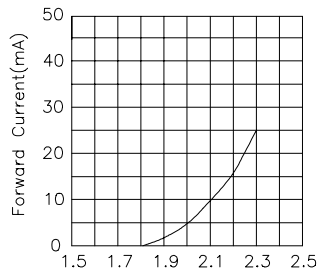
Notes:

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

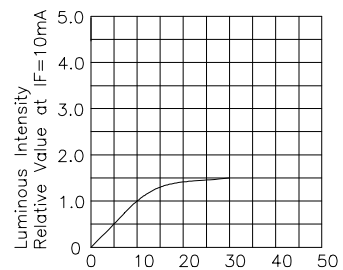


RELATIVE INTENSITY Vs. WAVELENGTH

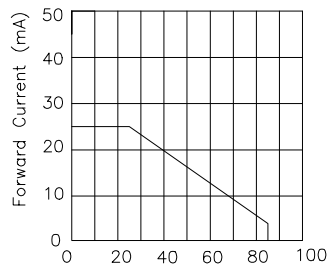
Bright Red L-503HDT



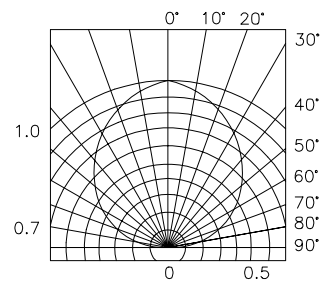
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



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

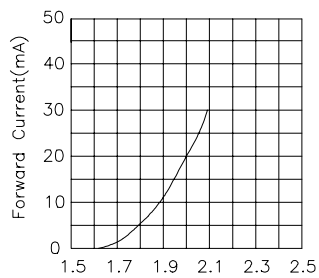


Ambient Temperature T_A ($^\circ\text{C}$)
FORWARD CURRENT
DERATING CURVE

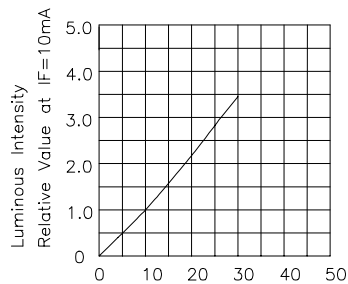


SPATIAL DISTRIBUTION

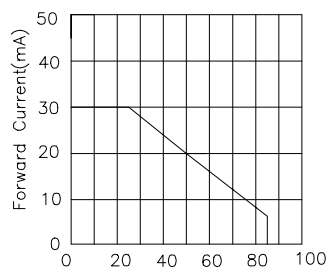
High Efficiency Red L-503IDT



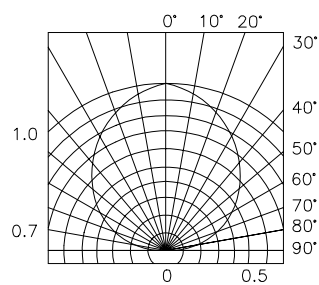
Forward Voltage(V)
FORWARD CURRENT Vs
FORWARD VOLTAGE



IF-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

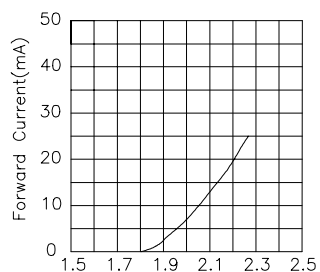


Ambient Temperature TA (°C)
FORWARD CURRENT
DERATING CURVE

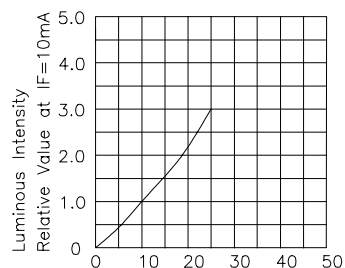


SPATIAL DISTRIBUTION

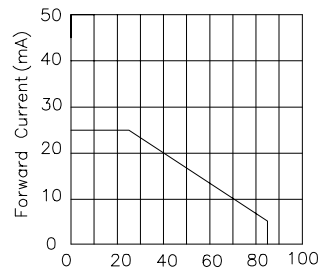
Green L-503GDT



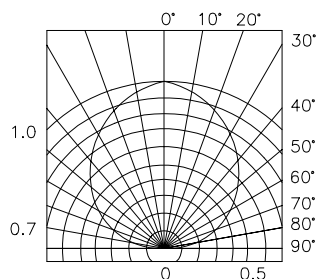
Forward Voltage(V)
FORWARD CURRENT Vs
FORWARD VOLTAGE



IF-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature TA (°C)
FORWARD CURRENT
DERATING CURVE



SPATIAL DISTRIBUTION

Yellow L-503YDT

