

Kingbright®

T-1 3/4 (5mm) SOLID STATE LAMPS

L-1503I HIGH EFFICIENCY RED

L-1503Y YELLOW

L-1503G GREEN

Features

- HIGH INTENSITY.
- LOW POWER CONSUMPTION.
- VERSATILE MOUNTING ON P.C. BOARD OR PANEL.
- T-1 3/4 DIAMETER FLANGELESS PACKAGE.
- RELIABLE AND RUGGED.
- DIFFUSED, TRANSPARENT AND WATER CLEAR TYPE.

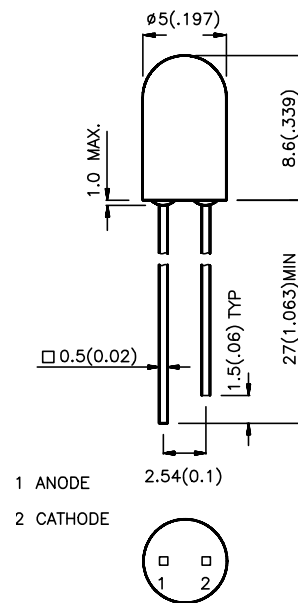
Description

The Green source color devices are made with Gallium Phosphide 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.

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 subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle 2θ1/2
			Min.	Max.	
L-1503ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	12.5	80	60°
L-1503IT		RED TRANSPARENT	50	200	30°
L-1503EC		WATER CLEAR	50	200	30°
L-1503GD	GREEN (GaP)	GREEN DIFFUSED	5	32	60°
L-1503GT		GREEN TRANSPARENT	20	150	30°
L-1503GC		WATER CLEAR	20	150	30°
L-1503YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	32	60°
L-1503YT		YELLOW TRANSPARENT	20	80	30°
L-1503YC		WATER CLEAR	20	80	30°

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

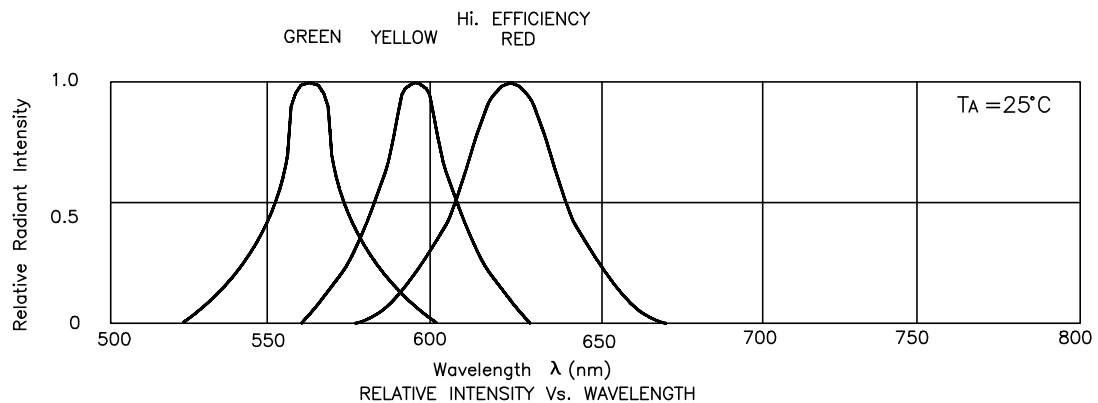
Electrical / Optical Characteristics at T_A=25°C

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

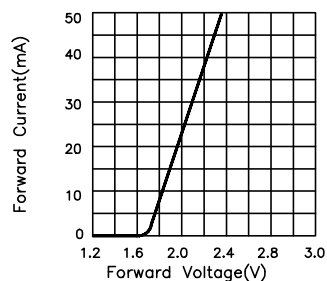
Absolute Maximum Ratings at T_A=25°C

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

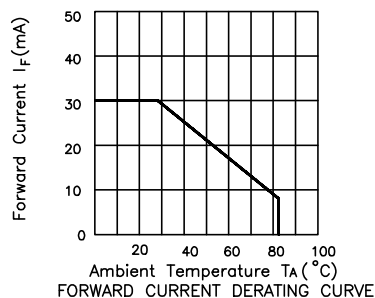
Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



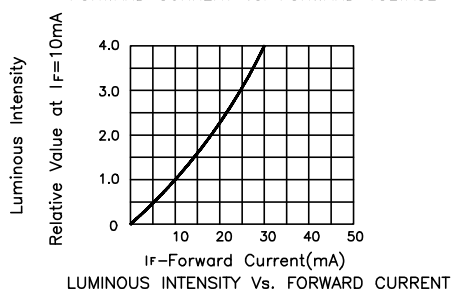
High Efficiency Red L-1503ID, L-1503IT, L-1503EC



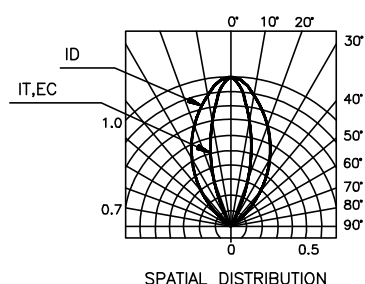
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

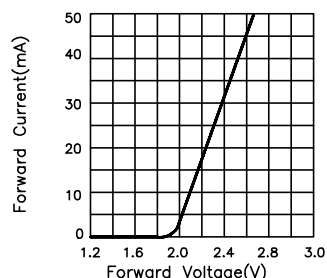


LUMINOUS INTENSITY Vs. FORWARD CURRENT

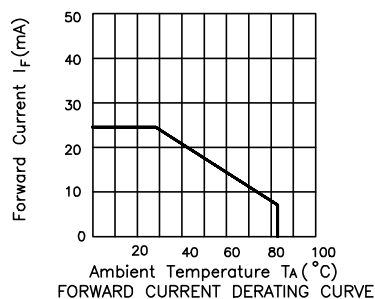


SPATIAL DISTRIBUTION

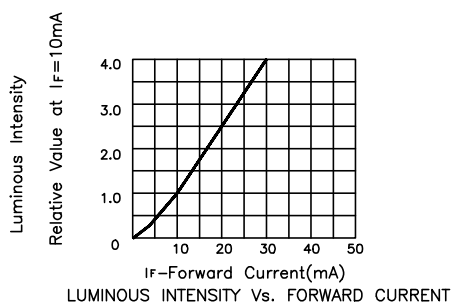
Green L-1503GD, L-1503GT, L-1503GC



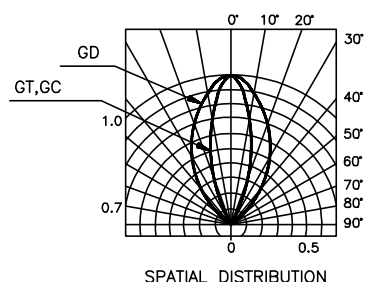
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

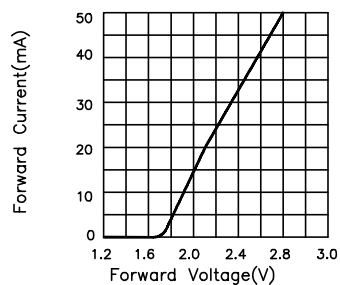


LUMINOUS INTENSITY Vs. FORWARD CURRENT

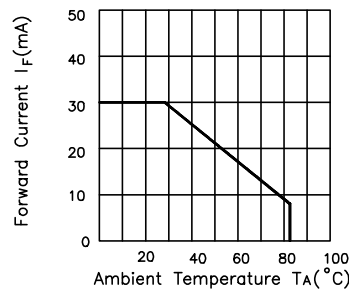


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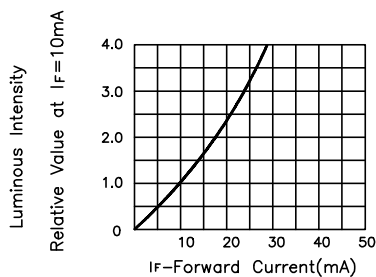
Yellow L-1503YD, L-1503YT, L-1503YC



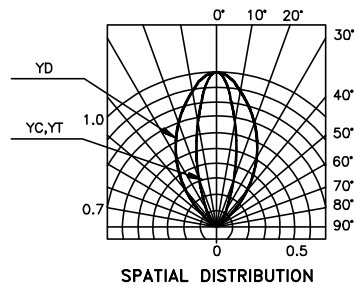
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION