

L-1503CB/1ID HIGH EFFICIENCY RED

L-1503CB/1GD GREEN

L-1503CB/1YD YELLOW

L-1503CB/1SRD SUPER BRIGHT RED

Features

- PRE-TRIMMED LEADS FOR PC BOARD MOUNTING.
- I.C. COMPATIBLE.
- BLACK CASE ENHANCES CONTRAST RATIO.
- WIDE VIEWING ANGLE.
- HIGH RELIABILITY - LIFE MEASURED IN YEARS.

Description

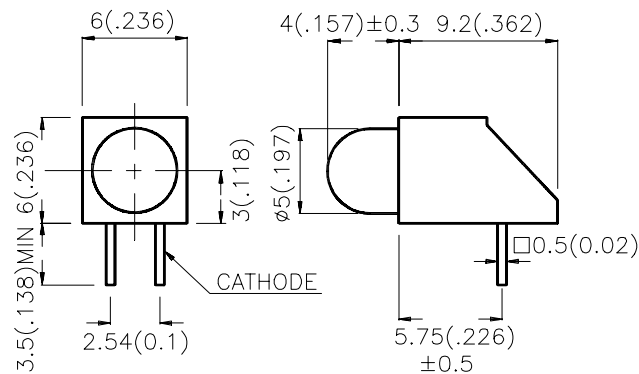
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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.

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red 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 *20mA		Viewing Angle
			Min.	Typ.	2θ1/2
L-1503CB/1ID	HIGH EFFICIENCY RED(GaAsP/GaP)	RED DIFFUSED	8	30	60°
L-1503CB/1GD	GREEN (GaP)	GREEN DIFFUSED	8	20	60°
L-1503CB/1YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	20	60°
L-1503CB/1SRD	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	*100	*400	60°

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

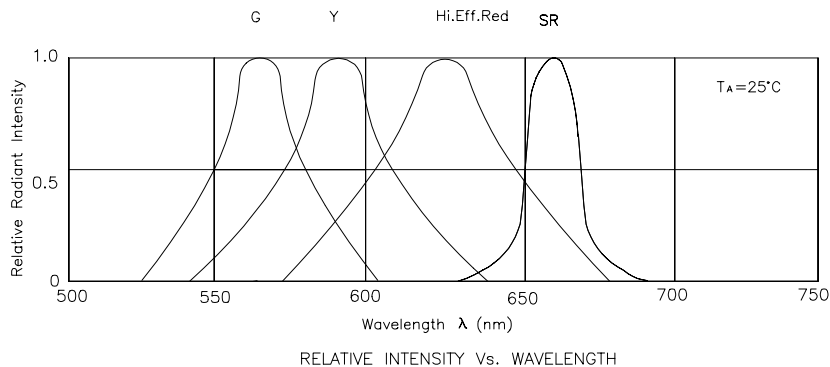
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red	627 565 590 660		nm	IF=20mA
λ _D	Dominate Wavelength	High Efficiency Red Green Yellow Super Bright Red	625 568 588 640		nm	IF=20mA
Δλ _{1/2}	Spectral Line Halfwidth	High Efficiency Red Green Yellow Super Bright Red	45 30 35 20		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red	15 15 20 45		pF	VF=0V;f=1MHz
V _F	Forward Voltage	High Efficiency Red Green Yellow Super Bright Red	2.0 2.2 2.1 1.85	2.5 2.5 2.5 2.5	V	IF=20mA
I _r	Reverse Current	All		10	μA	VR = 5V

Absolute Maximum Ratings at T_A=25°C

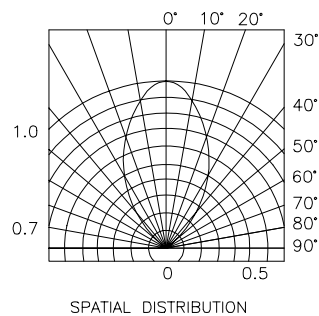
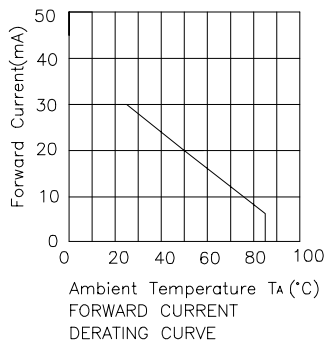
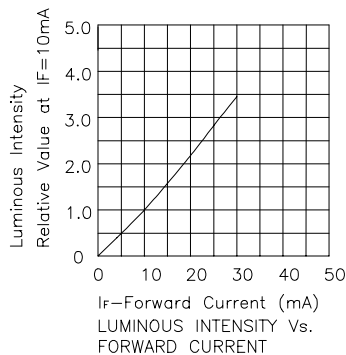
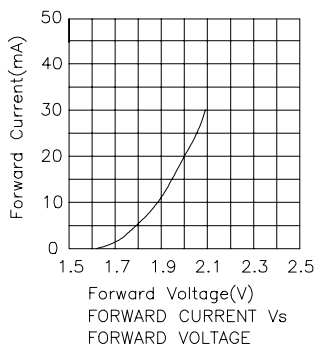
Parameter	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	105	105	105	100	mW
DC Forward Current	30	25	30	30	mA
Peak Forward Current [1]	160	140	140	155	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 5 Seconds				

Notes:

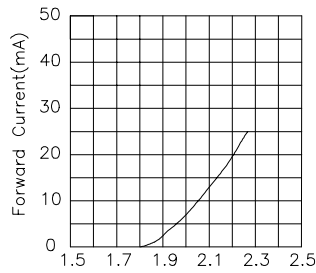
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



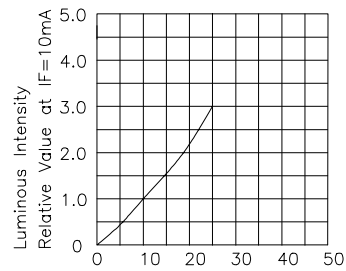
High Efficiency Red L-1503CB/1ID



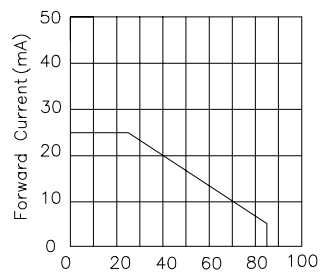
Green L-1503CB/1GD



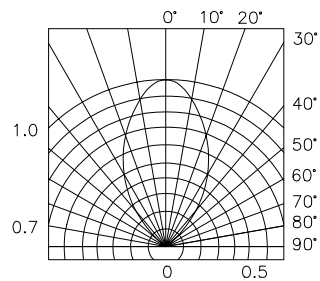
Forward Voltage(V)
FORWARD CURRENT Vs
FORWARD VOLTAGE



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

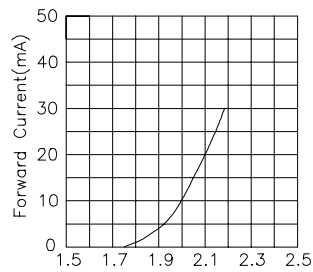


Ambient Temperature Ta (°C)
FORWARD CURRENT
DERATING CURVE

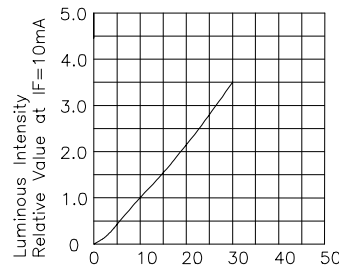


SPATIAL DISTRIBUTION

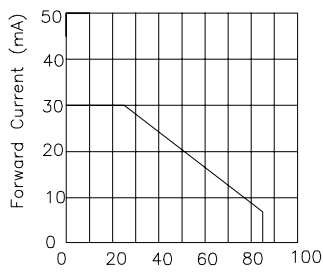
Yellow L-1503CB/1YD



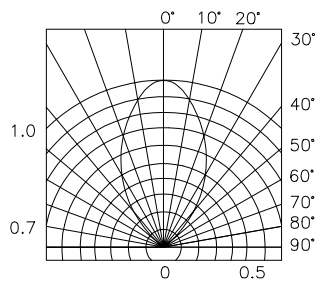
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



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



Ambient Temperature Ta (°C)
FORWARD CURRENT
DERATING CURVE



SPATIAL DISTRIBUTION

Super Bright Red L-1503CB/1SRD

