

| | |
|-------------|---------------------|
| L1503CB/ID | HIGH EFFICIENCY RED |
| L1503CB/GD | GREEN |
| L1503CB/YD | YELLOW |
| L1503CB/SRD | 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

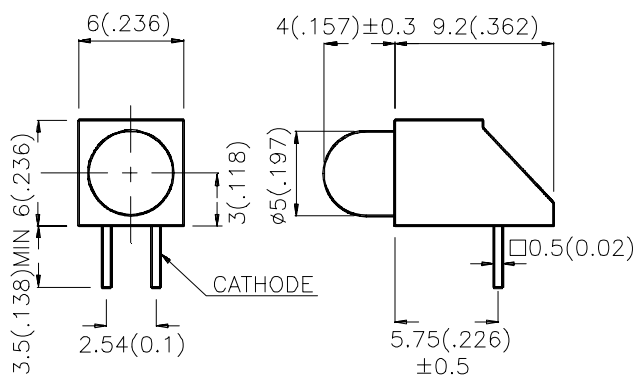
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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 |
| L1503CB/ID | HIGH EFFICIENCY RED(GaAsP/GaP) | RED DIFFUSED | 8 | 30 | 60° |
| L1503CB/GD | GREEN (GaP) | GREEN DIFFUSED | 8 | 20 | 60° |
| L1503CB/YD | YELLOW (GaAsP/GaP) | YELLOW DIFFUSED | 5 | 20 | 60° |
| L1503CB/SRD | 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

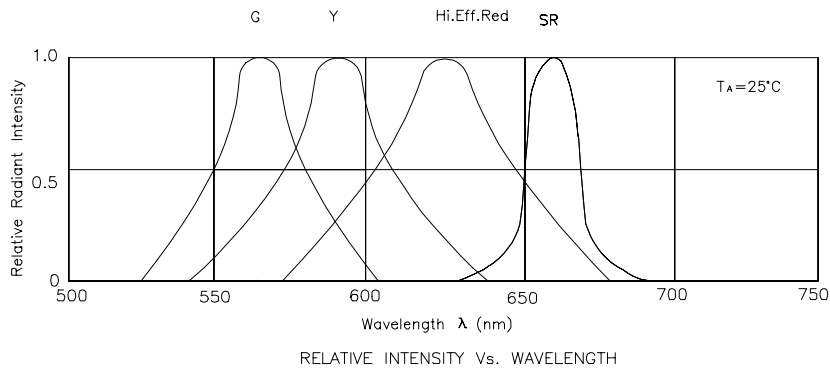
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-------------------|-------------------------|--|---------------------------|--------------------------|-------|-----------------|
| λ _{peak} | Peak Wavelength | High Efficiency Red Green Yellow Super Bright Red | 627 565 590 660 | | 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

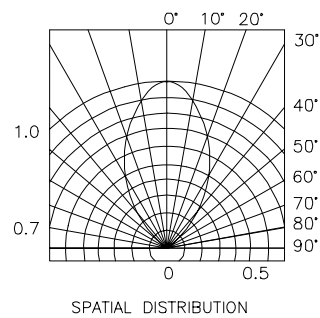
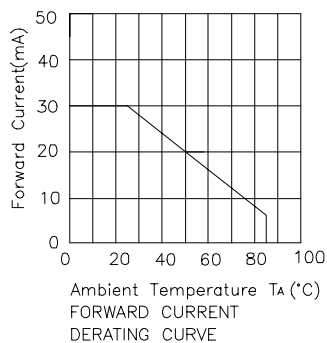
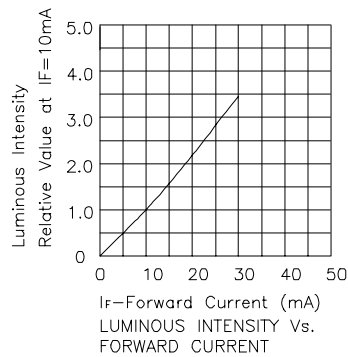
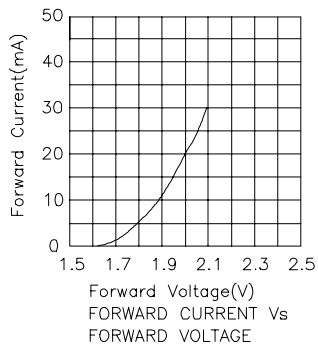
| Parameter | High Efficiency Red | Green | Yellow | Super Bright Red | Units |
|-------------------------------|---------------------|-------|--------|------------------|-------|
| Power dissipation | 105 | 105 | 105 | 100 | mW |
| DC Forward Current | 30 | 25 | 30 | 30 | mA |
| Peak Forward Current [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:

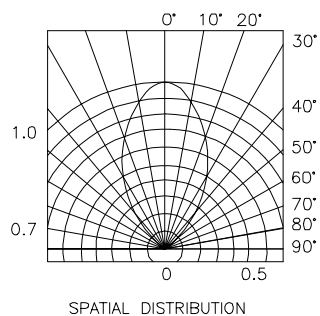
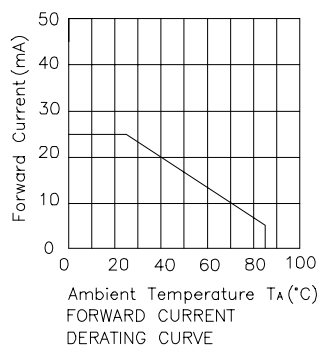
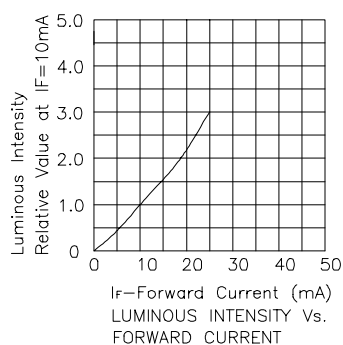
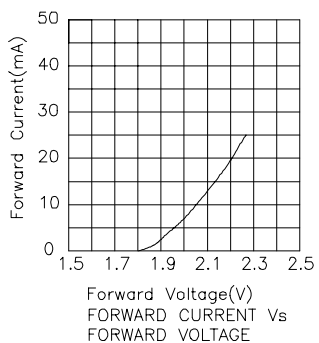
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



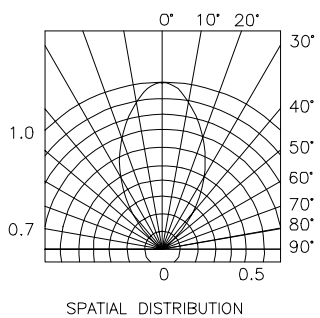
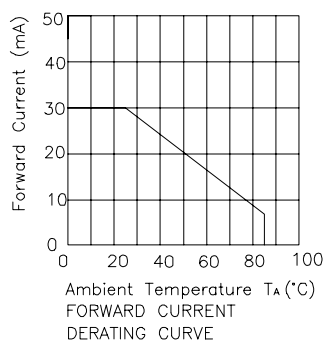
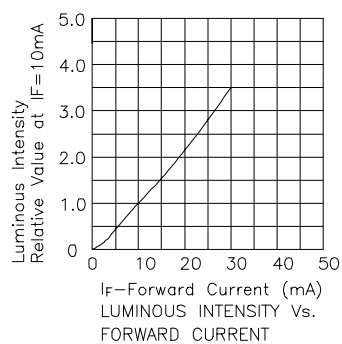
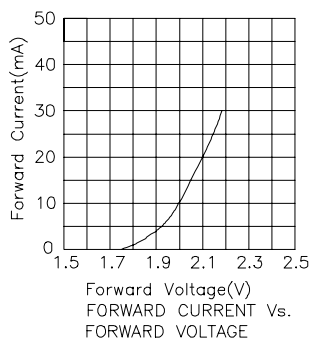
High Efficiency Red L1503CB/ID



Green L1503CB/GD



Yellow L1503CB/YD



Super Bright Red L1503CB/SRD

