

Features

- T-1 3/4 PACKAGE WITH RECTANGULAR BASE.
- WITH BUILT-IN BLINKING IC.
- OPERATION VOLTAGE FROM 3.5V TO 13V.
- BLINKING FREQUENCY FROM 2.5Hz TO 1.5Hz.

L456BHD BRIGHT RED

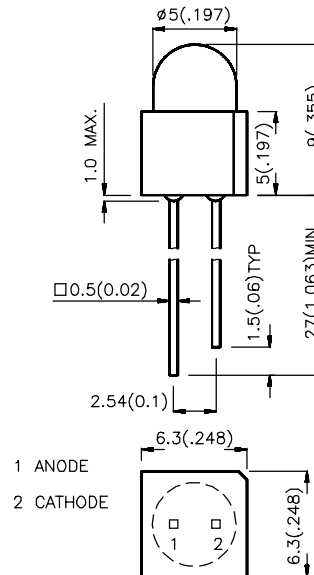
L456BGD GREEN

L456BID HIGH EFFICIENCY RED

L456BYD YELLOW

L456BSRD/B SUPER BRIGHT RED

Package Dimensions



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.

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

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) @ VF=9V | | Viewing Angle |
|------------|---------------------------------|-----------------|---------------------|------|------------------|
| | | | Min. | Typ. | |
| L456BHD | BRIHT RED (GaP) | RED DIFFUSED | 0.8 | 1 | 60° |
| L456BID | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED | 12 | 20 | 60° |
| L456BGD | GREEN (GaP) | GREEN DIFFUSED | 5 | 15 | 60° |
| L456BYD | YELLOW (GaAsP/GaP) | YELLOW DIFFUSED | 5 | 15 | 60° |
| L456BSRD/B | SUPER BRIGHT RED (GaAlAs) | RED DIFFUSED | 100 | 200 | 60° |

Notes:

1. $\theta_{1/2}$ 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

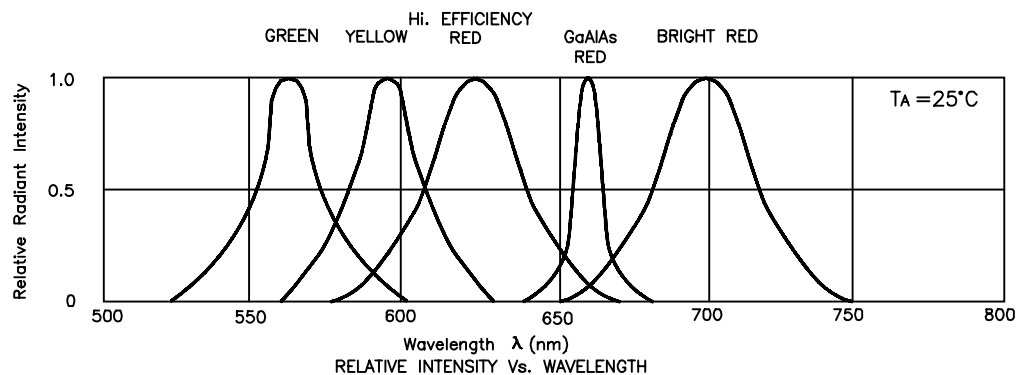
| Symbol | Parameter | Device | Min. | Typ. | Units | Test Conditions |
|-----------------------|-------------------------|--|------|---------------------------------|-------|--------------------------------|
| λ_{peak} | Peak Wavelength | Bright Red High Efficiency Red Green Yellow Super Bright Red | | 700 625 565 590 660 | nm | IF=20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Halfwidth | Bright Red High Efficiency Red Green Yellow Super Bright Red | | 45 45 30 35 20 | nm | IF=20mA |
| V _F | Forward Voltage | All | 3.5 | 9-12 | V | Min. IF=6mA Typ. IF=38-56mA |
| I _{SON} | Supply Current | All | | 6 -70 | mA | |
| f | Blink Frequency | All | | 2.5-1.5 | Hz | |

Absolute Maximum Ratings at T_A=25°C

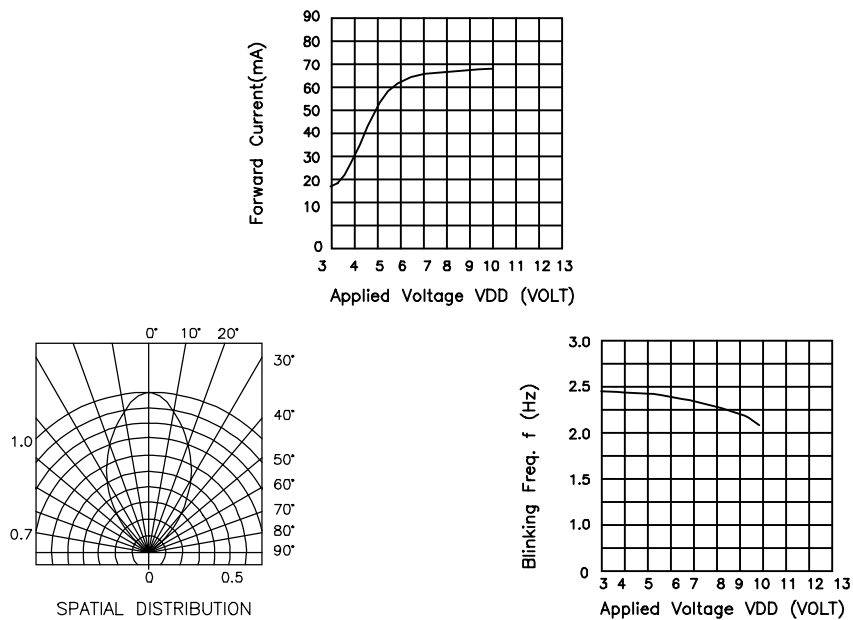
| Parameter | Bright Red | High Efficiency Red | Green | Yellow | Super Bright Red | Units |
|--------------------------------|---------------------|---------------------|-------|--------|------------------|-------|
| Power dissipation | 200 | 200 | 200 | 200 | 200 | mW |
| DC Forward Current | 38-56 | 38-56 | 38-56 | 38-56 | 38-56 | mA |
| Reverse Voltage | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | V |
| Operating Temperature | -40°C To +70°C | | | | | |
| Storage Temperature | -50°C To +100°C | | | | | |
| Lead Soldering Temperature [1] | 260°C For 5 Seconds | | | | | |

Notes:

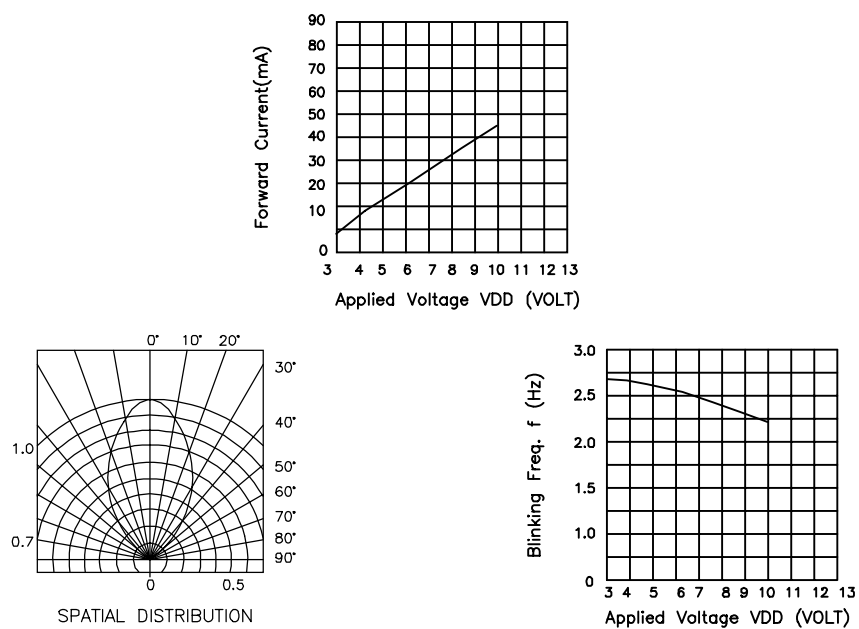
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



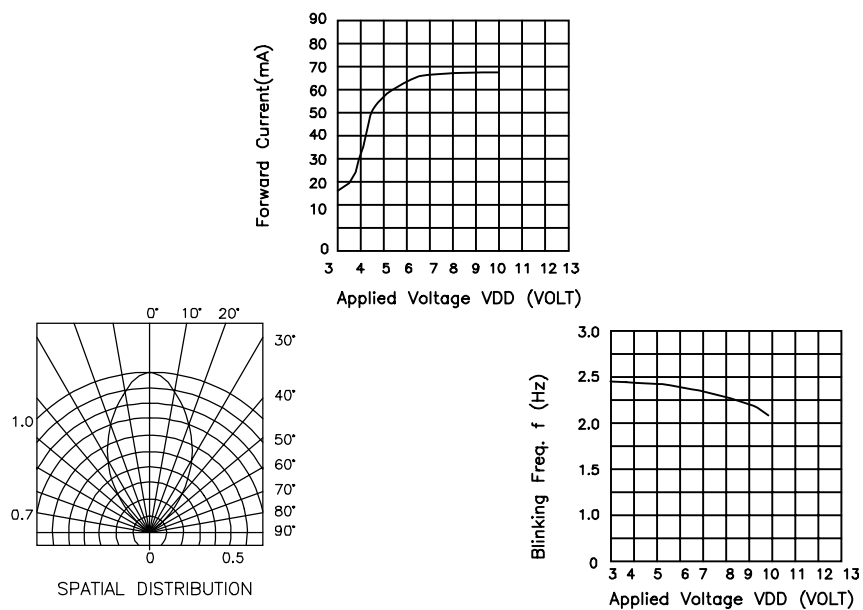
Bright Red L456BHD



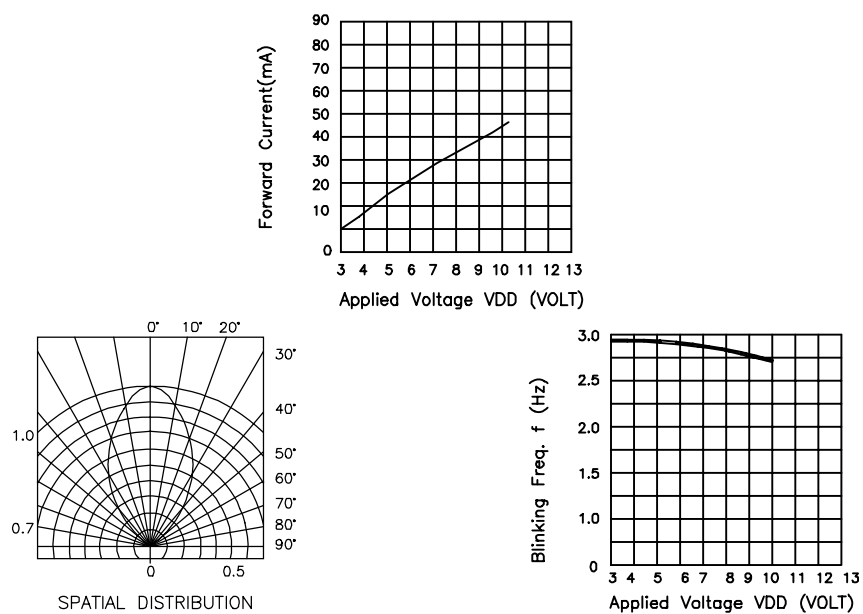
High Efficiency Red L456BID



Green L456BGD



Yellow L456BYD



Super Bright Red L456SRD/B

