

L-56BHD BRIGHT RED                      L-56BGD GREEN  
 L-56BID HIGH EFFICIENCY RED      L-56BYD YELLOW  
 L-56BSRD-B SUPER BRIGHT RED

### Features

- T-1 PACKAGE WITH RECTANGULAR BASE.
- WITH BUILT-IN BLINKING IC.
- OPERATION VOLTAGE FROM 3.5V TO 14V.
- BLINKING FREQUENCY FROM 3.0Hz TO 1.5Hz.

### Description

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

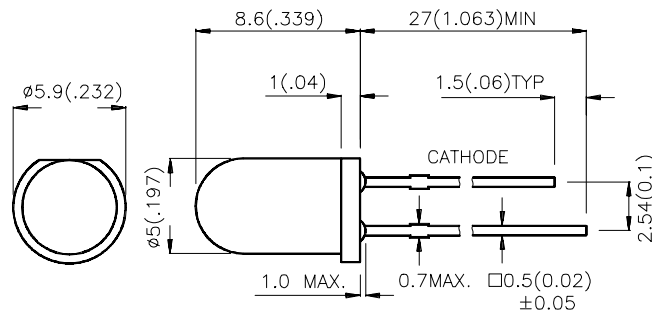
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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.

### 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) VF=9V		Viewing Angle
			Min.	Typ.	
L-56BHD	BRIGHT RED(GaP)	RED DIFFUSED	2	5	60°
L-56BID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	20	40	60°
L-56BGD	GREEN (GaP)	GREEN DIFFUSED	5	20	60°
L-56BYD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	20	60°
L-56BSRD-B	SUPER BRIGHT RED(GaAlAs)	RED DIFFUSED	100	200	60°

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<sub>A</sub>=25°C

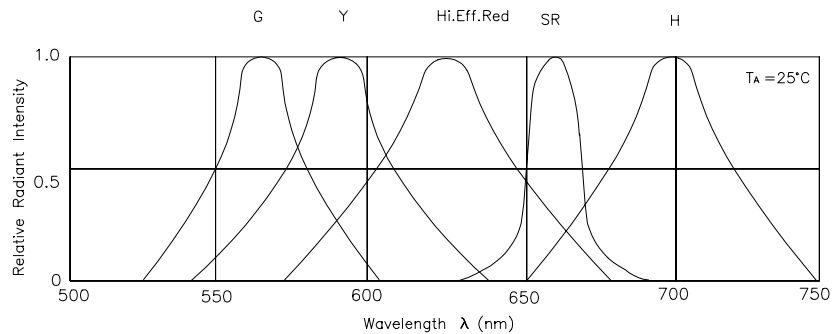
Symbol	Parameter	Device	Min	Typ	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Bright Red High Efficiency Red Green Yellow Super Bright Red		700 627 565 590 660	nm	
$\lambda_D$	Dominate Wavelength	Bright Red High Efficiency Red Green Yellow Super Bright Red		660 625 568 588 640	nm	
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Green Yellow Super Bright Red		45 45 30 35 20	nm	
I <sub>F</sub>	Forward Current	Bright Red High Efficiency Red Green Yellow Super Bright Red	8 8 8 8 8	20 22 20 21 25	mA	Min: V <sub>F</sub> =3.5V Typ: V <sub>F</sub> =5V
I <sub>SON</sub>	Supply Current	Bright Red High Efficiency Red Green Yellow Super Bright Red		8~43 8~44 8~42 8~43 8~45	uA	V <sub>F</sub> =3.5V~14V
f	Blink Frequency	All		3~1.5	Hz	V <sub>F</sub> =3.5V~14V

## Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

Parameter	Bright Red	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	310	310	310	310	310	mW
DC Forward Current	55	55	55	55	55	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					

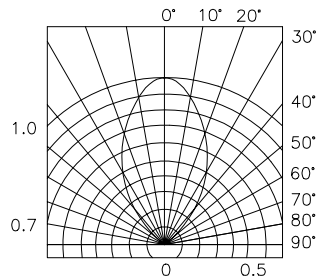
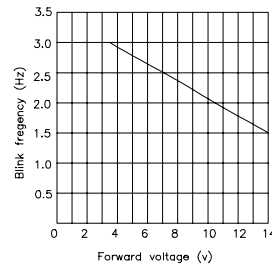
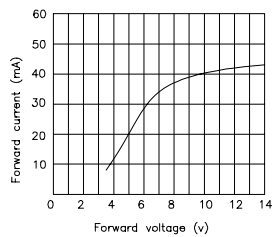
Note:

1. 4mm below package base.

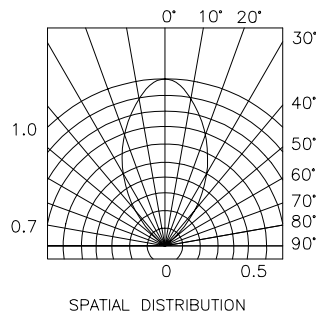
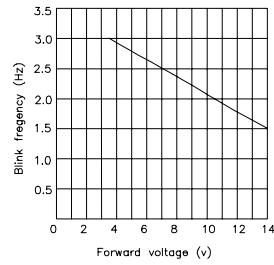
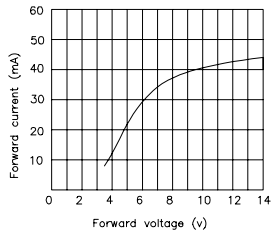


RELATIVE INTENSITY vs. WAVELENGTH

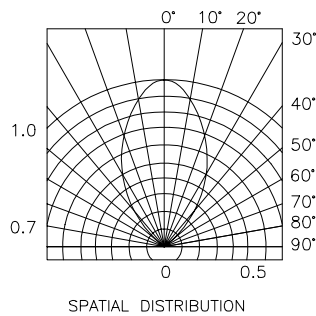
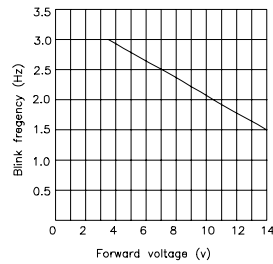
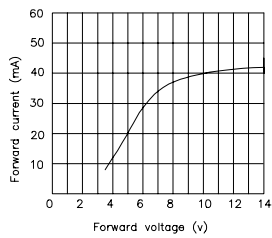
## BRIGHT RED L-56BHD



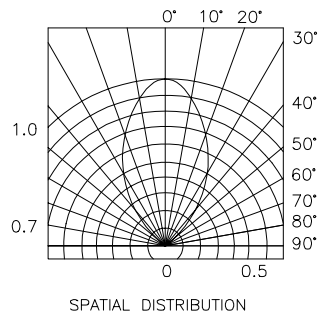
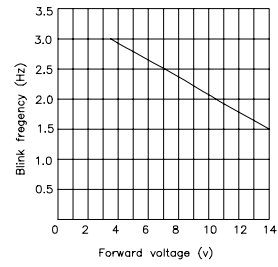
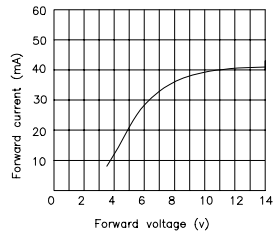
## High Efficiency Red L-56BID



## Green L-56BGD



## Yellow L-56BYD



## Super Bright Red L-56BSRD-B

