Kingbright®

T-1 (3mm) BLINKING LED LAMPS

L-616BH BRIGHT RED
L-616BG GREEN
L-616BI HIGH EFFICIENCY RED
L-616BY YELLOW
L-616BSR SUPER BRIGHT RED

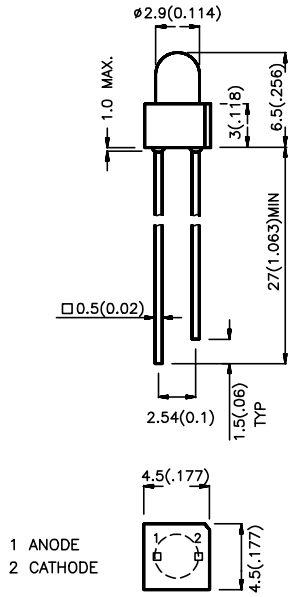
Features

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

Description

The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.
The Green source color devices are made with Gallium Phosphide Green 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.
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 ±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.	Max.	**2q1/2**
L-616BHD	BRIHT RED (GaP)	RED DIFFUSED	1.3	3.2	60°
L-616BID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	12.5	3.2	60°
L-616BGD	GREEN (GaP)	GREEN DIFFUSED	5	20	60°
L-616BYD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	20	60°
L-616BSRD-B	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	100	300	60°

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

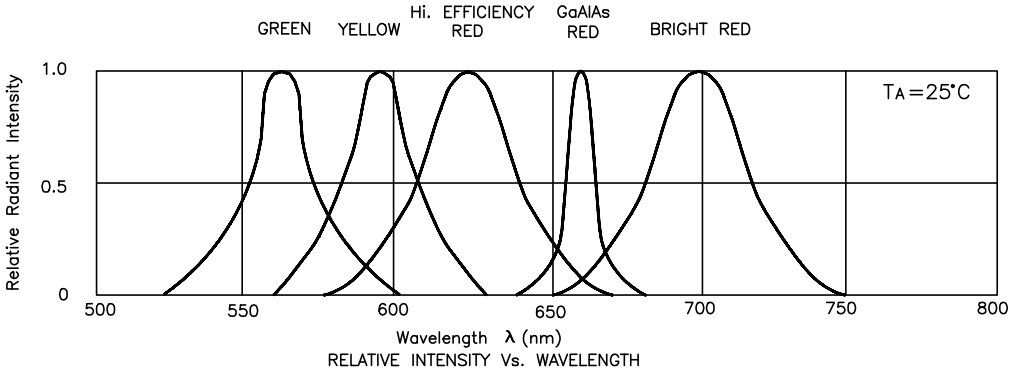
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Min.	Typ.	Max.	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	13.0	V	Min. IF=6mA Typ. IF=38-56mA Max.IF=70mA
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

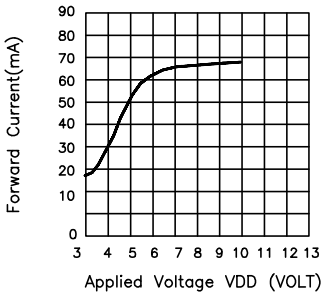
Parameter	Bright Red	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	200	200	200	200	200	mW
DC Forward Current	38-56	38-56	38-56	38-56	38-56	mA
Reverse Voltage	0.5	0.5	0.5	0.5	0.5	V
Operating Temperature	-40°C To +70°C					
Storage Temperature	-50°C To +100°C					
Lead Soldering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

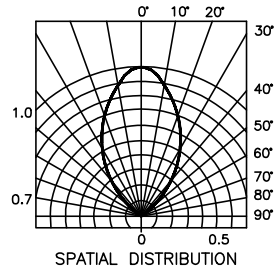
Note:
1. 4mm below package base.

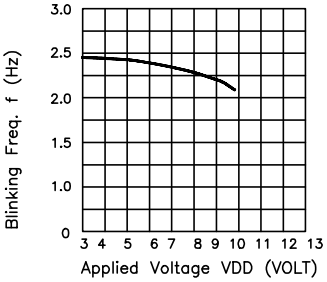


RELATIVE INTENSITY Vs. WAVELENGTH

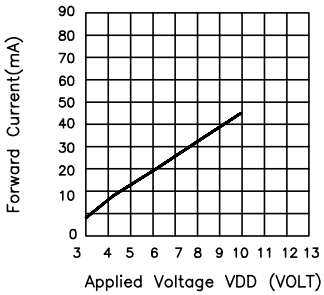
Bright Red L-616BHD

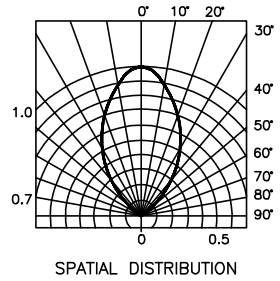


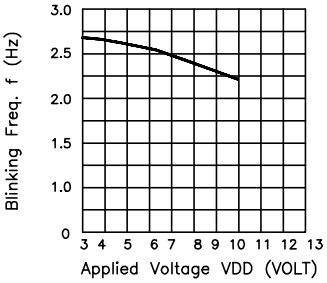




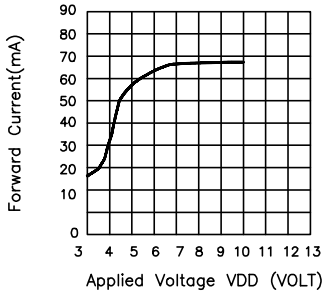
High Efficiency Red L-616BID

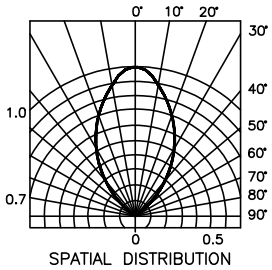


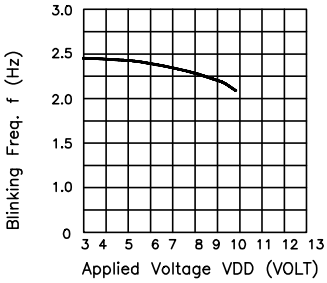




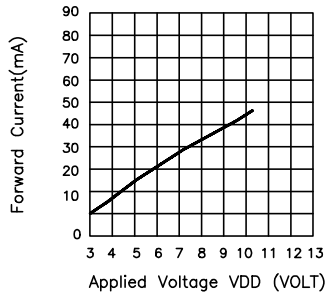
Green L-616BGD

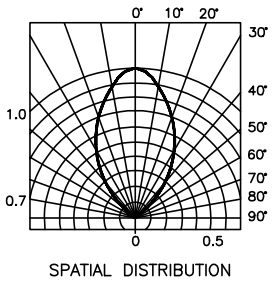


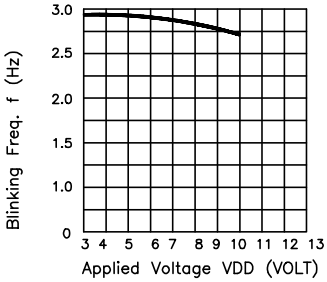




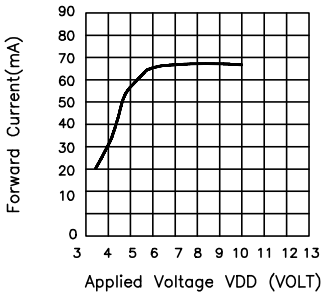
Yellow L-616BYD

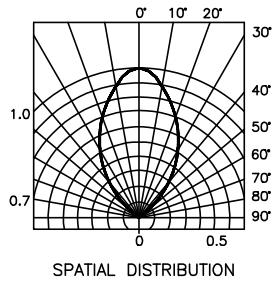






Super Bright Red L-616BSRD-B





SPATIAL DISTRIBUTION