

636-903

**Kingbright®****T - 1 (3mm) BLINKING LED LAMPS**

L-36BH BRIGHT RED

L-36BG GREEN

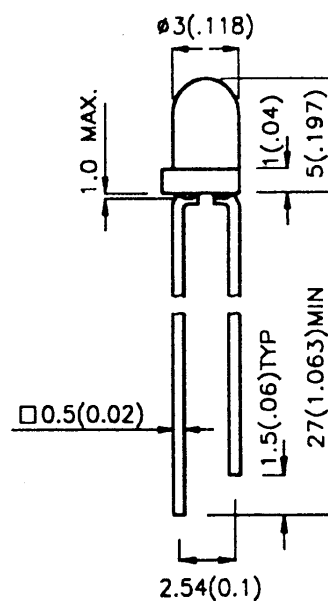
L-36BI HIGH EFFICIENCY RED

L-36BY YELLOW

L-36BSR SUPER BRIGHT RED

**Features**

- WITH BUILT-IN BLINKING IC.
- OPERATION VOLTAGE FROM 3.5V TO 13V.
- BLINKING FREQUENCY FROM 2.5Hz TO 1.5Hz.

**Package Dimensions**

1 ANODE

2 CATHODE

**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.

**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 201/2
			Min.	Max.	
L-36BHD	BRIGHT RED (GaP)	RED DIFFUSED	1.3	3.2	60°
L-36BID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	12.5	32.0	
L-36BGD	GREEN (GaP)	GREEN DIFFUSED	5.0	32.0	
L-36BYD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5.0	20.0	
L-36BSRD-B	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	100.0	300.0	

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

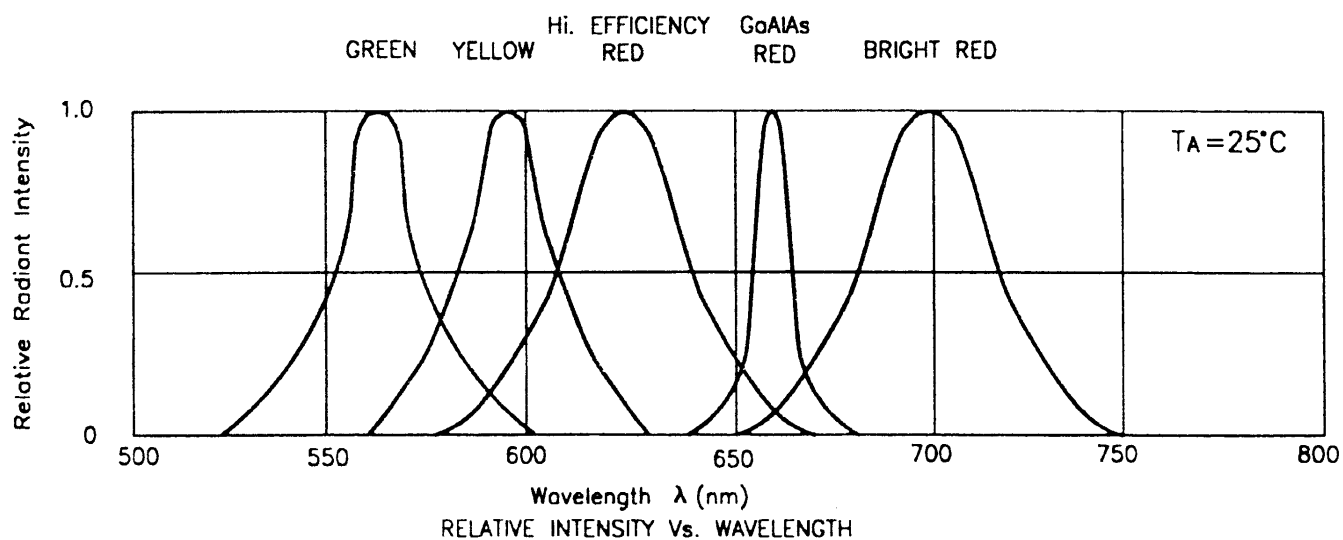
Symbol	Parameter	Device	Min.	Typ.	Max.	Units	Test Conditions
$\lambda_{\text{peak}}$	Peak Wavelength	Bright Red High Efficiency Red Green Yellow Super Bright Red		700 625 565 590 660		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Green Yellow Super Bright Red		45 45 30 35 20		nm	IF=20mA
V <sub>F</sub>	Forward Voltage	All	3.5	9-12	13.0	V	Min. IF=6mA Typ. IF=38-56mA Max. IF=70mA
I <sub>SON</sub>	Supply Current	All		6 -70		mA	
f	Blink Frequency	All		2.5-1.5		Hz	

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

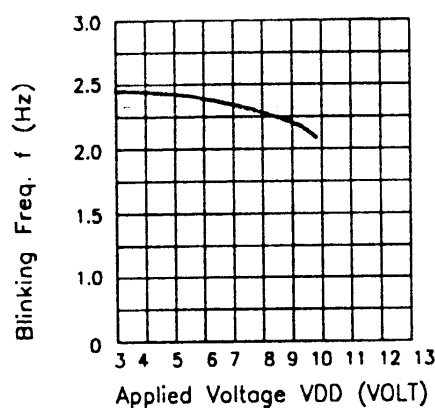
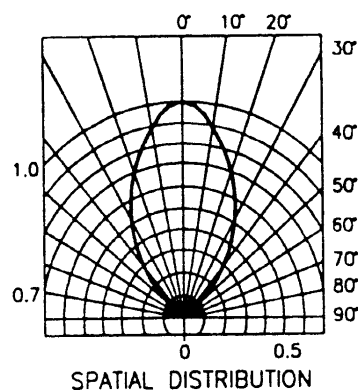
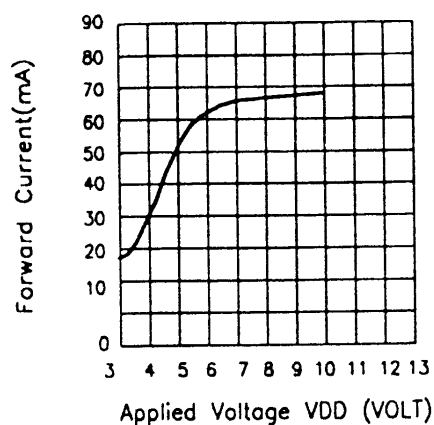
Parameter	Bright Red	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	200	200	200	200	200	mW
DC Forward Current	38-56	38-56	38-56	38-56	38-56	mA
Reverse Voltage	0.5	0.5	0.5	0.5	0.5	V
Operating Temperature	-40°C To +70°C					
Storage Temperature	-50°C To +100°C					
Lead Soldering Temperature [2]	260°C For 5 Seconds					

Notes:

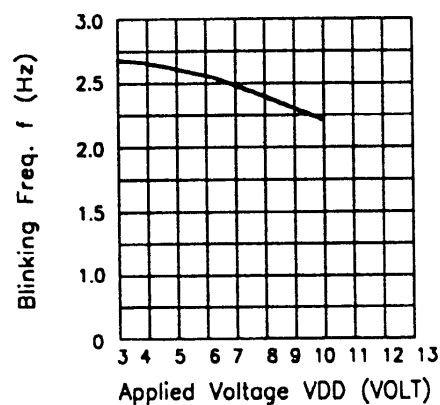
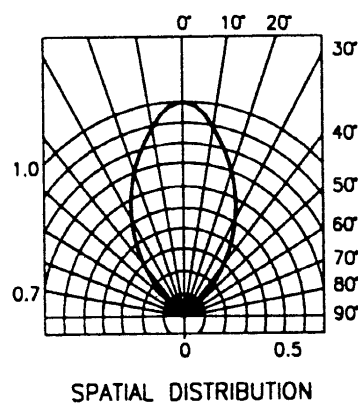
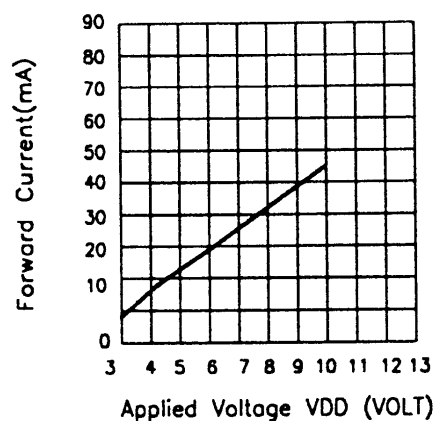
1.  $\tau \leq 10\mu\text{s}$ .
2. 4mm below package base



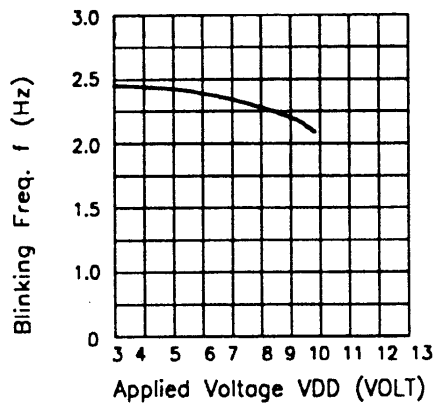
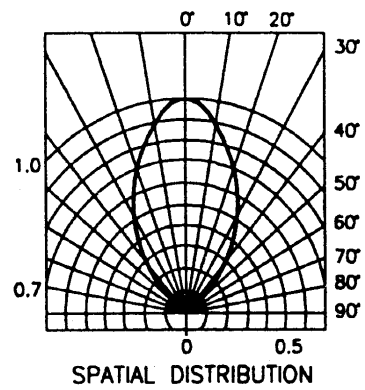
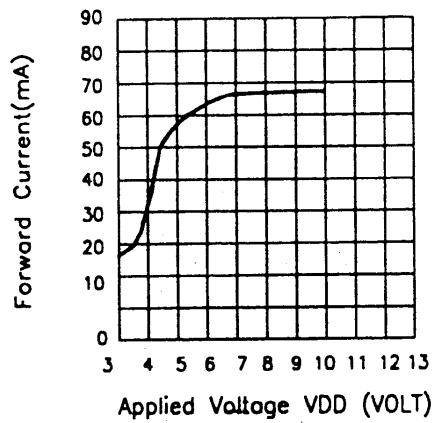
## Bright Red L-36BHD



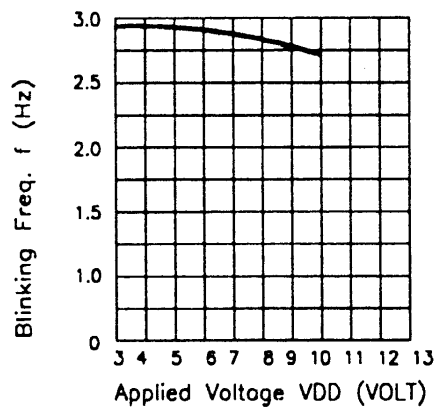
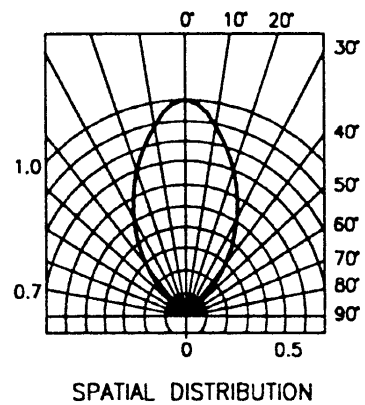
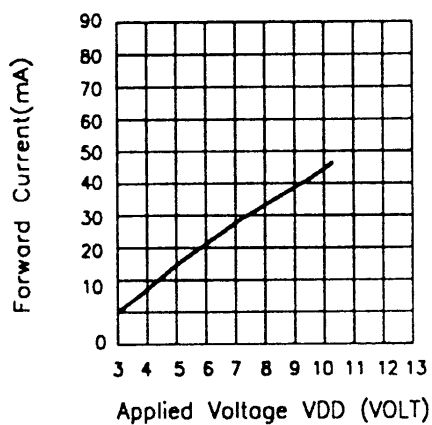
## High Efficiency Red L-36BID



## Green L-36BGD



## Yellow L-36BYD



# Super Bright Red L-36BSRD-B

