

Kingbright®

T-1(3mm) BI-COLOR INDICATOR LAMPS

L-937EG HIGH EFFICIENCY RED / GREEN

L-937EY HIGH EFFICIENCY RED / YELLOW

L-937GY GREEN / YELLOW

Features

- UNIFORM LIGHT OUTPUT.
- LOW POWER CONSUMPTION.
- MILKY WHITE DIFFUSION LENS.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.

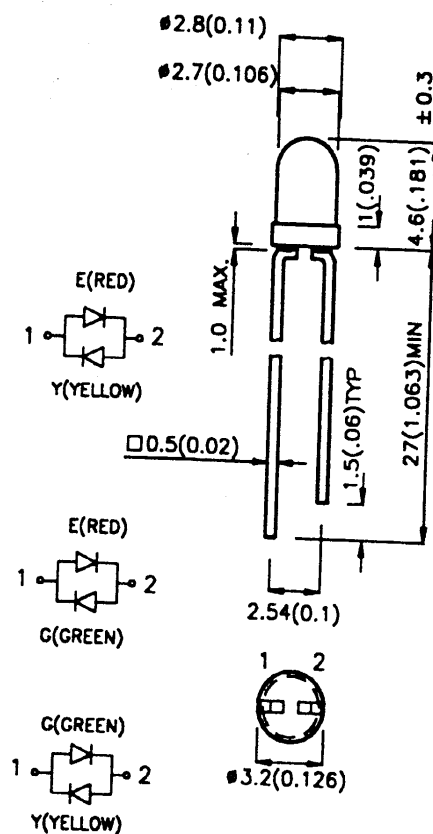
Description

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.

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 subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Max.	
L-937EGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	8.0	40.0	60°
	GREEN (GaP)		8.0	40.0	
L-937EYW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	8.0	40.0	
	YELLOW (GaAsP/GaP)		5.0	20.0	
L-937GYW	GREEN (GaP)	WHITE DIFFUSED	8.0	40.0	
	YELLOW (GaAsP/GaP)		5.0	20.0	

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 $T_A=25^\circ\text{C}$

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Green Yellow	625 565 590		nm	$I_F=20\text{mA}$
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green Yellow	45 30 35		nm	$I_F=20\text{mA}$
C	Capacitance	High Efficiency Red Green Yellow	12 45 10		pF	$V_F=0\text{V}; f=1\text{MHz}$
V_F	Forward Voltage	High Efficiency Red Green Yellow	2.0 2.2 2.1	2.5 2.5 2.5	V	$I_F=20\text{mA}$
I_R	Reverse Current	All	10		μA	$V_R = 5\text{V}$

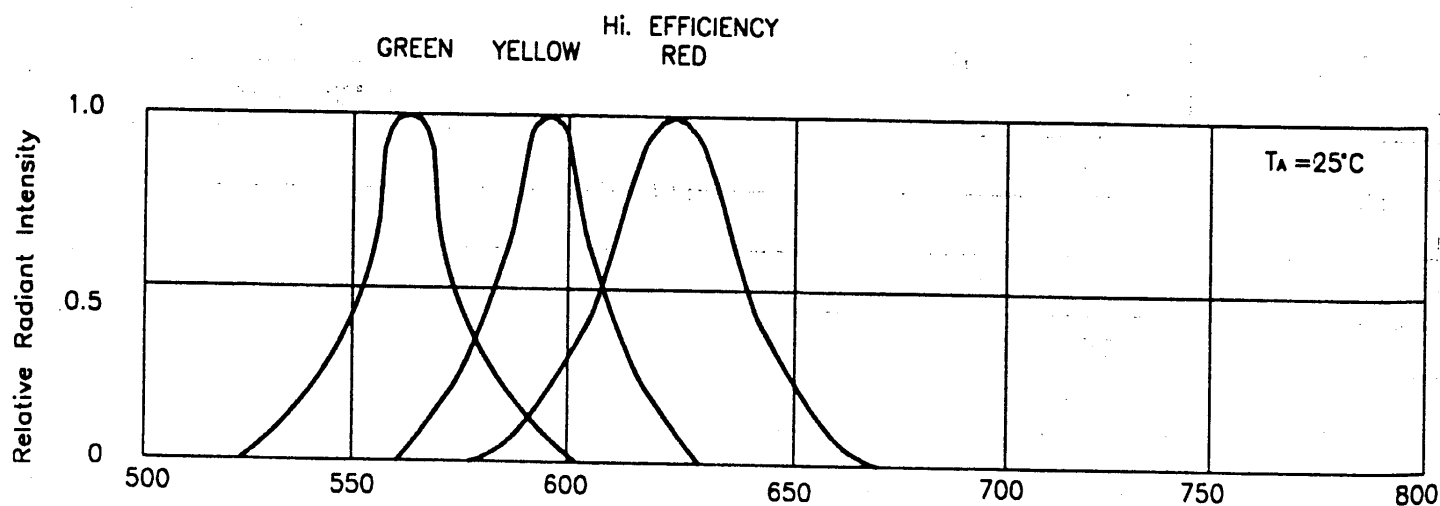
Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

Parameter	High Efficiency Red	Green	Yellow	Units
Power dissipation	105	105	105	mW
DC Forward Current	30	25	30	mA
Peak Forward Current [1]	150	150	150	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40°C To $+85^\circ\text{C}$			
Lead Soldering Temperature [2]	260 $^\circ\text{C}$ For 5 Seconds			

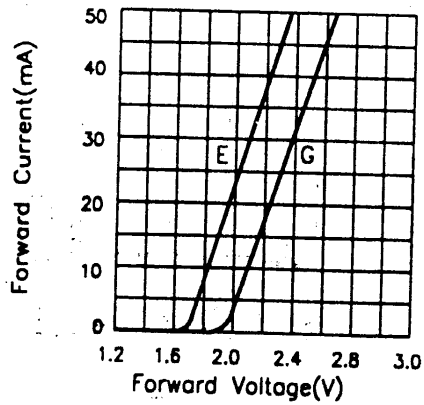
Notes:

1. $\tau \leq 10\mu\text{s}$.

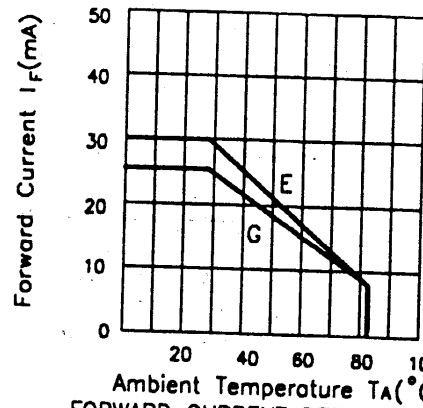
2. 4mm below package base.



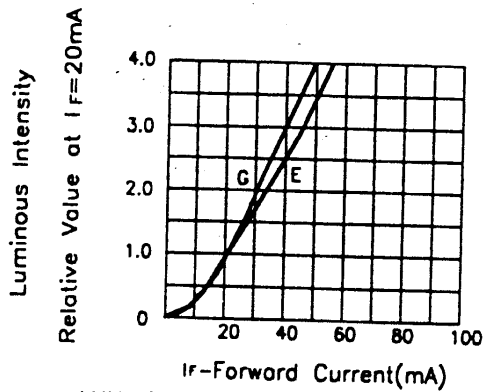
High Efficiency Red / Green L-937EGW



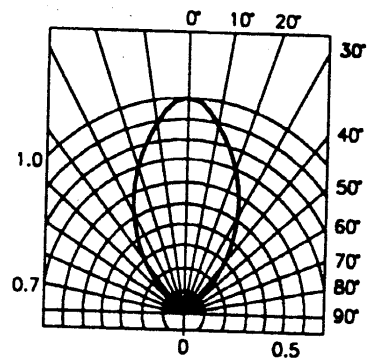
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

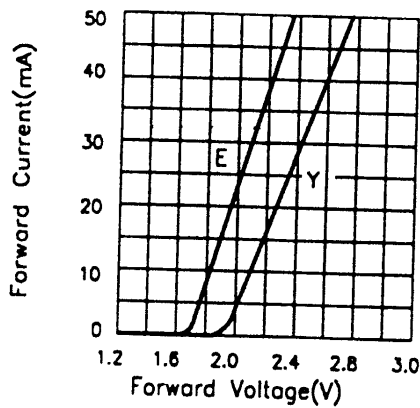


LUMINOUS INTENSITY Vs. FORWARD CURRENT

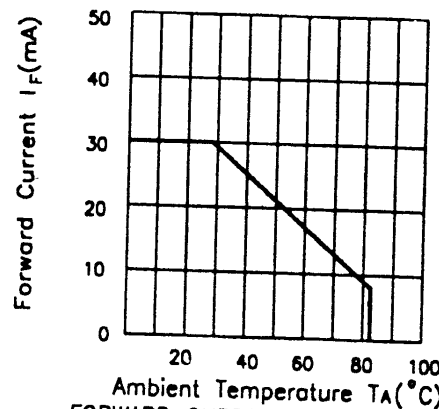


SPATIAL DISTRIBUTION

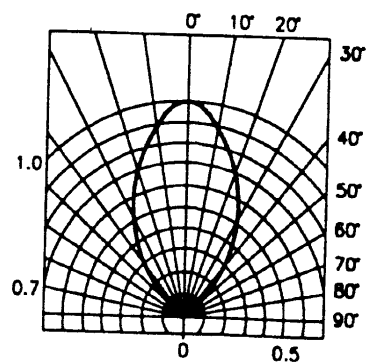
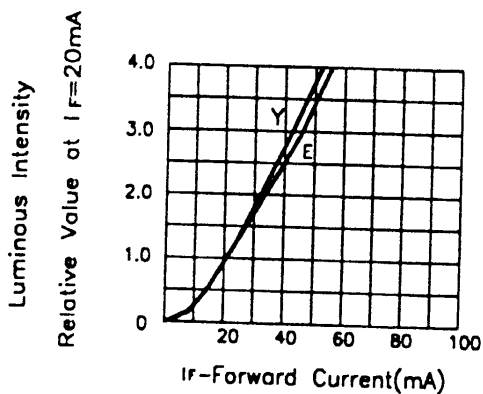
High Efficiency Red / Yellow L-937EYW



FORWARD CURRENT Vs. FORWARD VOLTAGE

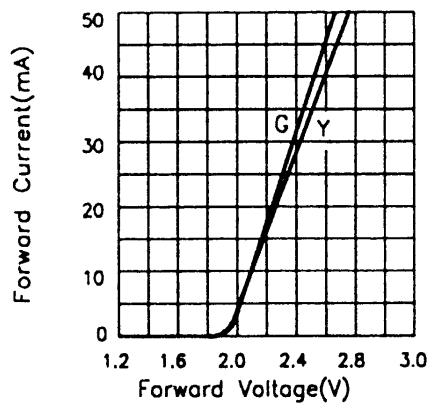


FORWARD CURRENT DERATING CURVE

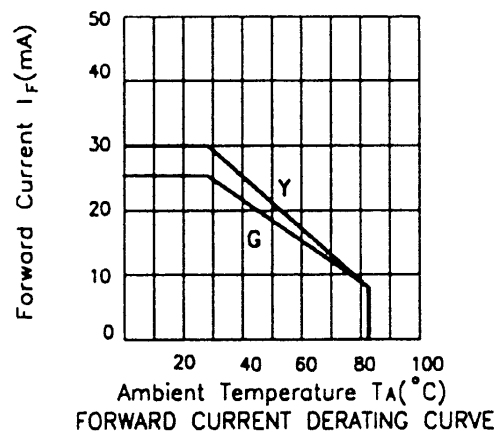


SPATIAL DISTRIBUTION

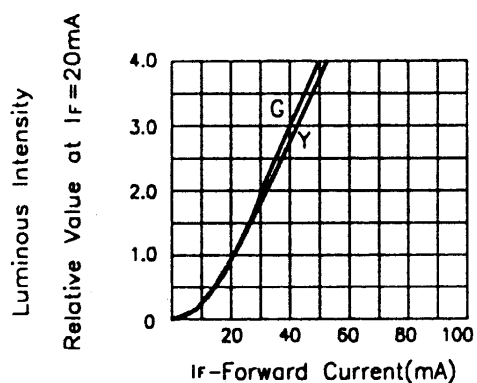
Green / Yellow L-937GYW



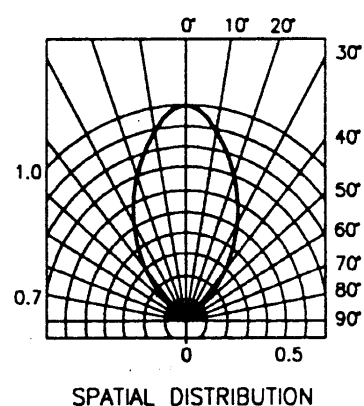
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION