

# Kingbright®

## T- 1 3/4 (5mm) SUPER BRIGHT LED LAMPS

L-53SE SUPER BRIGHT ORANGE

L-53SY SUPER BRIGHT YELLOW

### Features

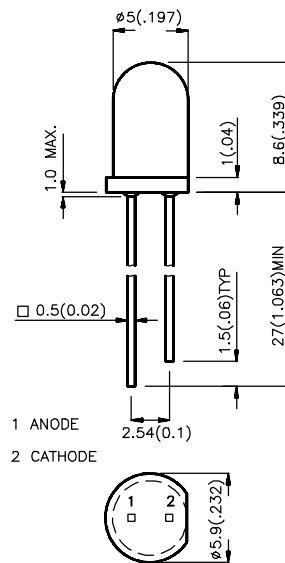
- ULTRA BRIGHTNESS.
- DIFFUSED, WATER CLEAR AND TRANSPARENT LENS ARE AVAILABLE.
- OUTSTANDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- IC COMPATIBLE/LOW CURRENT CAPABILITY.

### Description

The Super Bright Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

The Super Bright Yellow source color devices are made with DH InGaAlP on GaAs substrate 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.	2 $\theta$ 1/2
L-53SEC	SUPER BRIGHT YELLOW (InGaAlP)	WATER CLEAR	700	3000	30°
L-53SET		ORANGE TRANS.	700	3000	30°
L-53SED		ORANGE DIFFUSED	400	1000	60°
L-53SYC	SUPER BRIGHT YELLOW (InGaAlP)	WATER CLEAR	400	2500	30°
L-53SYT		YELLOW TRANS.	400	2500	30°
L-53SYD		YELLOW DIFFUSED	100	500	60°

### Note:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2

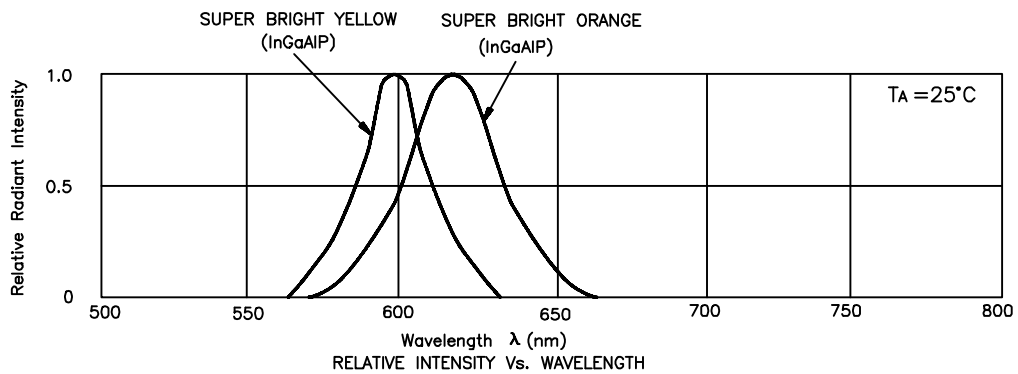
**Electrical / Optical Characteristics at T<sub>A</sub>=25°C**

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Super Bright Orange Super Bright Yellow	620 595		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Super Bright Orange Super Bright Yellow	20 15		nm	IF=20mA
C	Capacitance	Super Bright Orange Super Bright Yellow	40 33		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Super Bright Orange Super Bright Yellow	1.95 2.0	2.5 2.4	V	IF=20mA
I <sub>R</sub>	Reverse Current	All	10		uA	VR = 5V

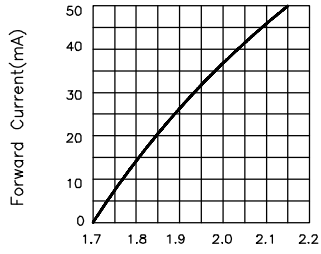
**Absolute Maximum Ratings at T<sub>A</sub>=25°C**

Parameter	Super Bright Orange	Super Bright Yellow	Units
Power dissipation	75	125	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	150	150	mA
Reverse Voltage	5	5	V
Operation/Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 5 Seconds		

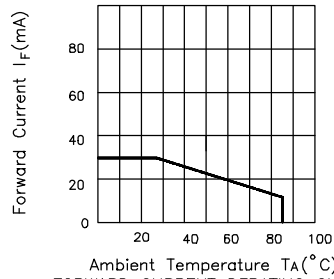
Notes:  
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.  
 2. 4mm below package base.



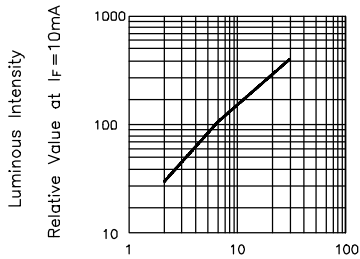
**Super Bright Orange L-53SEC, L-53SET, L-53SED**



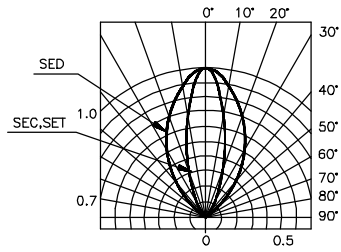
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

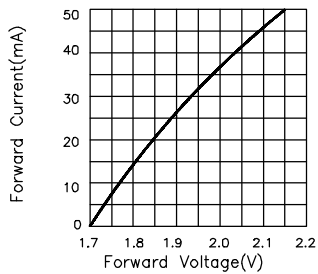


LUMINOUS INTENSITY Vs. FORWARD CURRENT

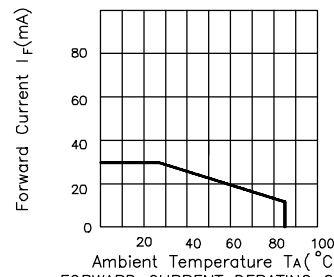


SPATIAL DISTRIBUTION

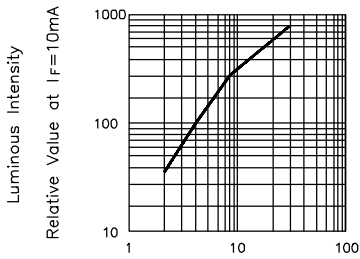
**Super Bright Yellow L-53SYC, L-53SYT, L-53SYD**



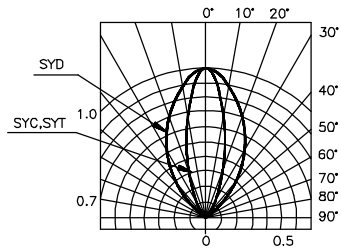
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION