

# Kingbright®

## T-1(3mm) HYPER LED LAMPS

L-934SURC HYPER RED

L-934SURC-E HYPER RED

### Features

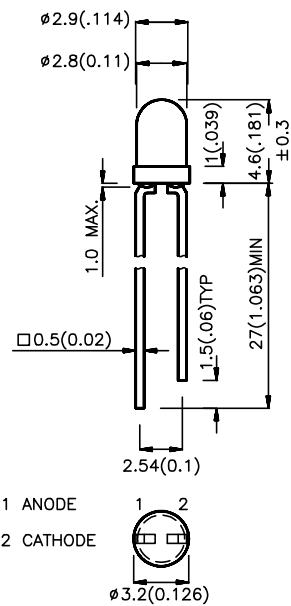
- | HYPER BRIGHTNESS.
- | OUTSTANDING MATERIAL EFFICIENCY.
- | RELIABLE AND RUGGED.
- | I.C. COMPATIBLE.

### Description

The Hyper Red (SUR) source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

The Hyper Red (SUR-E) 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 <b>2<math>\theta</math>1/2</b>
			Min.	Max.	
L-934SURC	HYPER RED (InGaAlP)	WATER CLEAR	500	1300	50°
L-934SURC-E	HYPER RED (InGaAlP)	WATER CLEAR	1000	2000	50°

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

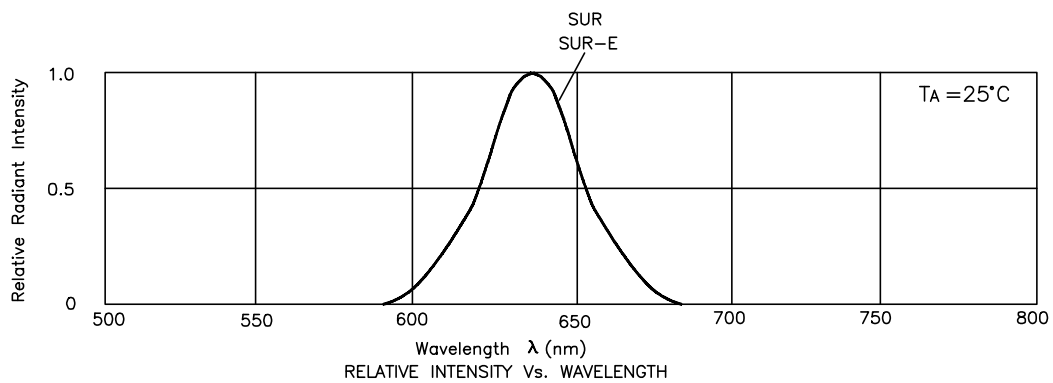
Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Hyper Red (SUR) Hyper Red (SUR-E)	640 640		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Hyper Red (SUR) Hyper Red (SUR-E)	25 25		nm	IF=20mA
C	Capacitance	Hyper Red (SUR) Hyper Red (SUR-E)	35 30		pF	VR=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Hyper Red (SUR) Hyper Red (SUR-E)	2.0 2.45	2.2 2.6	V	IF=20mA
I <sub>R</sub>	Reverse Current	Hyper Red (SUR) Hyper Red (SUR-E)	10		μA	VR = 5V

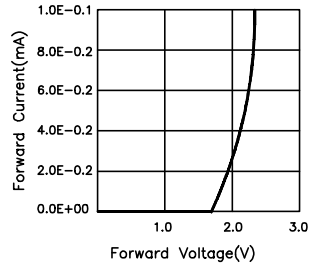
Absolute Maximum Ratings at T<sub>A</sub>=25°C

Parameter	Hyper Red (SUR)	Hyper Red (SUR-E)	Units
Power dissipation	170	120	mW
DC Forward Current	50	40	mA
Peak Forward Current [1]	150	150	mA
Reverse Voltage	5	5	V
Operating/Storage Temperature	-40 °C To +85 °C		
Lead Soldering Temperature [2]	260 °C For 5 Seconds		

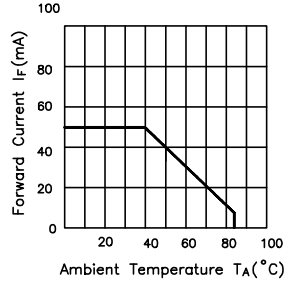
Notes:  
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.  
 2. 4mm below package base.



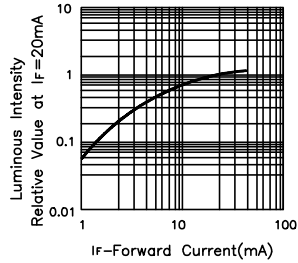
### Hyper Red L-934SURC



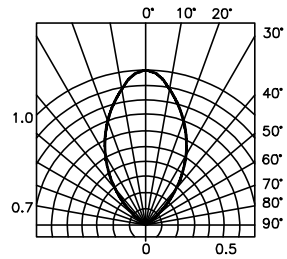
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

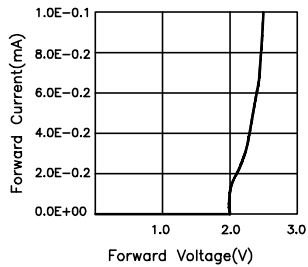


LUMINOUS INTENSITY Vs. FORWARD CURRENT

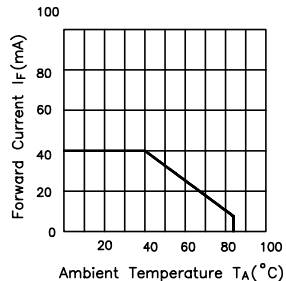


SPATIAL DISTRIBUTION

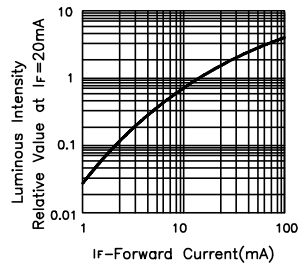
### Hyper Red L-934SURC-E



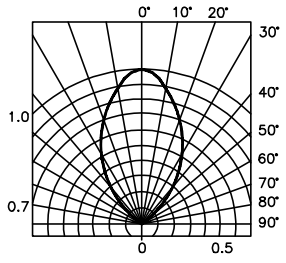
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION