Kingbright®

T- 1 3/4 (5mm) HYPER RED LED LAMPS

L-53URC HYPER RED

L-53URC-E HYPER RED

Features

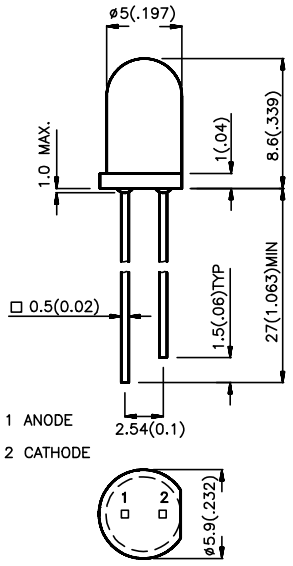
- HYPER BRIGHTNESS.
- OUTSTANDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- I.C. COMPATIBLE.

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 ±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.	**2q1/2**
L-53SURC	HYPER RED (InGaAlP)	WATER CLEAR	1300	3000	30°
L-53SURC-E	HYPER RED (InGaAlP)	WATER CLEAR	1600	3500	30°

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

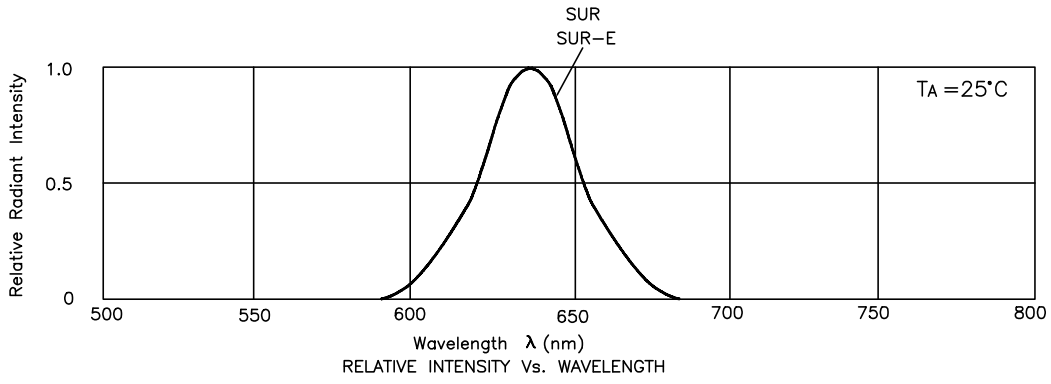
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{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_F	Forward Voltage	Hyper Red (SUR) Hyper Red (SUR-E)	2.0 2.45	2.2 2.6	V	IF=20mA
I_R	Reverse Current	Hyper Red (SUR) Hyper Red (SUR-E)	10		uA	VR = 5V

Absolute Maximum Ratings at T_A=25°C

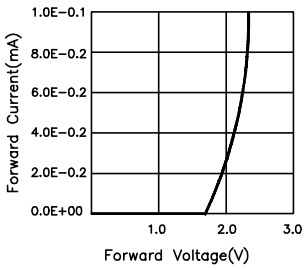
Parameter	Hyper Red (SUR)	Hyper Red (SUR-E)	Units
Power dissipation	170	120	mW
DC Forward Current	50	40	mA
Peak Forward Current [1]	150	150	mA
Reverse Voltage	5	5	V
Operating/Storage Temperature	-40°C To +85°C		
Lead Soldering Temperature [2]	260°C For 5 Seconds		

Notes:
1.1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.

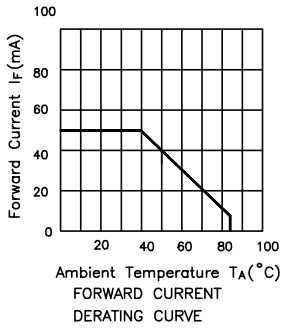


RELATIVE INTENSITY Vs. WAVELENGTH

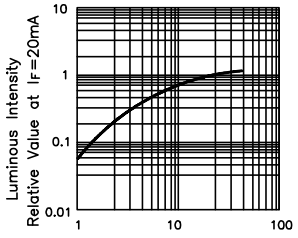
Hyper Red L-53SURC



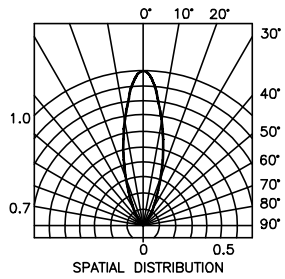
FORWARD CURRENT Vs. FORWARD VOLTAGE



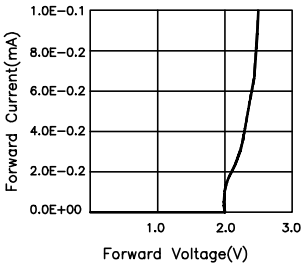
FORWARD CURRENT
DERATING CURVE



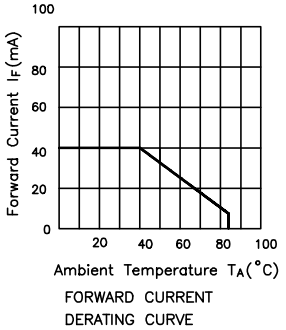
LUMINOUS INTENSITY Vs. FORWARD CURRENT



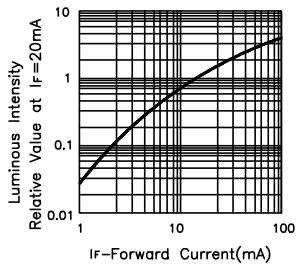
Hyper Red L-53SURC-E



FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT

