

L-1543SURC HYPER RED

L-1543SURC-E HYPER RED

### Features

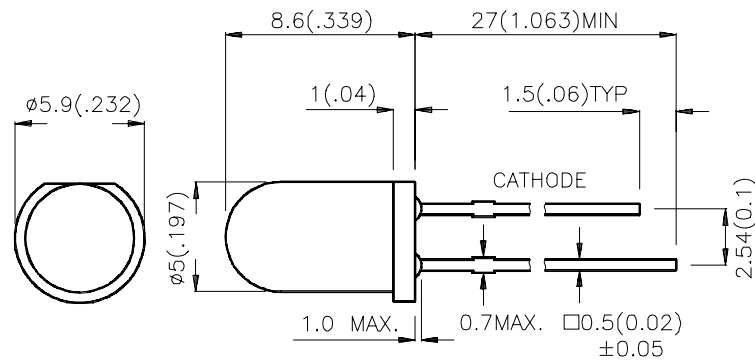
- HYPER BRIGHTNESS.
- OUTSTANDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- I.C. COMPATIBLE.

### 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 subject to change without notice.

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	2θ1/2
L-1543SURC	HYPER RED (InGaAlP)	WATER CLEAR	400	700	50°
L-1543SURC-E	HYPER RED (InGaAlP)	WATER CLEAR	700	1300	50°

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<sub>A</sub>=25°C

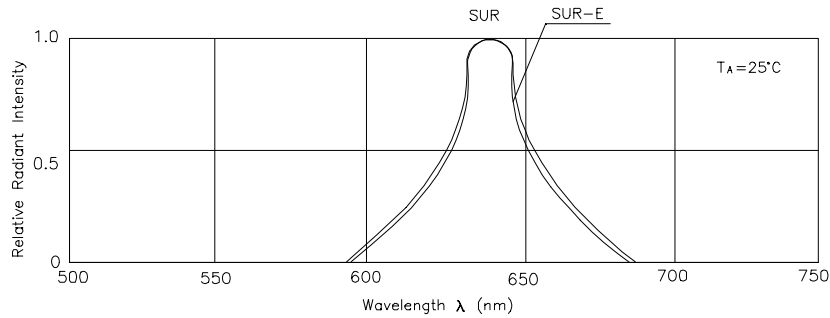
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Hyper Red (SUR) Hyper Red (SUR-E)	640 640		nm	IF=20mA
λ <sub>D</sub>	Dominate Wavelength	Hyper Red (SUR) Hyper Red (SUR-E)	628 630		nm	IF=20mA
Δλ <sub>1/2</sub>	Spectral Line Halfwidth	Hyper Red (SUR) Hyper Red (SUR-E)	27 25		nm	IF=20mA
C	Capacitance	Hyper Red (SUR) Hyper Red (SUR-E)	45 45		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Hyper Red (SUR) Hyper Red (SUR-E)	1.9 1.9	2.5 2.5	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	Hyper Red (SUR)	Hyper Red (SUR-E)	Units
Power dissipation	170	150	mW
DC Forward Current	30	40	mA
Peak Forward Current [1]	185	200	mA
Reverse Voltage	5	5	V
Operating/Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 5 Seconds		

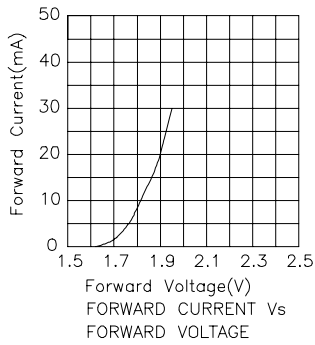
Notes:

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

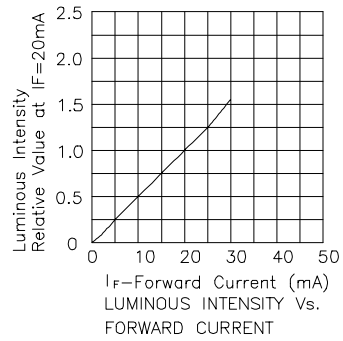


RELATIVE INTENSITY Vs. WAVELENGTH

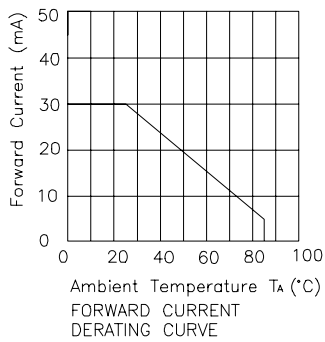
## Hyper Red L-1543SURC



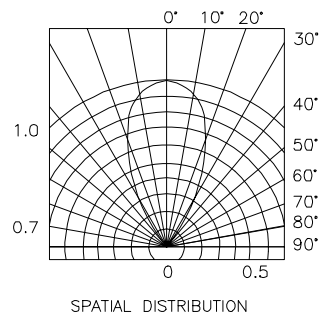
FORWARD CURRENT Vs. FORWARD VOLTAGE



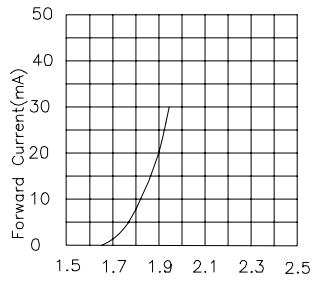
LUMINOUS INTENSITY Vs. FORWARD CURRENT



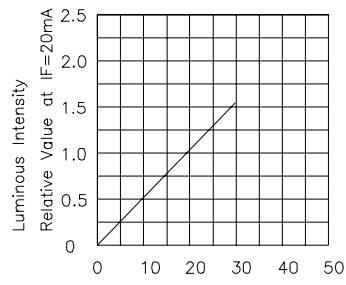
FORWARD CURRENT DERATING CURVE



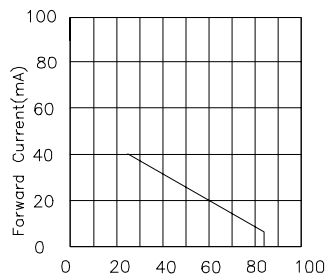
## Hyper Red L-1543SURC-E



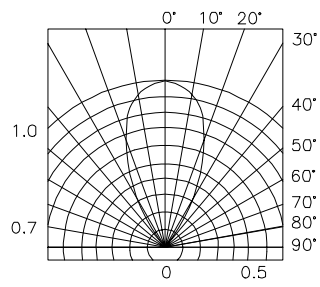
Forward Voltage(V)  
FORWARD CURRENT Vs.  
FORWARD VOLTAGE



IF-Forward Current(mA)  
LUMINOUS INTENSITY Vs.  
FORWARD CURRENT



Ambient Temperature Ta(°C)  
FORWARD CURRENT  
DERATING CURVE



SPATIAL DISTRIBUTION