

L-53SURC HYPER RED

L-53SURC-E HYPER RED

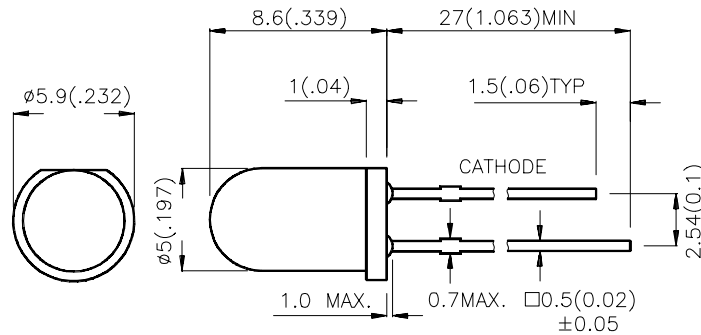
Features

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

Description

The Hyper Red 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-53SURC	HYPHER RED (InGaAIP)	WATER CLEAR	1300	1800	30°
L-53SURC-E	HYPHER RED (InGaAIP)	WATER CLEAR	1600	2200	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

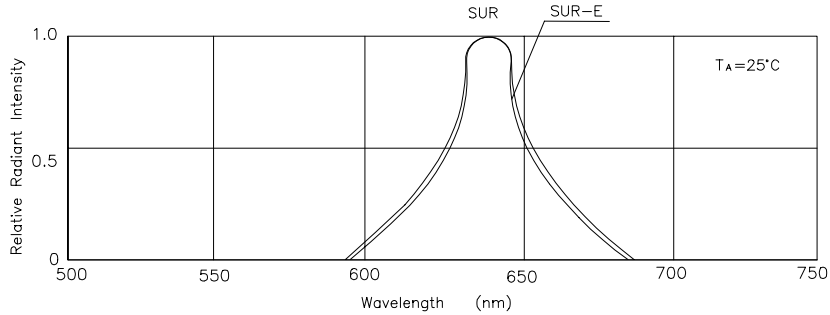
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Hyper Red (SUR) Hyper Red (SUR-E)	640 640		nm	IF=20mA
λ _D	Dominate Wavelength	Hyper Red (SUR) Hyper Red (SUR-E)	628 630		nm	IF=20mA
Δλ _{1/2}	Spectral Line Halfwidth	Hyper Red (SUR) Hyper Red (SUR-E)	27 25		nm	IF=20mA
C	Capacitance	Hyper Red (SUR) Hyper Red (SUR-E)	45 45		pF	V _F =0V; f=1MHz
V _F	Forward Voltage	Hyper Red (SUR) Hyper Red (SUR-E)	1.9 1.9	2.5 2.5	V	IF=20mA
I _R	Reverse Current	All		10	μA	V _R = 5V

Absolute Maximum Ratings at T_A=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		

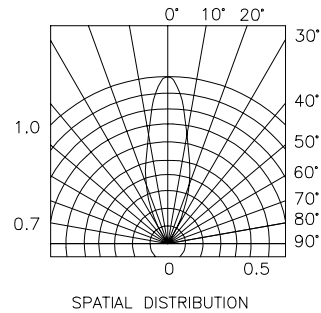
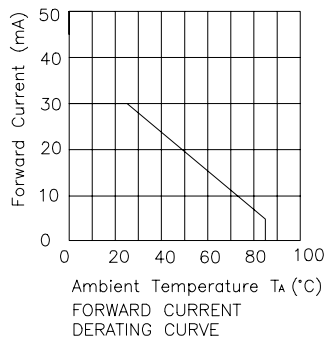
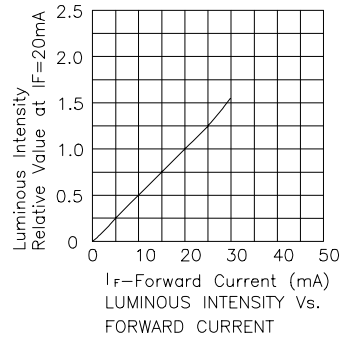
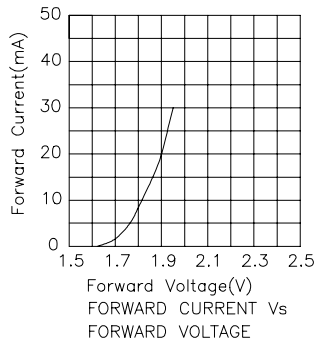
Notes:

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

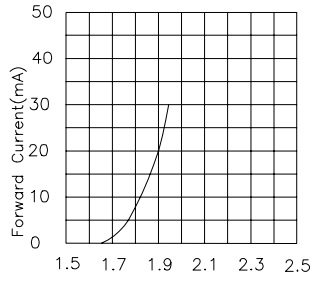


RELATIVE INTENSITY Vs. WAVELENGTH

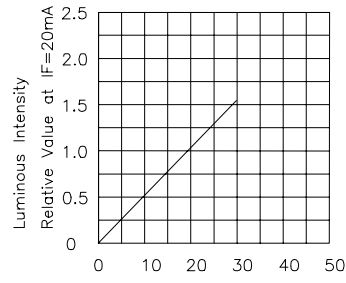
Hyper Red L-53SURC



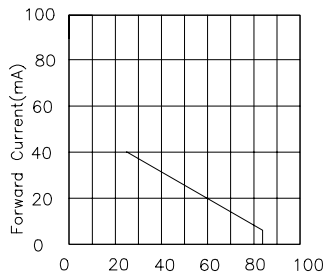
Hyper Red L-53SURC-E



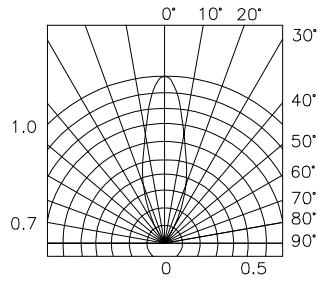
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



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



Ambient Temperature T_a (°C)
FORWARD CURRENT
DERATING CURVE



SPATIAL DISTRIBUTION