

5mm LEDs

Order code	Manufacturer code	Description
72-8948	n/a	5MM HYPER RED LED

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

Kingbright®

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

L-2523SURC HYPER RED

L-2523SURC-E HYPER RED

Features

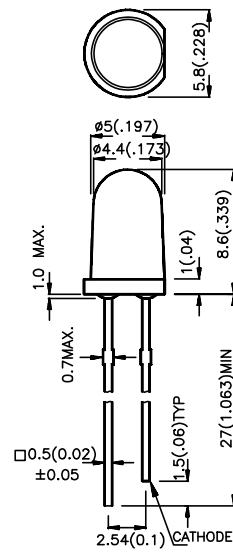
- | HYPERBRIGHTNESS.
- | NARROW VIEWING ANGLE.
- | OUTSTANDING MATERIAL EFFICIENCY.
- | RELIABLE AND RUGGED.
- | I.C. COMPATIBLE.

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 2θ1/2
			Min.	Max.	
L-2523SURC	HYPHER RED (InGaAlP)	WATER CLEAR	1300	3000	12°
L-2523SURC-E	HYPHER RED (InGaAlP)	WATER CLEAR	1600	4000	12°

Note:

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

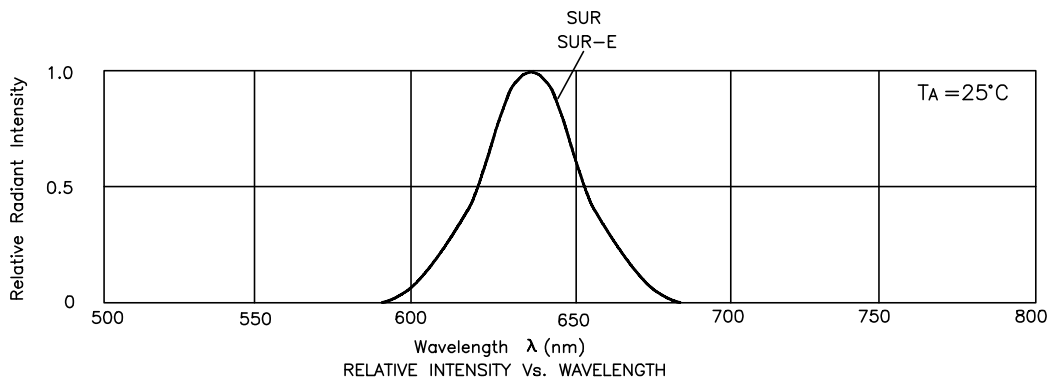
Electrical / Optical Characteristics at $T_A=25^\circ\text{C}$

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		μA	VR = 5V

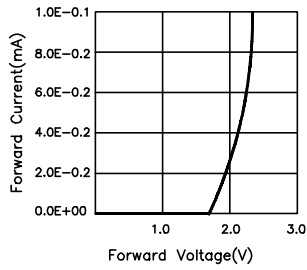
Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

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		

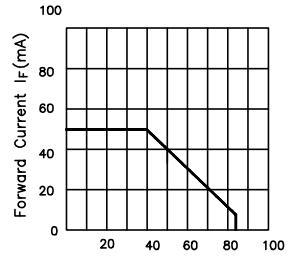
Notes:
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
 2. 4mm below package base.



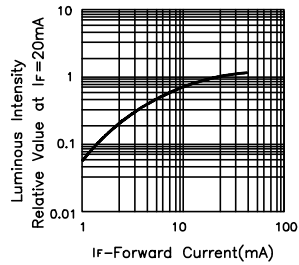
Hyper Red L-2523SURC



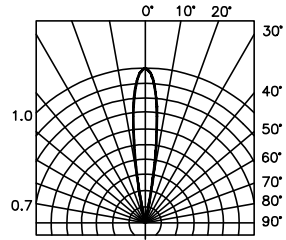
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

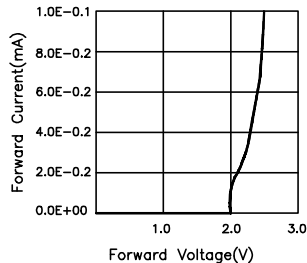


LUMINOUS INTENSITY Vs. FORWARD CURRENT

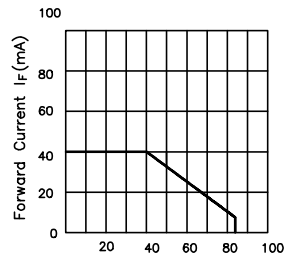


SPATIAL DISTRIBUTION

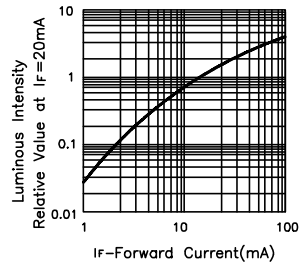
Hyper Red L-2523SURC-E



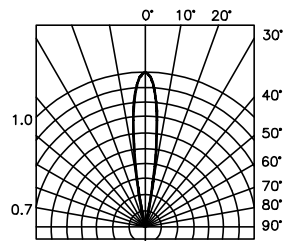
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION