

HYPER RED

Description

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

Figure 1 shows three dimensioned drawings of a mechanical part. The top view is a rectangle with a central circular hole and a small square feature. The front view shows a stepped profile with a semi-circular top. The side view shows a rectangular profile. Dimensions are given in millimeters with tolerances in brackets. A polarity mark is shown on the right.

Dimensions (mm):

- Top view: $2[0.079]$ (height of central hole), $3.2[0.126]$ MIN. (width of central hole), $3[0.118]$ MIN. (width of central hole), $0.6[0.024]$ (width of central hole), $3.8[0.150]$ (width of part), $1[0.039]$ (width of part).
- Front view: $3.2[0.126]$ MIN. (width of top semi-circle), $3[0.118]$ MIN. (width of top semi-circle), $0.6[0.024]$ (width of top semi-circle), $1[0.039]$ (height of top semi-circle), $1[0.039]$ (height of middle section), $1[0.039]$ (height of bottom section).
- Side view: $1[0.039]$ (width of part).

Polarity Mark: A triangle pointing to the right, with a horizontal line extending to the right and a vertical line extending upwards.

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.2 (0.008") unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	θ1/2
APED3820SURC	HYPER RED(InGaAlP)	WATER CLEAR	180	500	60° (H) 35° (V)

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

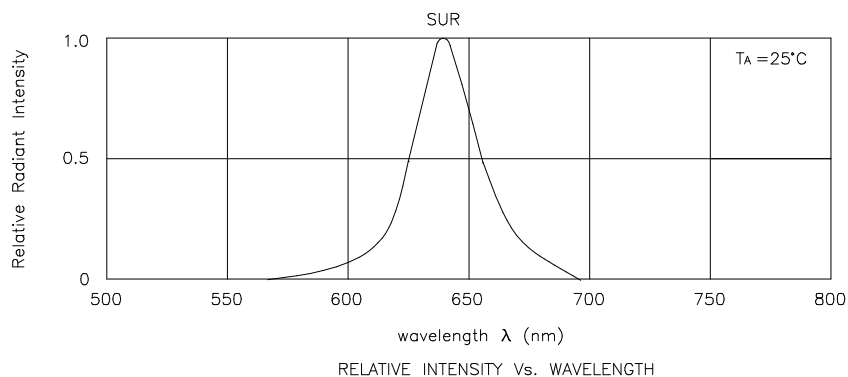
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Hyper Red	640		nm	I _F =20mA
λ _D	Dominate Wavelength	Hyper Red	628		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Hyper Red	27		nm	I _F =20mA
C	Capacitance	Hyper Red	45		pF	V _F =0V;f=1MHz
V _F	Forward Voltage	Hyper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

Absolute Maximum Ratings at T_A=25°C

Parameter	Hyper Red	Units
Power dissipation	170	mW
DC Forward Current	30	mA
Peak Forward Current [1]	185	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

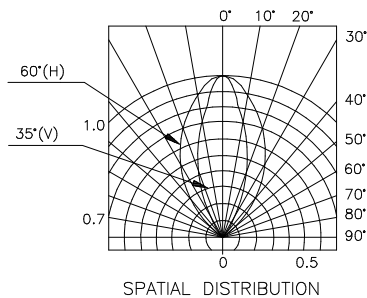
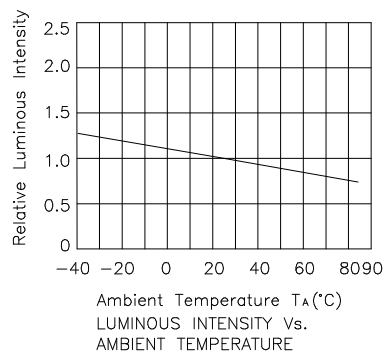
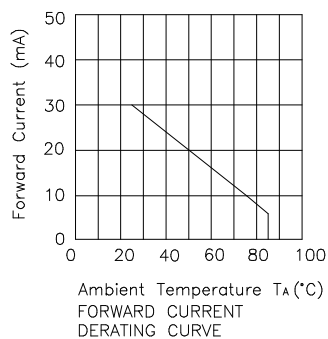
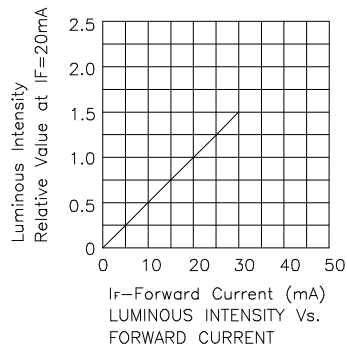
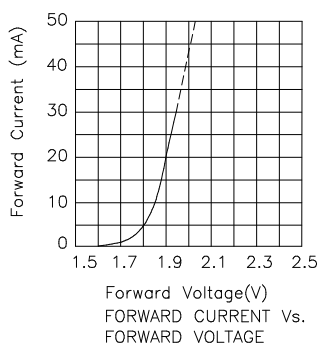
Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.



Hyper Red

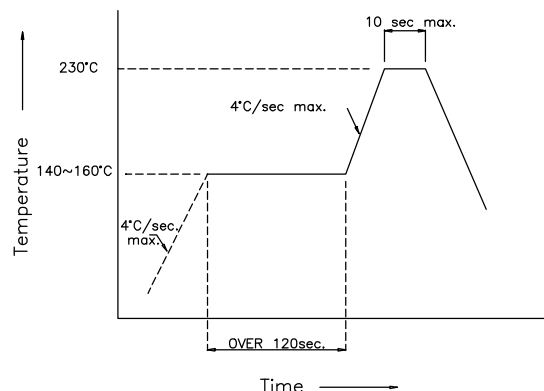
APED3820SURC



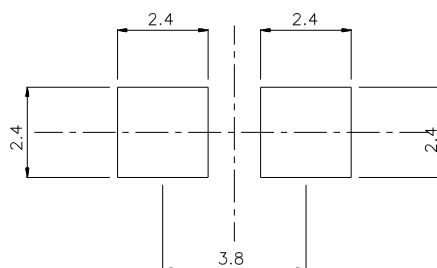
APED3820SURC

SMT Reflow Soldering Instructions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process.



Recommended Soldering Pattern (Units : mm)



Tape Specifications (Units : mm)

