

## Features

- 3.0mmx1.0mm RIGHT ANGLE SMT LED, 2.0mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACK LIGHT AND INDICATOR.
- PACKAGE : 2000PCS / REEL.
- RoHS COMPLIANT.

## Description

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

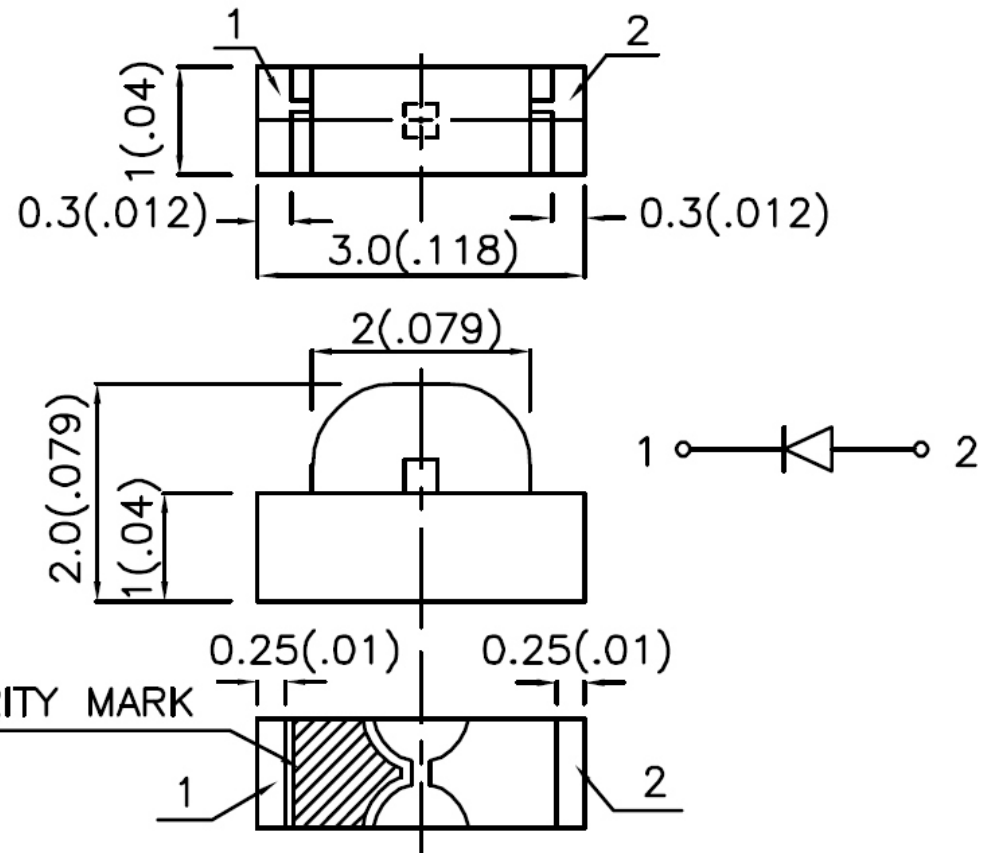
### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.15(0.006)$ " unless otherwise noted.
3. Specifications are subject to change without notice.

**LED-VRD-20-LF**

**LEADFREE**

**RoHS Compliant**



**MORETHANALL**  
CONNECTORS  
ASSEMBLIES

PART NO. **LED-VRD-20**

DWG NO. **LED-VRD-20**

FILE NO.

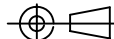
UNIT / mm

SCALE 1:1

CHECKED BY CY

DRAWING BY

PROJECTION



TOLERANCES ARE

.X  $\pm$  0.2  
.XX  $\pm$   
.XXX  $\pm$   
AWG

DESCRIPTION:

AREA

REVISIONS

HK

DATE

煜倫股份有限公司

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2 $\theta$ 1/2
<b>LED-VRD-20</b>	HYPER RED (InGaAlP)	WATER CLEAR	70	200	120°

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<sub>A</sub>=25°C

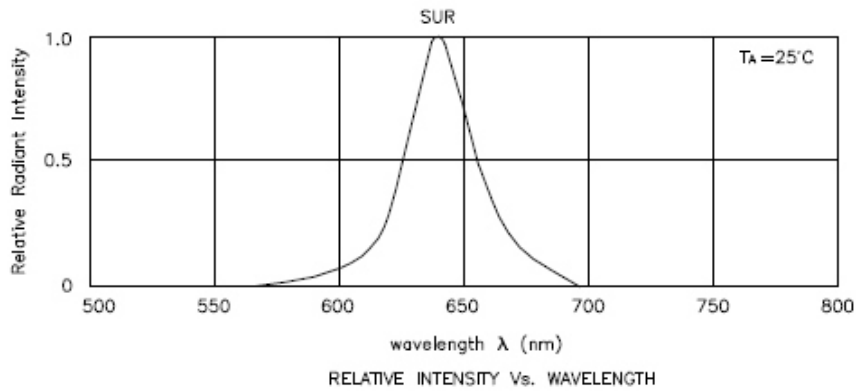
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Hyper Red	640		nm	I <sub>F</sub> =20mA
$\lambda_D$	Dominant Wavelength	Hyper Red	628		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Red	27		nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Red	45		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Hyper Red	1.9	2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Hyper Red		10	uA	V <sub>R</sub> = 5V

## Absolute Maximum Ratings at T<sub>A</sub>=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	

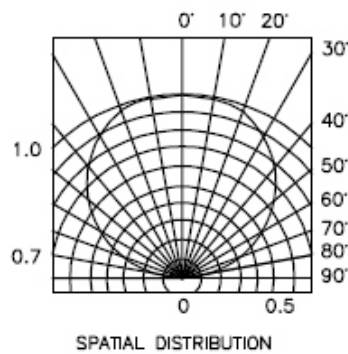
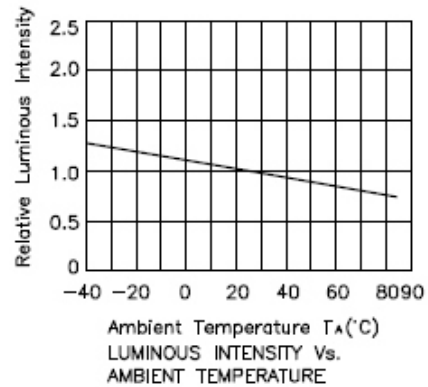
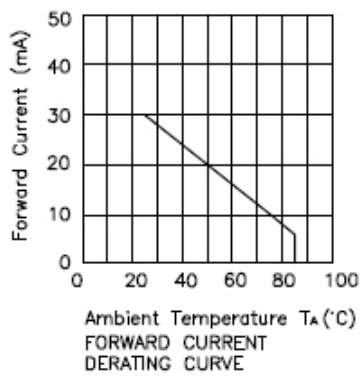
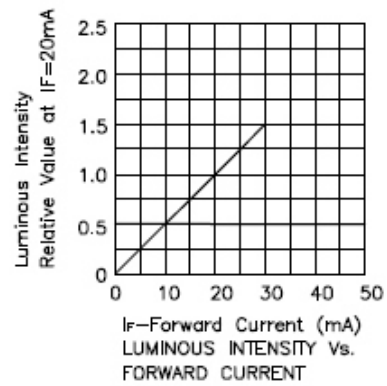
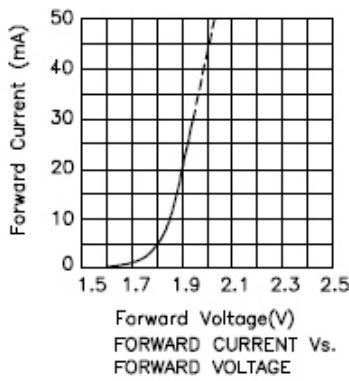
Note:

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

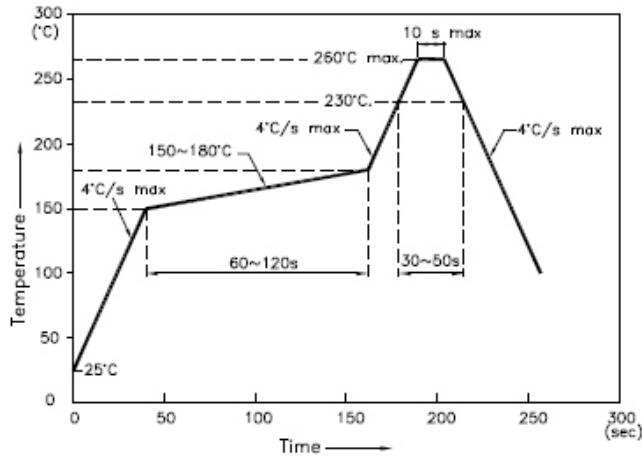


Hyper Red

KPA-3010SURC



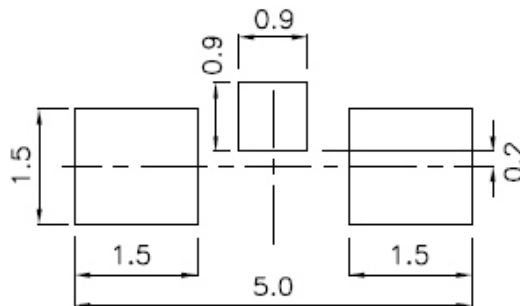
Reflow Soldering Profile For Lead-free SMT Process.



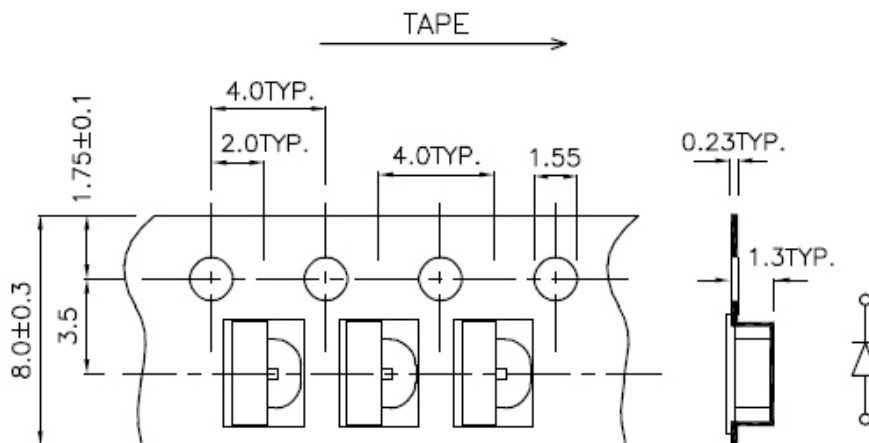
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

**Recommended Soldering Pattern  
(Units : mm)**



**Tape Specifications  
(Units : mm)**



Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.