

APA3010SURC

HYPER RED

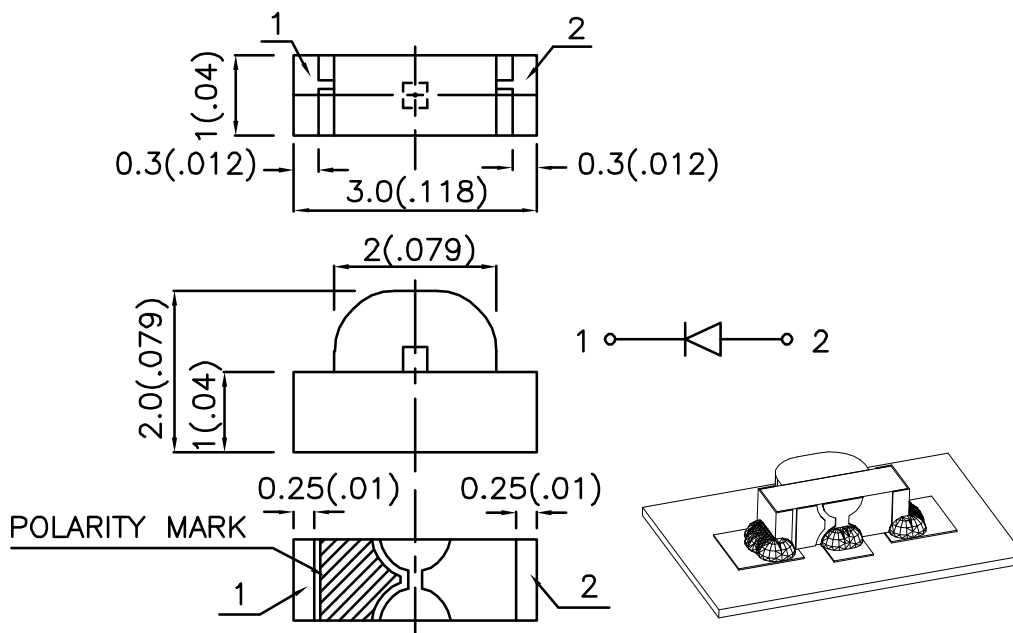
### Features

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

### 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  $\pm 0.15(0.006)$  unless otherwise noted.
3. Specifications are subject to change without notice.

## Selection Guide

| Part No.    | Dice                | Lens Type   | Iv (mcd)<br>@ 20mA |      | Viewing<br>Angle |
|-------------|---------------------|-------------|--------------------|------|------------------|
|             |                     |             | Min.               | Typ. | 2θ1/2            |
| APA3010SURC | 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

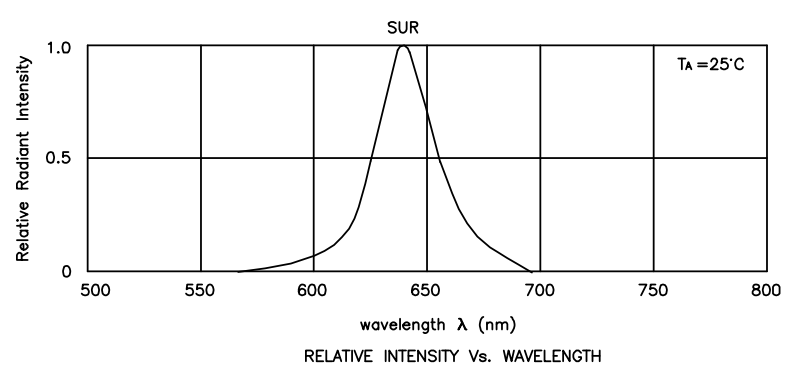
| Symbol                | Parameter                | Device    | Typ. | Max. | Units | Test Conditions            |
|-----------------------|--------------------------|-----------|------|------|-------|----------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Hyper Red | 640  |      | 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 |       |

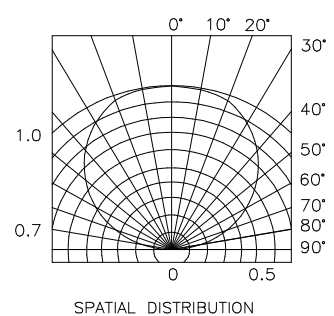
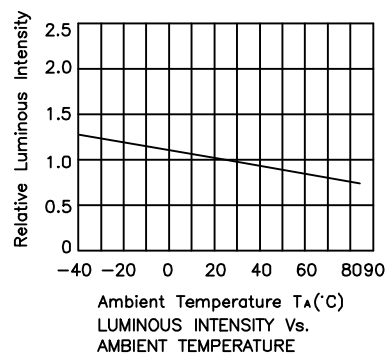
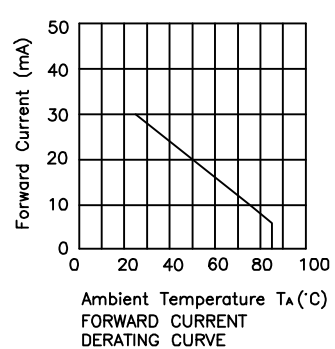
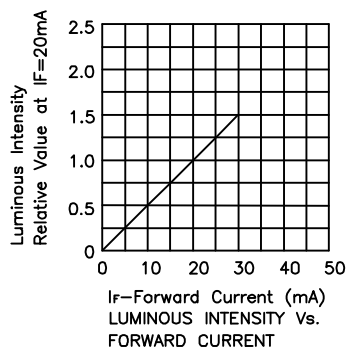
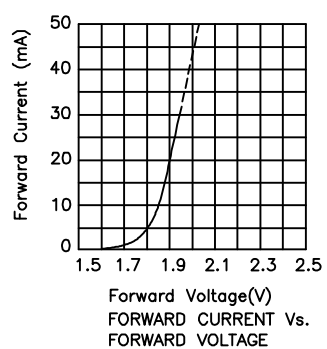
Note:

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



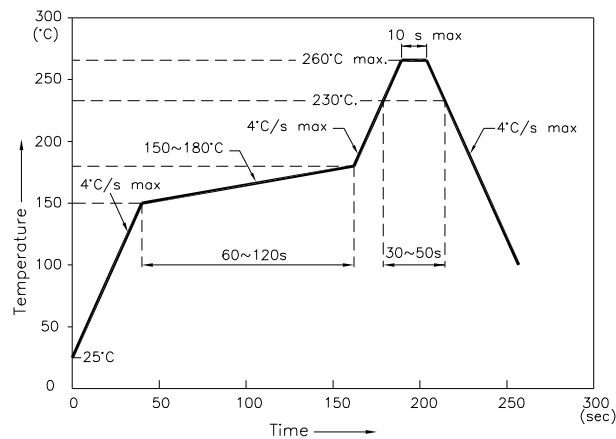
Hyper Red

APA3010SURC



## APA3010SURC

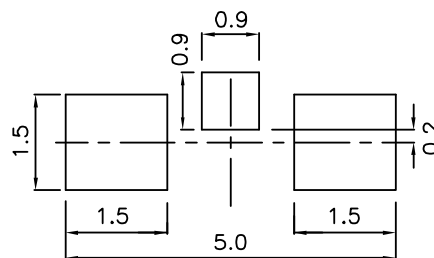
Reflow Soldering Profile For Lead-free SMT Process.



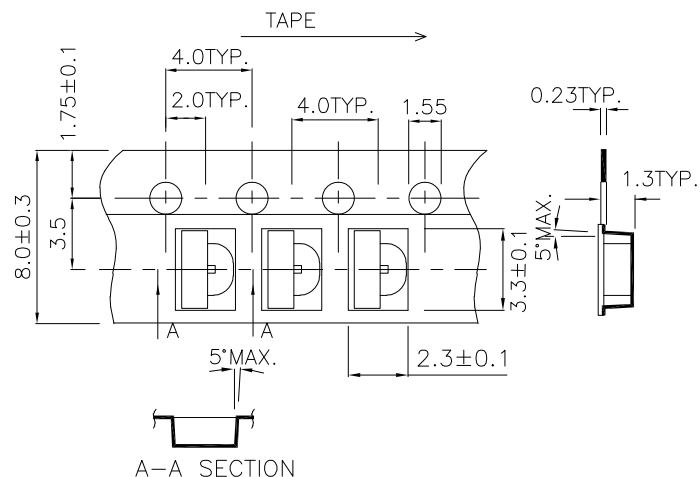
### NOTES:

1. We recommend the reflow temperature  $245^{\circ}\text{C} (+/-5^{\circ}\text{C})$ . The maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
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:

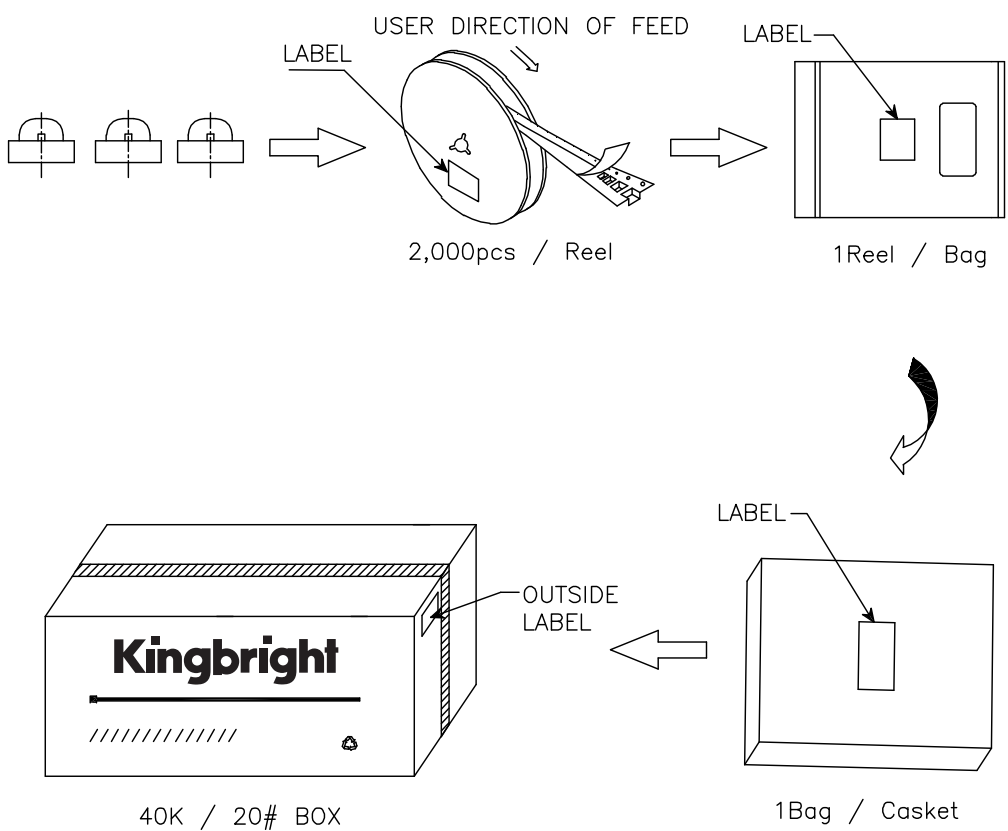
If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength:  $\pm 1\text{nm}$
2. Luminous Intensity:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.

PACKING & LABEL SPECIFICATIONS

APA3010SURC



|                                                                                      |                                                                                                                     |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Kingbright</b>                                                                    |                                                                                                                     |
| P/NO: APA3010xxx                                                                     |                                                                                                                     |
| QTY: 2,000 pcs                                                                       | Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C<br/>xx xx. xxxx<br/>PASSED</span> |
| S/N: XXXX                                                                            | Date                                                                                                                |
| CODE: XXX                                                                            |                                                                                                                     |
| LOT NO:                                                                              |                                                                                                                     |
|  |                                                                                                                     |
| RoHS Compliant                                                                       |                                                                                                                     |

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