

Part Number: KPDA-3020LVSECK-J3-PF Hyper Red

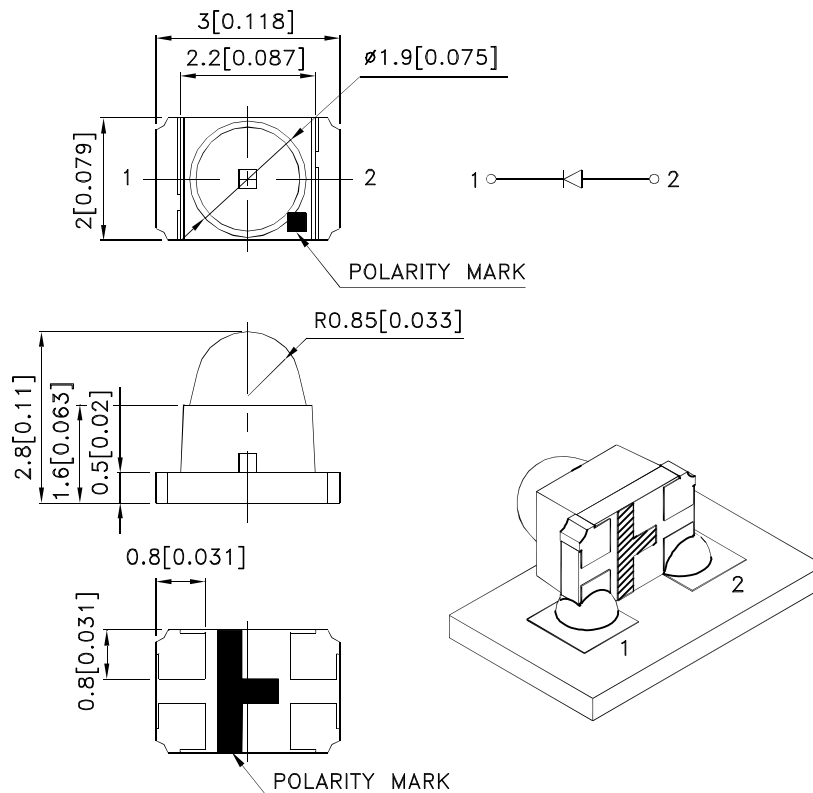
### Features

- 3.0mmx2.0mm SMD LED, 2.8mm thickness.
- Low power consumption.
- Ideal for back light and indicator
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- Low current IF=2mA operating.
- RoHS compliant.

### Description

The Hyper Red device is based on light emitting diode chip made from AlGaInP.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2$  (0.008") unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



## Selection Guide

| Part No.              | Emitting Color (Material) | Lens Type   | Iv (mcd) [2]<br>@ 2mA |      | Viewing<br>Angle [1] |
|-----------------------|---------------------------|-------------|-----------------------|------|----------------------|
|                       |                           |             | Min.                  | Typ. | 2θ1/2                |
| KPDA-3020LVSECK-J3-PF | Hyper Red (AlGaInP)       | Water Clear | 700                   | 1000 | 10°                  |
|                       |                           |             | *250                  | *500 |                      |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity / luminous Flux: +/-15%.
- \* Luminous intensity value is traceable to CIE127-2007 standards.

## Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter                | Emitting Color | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|----------------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | Hyper Red      | 640  |      | nm    | If=2mA          |
| λD [1] | Dominant Wavelength      | Hyper Red      | 625  |      | nm    | If=2mA          |
| Δλ1/2  | Spectral Line Half-width | Hyper Red      | 20   |      | nm    | If=2mA          |
| C      | Capacitance              | Hyper Red      | 27   |      | pF    | Vf=0V;f=1MHz    |
| Vf [2] | Forward Voltage          | Hyper Red      | 1.8  | 2.1  | V     | If=2mA          |
| Ir     | Reverse Current          | Hyper Red      |      | 10   | uA    | Vr=5V           |

Notes:

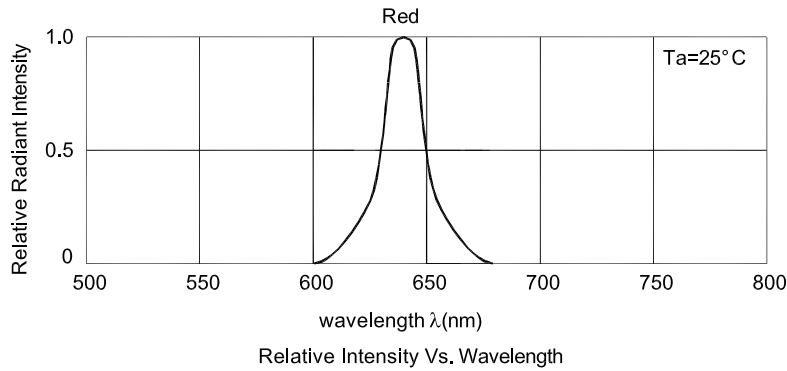
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

| Parameter                | Values         | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 63             | mW    |
| DC Forward Current       | 30             | mA    |
| Peak Forward Current [1] | 150            | mA    |
| Reverse Voltage          | 5              | V     |
| Operating Temperature    | -40°C To +85°C |       |
| Storage Temperature      | -40°C To +85°C |       |

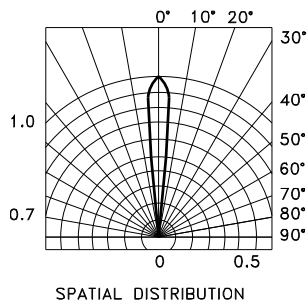
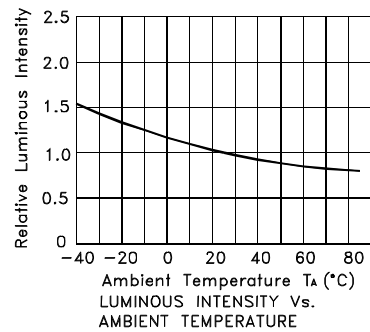
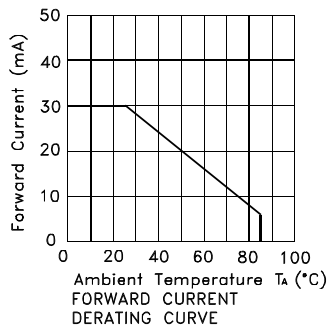
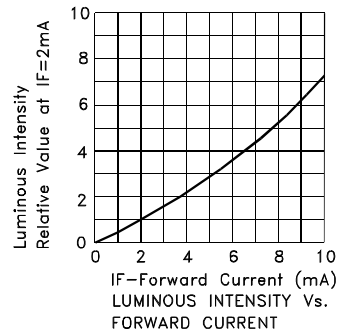
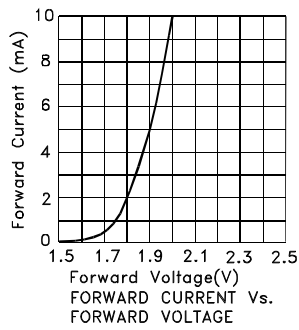
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



## Hyper Red

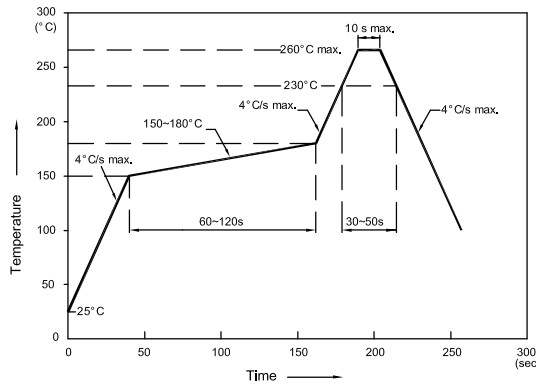
### KPDA-3020LVSECK-J3-PF



## KPDA-3020LVSECK-J3-PF

Reflow soldering is recommended and the soldering profile is shown below.  
Other soldering methods are not recommended as they might cause damage to the product.

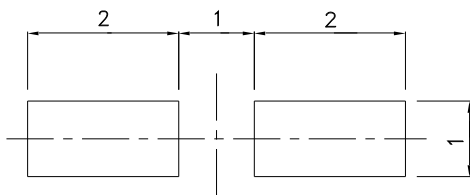
Reflow Soldering Profile For Lead-free SMT Process.



**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.

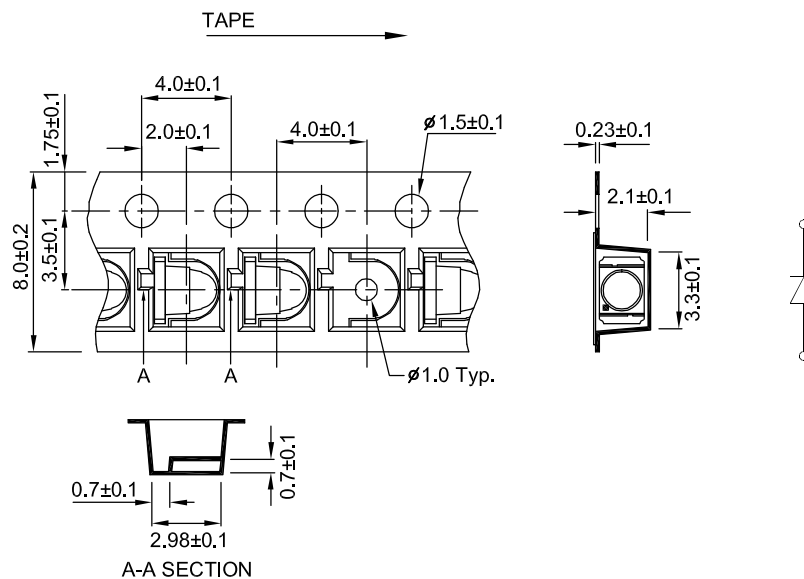
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

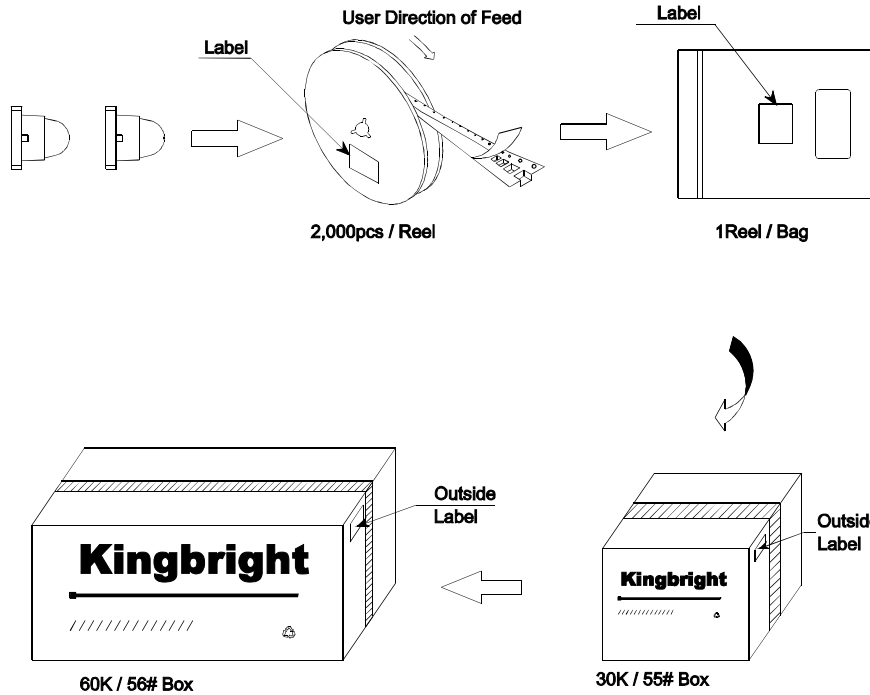



### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

## KPDA-3020LVSECK-J3-PF



|  |      |                            |
|--|------|----------------------------|
| <b>Kingbright</b>  |      |                            |
| P/NO: KPDA-3020XXX   |      |                            |
| QTY: 2,000 pcs   | Q.C. | Q C<br>XX XX XXX<br>PASSED |
| S/N: XXXX  |      |                            |
| CODE: XXX  |      |                            |
| LOT NO:  |      |                            |
|  |      |                            |
| RoHS Compliant   |      |                            |

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