Kingbright

**3.0x2.0mm RIGHT ANGLE SMD LED**

Part Number: KPDA-3020LVSYCK-J3-PF

Super Bright Yellow

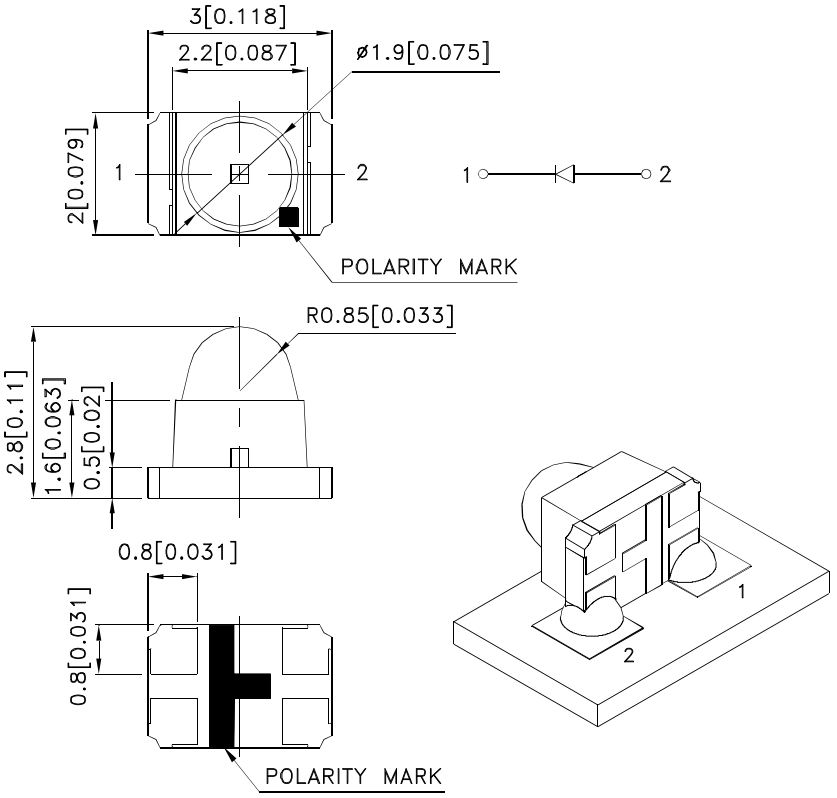
## Features

- 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 Super Bright Yellow device is based on light emitting diode chip made from AlGaInP.

## Package Dimensions




Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±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] @ 2mA | | Viewing Angle [1] |
|---|---|---|---|---|---|
| | | | Min. | Typ. | 2θ1/2 |
| KPDA-3020LVSYCK-J3-PF | Super Bright Yellow (AlGaInP) | Water Clear | 180 | 500 | 10° |

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%.
3. Luminous intensity value is traceable to CIE127-2007 standards.

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

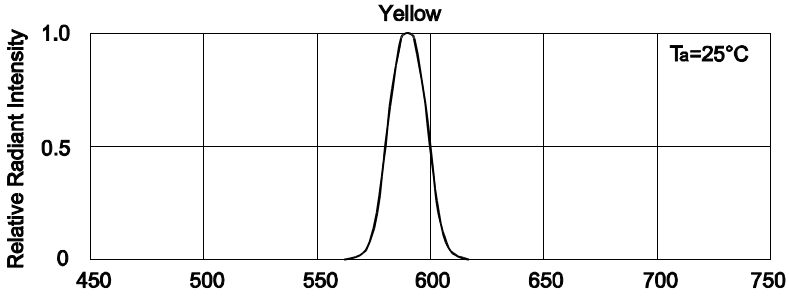
| Symbol | Parameter | Emitting Color | Typ. | Max. | Units | Test Conditions |
|---|---|---|---|---|---|---|
| λpeak | Peak Wavelength | Super Bright Yellow | 590 | | nm | $I_F$=2mA |
| λD [1] | Dominant Wavelength | Super Bright Yellow | 590 | | nm | $I_F$=2mA |
| Δλ1/2 | Spectral Line Half-width | Super Bright Yellow | 20 | | nm | $I_F$=2mA |
| C | Capacitance | Super Bright Yellow | 45 | | pF | $V_F$=0V;f=1MHz |
| $V_F$ [2] | Forward Voltage | Super Bright Yellow | 1.85 | 2.1 | V | $I_F$=2mA |
| $I_R$ | Reverse Current | Super Bright Yellow | | 10 | uA | $V_R$=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

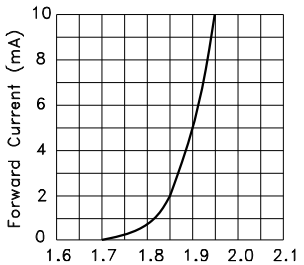
| Parameter | Values | Units |
|---|---|---|
| Power dissipation | 63 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 140 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C | |

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.

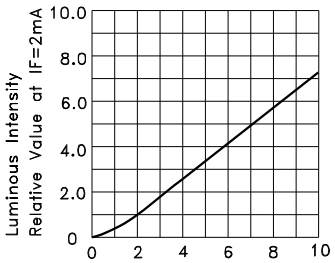



Relative Intensity Vs. Wavelength

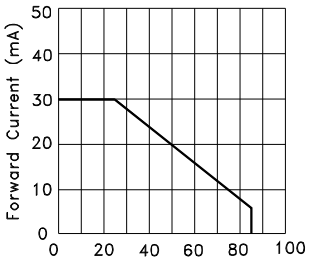
**Super Bright Yellow KPDA-3020LVSYCK-J3-PF**



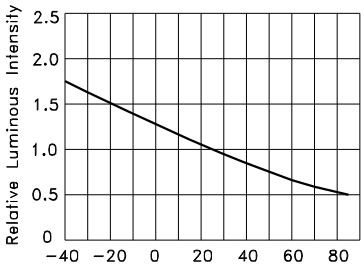

FORWARD CURRENT Vs.
FORWARD VOLTAGE



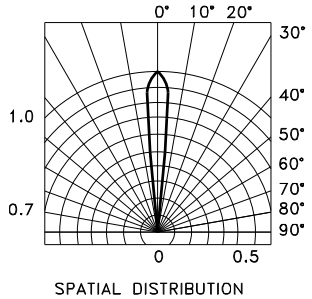

LUMINOUS INTENSITY Vs.
FORWARD CURRENT




FORWARD CURRENT
DERATING CURVE




LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

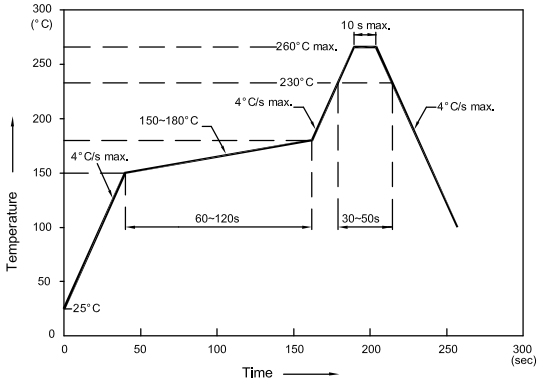



SPATIAL DISTRIBUTION

## KPDA-3020LVSYCK-J3-PF

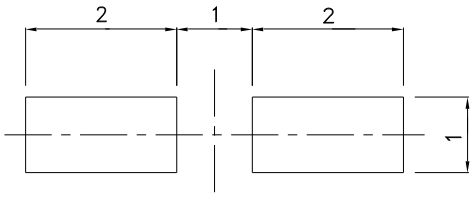
**Reflow soldering is recommended and the soldering profile is shown below.**
**Other soldering methods are not recommended as they might cause damage to the product.**

Reflow Soldering Profile For Lead-free SMT Process.

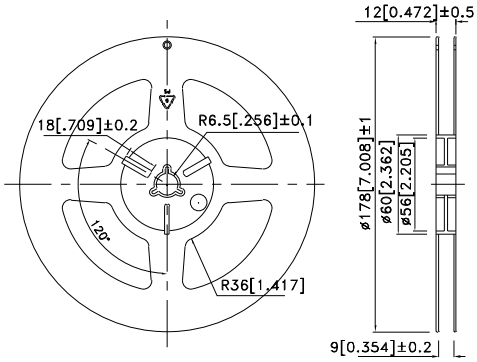



NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

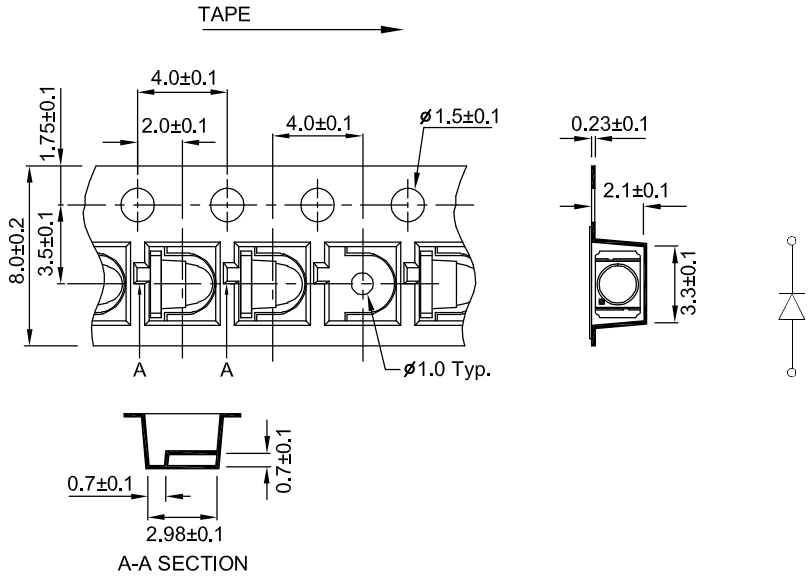
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)




### Reel Dimension




### Tape Dimensions (Units : mm)



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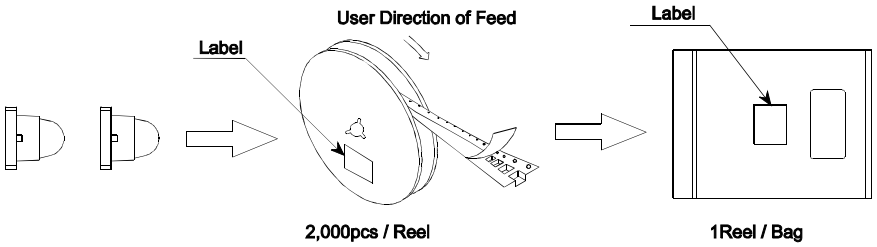
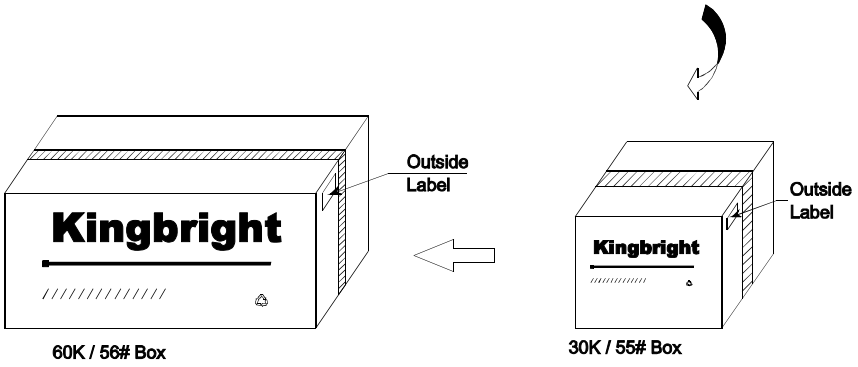
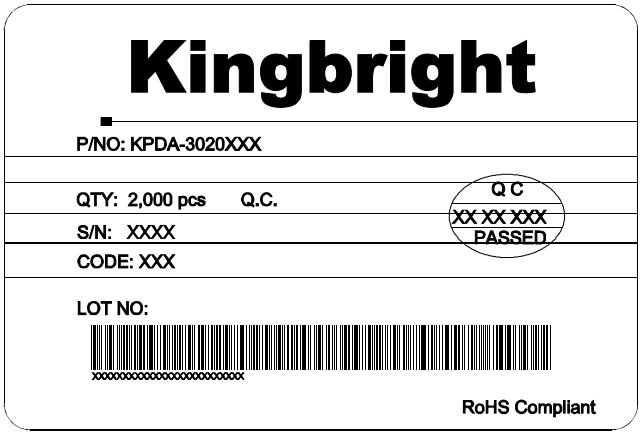
**PACKING & LABEL SPECIFICATIONS** **KPDA-3020LVSYCK-J3-PF**

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