

Part Number: KPBDA-3020SYKCGKC-PF

Super Bright Yellow
Green

Features

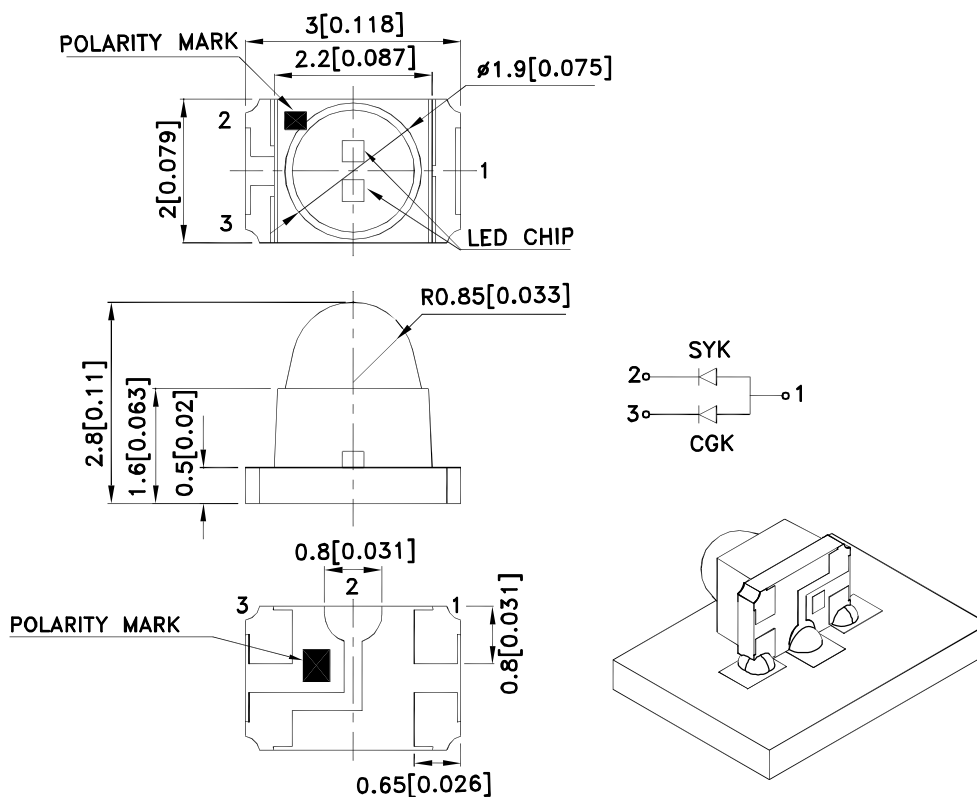
- 3.0mmx2.0mm SMT LED, 2.8mm thickness.
- Low power consumption.
- Various colors and lens types available.
- Ideal for back light and indicator
- Package : 2000pcs / reel.
- When soldered in the sideview configuration, the maximum shear tolerance of the epoxy lens is 300g.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip.

The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

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. | Dice | Lens Type | Iv (mcd) [2] @ 20mA | | Viewing Angle [1] |
|----------------------|-------------------------------|-------------|------------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| KPBDA-3020SYKCGKC-PF | Super Bright Yellow (AlGaInP) | Water Clear | 500 | 900 | 15° |
| | Green (AlGaInP) | | 120 | 300 | |

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 the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|------------------------------|------------|------------|-------|-----------------|
| λpeak | Peak Wavelength | Super Bright Yellow Green | 590 574 | | nm | IF=20mA |
| λD [1] | Dominant Wavelength | Super Bright Yellow Green | 590 570 | | nm | IF=20mA |
| Δλ1/2 | Spectral Line Half-width | Super Bright Yellow Green | 20 20 | | nm | IF=20mA |
| C | Capacitance | Super Bright Yellow Green | 20 15 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Super Bright Yellow Green | 2 2.1 | 2.5 2.5 | V | IF=20mA |
| IR | Reverse Current | Super Bright Yellow Green | | 10 10 | uA | VR = 5V |

Notes:

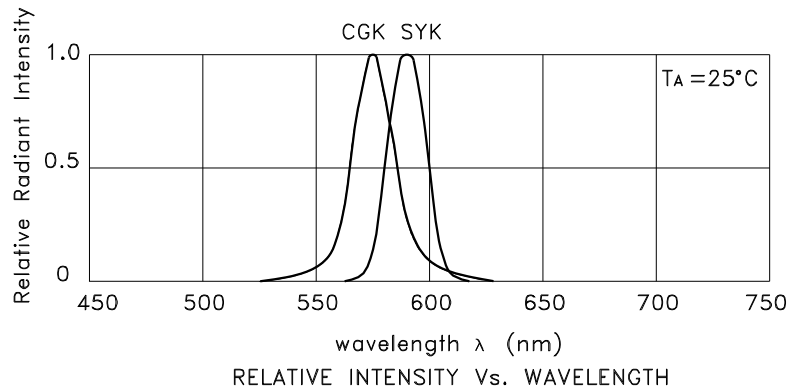
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

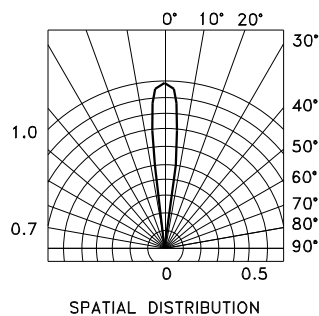
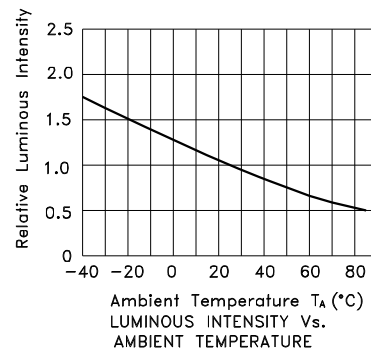
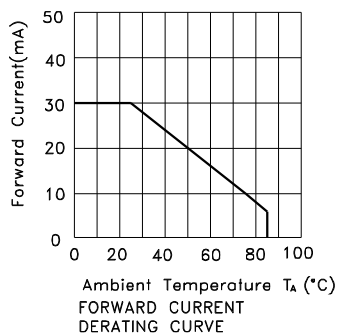
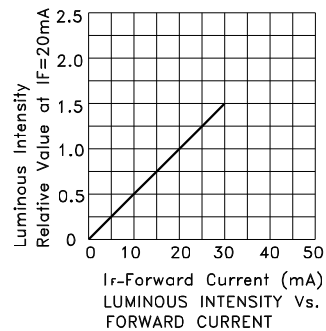
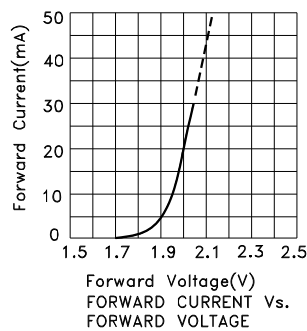
| Parameter | Super Bright Yellow | Green | Units |
|--------------------------|---------------------|-------|-------|
| Power dissipation | 75 | 75 | mW |
| DC Forward Current | 30 | 30 | mA |
| Peak Forward Current [1] | 175 | 150 | mA |
| Reverse Voltage | 5 | | V |
| Operating Temperature | -40°C To +85°C | | |
| Storage Temperature | -40°C To +85°C | | |

Note:

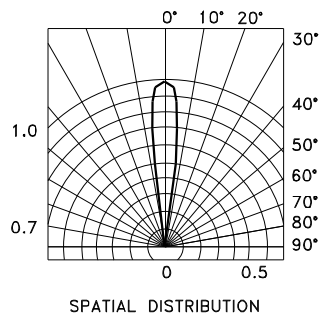
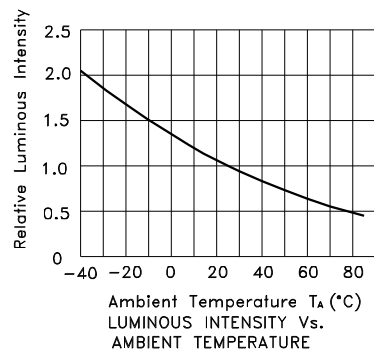
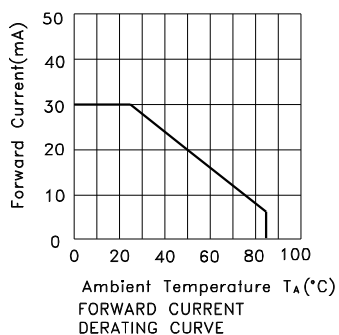
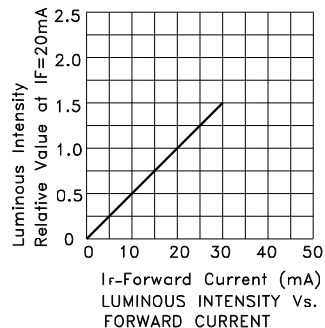
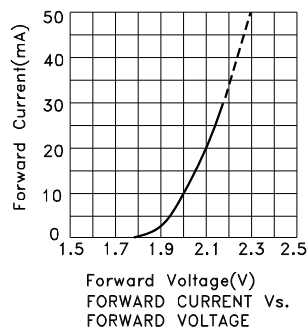
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



KPBDA-3020SYKCGKC-PF Super Bright Yellow



Green



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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.

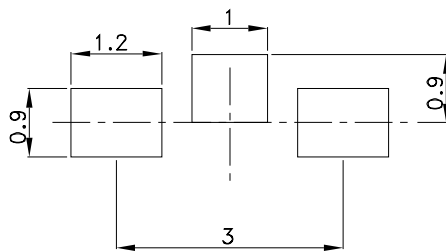
Reflow Soldering Profile For Lead-free SMT Process.



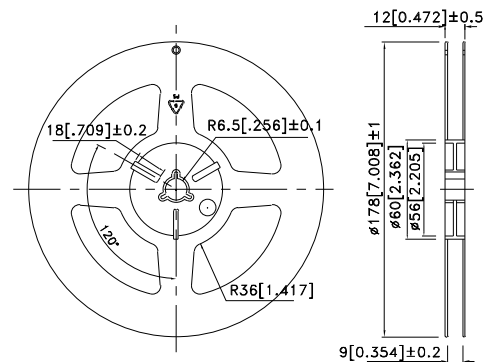
NOTES:

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.

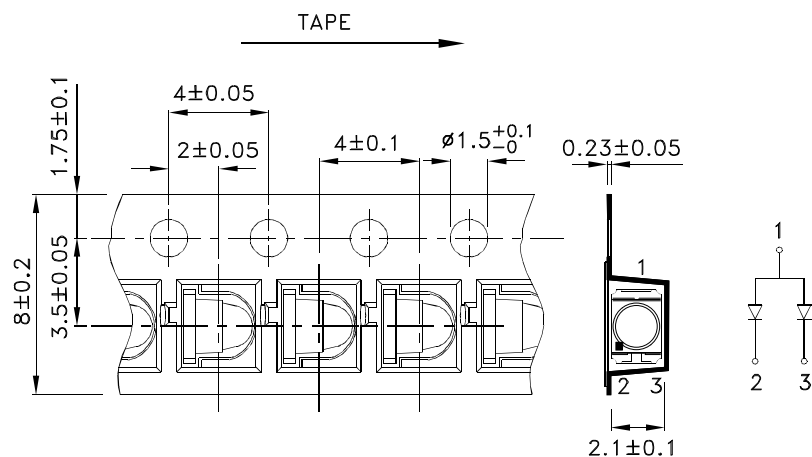
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

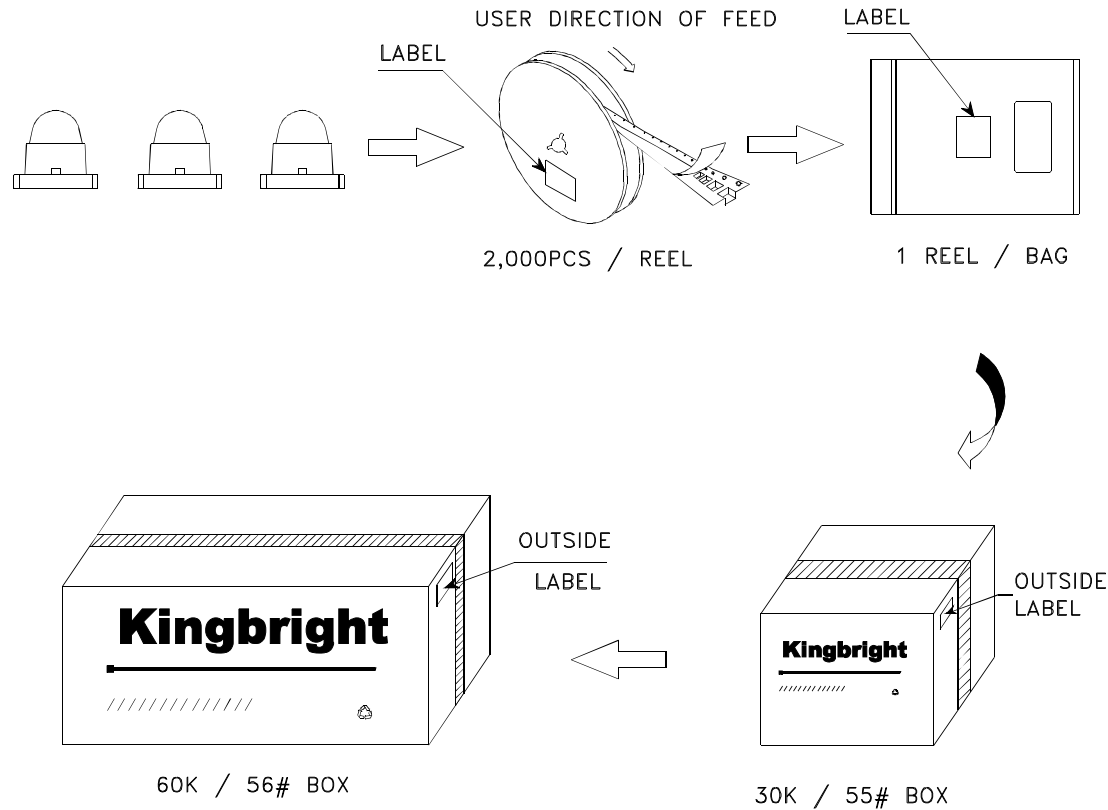



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KPBDA-3020SYKCGKC-PF



| | | | |
|--|-----------|----------------------|-----|
| Kingbright | | | |
| P/NO: KPBDA-3020xxx | | | |
| QTY: | 2,000 pcs | Q.C. | Q C |
| S/N: | XXXX | XX XX XXXX PASSED | |
| CODE: XXX | | | |
| LOT NO: | | | |
|  | | | |
| RoHS Compliant | | | |

Detailed application notes are listed on our website.
http://www.kingbright.com/application_notes