

Part Number: APBD3224SYKCGKC

Super Bright Yellow  
Green

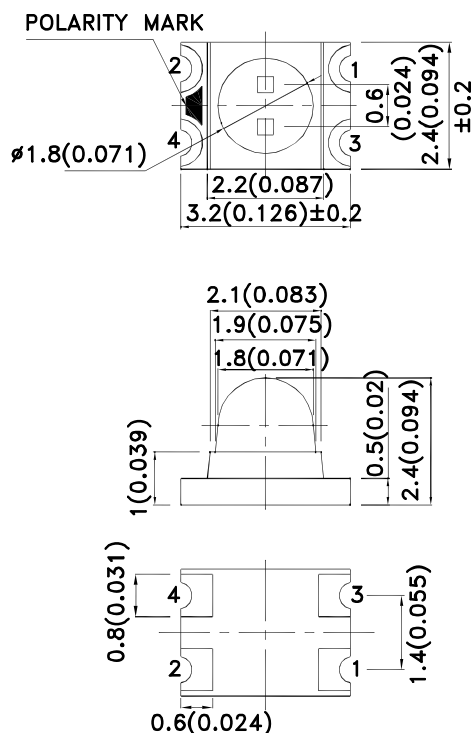
### Features

- 3.2x2.4mm SMT LED, 2.4mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package : 1500pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

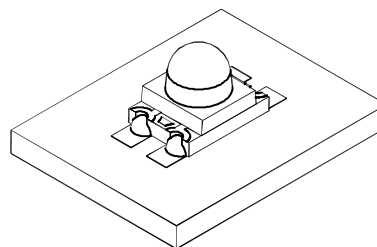
The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip.  
The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

### Package Dimensions



YELLOW  
2 1

GREEN  
4 3



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1(0.004)$  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]<br>@ 20mA |      | Viewing<br>Angle [1] |
|-----------------|-------------------------------|-------------|------------------------|------|----------------------|
|                 |                               |             | Min.                   | Typ. | 2θ1/2                |
| APBD3224SYKCGKC | Super Bright Yellow (AlGaInP) | Water Clear | 450                    | 800  | 20°                  |
|                 | Green (AlGaInP)               |             | 120                    | 300  |                      |

Notes:

1.  $\theta_{1/2}$  is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.

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

| Symbol                | Parameter                | Device                       | Typ.       | Max.       | Units | Test Conditions           |
|-----------------------|--------------------------|------------------------------|------------|------------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Super Bright Yellow<br>Green | 590<br>574 |            | nm    | I <sub>F</sub> =20mA      |
| $\lambda_D$ [1]       | Dominant Wavelength      | Super Bright Yellow<br>Green | 590<br>570 |            | nm    | I <sub>F</sub> =20mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Yellow<br>Green | 20<br>20   |            | nm    | I <sub>F</sub> =20mA      |
| C                     | Capacitance              | Super Bright Yellow<br>Green | 20<br>15   |            | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Super Bright Yellow<br>Green | 2<br>2.1   | 2.5<br>2.5 | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>        | Reverse Current          | Super Bright Yellow<br>Green |            | 10<br>10   | uA    | V <sub>R</sub> = 5V       |

Notes:

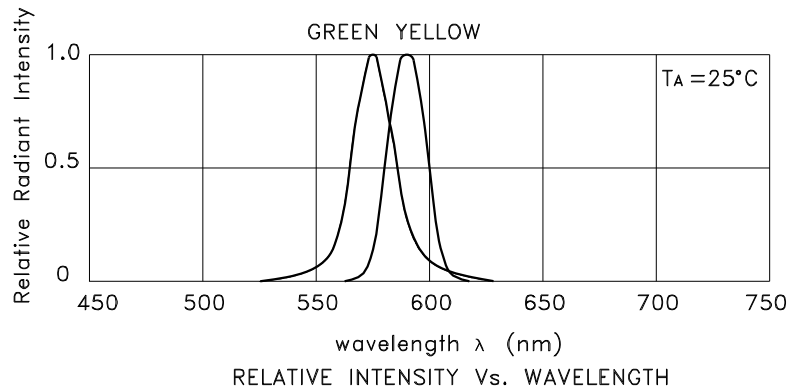
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

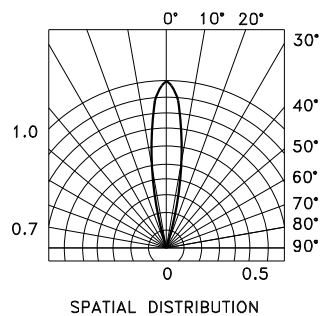
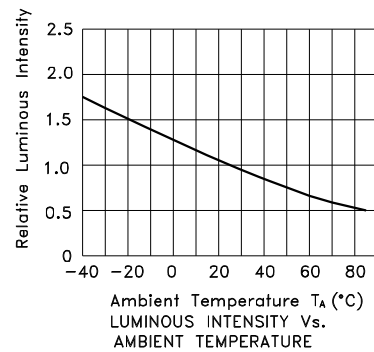
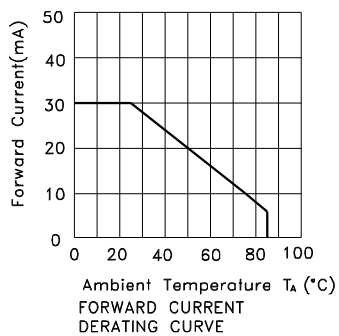
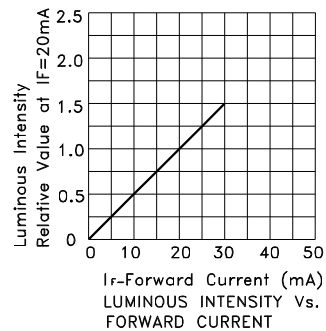
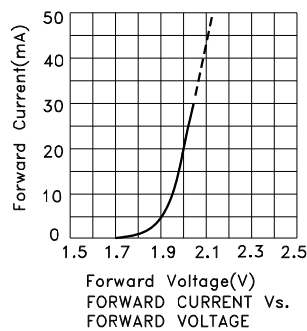
| Parameter                | Super Bright Yellow | Green | Units |
|--------------------------|---------------------|-------|-------|
| Power dissipation        | 75                  | 75    | mW    |
| DC Forward Current       | 30                  | 30    | mA    |
| Peak Forward Current [1] | 175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

Note:

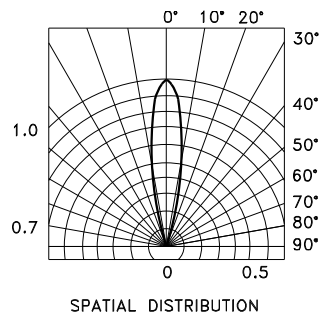
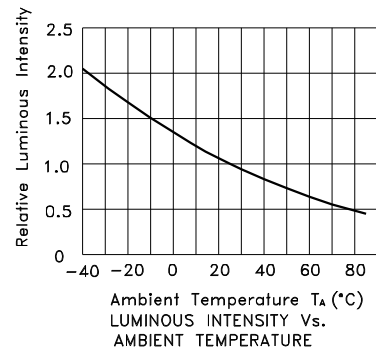
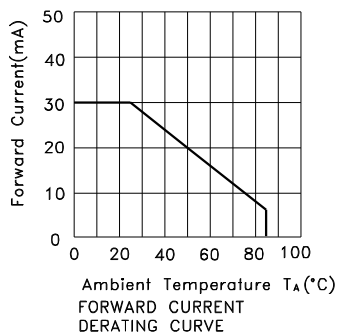
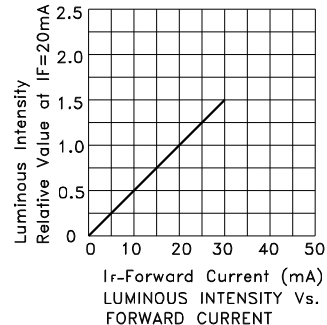
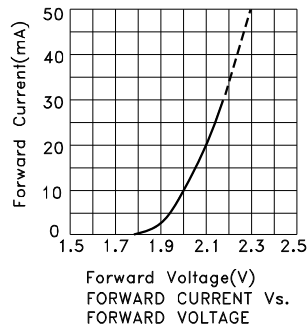
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



## APBD3224SYKCGKC Super Bright Yellow



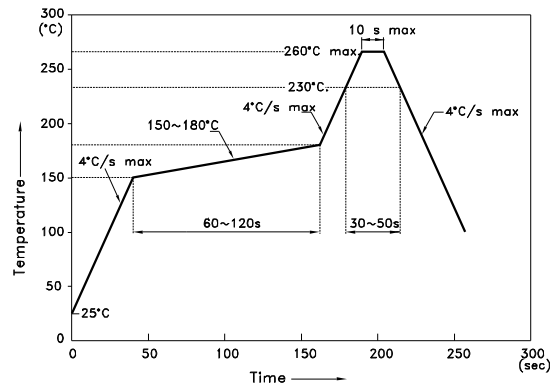
## Green



## APBD3224SYKCGKC

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.

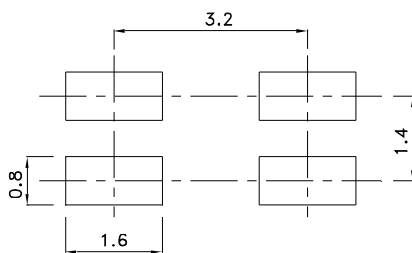
Reflow Soldering Profile For Lead-free SMT Process.



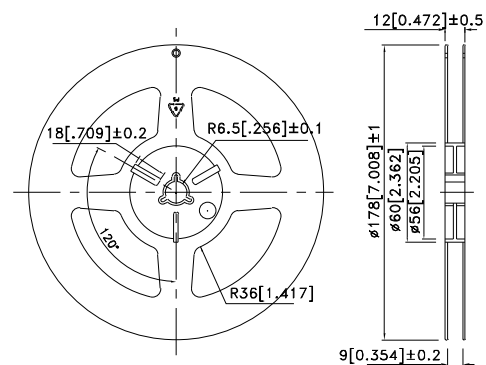
### NOTES:

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.

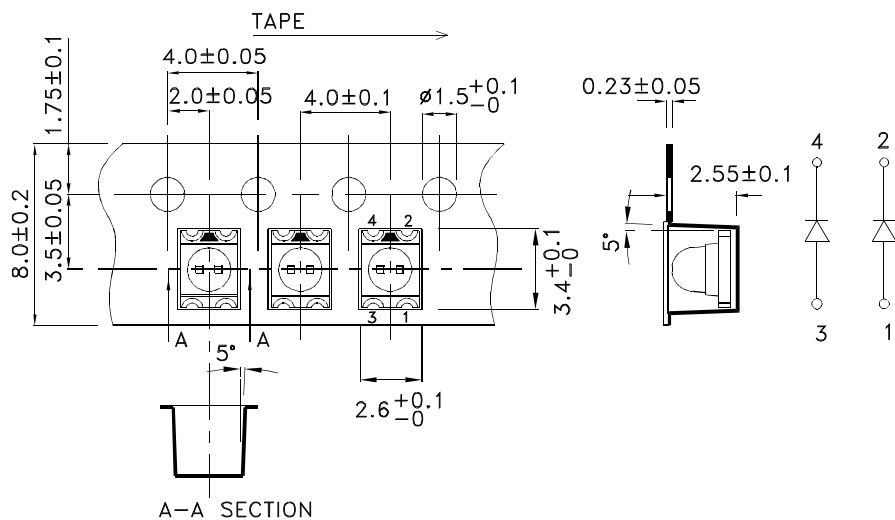
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Reel Dimension

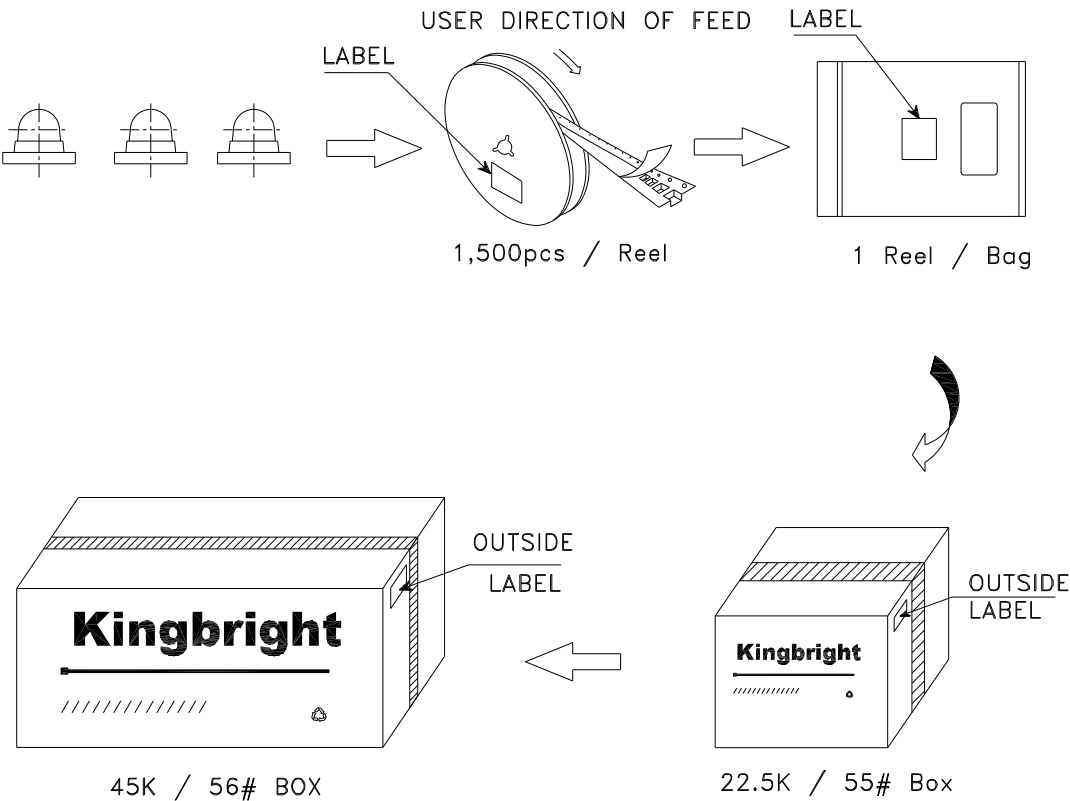


### Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APBD3224SYKCGKC



|                                                                                                                      |                                               |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Kingbright</b>                                                                                                    |                                               |
| P/NO: APBD3224xxx                                                                                                    |                                               |
| QTY: 1,500 pcs                                                                                                       | Q.C. <div>Q C<br/>xx xx xxxx<br/>PASSED</div> |
| S/N: XXXX                                                                                                            |                                               |
| CODE: XXX                                                                                                            |                                               |
| LOT NO:                                                                                                              |                                               |
| <br>xxxxxxxxxxxxxxxxxxxxxxxxxxxx |                                               |
| RoHS Compliant                                                                                                       |                                               |