



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

Part Number: KPBDA-3020SYKZGC-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.
- Tinned pads for improved solderability
- RoHS compliant.

### Description

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

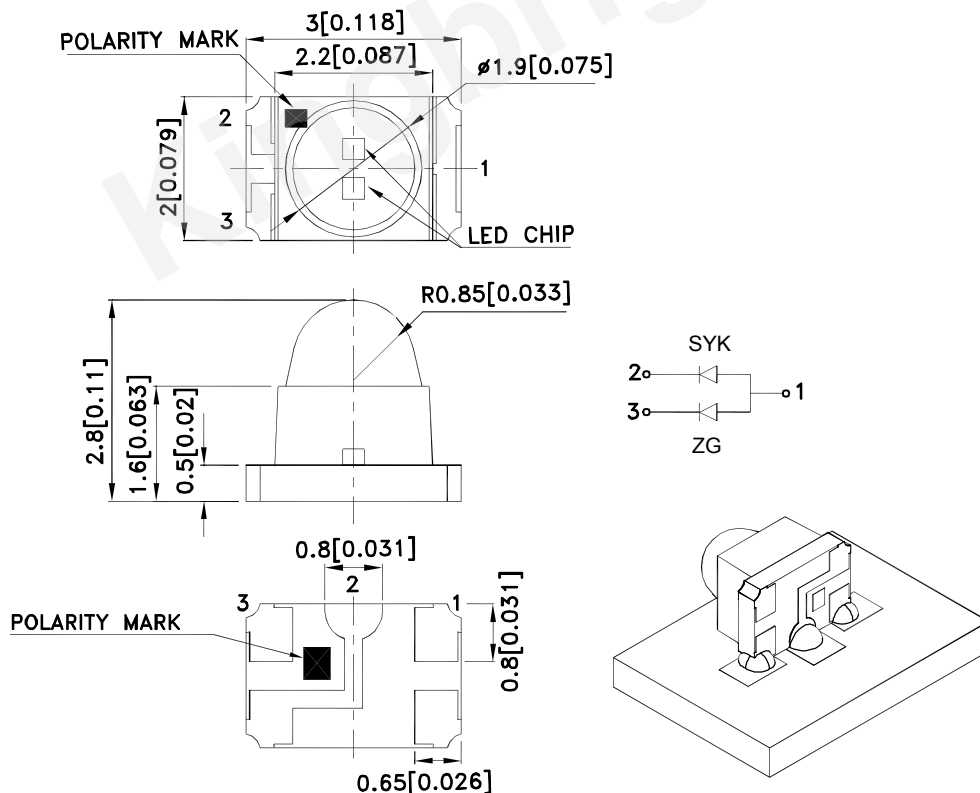
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

### 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-3020SYKZGC-PF	Super Bright Yellow (AlGaInP)	Water Clear	500	900	15°
	Green (InGaN)		400	800	

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
$\lambda_{peak}$	Peak Wavelength	Super Bright Yellow Green	590 515		nm	I <sub>F</sub> =20mA
$\lambda_D$ [1]	Dominant Wavelength	Super Bright Yellow Green	590 525		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Super Bright Yellow Green	20 30		nm	I <sub>F</sub> =20mA
C	Capacitance	Super Bright Yellow Green	20 45		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Super Bright Yellow Green	2 3.3	2.5 4.1	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Super Bright Yellow Green		10 50	uA	V <sub>R</sub> = 5V

Notes:

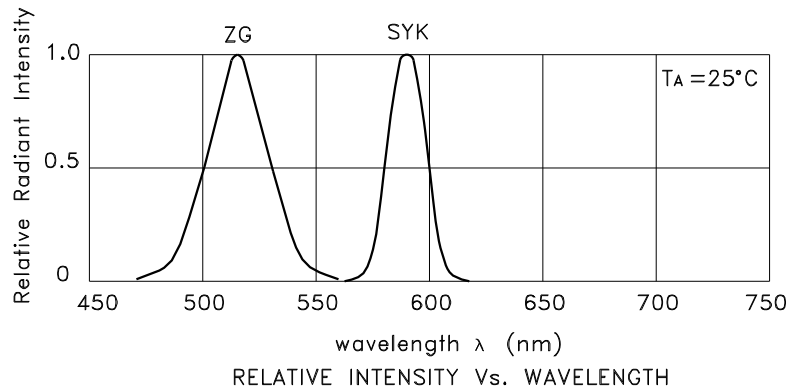
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

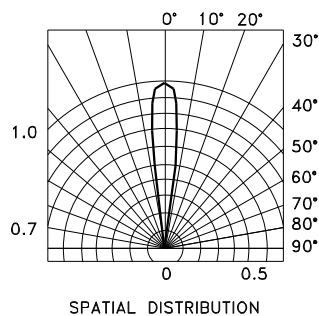
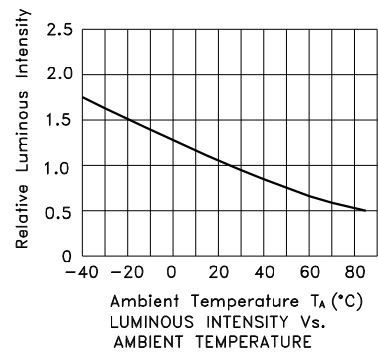
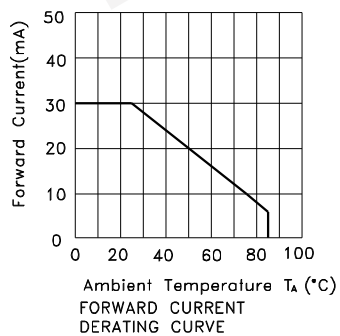
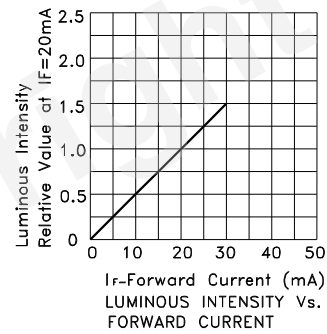
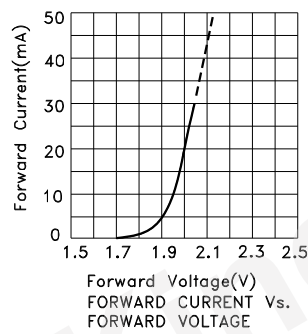
Parameter	Super Bright Yellow	Green	Units
Power dissipation	75	102.5	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	175	150	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

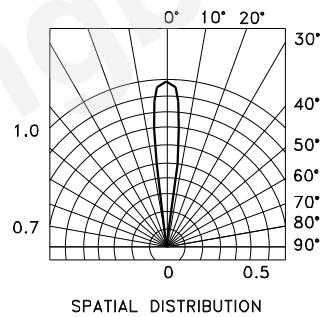
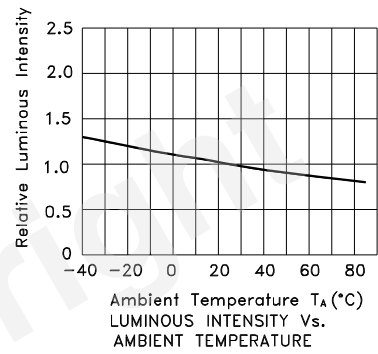
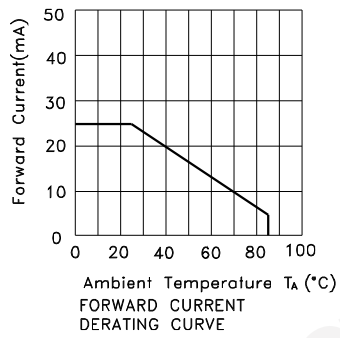
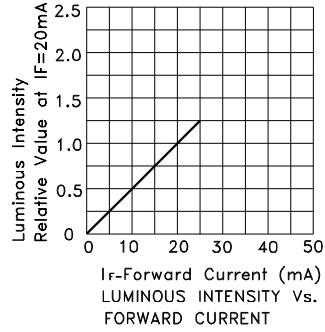
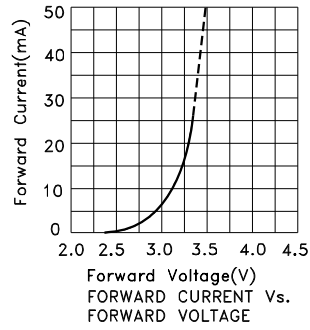
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



## KPBDA-3020SYKZGC-PF Super Bright Yellow



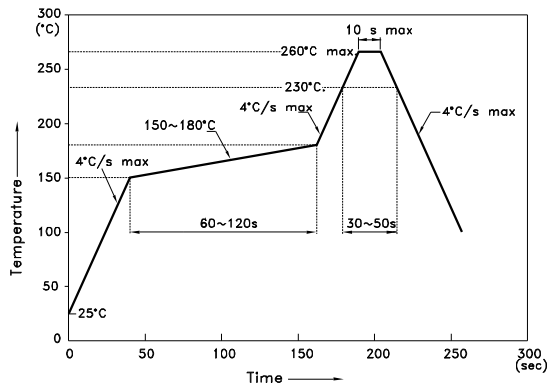
## Green



## KPBDA-3020SYKZGC-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.

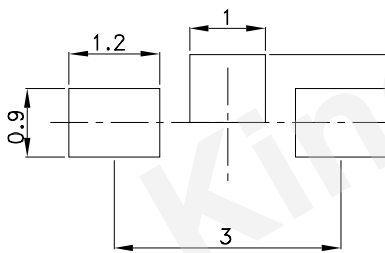
Reflow Soldering Profile For Lead-free SMT Process.



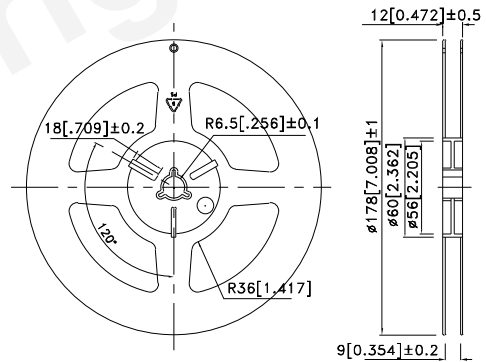
NOTES:

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.

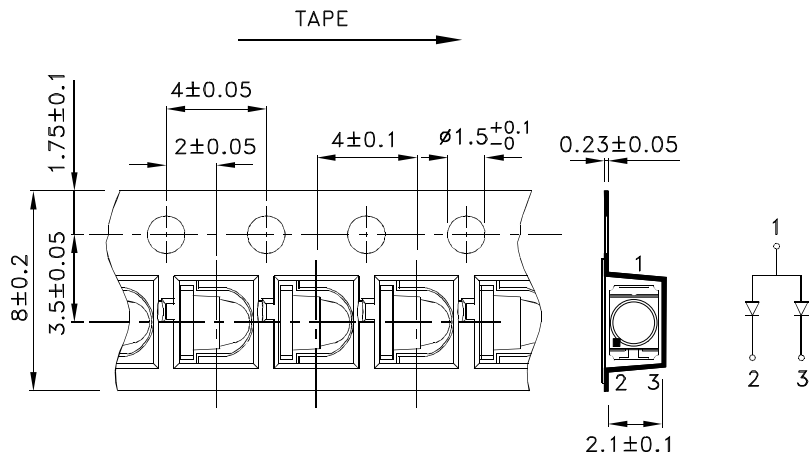
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension



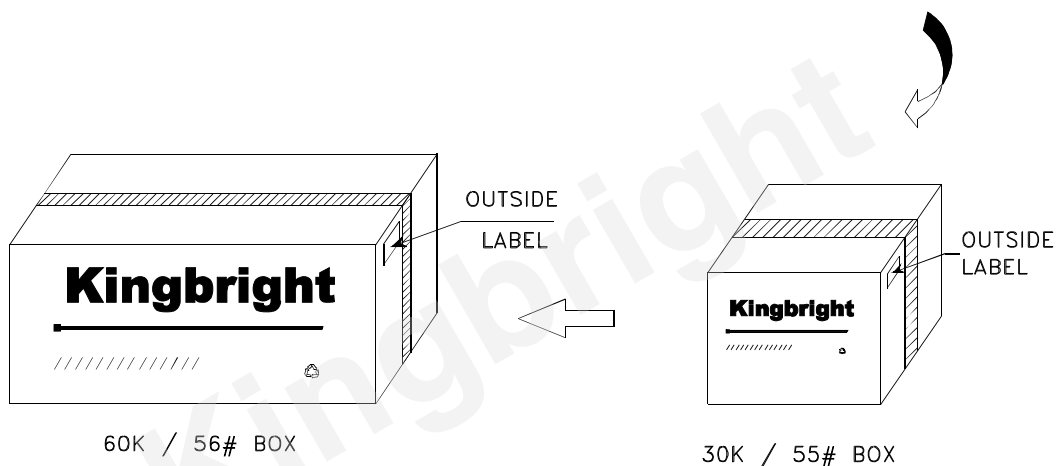
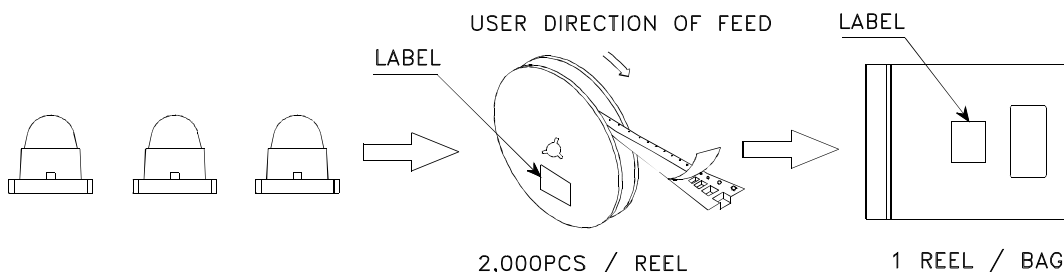
### Tape Dimensions (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

## KPBDA-3020SYKZGC-PF



<h1>Kingbright</h1>	
P/NO: KPBDA-3020xxx	
QTY: 2,000 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C XX XX XXXX PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

Detailed application notes are listed on our website.  
[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)