

### PRELIMINARY SPEC



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

Part Number: AAA5060SYEZGEC

Super Bright Yellow  
Green

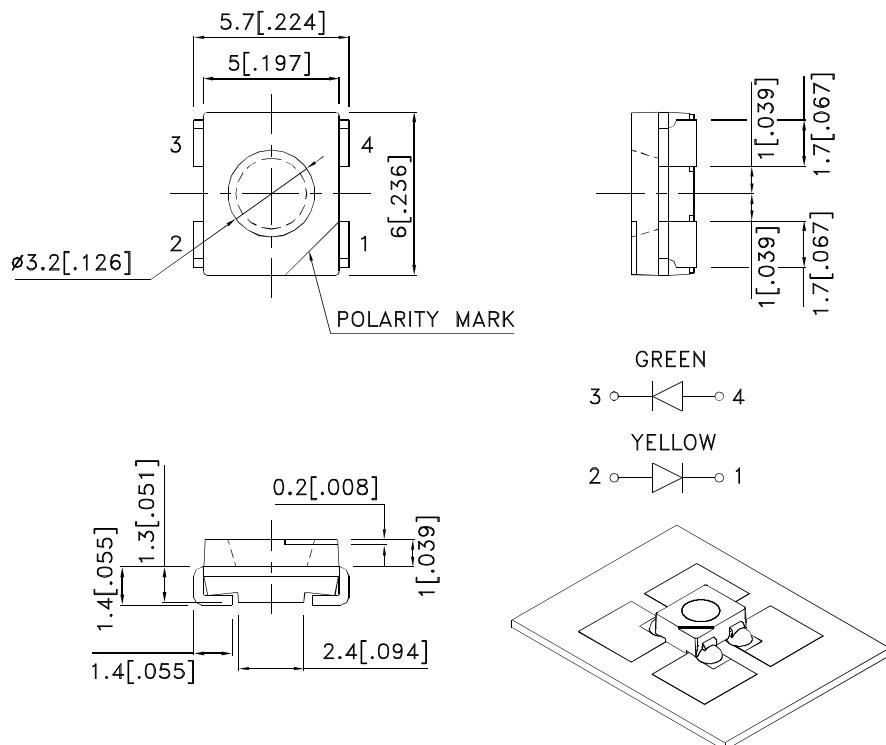
### Features

- Chips can be controlled separately.
- Suitable for all SMT assembly and solder process.
- Available on tape and reel.
- Package: 500pcs / reel.
- Moisture sensitivity level : level 4.
- RoHS compliant.

### Description

The Super Bright Yellow source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode  
The Green source color devices are made with InGaN 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  $\pm 0.25(0.01")$  unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



# Kingbright

## Selection Guide

Part No.	Dice	Lens Type	I <sub>v</sub> (mcd) [2] @ 50mA *30mA		Viewing Angle [1]
			Min.	Typ.	
AAA5060SYEZGEC	Super Bright Yellow (AlGaNp)	WATER CLEAR	280	500	100°
	Green (InGaN)		*1200	*2000	

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 with asterisk is measured at 30mA; Luminous intensity/ luminous Flux: +/-15%.

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

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Yellow Green	592 520		nm	I <sub>F</sub> =20mA
λD [1]	Dominant Wavelength	Super Bright Yellow Green	590 525		nm	I <sub>F</sub> =20mA
Δλ1/2	Spectral Line Half-width	Super Bright Yellow Green	20 35		nm	I <sub>F</sub> =20mA
C	Capacitance	Super Bright Yellow Green	33 100		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Super Bright Yellow Green	2 3.2	2.5 4	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Super Bright Yellow Green		10 10	uA	V <sub>R</sub> = 5V

Notes:

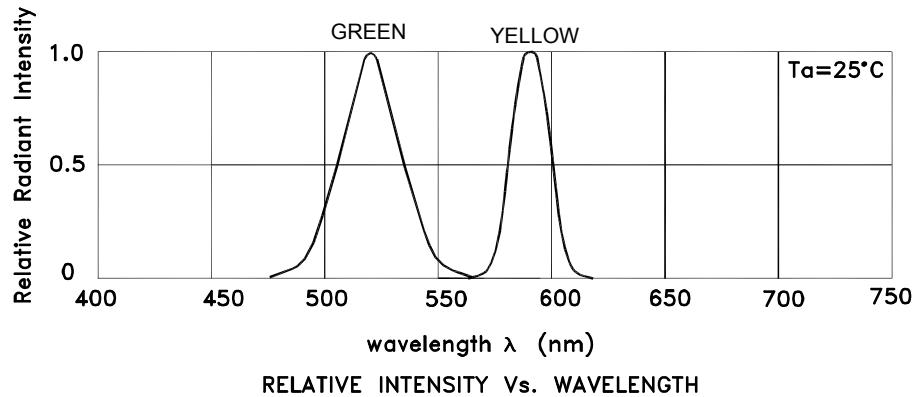
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

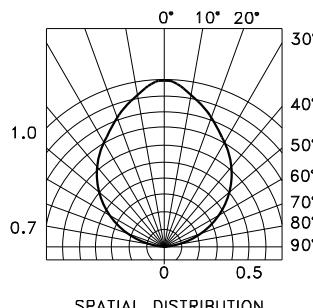
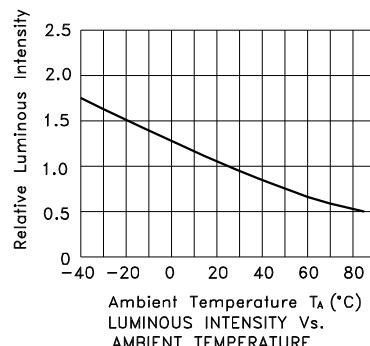
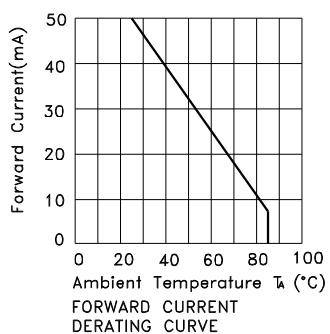
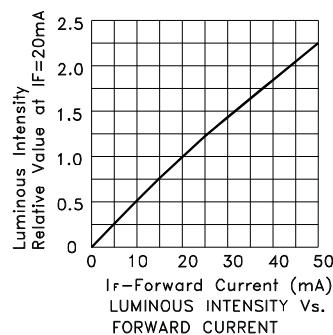
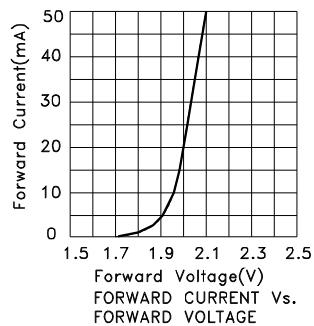
Parameter	Super Bright Yellow	Green	Units
Power dissipation	125	120	mW
DC Forward Current	50	30	mA
Peak Forward Current [1]	200	100	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

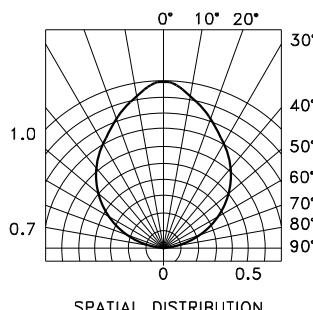
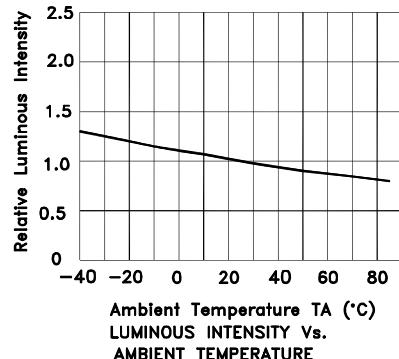
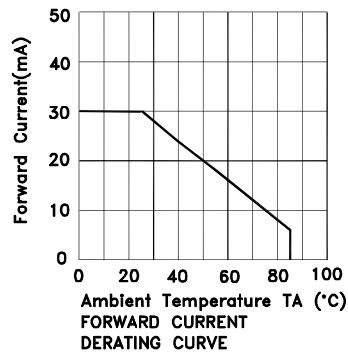
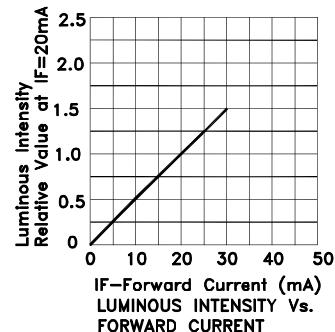
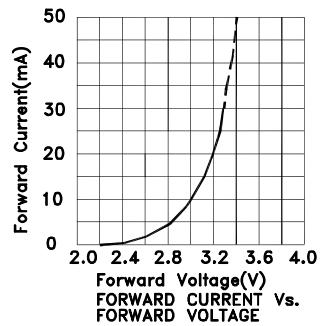
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



**AAA5060SYEZGEC**  
Super Bright Yellow



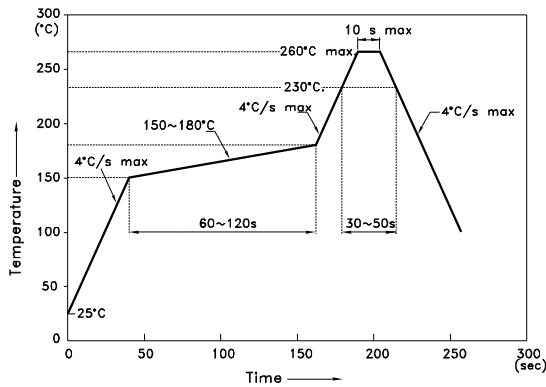
Green



## AAA5060SYEZGEC

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.

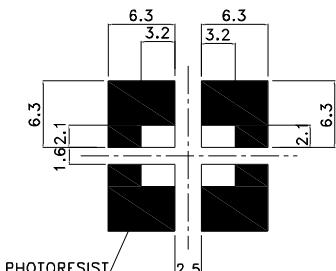


NOTES:

1. We recommend the reflow temperature  $245^{\circ}\text{C} (+/- 5^{\circ}\text{C})$ . The maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
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.

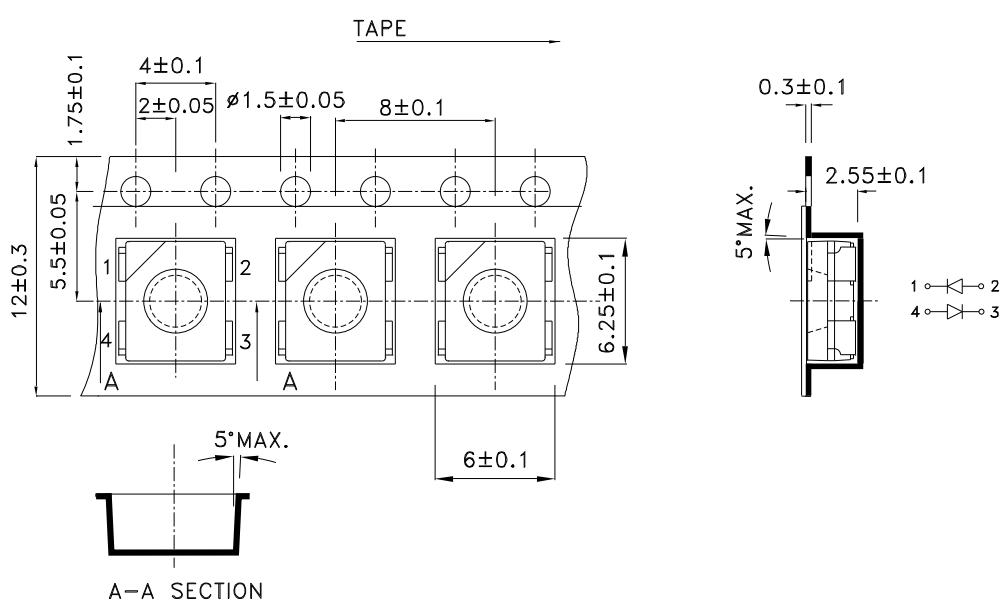
### Recommended Soldering Pattern

(Units : mm; Tolerance:  $\pm 0.1$ )



### Tape Dimensions

(Units : mm)



## PACKING & LABEL SPECIFICATIONS

AAA5060SYEZGEC

