

### PRELIMINARY SPEC



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

Part Number: AAA5060SEEVGAPBEC

HYPER ORANGE  
GREEN  
BLUE

### 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 Hyper Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

The Green source color devices are made with InGaN on G-SiC Light Emitting Diode.

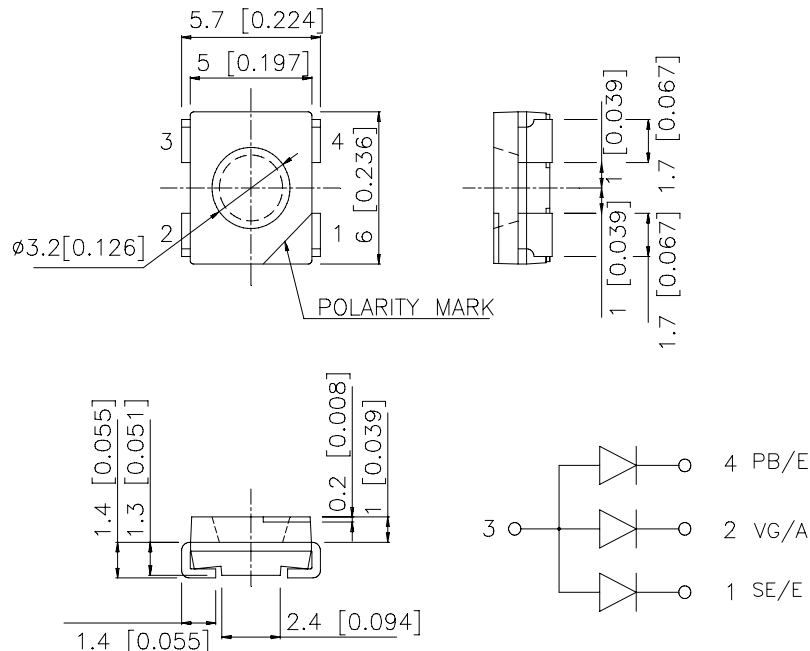
The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

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.

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @50mA *30mA		Viewing Angle [1]
			Min.	Typ.	2 θ 1/2
AAA5060SEEVGAPBEC	HYPER ORANGE(InGaAlP)	WATER CLEAR	650	1000	100°
	GREEN (InGaN)		*180	*350	
	BLUE (InGaN)		*110	*250	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline 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
$\lambda_{peak}$	Peak Wavelength	Hyper Orange Green Blue	630 520 465		nm	I <sub>F</sub> =20mA
$\lambda_D$ [1]	Dominant Wavelength	Hyper Orange Green Blue	621 525 470		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Orange Green Blue	20 35 25		nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Orange Green Blue	25 100 110		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Hyper Orange Green Blue	2.0 3.2 3.7	2.5 4.0 4.3	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Hyper Orange Green Blue		10 10 10	uA	V <sub>R</sub> = 5V

Notes:

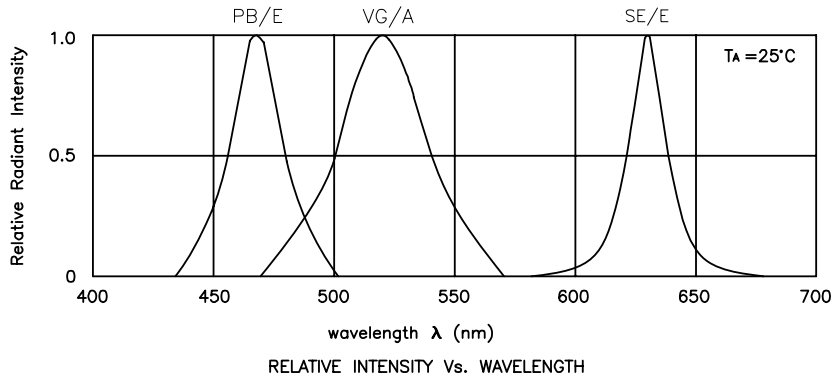
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

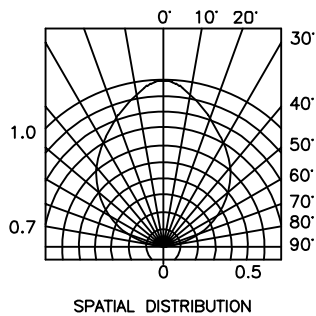
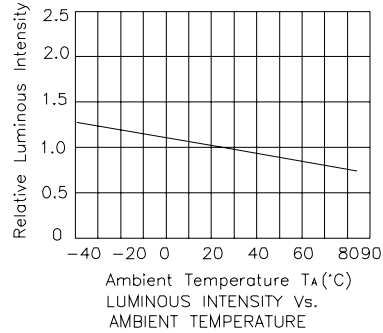
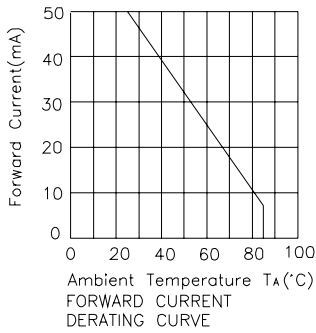
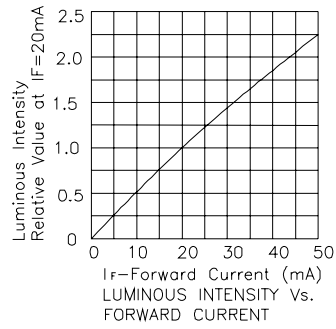
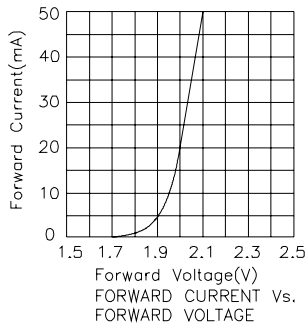
Parameter	Hyper Orange	Green	Blue	Units
Power dissipation [2]	350			mW
DC Forward Current	50	50	30	mA
Peak Forward Current [1]	195	100	160	mA
Reverse Voltage	5	5	5	V
Operating / Storage Temperature	-40°C To +85°C			

Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Within 350mW at all chips are lightened.

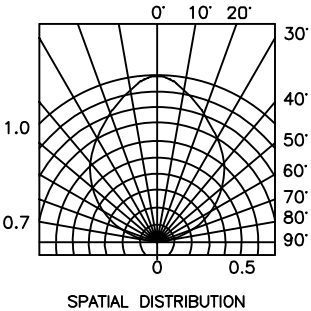
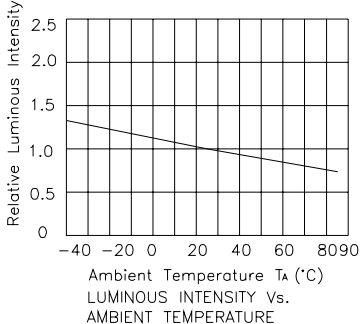
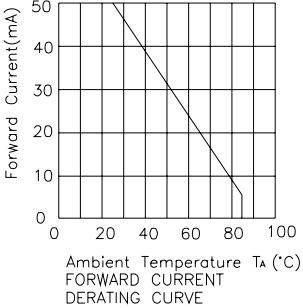
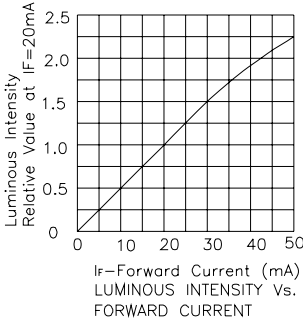
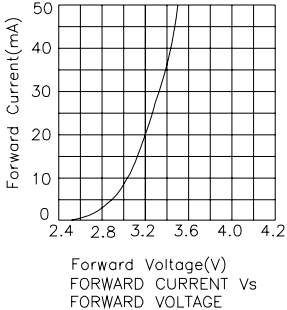


## AAA5060SEEVGAPBEC Hyper Orange



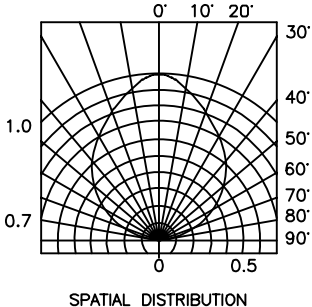
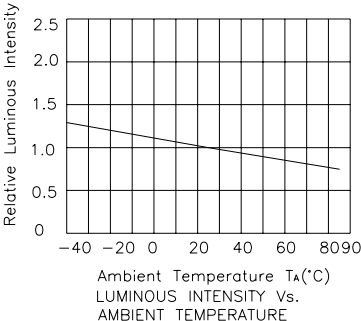
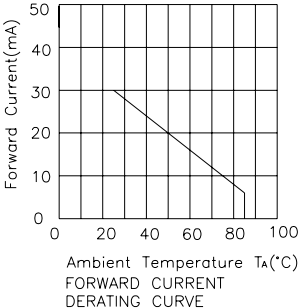
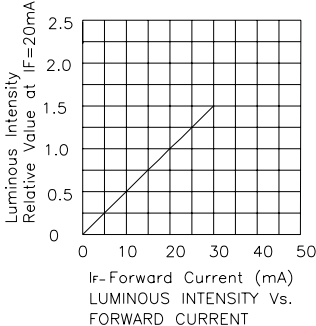
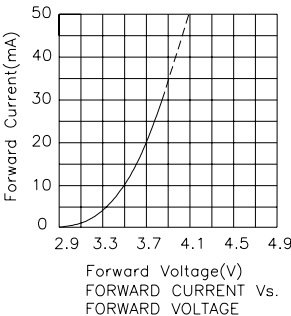
# Kingbright

## Green



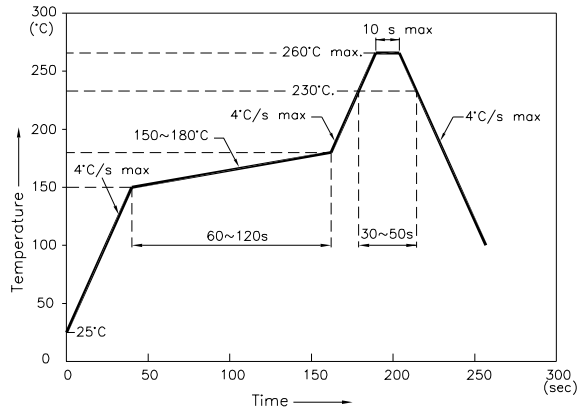
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## Blue



## AAA5060SEEVGAPBEC

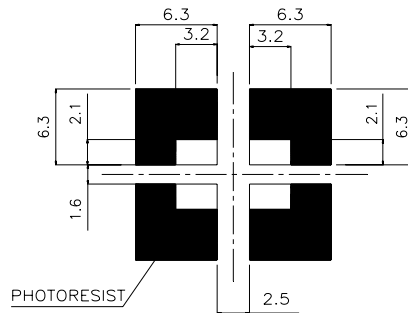
Reflow Soldering Profile For Lead-free SMT Process.



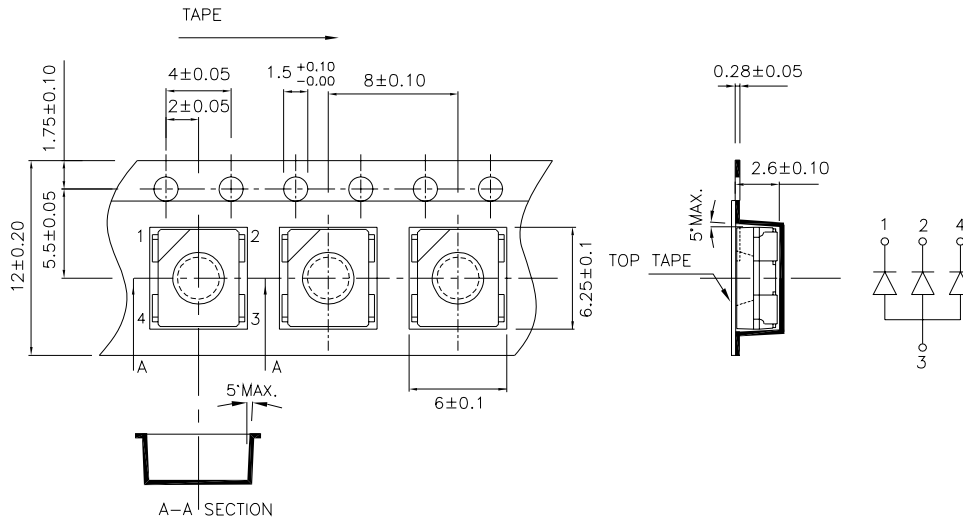
**NOTES:**

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)



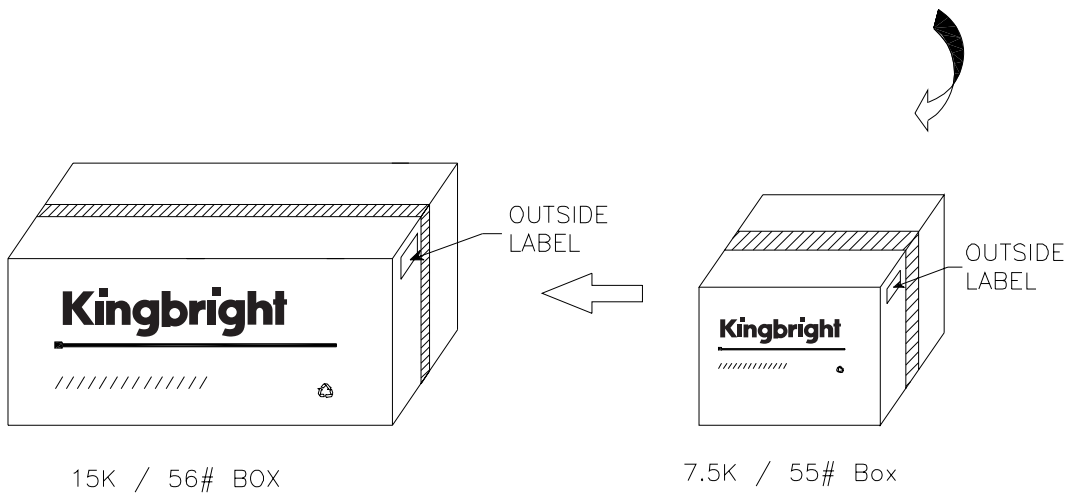
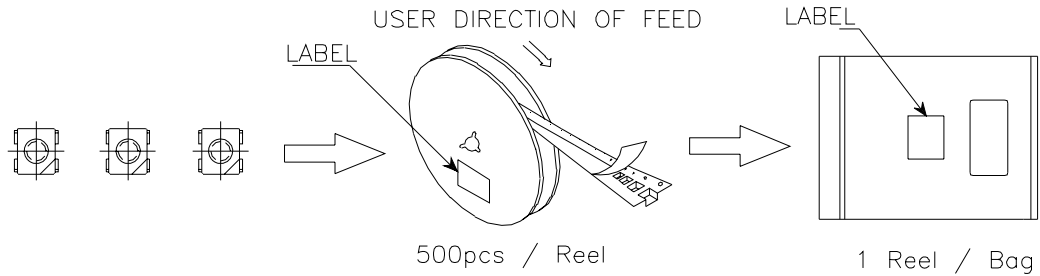
### Tape Specifications (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

AAA5060SEEVGAPBEC



<b>Kingbright</b>	
P/NO: AAA5060XXX	
QTY: 500 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C XX XX XXX PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXX	
MADE IN CHINA	RoHS Compliant