

# Kingbright

## 3.0x1.0mm RIGHT ANGLE SMD CHIP LED LAMP

### PRELIMINARY SPEC



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

Part Number: APFA3010SEEVGAPBAC

Hyper Orange  
Green  
Blue

### Features

- 3.0mmx1.0mm RIGHT ANGLE SMT LED, 1.5mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

### Description

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

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

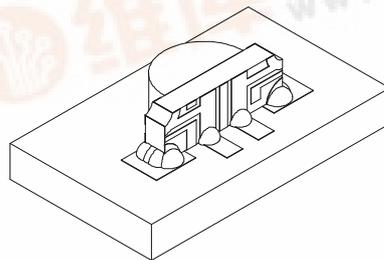
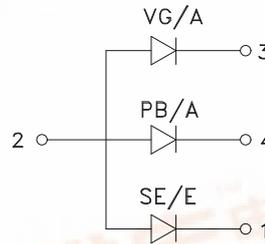
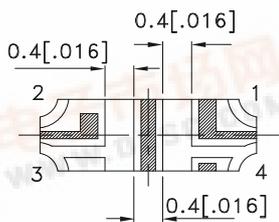
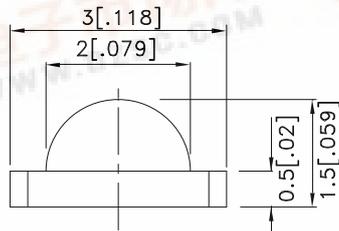
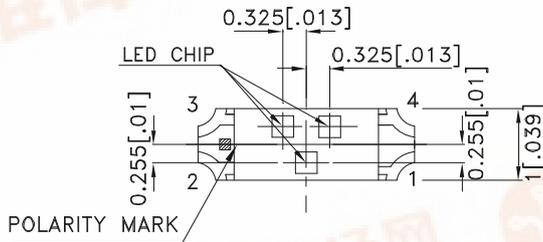
The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

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  $\pm 0.2(0.008)$  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.



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## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APFA3010SEEVGAPBAC	Hyper Orange (InGaAlP)	WATER CLEAR	110	300	120°
	Green (InGaN)		50	200	
	Blue (InGaN)		18	60	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

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

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Orange Green Blue	630 520 468		nm	If=20mA
λD [1]	Dominant Wavelength	Hyper Orange Green Blue	621 525 470		nm	If=20mA
Δλ1/2	Spectral Line Half-width	Hyper Orange Green Blue	20 35 21		nm	If=20mA
C	Capacitance	Hyper Orange Green Blue	25 100 100		pF	Vf=0V;f=1MHz
Vf [2]	Forward Voltage	Hyper Orange Green Blue	2 3.2 3.2	2.5 4 4	V	If=20mA
Ir	Reverse Current	Hyper Orange Green Blue		10 10 10	uA	Vr=5V

Notes:

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

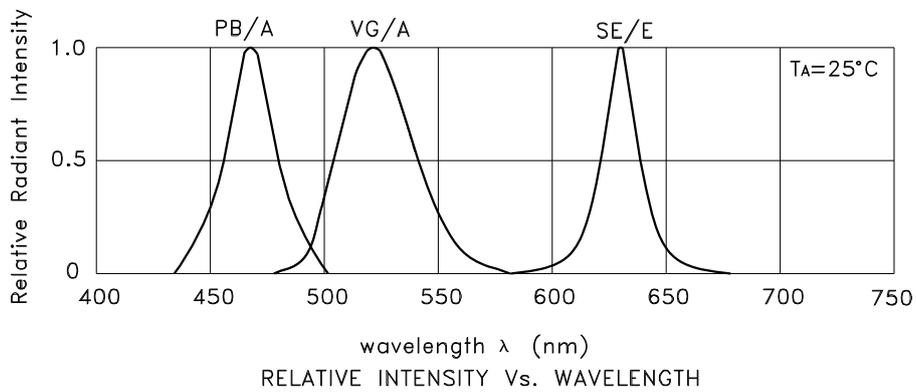
## Absolute Maximum Ratings at TA=25°C

Parameter	Hyper Orange	Green	Blue	Units
Power dissipation	75	120	120	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	195	100	100	mA
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

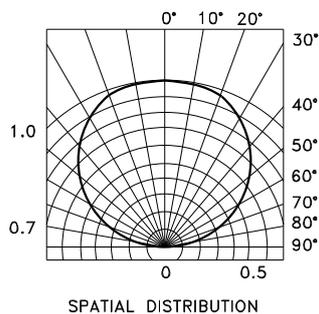
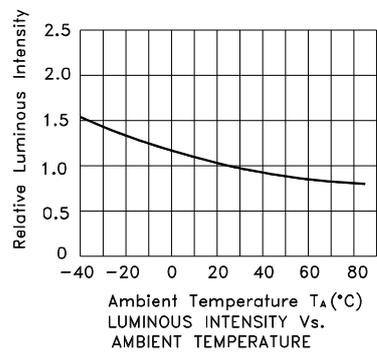
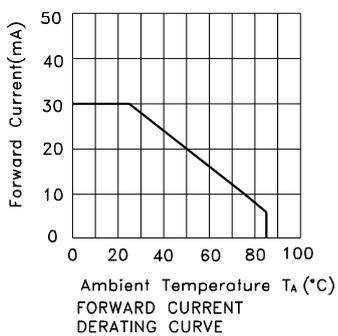
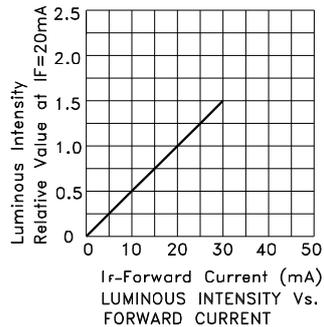
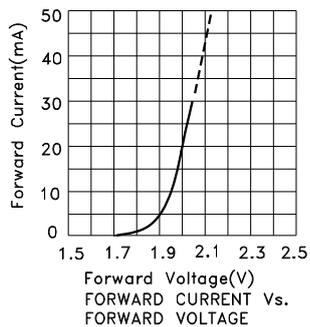
Notes:

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

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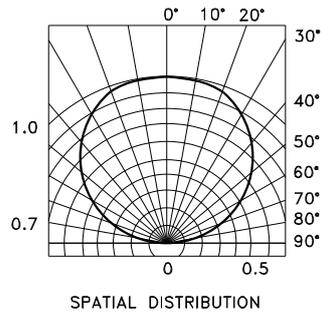
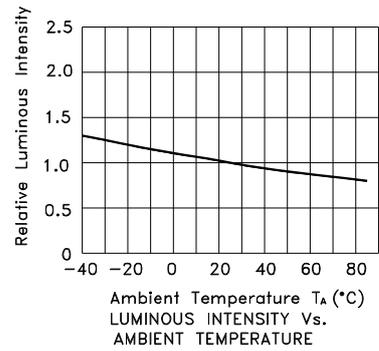
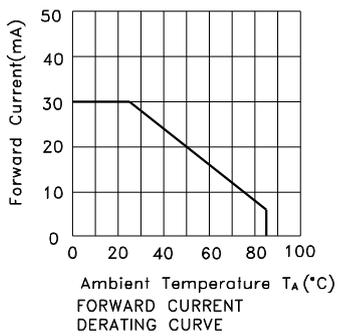
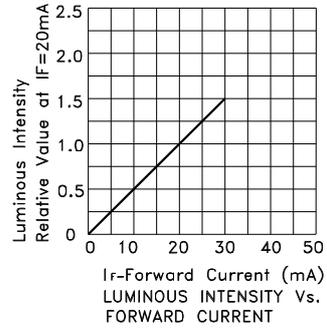
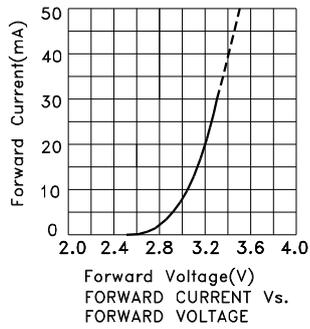


## APFA3010SEEVGAPBAC Hyper Orange



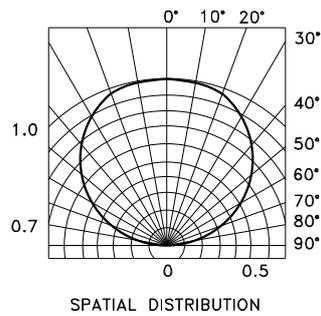
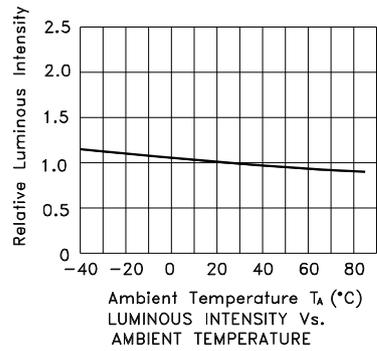
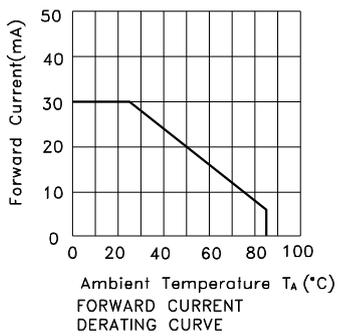
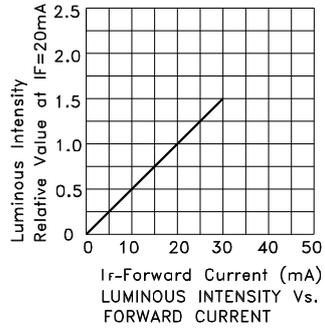
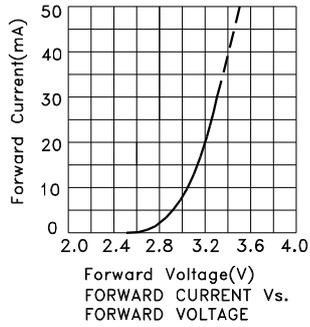
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## Green



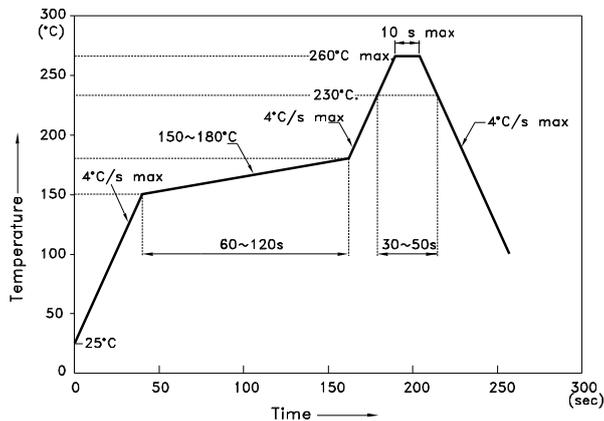
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## Blue



## APFA3010SEEVGAPBAC

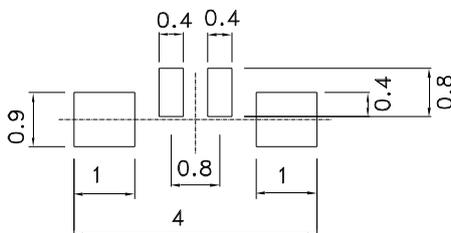
Reflow Soldering Profile For Lead-free SMT Process.



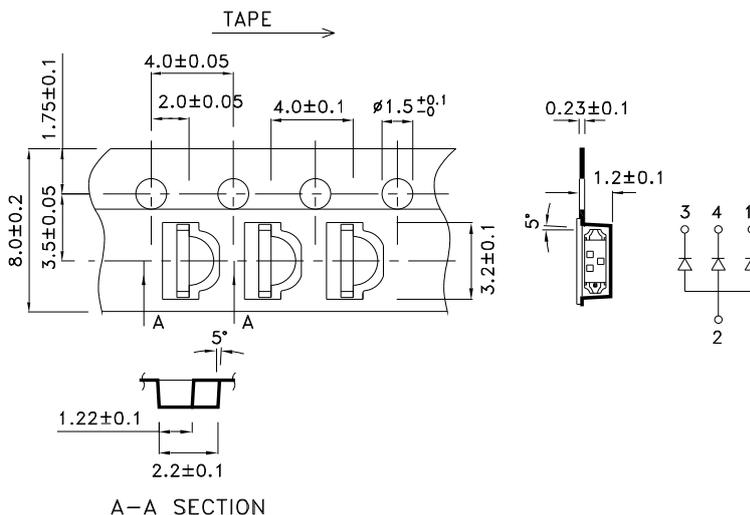
**NOTES:**

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)



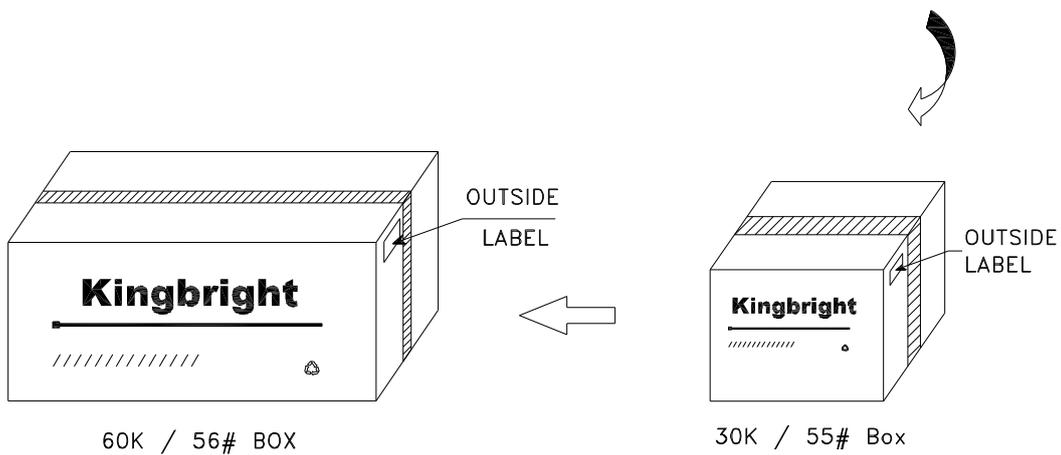
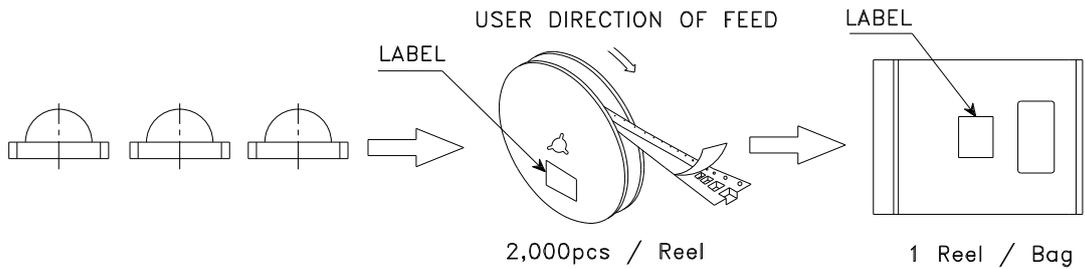
### Tape Specifications (Units : mm)



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## PACKING & LABEL SPECIFICATIONS

## APFA3010SEEVGAPBAC



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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:	
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RoHS Compliant	