

### 1.6x0.2mm RIGHT ANGLE SMD CHIP LED **LAMP**



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

**DEVICES** 

Part Number: APGA1602QBC/KA-5MAV

Blue

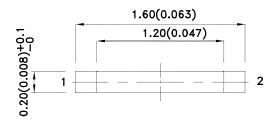
### **Features**

- 1.6mmx0.2mm right angle SMT LED,0.2mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Moisture sensitivity level : level 3.
- Package :2000pcs / reel.
- Tinned pads for improved solderability.
- Low current IF=5mA operating.
- RoHS compliant.

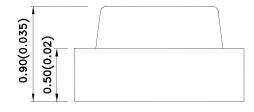
### **Descriptions**

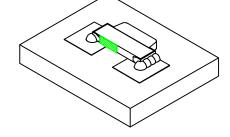
- The Blue source color devices are made with InGaN on Sapphire-substrate Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or antielectrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

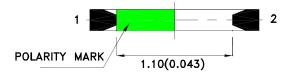
### **Package Dimensions**











- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.1 (0.004")$  unless otherwise noted.
- The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
   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] @ 5mA		Viewing Angle [1]
			Min.	Тур.	201/2
APGA1602QBC/KA-5MAV	Blue (InGaN)	Water Clear	8	20	130°(H) 150°(V)

#### 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%.
- 3. Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

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

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue	460		nm	IF=5mA
λD [1]	Dominant Wavelength	Blue	463		nm	IF=5mA
Δλ1/2	Spectral Line Half-width	Blue	25		nm	IF=5mA
VF [2]	Forward Voltage	Blue	2.8	3.2	V	IF=5mA
lr	Reverse Current	Blue		50	uA	VR=5V

### Notes:

- 1.Wavelength: +/-1nm.
- 2.Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
- Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

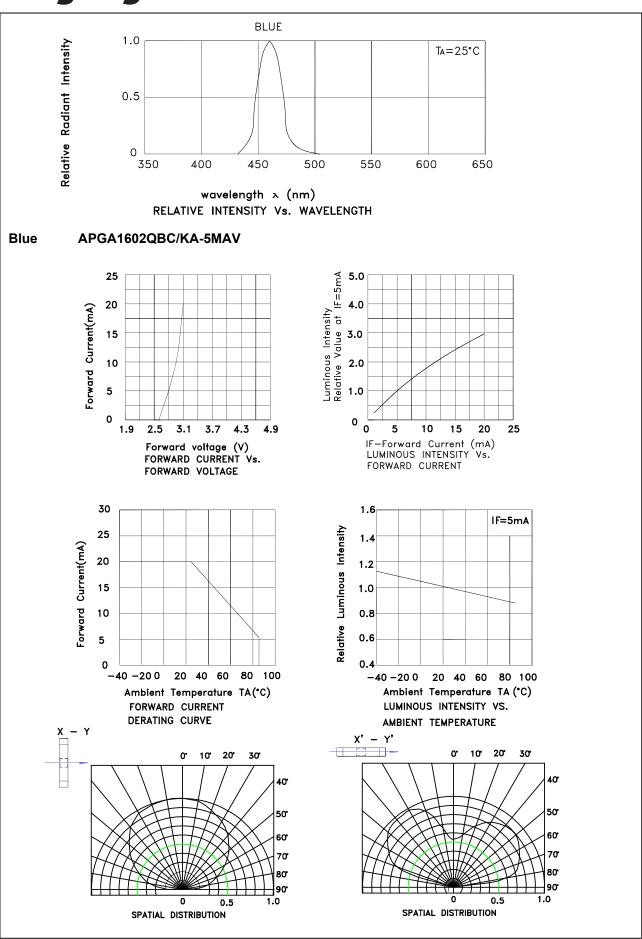
### Absolute Maximum Ratings at TA=25°C

Parameter	Blue	Units	
Power dissipation	70	mW	
DC Forward Current	20	mA	
Peak Forward Current [1]	100	mA	
Electrostatic Discharge Threshold(HBM)	250	V	
Reverse Voltage	5	V	
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +100°C		

### Note

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

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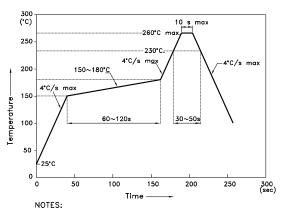
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### APGA1602QBC/KA-5MAV

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.

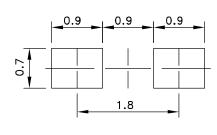


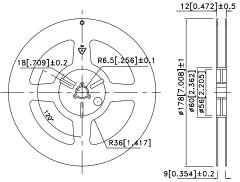
- 1.We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C. 2.Don't cause stress to the epoxy resin while it is exposed
- to high temperature.

  3.Number of reflow process shall be 2 times or less.

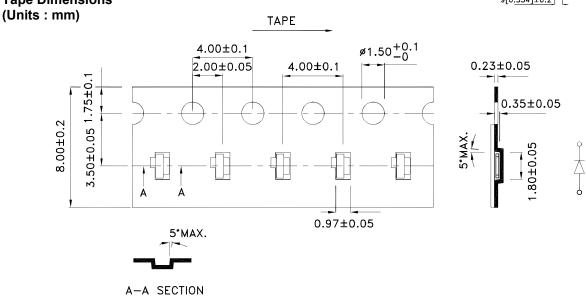
### **Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.1)

### **Reel Dimension**





## **Tape Dimensions**

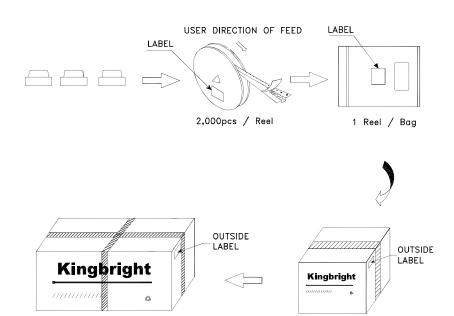


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### **PACKING & LABEL SPECIFICATIONS**

### APGA1602QBC/KA-5MAV

30K / 55# BOX





### Terms and conditions for the usage of this document

60K / 56# BOX

- 1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
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