

Part Number: APG0603VGC-TT-5MAV      Green



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

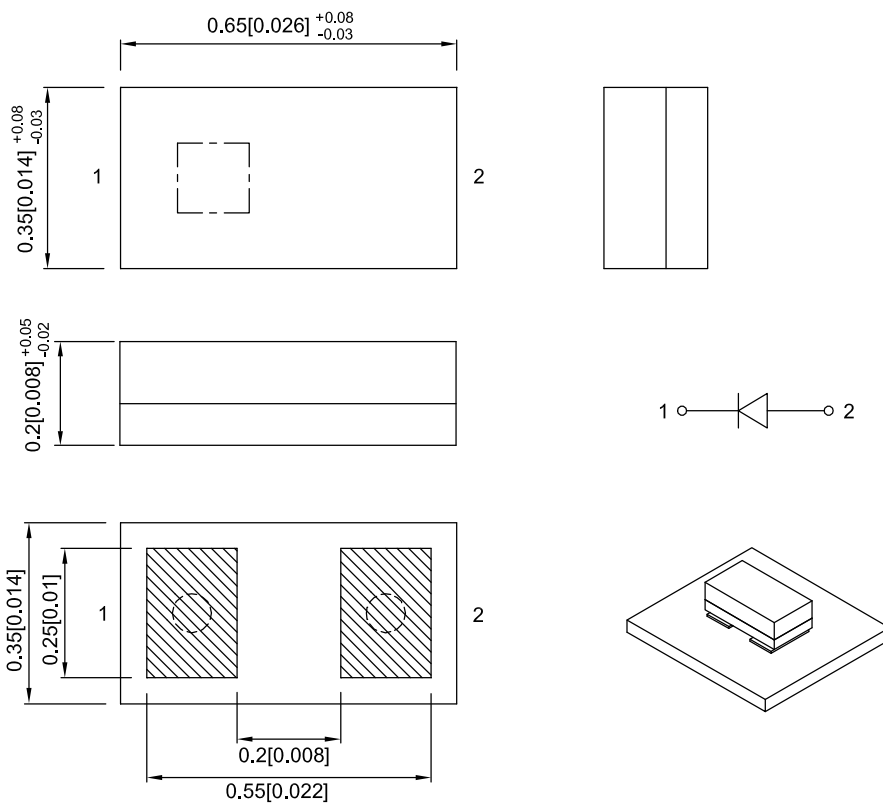
### Features

- 0.65mmX0.35mm SMD LED,0.2mm thickness
- Low power consumption.
- Wide viewing angle.
- Compatible with automatic placement equipment.
- Package: 4000pcs / reel.
- Moisture sensitivity level : level 2.
- Low current IF=5mA operating.
- RoHS compliant.

### Descriptions

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

### Package Dimensions



**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1(0.004)$  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.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 5mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APG0603VGC-TT-5MAV	Green (InGaN)	Water Clear	30	80	140°

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 CIE127-2007 standards.

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

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Green	518		nm	I <sub>F</sub> =5mA
$\lambda_D$ [1]	Dominant Wavelength	Green	527		nm	I <sub>F</sub> =5mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Green	35		nm	I <sub>F</sub> =5mA
V <sub>F</sub> [2]	Forward Voltage	Green	3.0	3.2	V	I <sub>F</sub> =5mA
I <sub>R</sub>	Reverse Current	Green		50	uA	V <sub>R</sub> = 5V

Notes:

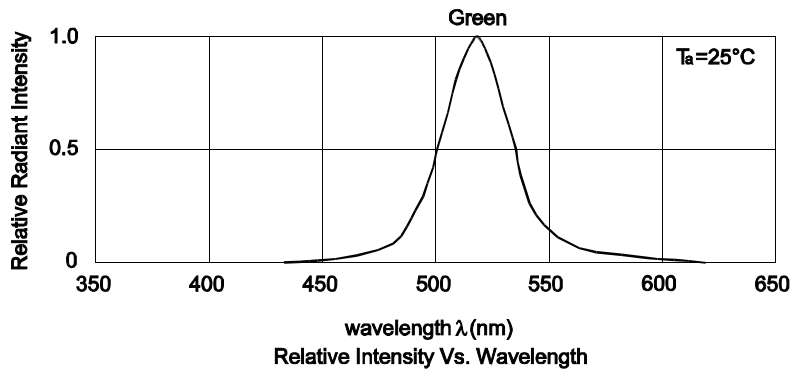
1. Wavelength: + / -1nm.
2. Forward Voltage: + / -0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

Parameter	Values	Units
Power dissipation	34	mW
DC Forward Current	10	mA
Peak Forward Current [1]	50	mA
Reverse Voltage	5	V
Electrostatic Discharge Threshold (HBM)	1000	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

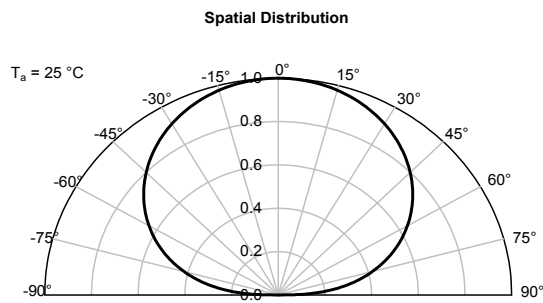
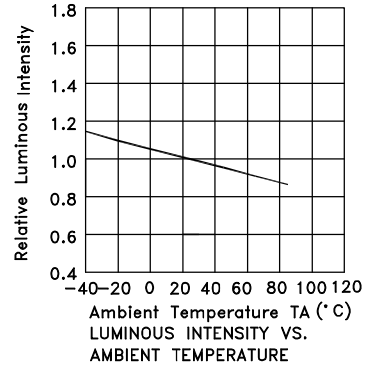
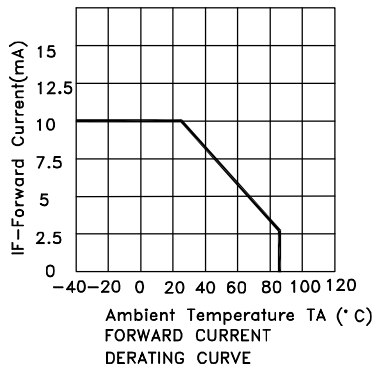
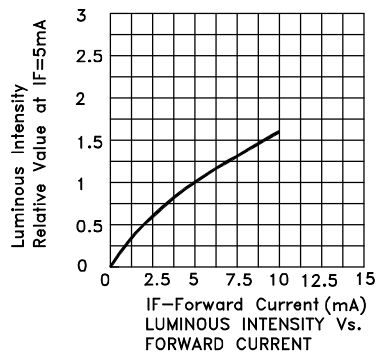
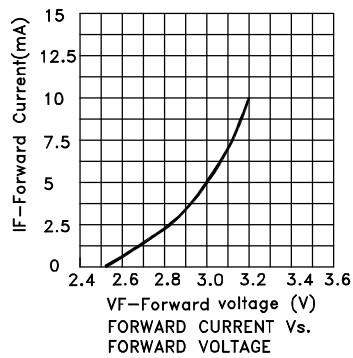
Notes:

1. 1 / 10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



Green

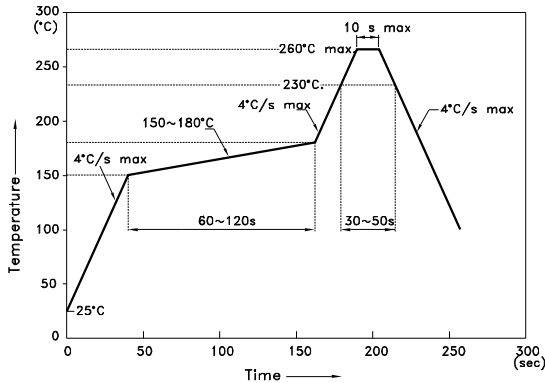
APG0603VGC-TT-5MAV



## APG0603VGC-TT-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.

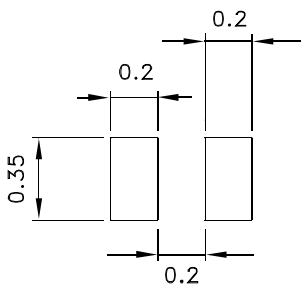
Reflow Soldering Profile For Lead-free SMT Process.



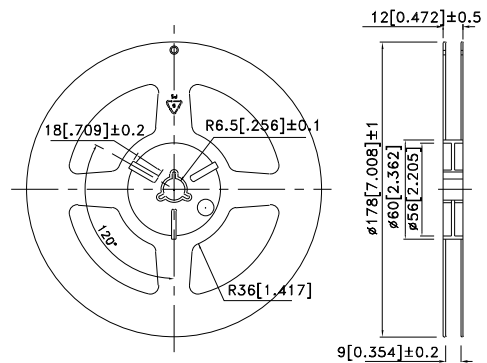
NOTES:

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.

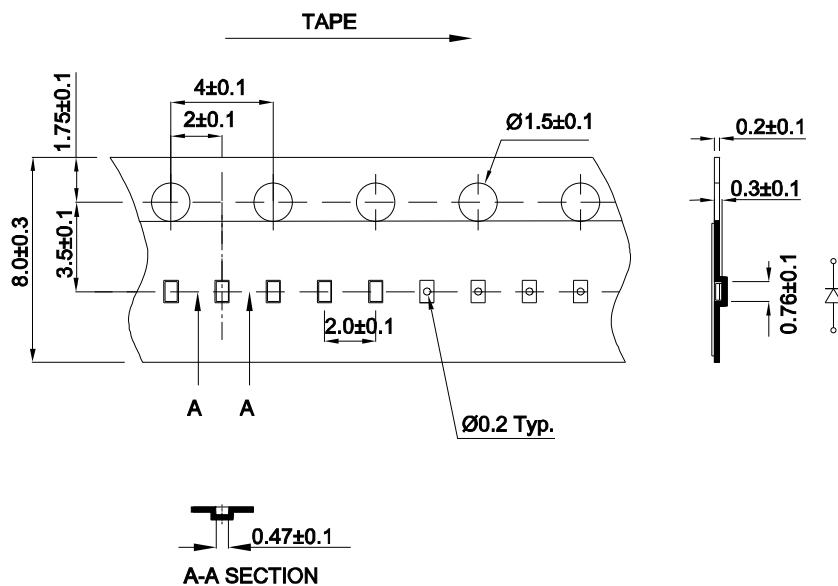
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

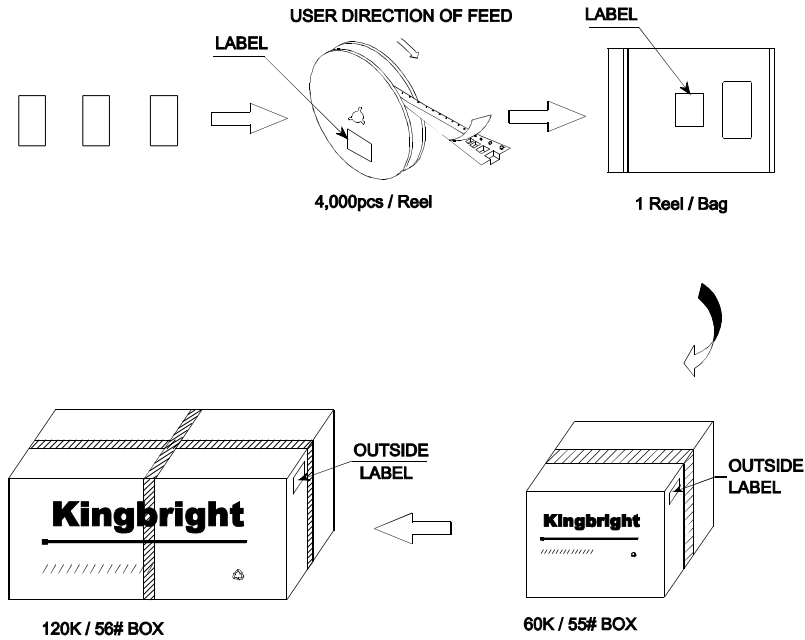



### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

## APG0603VGC-TT-5MAV



<b>Kingbright</b>	
P/NO: APG0603xxx	
QTY: 4000 pcs	Q.C.
S/N: XXXX	Q C XX XX XXXX PASSED
CODE: XXX	
LOT NO:	
 <small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</small>	
RoHS Compliant	

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

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
6. All design applications should refer to Kingbright application notes available at <http://www.KingbrightUSA.com/ApplicationNotes>