

Part Number: APG0603VGC-TT-5MAV      Green



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

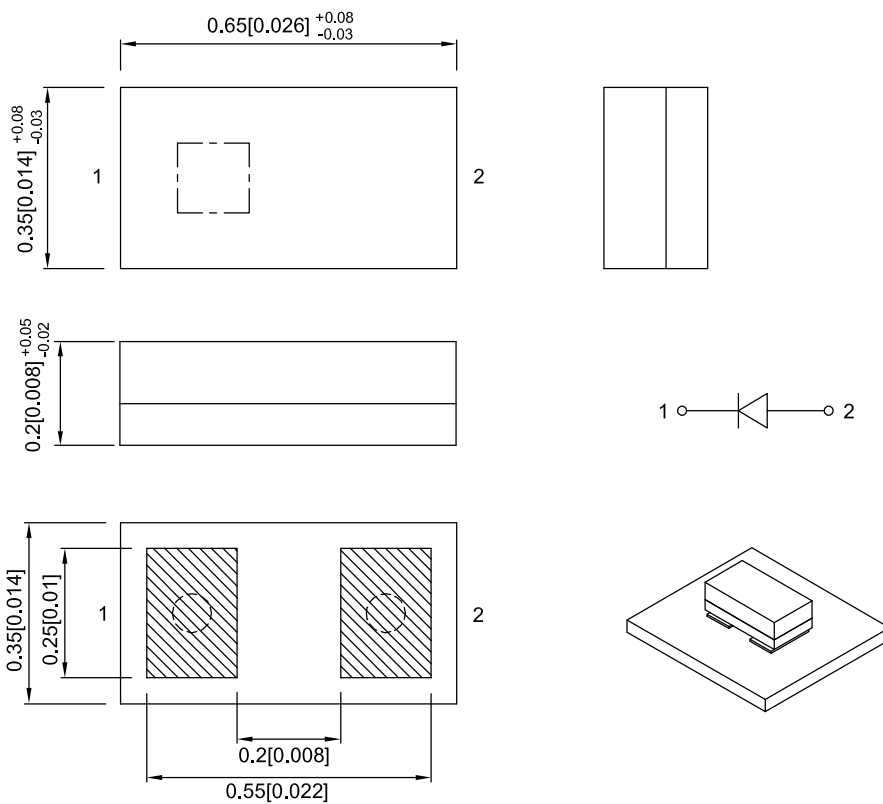
### Features

- 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]<br>@ 5mA |      | Viewing<br>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:

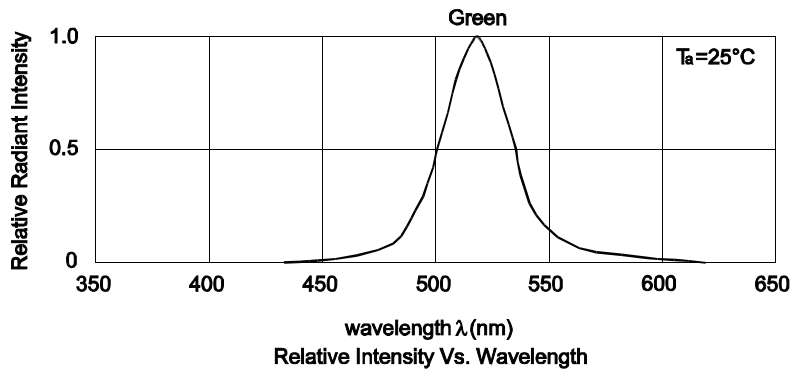
1. Wavelength: + / -1nm.
2. Forward Voltage: + / -0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## 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 |       |

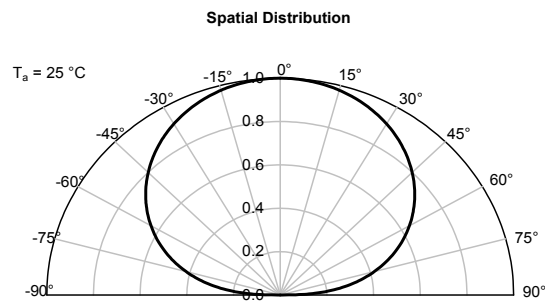
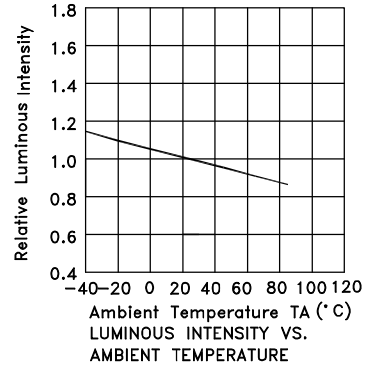
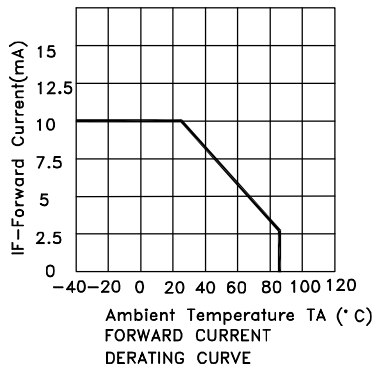
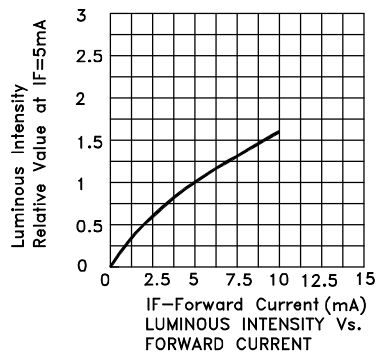
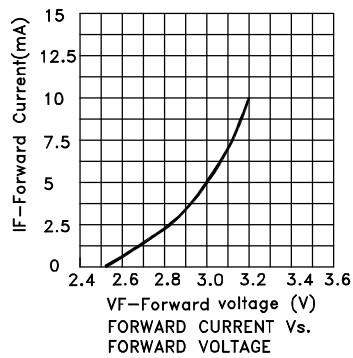
Notes:

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

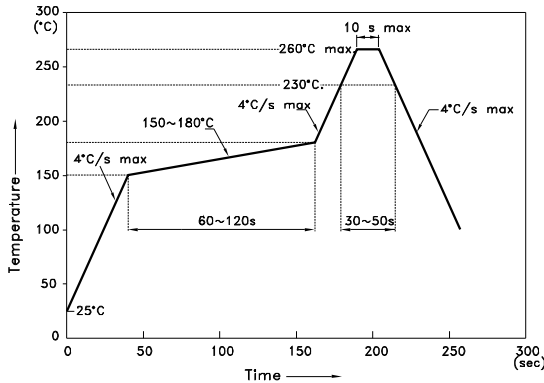
APG0603VGC-TT-5MAV



## 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.

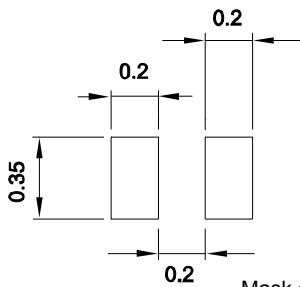
Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

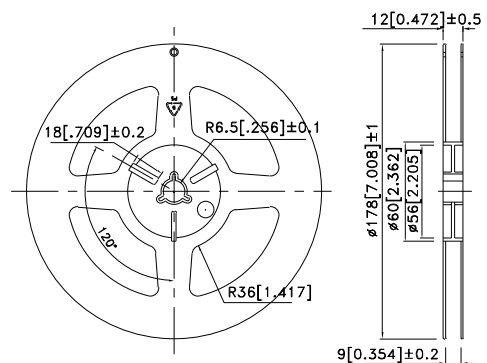
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

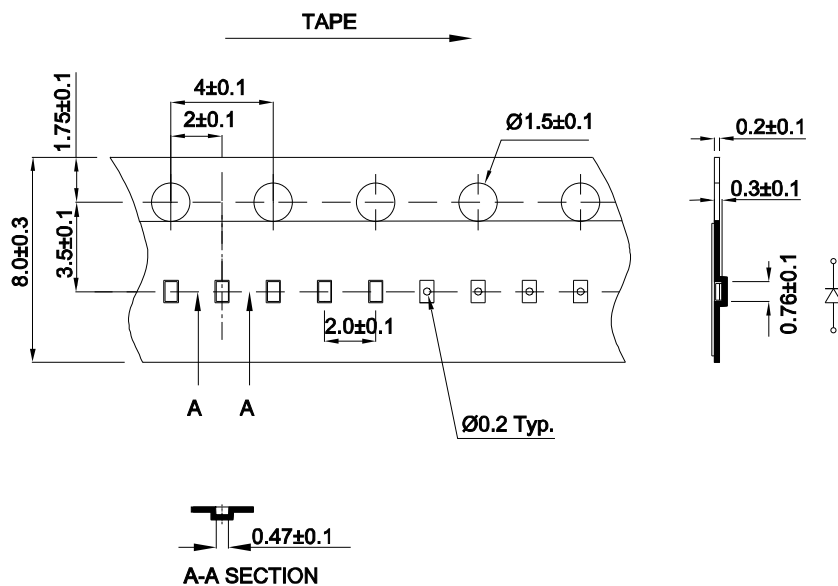


Mask open area ratio: 80%  
Mask thickness: 80~100um

### Reel Dimension

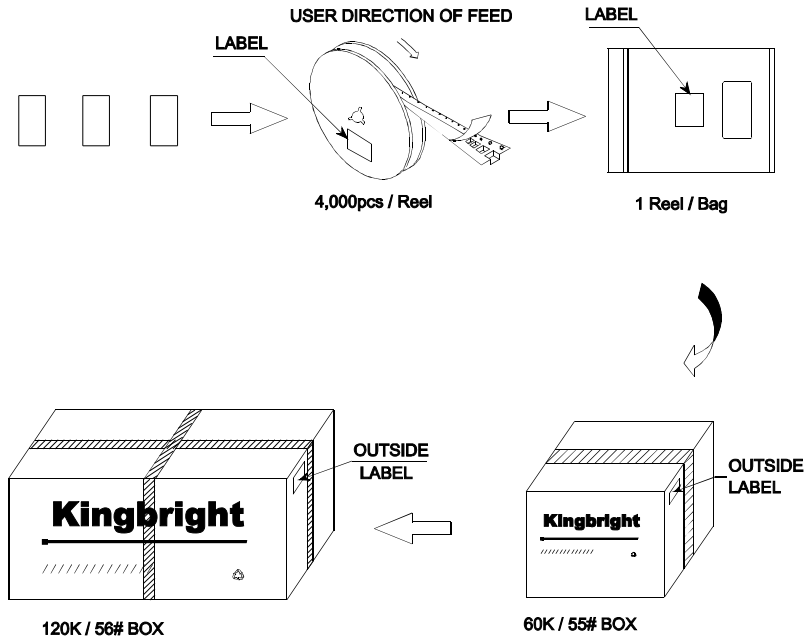



### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

APG0603VGC-TT-5MAV



|   |                             |
|---|-----------------------------|
| <h1>Kingbright</h1>   |                             |
| P/NO: APG0603xxx  |                             |
| QTY: 4000 pcs   | Q.C.                        |
| S/N: XXXX   | Q C<br>XX XX XXXX<br>PASSED |
| CODE: XXX   |                             |
| LOT NO:   |                             |
| <br><small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</small> |                             |
| RoHS Compliant  |                             |

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