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[APG1005VGC-T-5MAV](#)

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## 1.0X0.5X0.2mm (0402)SMD CHIP LED LAMP



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

Part Number: APG1005VGC-T-5MAV

Green

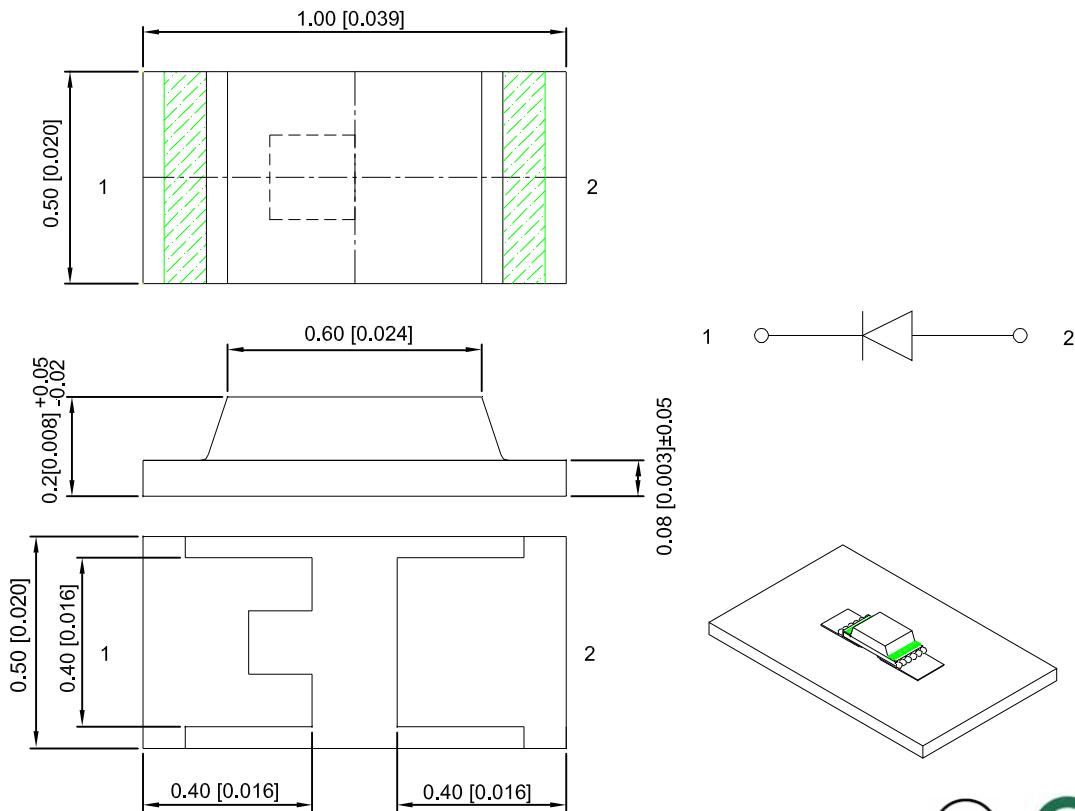
### Features

- 1.0mmX0.5mm SMD LED, 0.2mm thickness.
- Low power consumption.
- Wide viewing angle.
- Compatible with automatic placement equipment.
- Ideal for backlight and indicator.
- Package: 4000pcs / reel.
- Moisture sensitivity level : level 3.
- 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.



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## Selection Guide

Part No.	Emitting Color (Material)	Lens Type	I <sub>V</sub> (mcd) [2] @ 5mA		Viewing Angle [1]
			Min.	Typ.	
APG1005VGC-T-5MAV	Green (InGaN)	Water Clear	30	70	140°

Notes:

1. θ1/2 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
λpeak	Peak Wavelength	Green	518		nm	I <sub>F</sub> =5mA
λD [1]	Dominant Wavelength	Green	527		nm	I <sub>F</sub> =5mA
Δλ1/2	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.

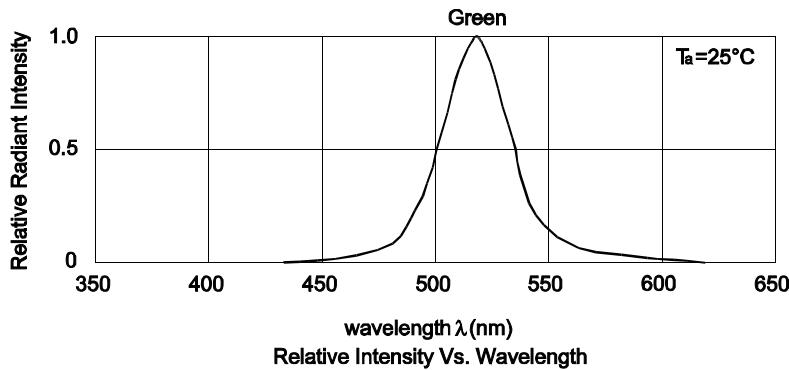
## Absolute Maximum Ratings at TA=25°C

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:

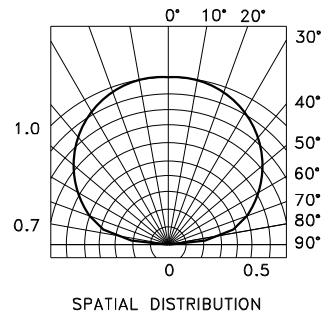
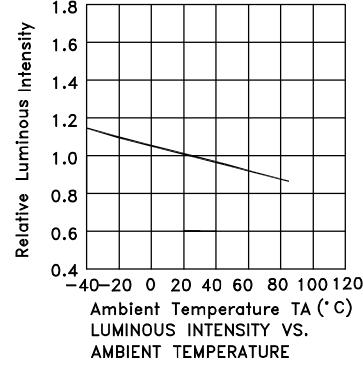
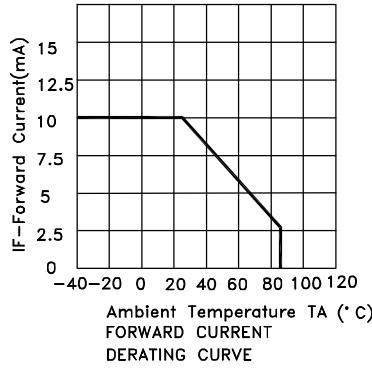
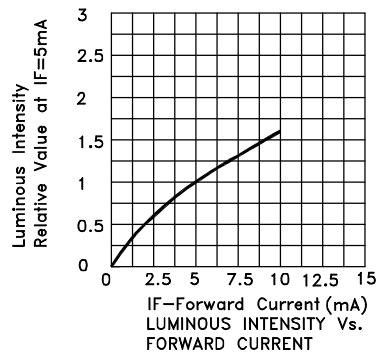
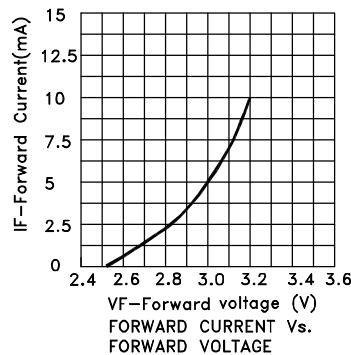
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

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Green

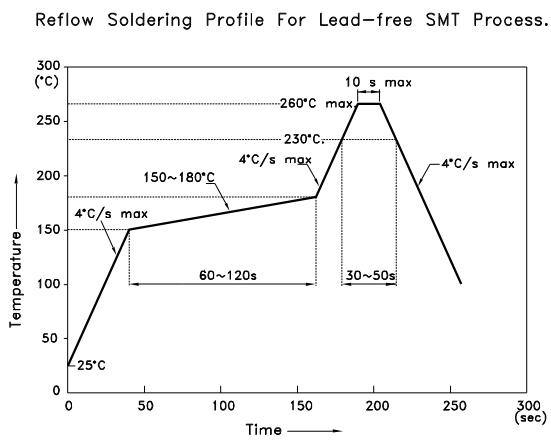
APG1005VGC-T-5MAV



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**APG1005VGC-T-5MAV**

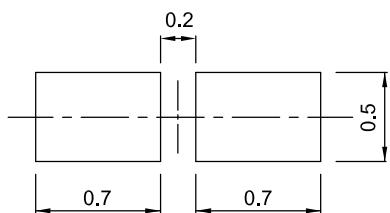
**Reflow soldering is recommended and the soldering profile is shown below.**  
**Other soldering methods are not recommended as they might cause damage to the product.**



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.

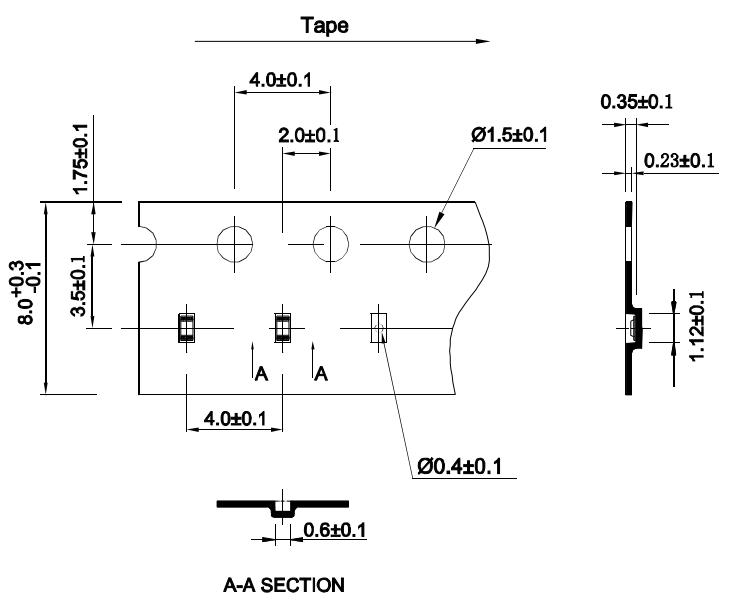
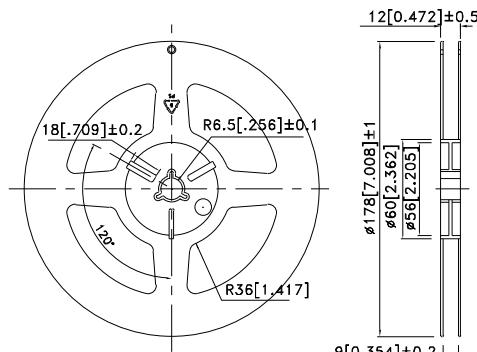
## Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



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

## **Tape Dimensions (Units : mm)**

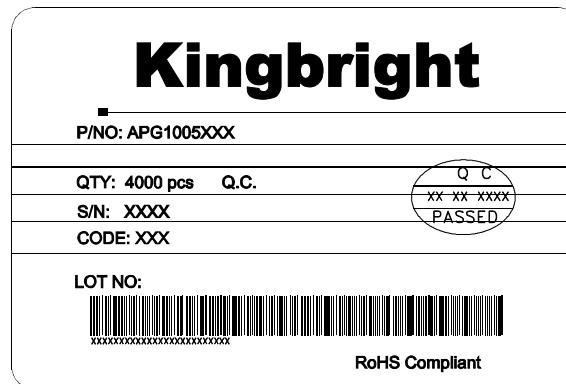
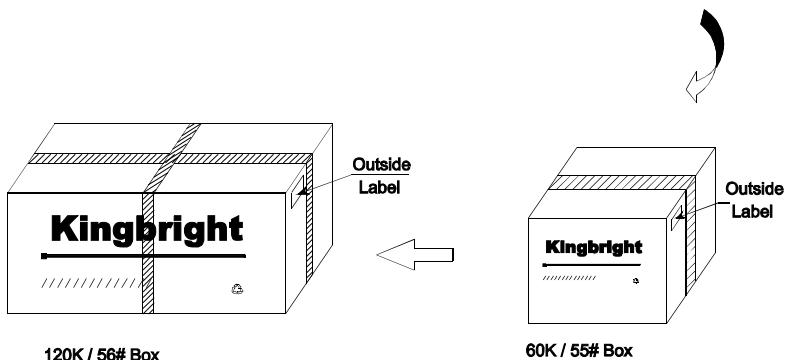
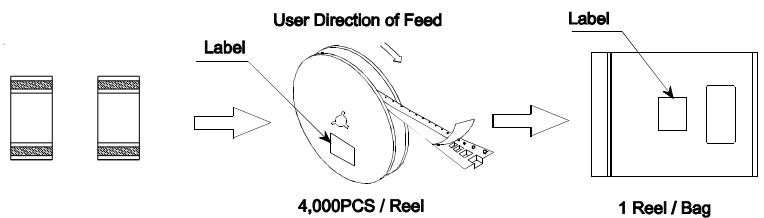
## Reel Dimension



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## PACKING & LABEL SPECIFICATIONS

## APG1005VGC-T-5MAV



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