



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APG1005PBC-T-5MAV

Blue

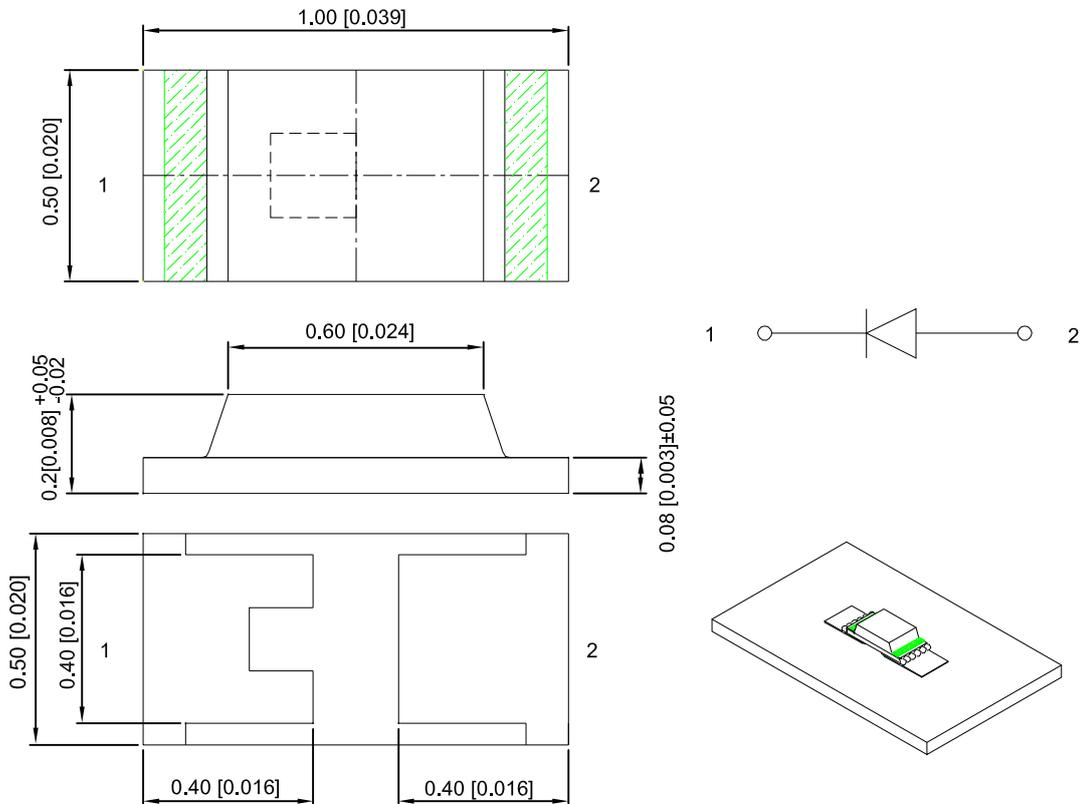
Features

- 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 Blue 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 |
| APG1005PBC-T-5MAV | Blue (InGaN) | Water Clear | 20 | 28 | 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 | Blue | 461 | | nm | IF=5mA |
| λD [1] | Dominant Wavelength | Blue | 467 | | nm | IF=5mA |
| Δλ1/2 | Spectral Line Half-width | Blue | 22 | | nm | IF=5mA |
| Vf [2] | Forward Voltage | Blue | 2.9 | 3.1 | V | IF=5mA |
| Ir | Reverse Current | Blue | | 50 | uA | VR=5V |

Notes:

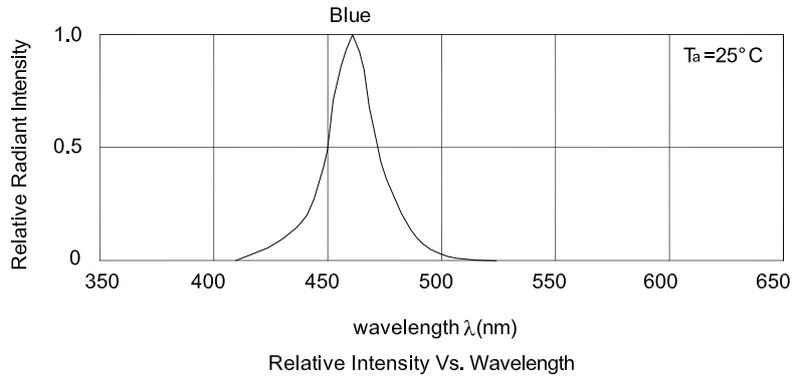
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

| Parameter | Values | Units |
|---|----------------|-------|
| Power dissipation | 32 | 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 | |

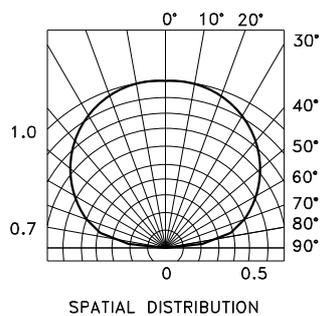
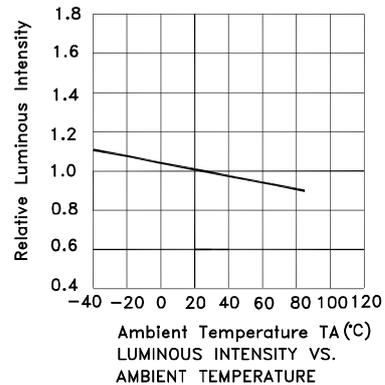
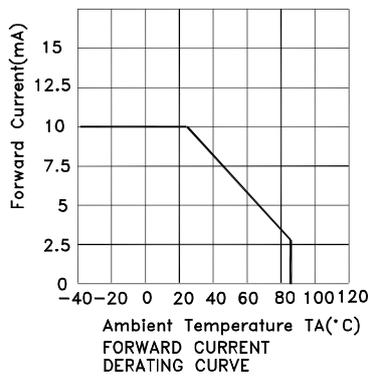
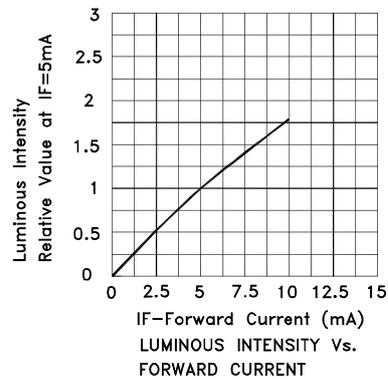
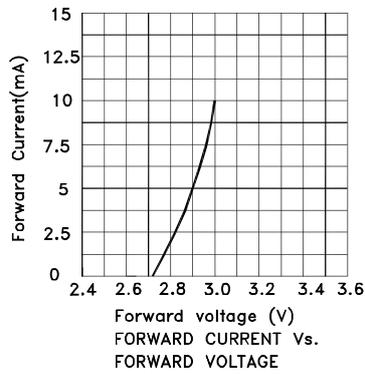
Notes:

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.



Blue

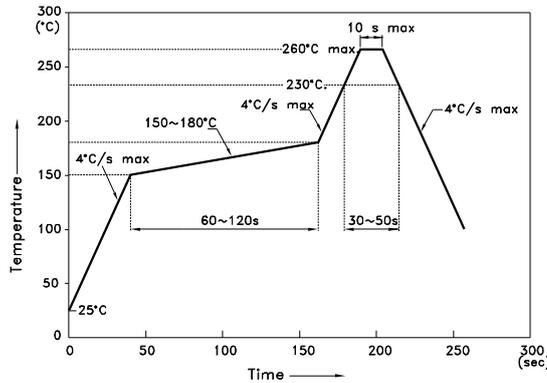
APG1005PBC-T-5MAV



APG1005PBC-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.

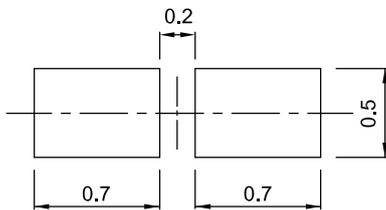
Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

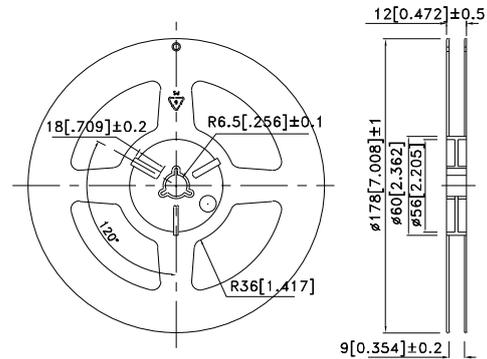
1. We recommend the reflow temperature 245°C (+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

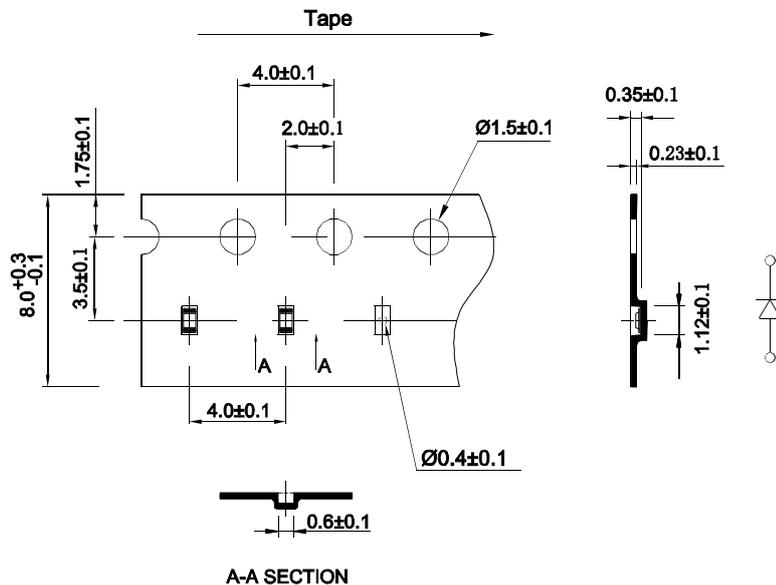


Mask open area ratio: 80%
Mask thickness: 80~100um

Reel Dimension

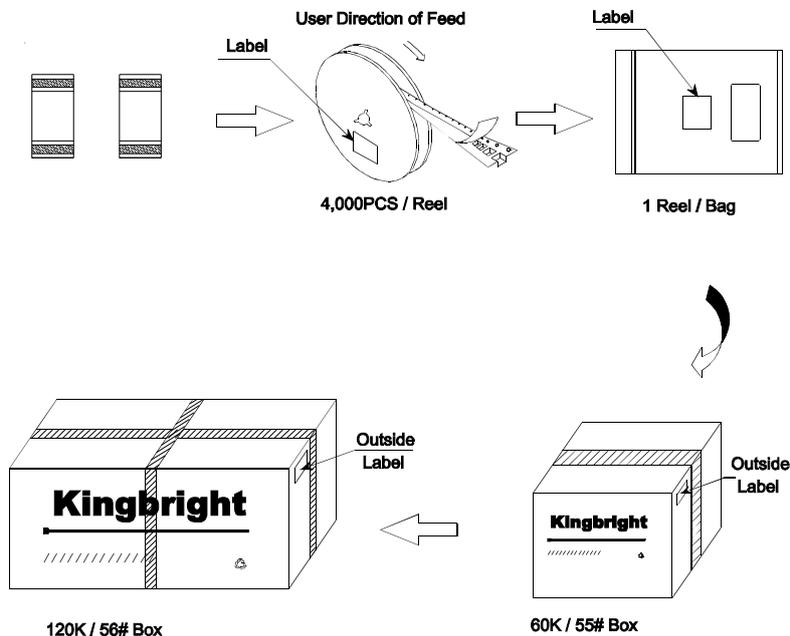


Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APG1005PBC-T-5MAV



| | | | | |
|-------------------|---|-----|------------|--------|
| Kingbright | | | | |
| P/NO: APG1005XXX | | | | |
| QTY: 4000 pcs | Q.C. | | | |
| S/N: XXXX | <table border="1"> <tr> <td style="text-align: center;">Q C</td> </tr> <tr> <td style="text-align: center;">XX XX XXXX</td> </tr> <tr> <td style="text-align: center;">PASSED</td> </tr> </table> | Q C | XX XX XXXX | PASSED |
| Q C | | | | |
| XX XX XXXX | | | | |
| PASSED | | | | |
| CODE: XXX | | | | |
| LOT NO: | | | | |
| | | | | |
| RoHS Compliant | | | | |

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