

Part Number: KPG1-1608VGC-TT-5MAV Green



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

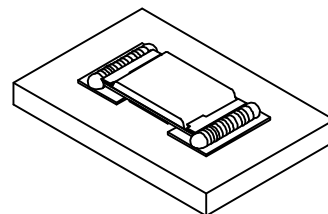
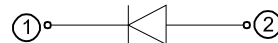
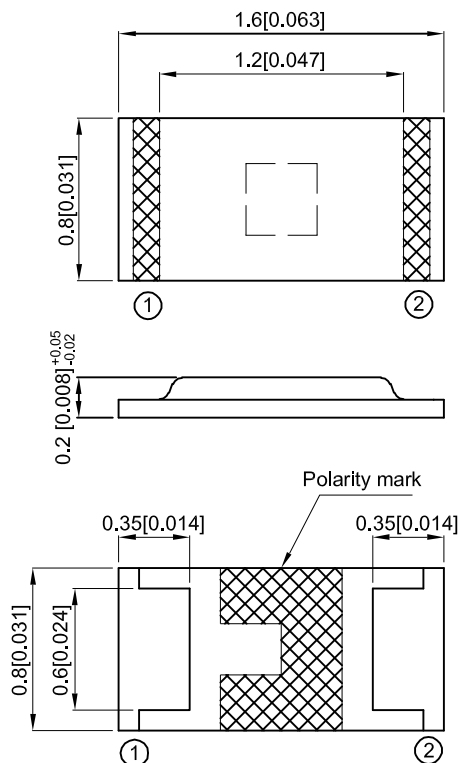
Features

- 1.6mmX0.8mm 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.



Selection Guide

| Part No. | Emitting Color (Material) | Lens Type | Iv (mcd) [2] @ 5mA | | Viewing Angle [1] |
|----------------------|---------------------------|-------------|-----------------------|------|----------------------|
| | | | Min. | Typ. | 2 θ 1/2 |
| KPG1-1608VGC-TT-5MAV | Green (InGaN) | Water Clear | 30 | 70 | 130° |

Notes:

1. θ 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 | Emitting Color | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|----------------|------|------|-------|---------------------|
| λ_{peak} | Peak Wavelength | Green | 518 | | nm | I _F =5mA |
| λ_D [1] | Dominant Wavelength | Green | 527 | | nm | I _F =5mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Green | 35 | | nm | I _F =5mA |
| V _F [2] | Forward Voltage | Green | 3.0 | 3.2 | V | I _F =5mA |
| I _R | Reverse Current | Green | | 50 | uA | V _R = 5V |

Notes:

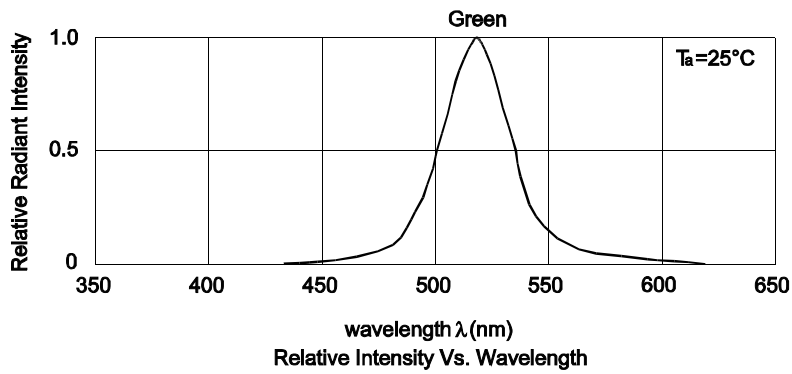
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
4. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

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 | |

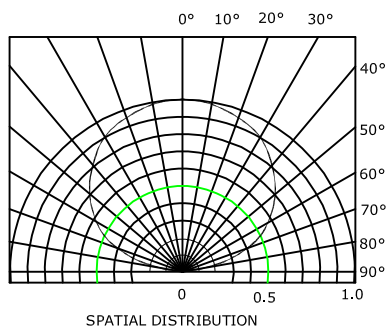
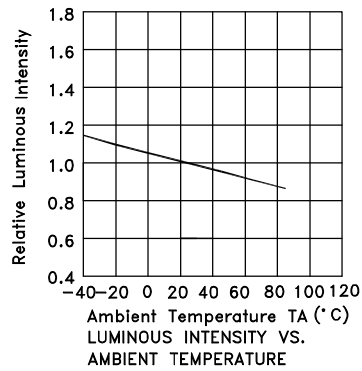
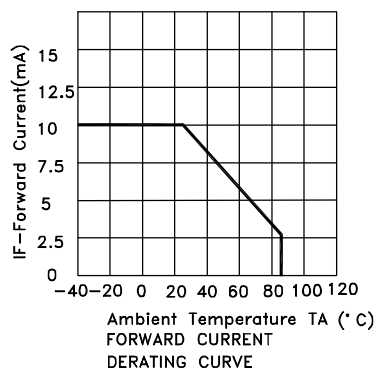
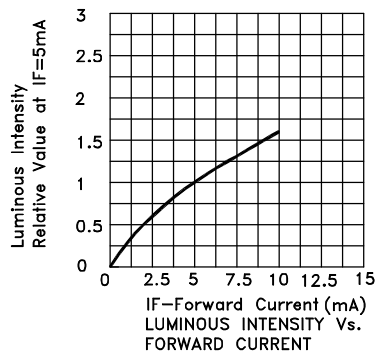
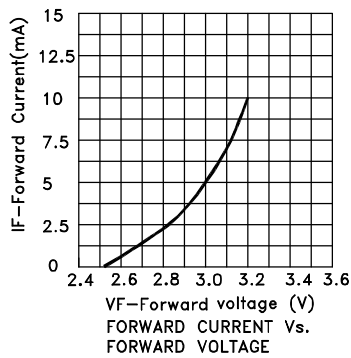
Note:

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



Green

KPG1-1608VGC-TT-5MAV



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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.

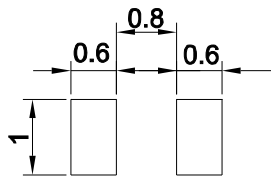
Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

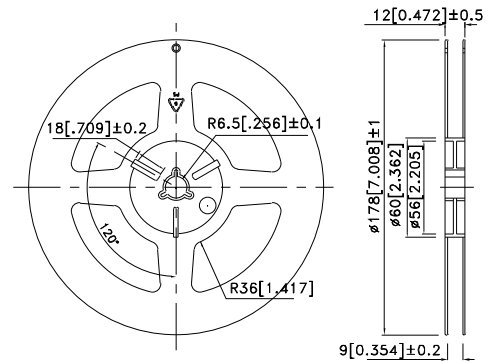
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

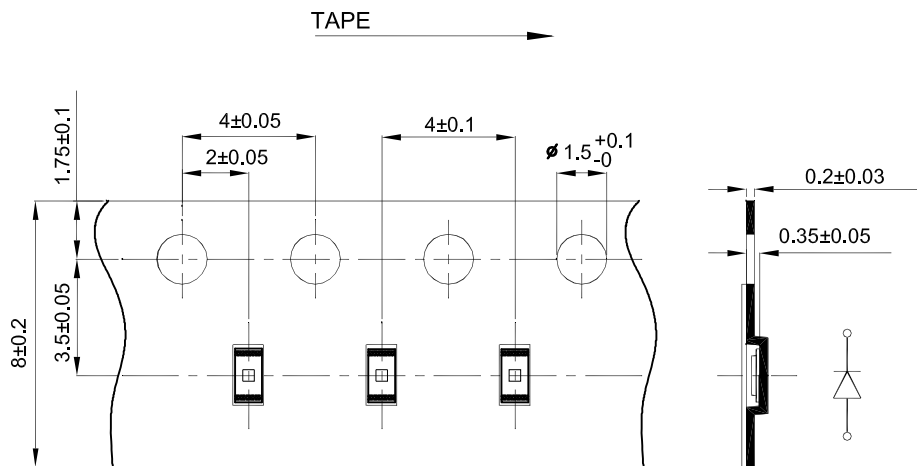


Mask open area ratio: 80%;
Mask thickness: 80~100um;

Reel Dimension

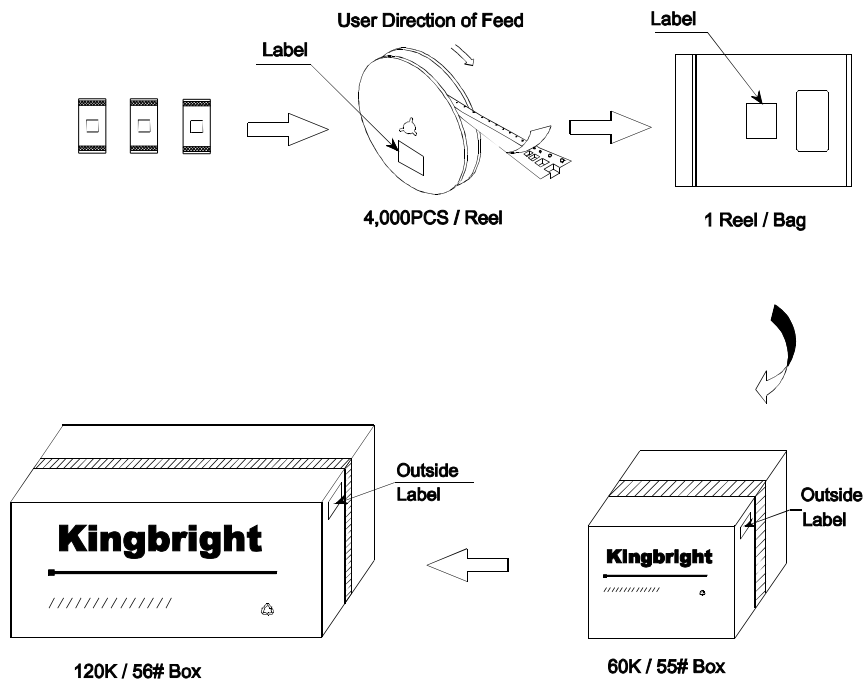



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KPG1-1608VGC-TT-5MAV



| | | | | |
|--|--|------|------------|--------|
| <h1>Kingbright</h1> | | | | |
| P/NO: KPG1-1608xxx | | | | |
| QTY: 4,000 PCS | Q.C. | | | |
| S/N: XXXX | <table border="1"> <tr> <td>Q.C.</td> </tr> <tr> <td>xx-xx-xxxx</td> </tr> <tr> <td>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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