

# Kingbright

## SUBMINIATURE SOLID STATE LAMP

Part Number: AM2520SGC09

Super Bright Green

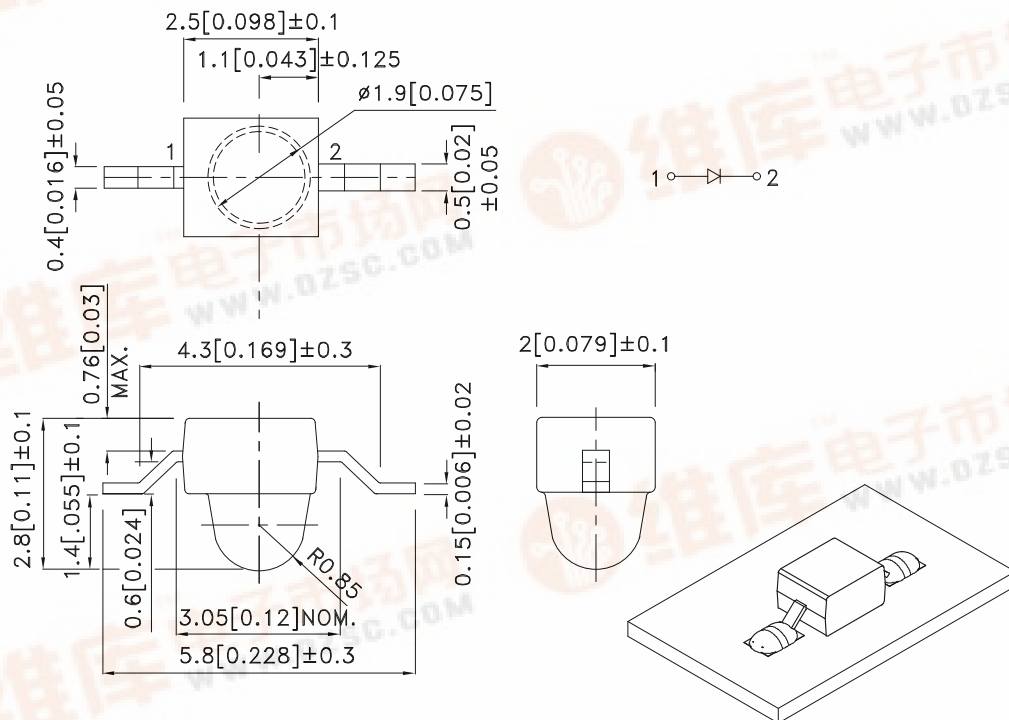
### Features

- SUBMINIATURE PACKAGE.
- WIDE VIEWING ANGLE.
- Z-BEND LEAD.
- LONG LIFE - SOLID STATE RELIABILITY.
- LOW PACKAGE PROFILE.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- PACKAGE : 1000PCS / REEL.
- RoHS COMPLIANT.

### Description

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.
5. The device has a single mounting surface. The device must be mounted according to the specifications.



## Selection Guide

| Part No.    | Dice                     | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|-------------|--------------------------|-------------|------------------------|------|----------------------|
|             |                          |             | Min.                   | Typ. | 2θ1/2                |
| AM2520SGC09 | Super Bright Green (GaP) | WATER CLEAR | 36                     | 80   | 20°                  |

### Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

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

| Symbol                | Parameter                | Device             | Typ. | Max. | Units | Test Conditions           |
|-----------------------|--------------------------|--------------------|------|------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Super Bright Green | 565  |      | nm    | I <sub>F</sub> =20mA      |
| $\lambda_D$ [1]       | Dominant Wavelength      | Super Bright Green | 568  |      | nm    | I <sub>F</sub> =20mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Green | 30   |      | nm    | I <sub>F</sub> =20mA      |
| C                     | Capacitance              | Super Bright Green | 15   |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Super Bright Green | 2.2  | 2.5  | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>        | Reverse Current          | Super Bright Green |      | 10   | uA    | V <sub>R</sub> =5V        |

### Notes:

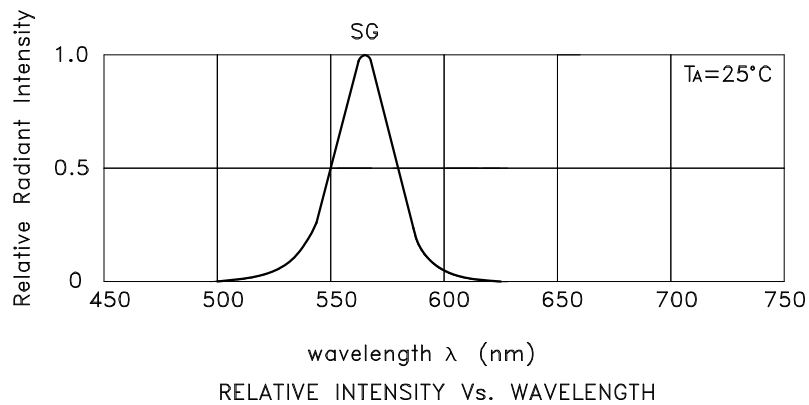
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

| Parameter                | Super Bright Green | Units |
|--------------------------|--------------------|-------|
| Power dissipation        | 62.5               | mW    |
| DC Forward Current       | 25                 | mA    |
| Peak Forward Current [1] | 140                | mA    |
| Reverse Voltage          | 5                  | V     |
| Operating Temperature    | -40°C To +85°C     |       |
| Storage Temperature      | -40°C To +85°C     |       |

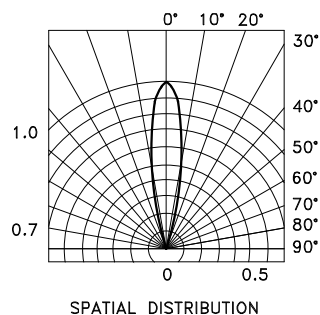
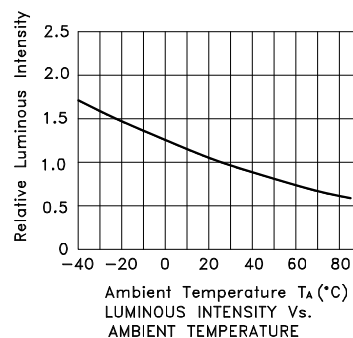
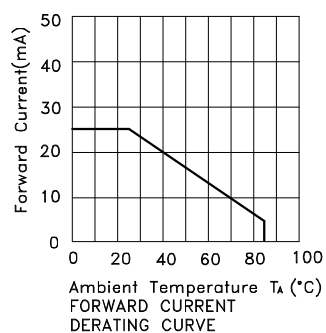
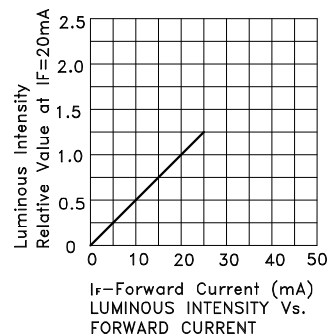
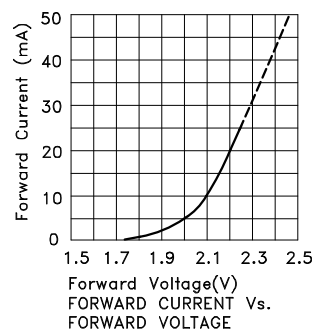
### Note:

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



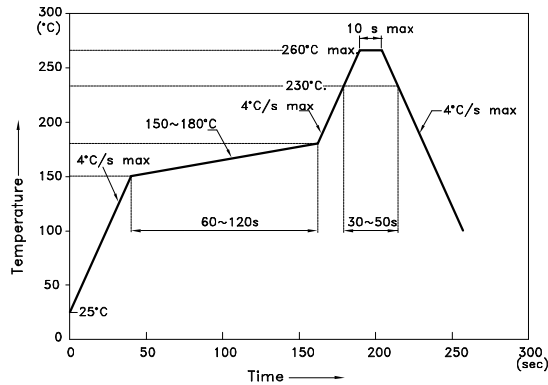
## Super Bright Green

AM2520SGC09



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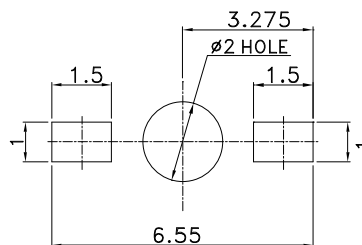
Reflow Soldering Profile For Lead-free SMT Process.



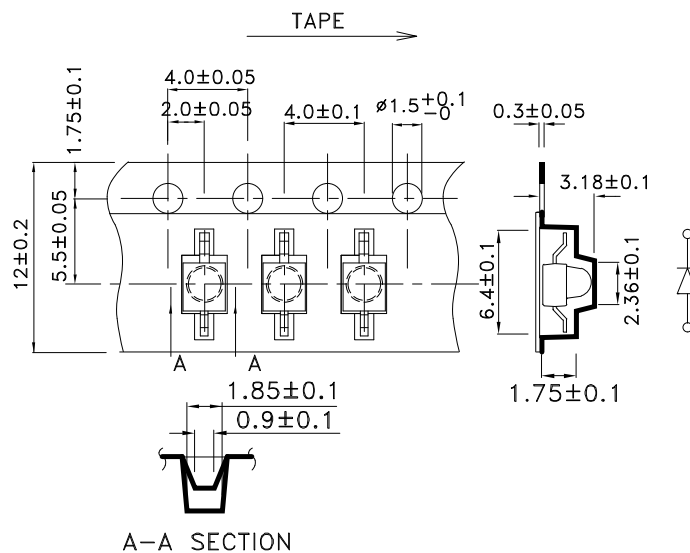
NOTES:

1. We recommend the reflow temperature  $245^{\circ}\text{C} (+/-5^{\circ}\text{C})$ . The maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
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: $\pm 0.1$ )

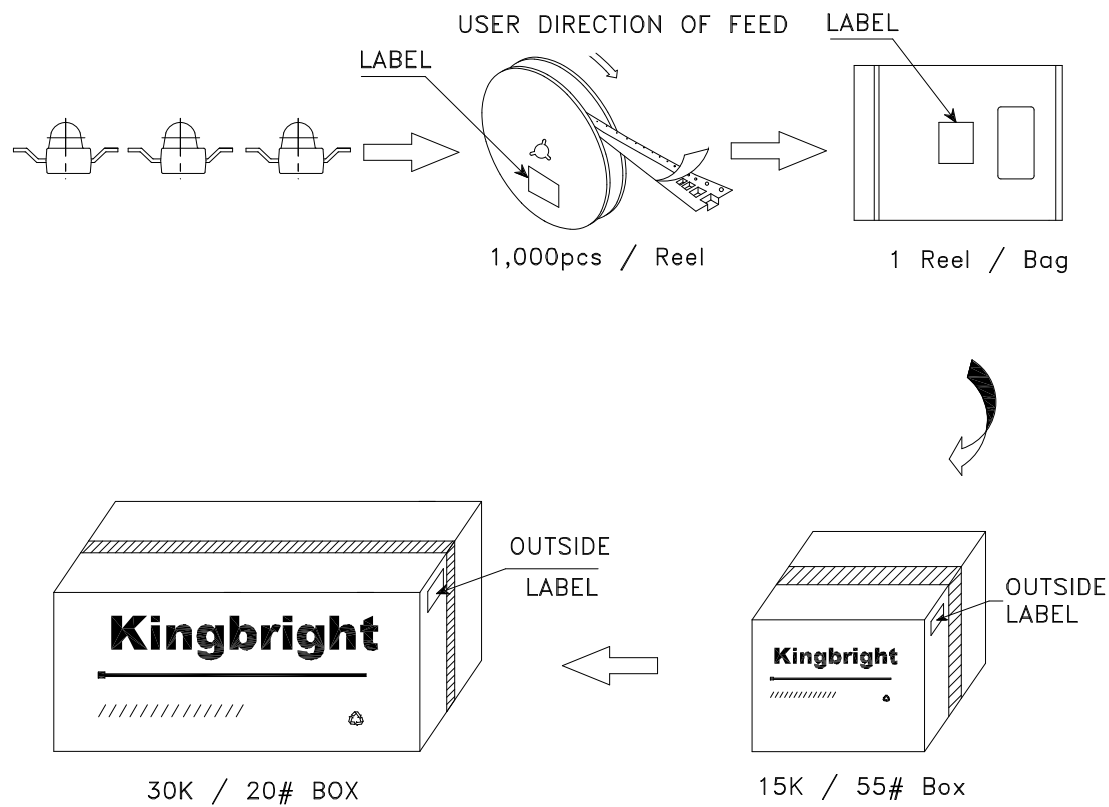


## Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

AM2520SGC09



|                                                                                                                          |                                               |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Kingbright</b>                                                                                                        |                                               |
| P/NO: AM2520xxx09                                                                                                        |                                               |
| QTY: 1,000 pcs                                                                                                           | Q.C. <div>Q C<br/>xx xx xxxx<br/>PASSED</div> |
| S/N: XXXX                                                                                                                |                                               |
| CODE: XXX                                                                                                                |                                               |
| LOT NO:                                                                                                                  |                                               |
| <br>xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx |                                               |
| RoHS Compliant                                                                                                           |                                               |