

Part Number: APG1005SEC-T

Super Bright Orange

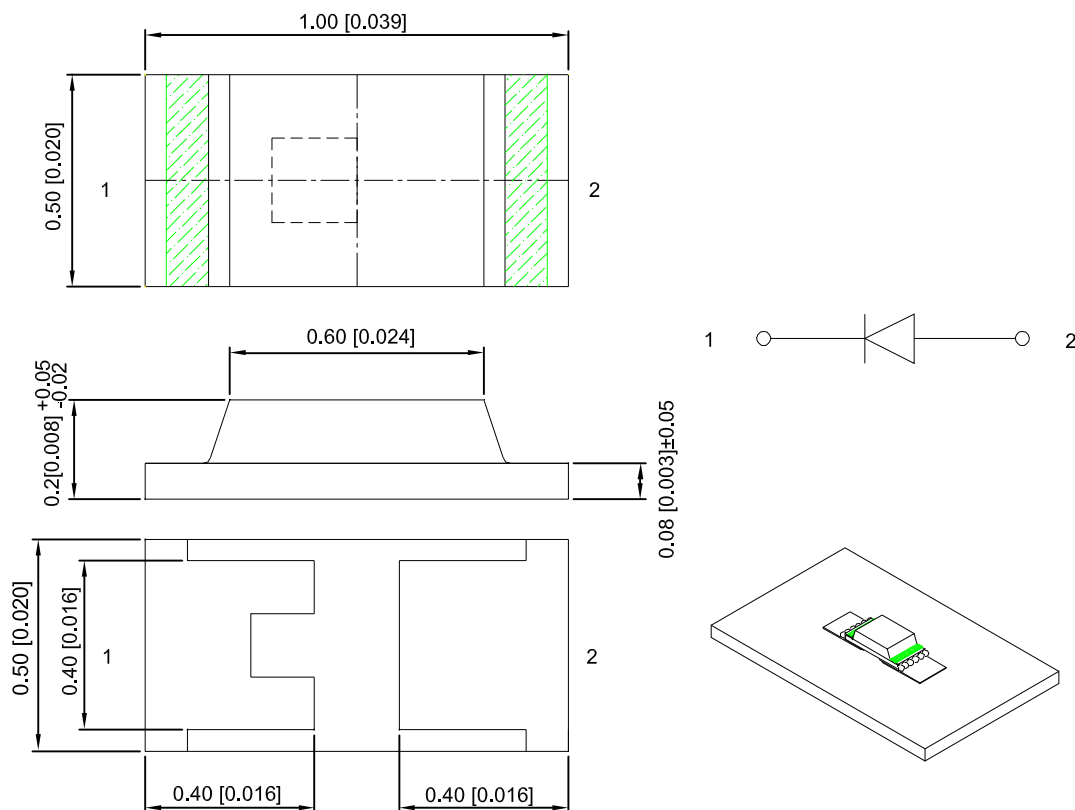
### Features

- 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.
- RoHS compliant.

### Description

The Super Bright Orange source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

### 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>@ 20mA |      | Viewing<br>Angle [1] |
|--------------|-------------------------------|-------------|------------------------|------|----------------------|
|              |                               |             | Min.                   | Typ. |                      |
| APG1005SEC-T | Super Bright Orange (AlGaInP) | Water Clear | 55                     | 153  | 120°                 |
|              |                               |             | *40                    | *90  |                      |

### 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%.
- \* 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          | Super Bright Orange | 611  |      | nm    | I <sub>F</sub> =20mA |
| $\lambda_D$ [1]       | Dominant Wavelength      | Super Bright Orange | 605  |      | nm    | I <sub>F</sub> =20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Orange | 17   |      | nm    | I <sub>F</sub> =20mA |
| V <sub>F</sub> [2]    | Forward Voltage          | Super Bright Orange | 2.05 | 2.4  | V     | I <sub>F</sub> =20mA |
| I <sub>R</sub>        | Reverse Current          | Super Bright Orange |      | 10   | uA    | V <sub>R</sub> =5V   |

### Notes:

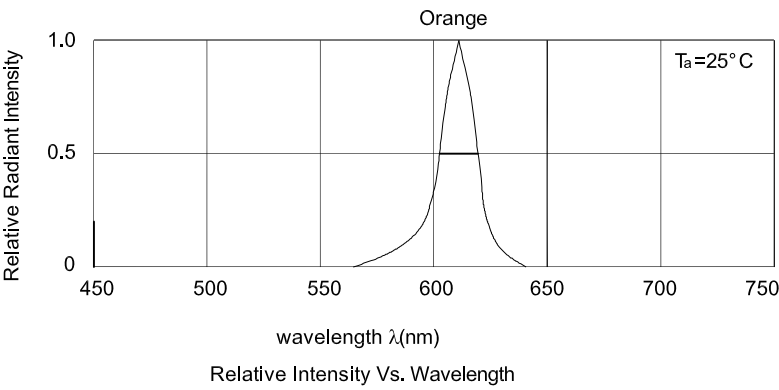
- 1.Wavelength: +/-1nm.
- 2.Forward Voltage: +/-0.1V.
- 3.Wavelength value is traceable to CIE127-2007 standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

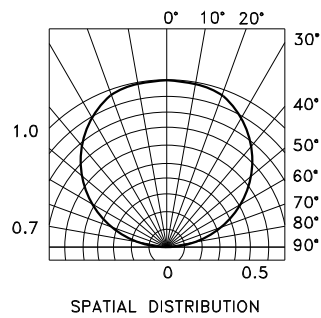
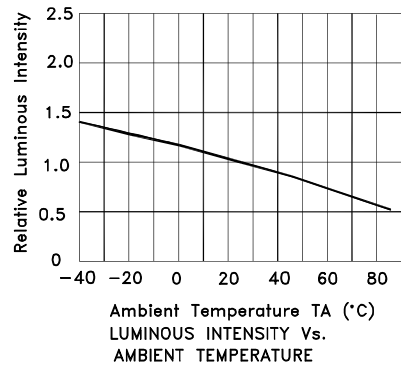
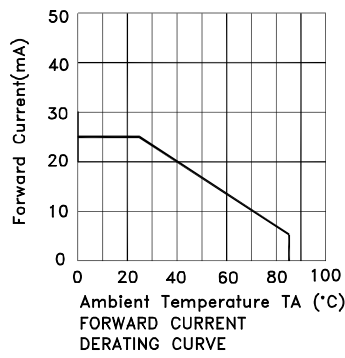
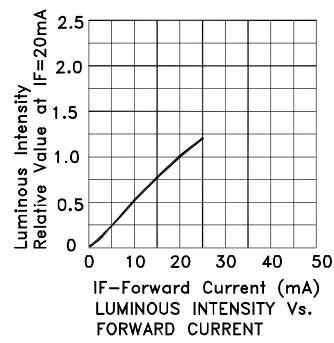
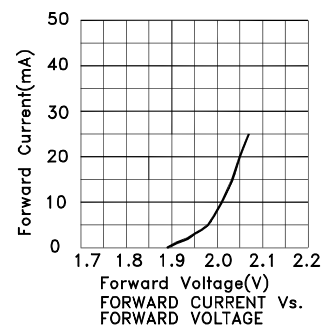
| Parameter                | Values         | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 60             | mW    |
| DC Forward Current       | 25             | mA    |
| Peak Forward Current [1] | 120            | mA    |
| Reverse Voltage          | 5              | 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.



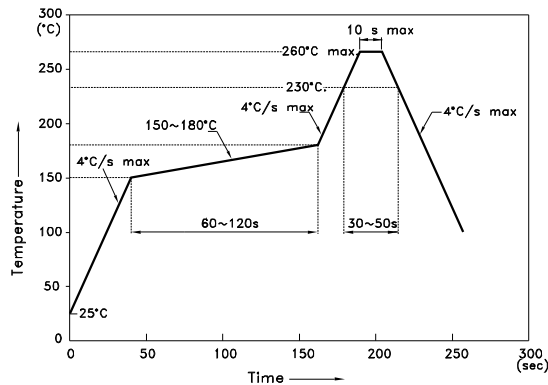
Super Bright Orange      APG1005SEC-T



## APG1005SEC-T

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.

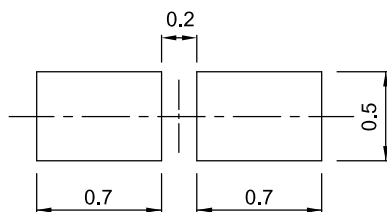
Reflow Soldering Profile For Lead-free SMT Process.



### NOTES:

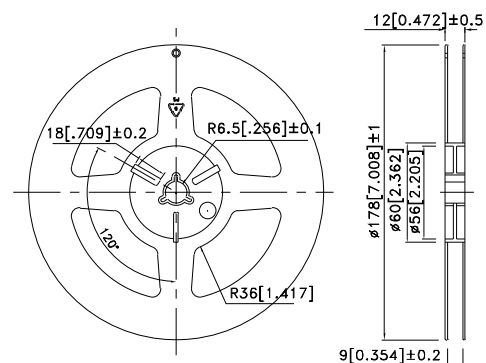
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

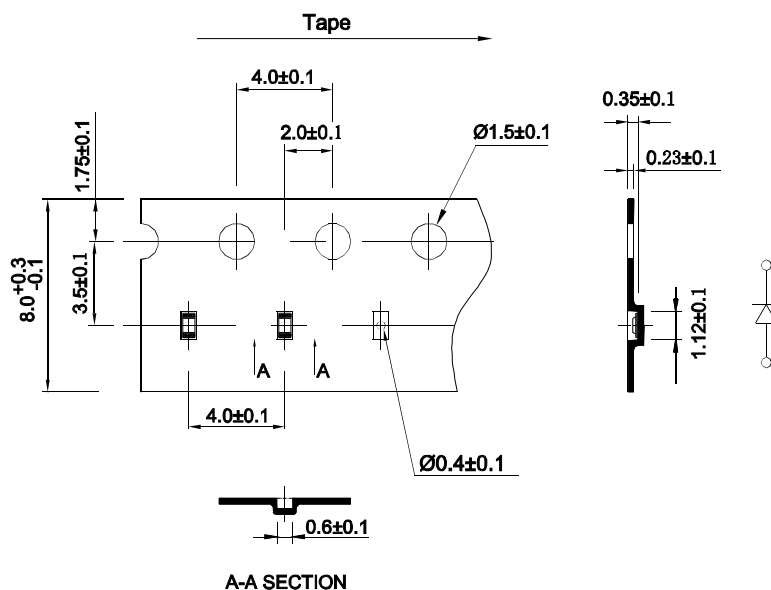


Mask open area ratio:80%  
Mask thickness:80~100um

## Reel Dimension

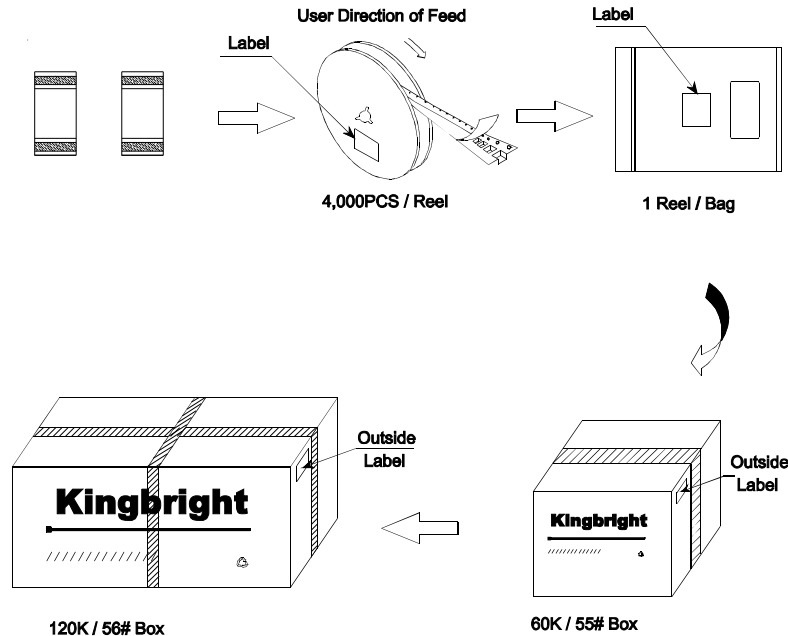



## Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

APG1005SEC-T



|   |                      |
|---|----------------------|
| <b>Kingbright</b>   |                      |
| P/NO: APG1005XXX  |                      |
| QTY: 4000 pcs   | Q.C.                 |
| S/N: XXXX   | XX-XX-XXXX<br>PASSED |
| CODE: XXX   |                      |
| LOT NO:   |                      |
|  |                      |
| RoHS Compliant  |                      |

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