

Part Number: KPA-1606SECK

Super Bright Orange

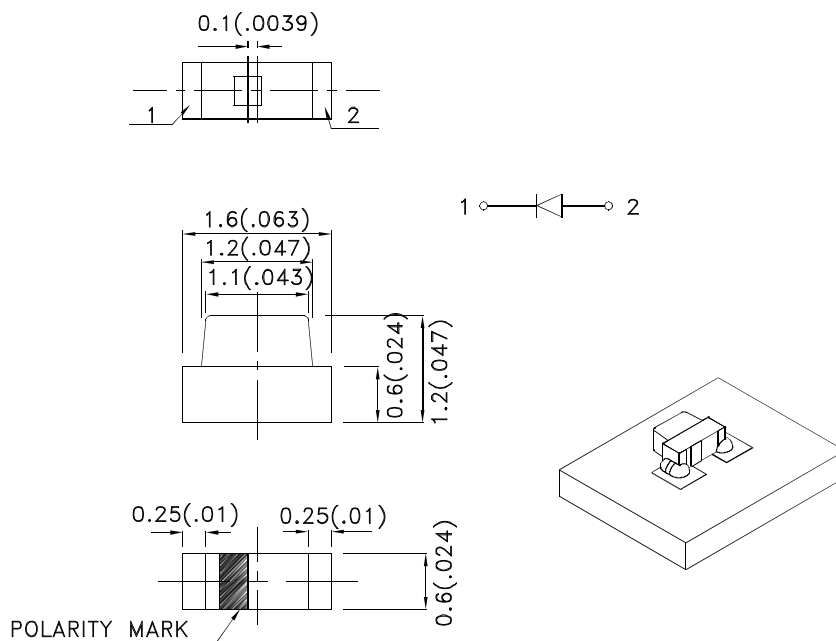
### Features

- 1.6mmx0.6mm right angle SMT LED, 1.2mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package :2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

The Super Bright Orange device is made with AlGaInP (on GaAs substrate) light emitting diode chip.

### 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.     | Dice                          | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|--------------|-------------------------------|-------------|------------------------|------|----------------------|
|              |                               |             | Min.                   | Typ. | 2θ1/2                |
| KPA-1606SECK | Super Bright Orange (AlGaInP) | Water Clear | 110                    | 250  | 110°                 |

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%.

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

| Symbol                | Parameter                | Device              | Typ. | Max. | Units | Test Conditions           |
|-----------------------|--------------------------|---------------------|------|------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Super Bright Orange | 610  |      | nm    | I <sub>F</sub> =20mA      |
| $\lambda_D$ [1]       | Dominant Wavelength      | Super Bright Orange | 601  |      | nm    | I <sub>F</sub> =20mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Super Bright Orange | 29   |      | nm    | I <sub>F</sub> =20mA      |
| C                     | Capacitance              | Super Bright Orange | 15   |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Super Bright Orange | 2.1  | 2.5  | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>        | Reverse Current          | Super Bright Orange |      | 10   | uA    | V <sub>R</sub> =5V        |

Notes:

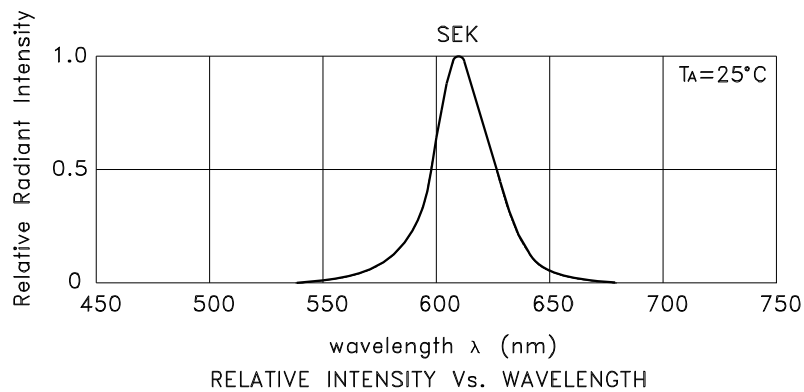
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

| Parameter                | Super Bright Orange | Units |
|--------------------------|---------------------|-------|
| Power dissipation        | 75                  | mW    |
| DC Forward Current       | 30                  | mA    |
| Peak Forward Current [1] | 195                 | mA    |
| Reverse Voltage          | 5                   | V     |
| Operating Temperature    | -40°C To +85°C      |       |
| Storage Temperature      | -40°C To +85°C      |       |

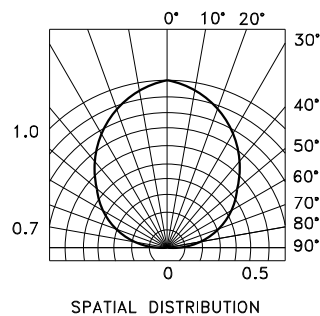
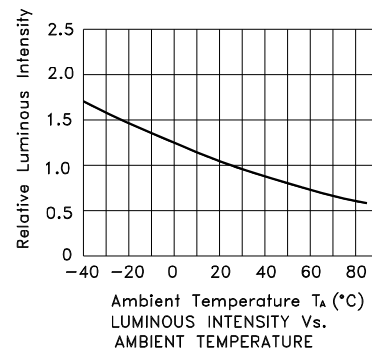
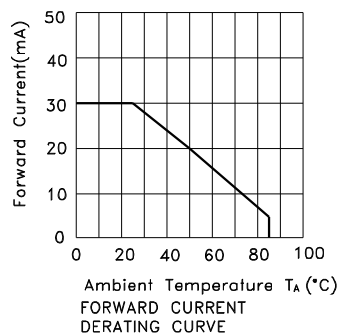
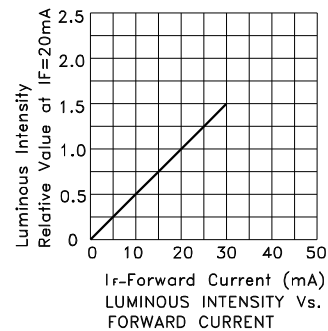
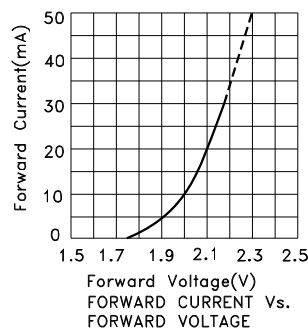
Note:

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



## Super Bright Orange

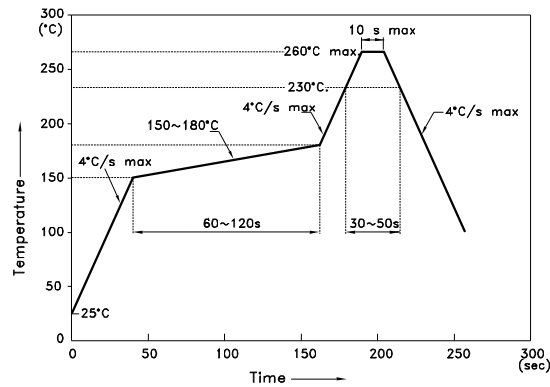
## KPA-1606SECK



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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.

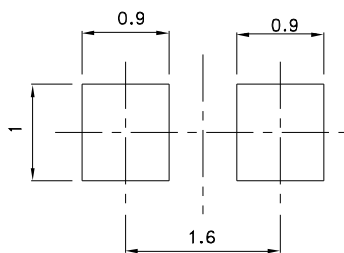
Reflow Soldering Profile For Lead-free SMT Process.



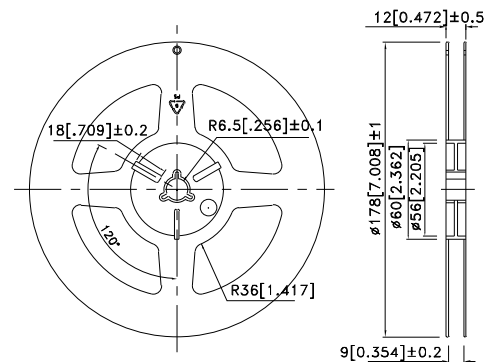
### NOTES:

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.

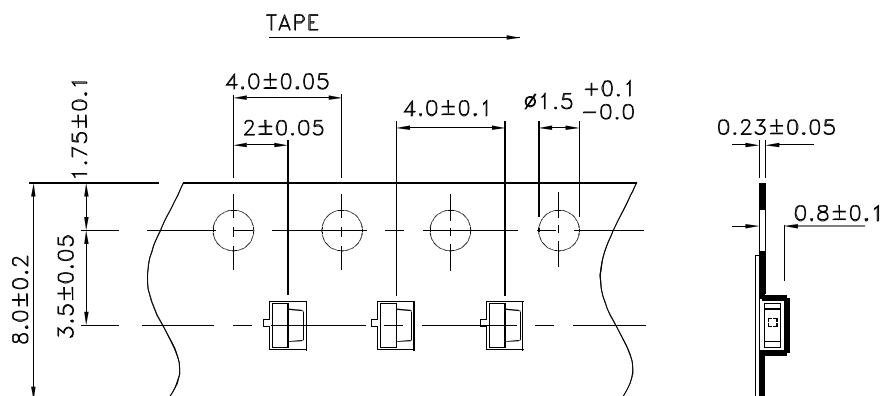
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Reel Dimension

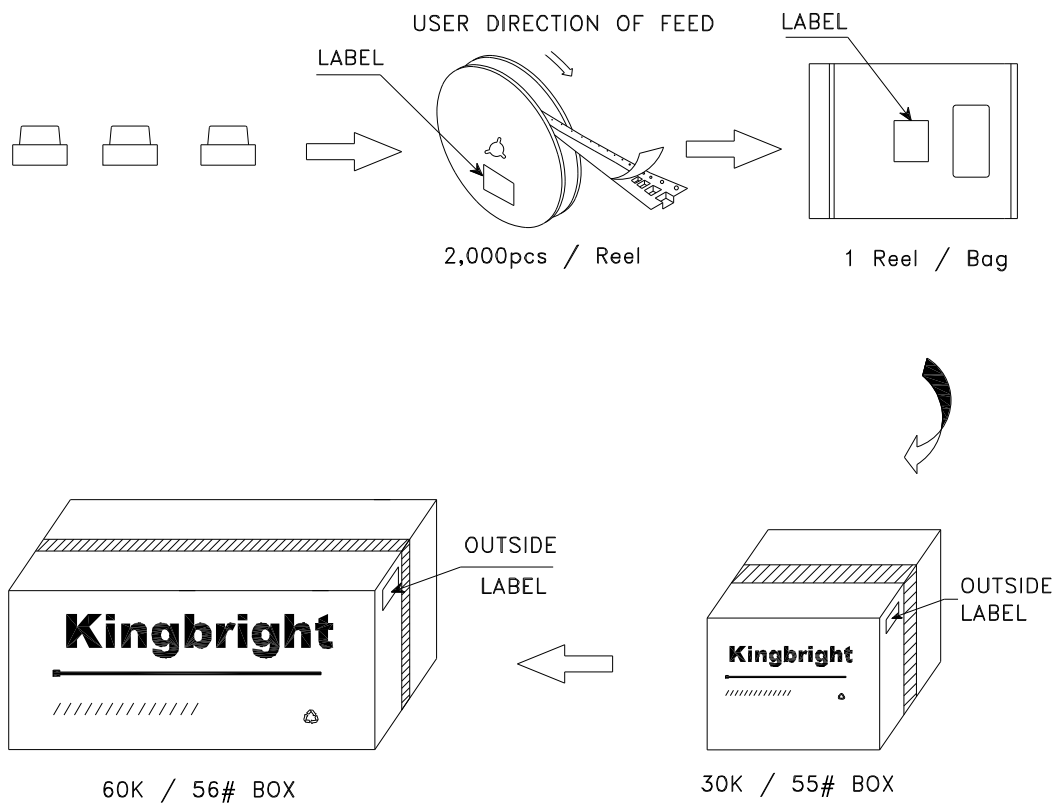


### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

## KPA-1606SECK



|                                                                                                                                 |      |                                          |
|---------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------------|
| <b>Kingbright</b>                                                                                                               |      |                                          |
| P/N0: KPA-1606xxx                                                                                                               |      |                                          |
| QTY: 2,000 pcs                                                                                                                  | Q.C. | <div>Q C<br/>xx xx xxxx<br/>PASSED</div> |
| S/N: XXXX                                                                                                                       |      |                                          |
| CODE: XXX                                                                                                                       |      |                                          |
| LOT NO:<br><br>xxxxxxxxxxxxxxxxxxxxxxxxxxxx |      |                                          |
| RoHS Compliant                                                                                                                  |      |                                          |