

Part Number: APT2012SECK/J4-PRV

Super Bright Orange

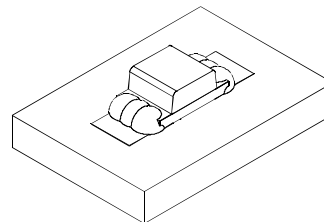
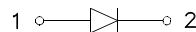
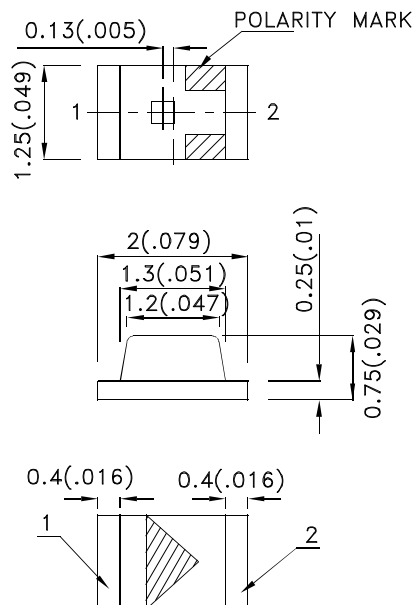
Features

- 2.0mm x1.25mm SMT LED,0.75mm 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 Orange source color devices are made with AlGaInP 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. | Dice | Lens Type | Iv (mcd) [2] @ 20mA | | Viewing Angle [1] |
|--------------------|-------------------------------|-------------|------------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| APT2012SECK/J4-PRV | Super Bright Orange (AlGaInP) | Water Clear | 1300 | 2000 | 120° |
| | | | *300 | *550 | |

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%.
- * Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|---------------------|------|------|-------|-----------------|
| λpeak | Peak Wavelength | Super Bright Orange | 611 | | nm | IF=20mA |
| λD [1] | Dominant Wavelength | Super Bright Orange | 605 | | nm | IF=20mA |
| Δλ1/2 | Spectral Line Half-width | Super Bright Orange | 17 | | nm | IF=20mA |
| C | Capacitance | Super Bright Orange | 27 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Super Bright Orange | 2.2 | 2.8 | V | IF=20mA |
| IR | Reverse Current | Super Bright Orange | | 10 | uA | VR=5V |

Notes:

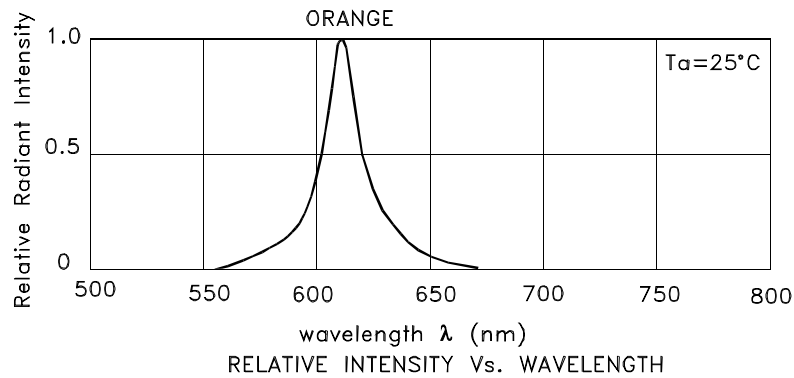
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

| Parameter | Super Bright Orange | Units |
|--------------------------|---------------------|-------|
| Power dissipation | 84 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 150 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C | |

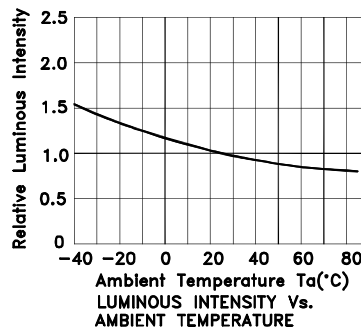
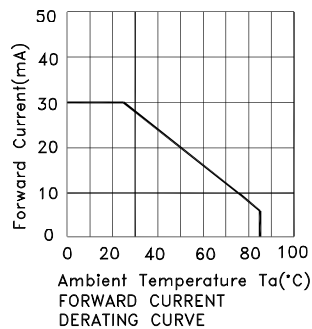
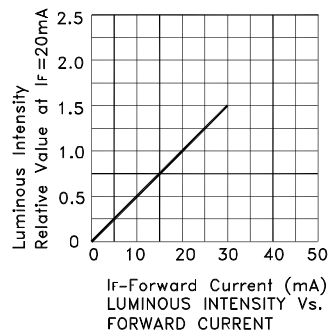
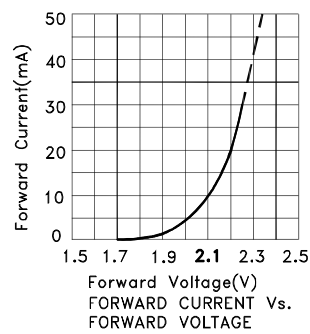
Note:

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



Super Bright Orange

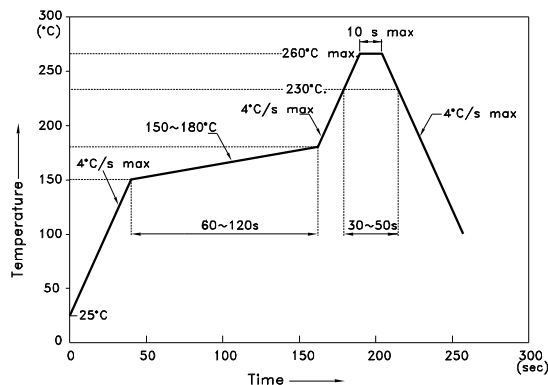
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Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

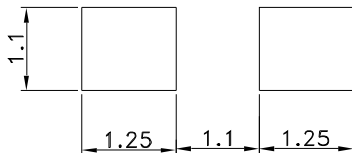
Reflow Soldering Profile For Lead-free SMT Process.



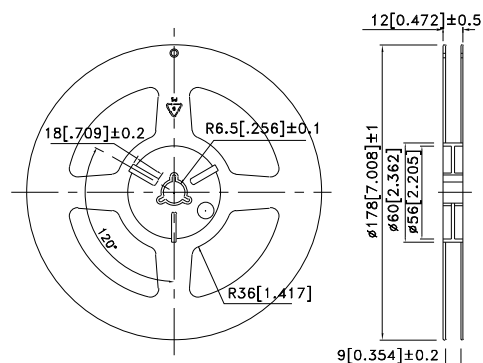
NOTES:

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.

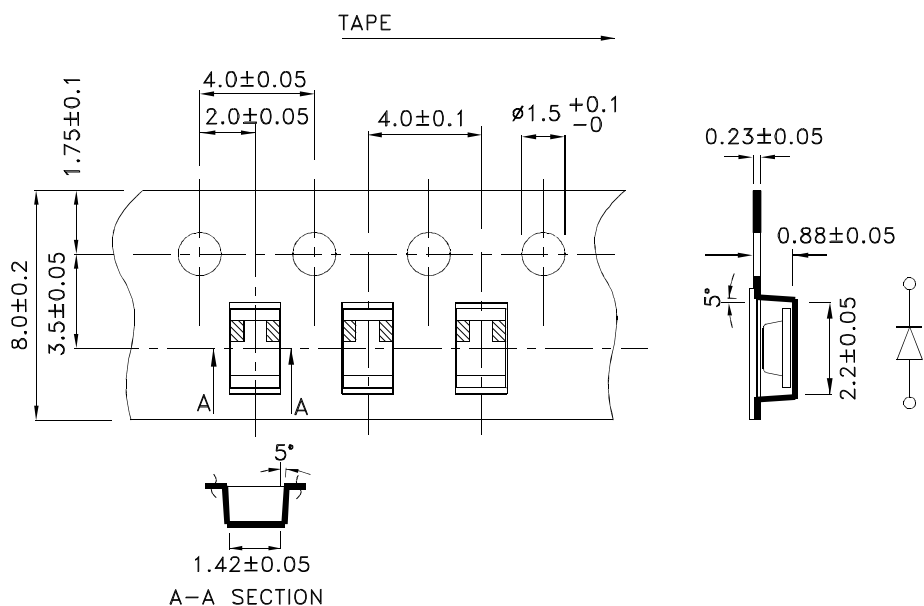
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

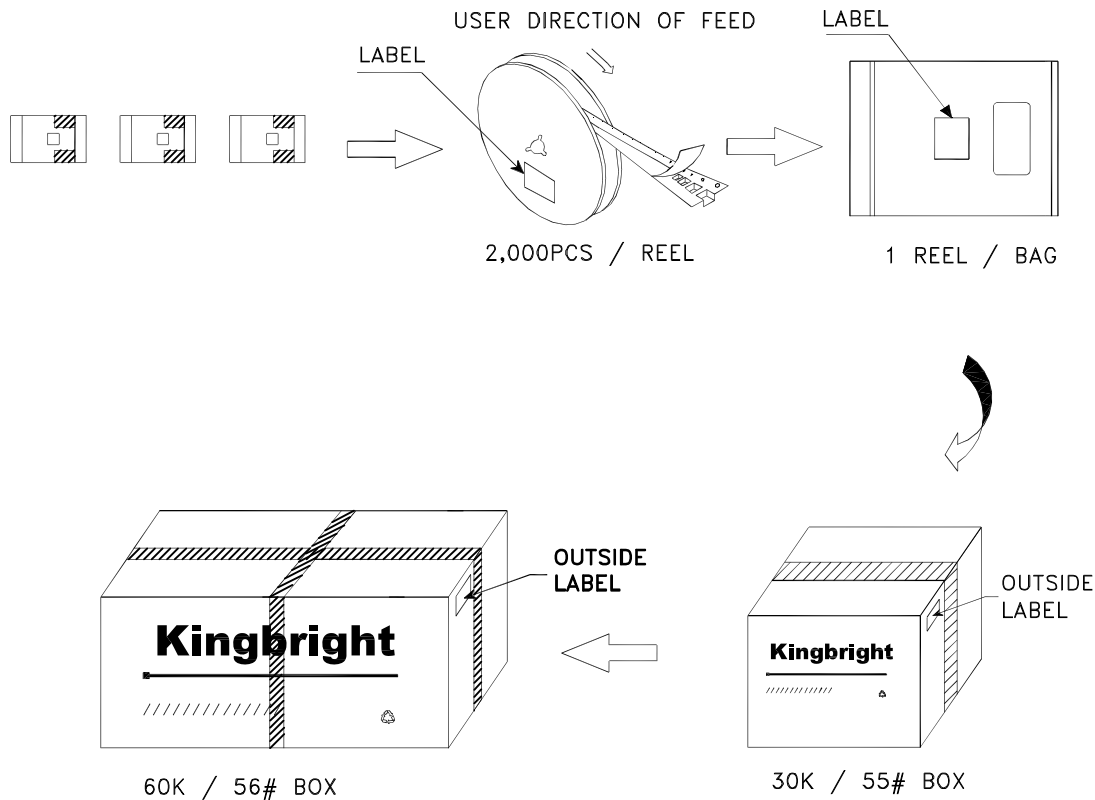



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APT2012SECK/J4-PRV



| | |
|--|--|
| Kingbright | |
| P/N0: APT2012xxx | |
| QTY: 2,000 pcs | Q.C. Q C XX XX XXXX PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  XXXXXXXXXXXXXXXXXXXXXXXXXXXX | |
| RoHS Compliant | |

All design applications should refer to Kingbright application notes available at <http://www.KingbrightUSA.com/ApplicationNotes>

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