

# SUBMINIATURE SOLID STATE LAMP

Part Number: AM2520SECK09

Super Bright Orange

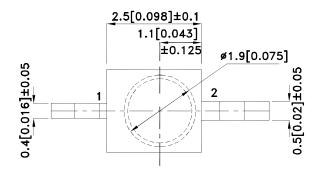
# **Features**

- Subminiature package.
- Z-bend lead.
- Long life solid state reliability.
- Low package profile.
- Moisture sensitivity level : level 3.
- Package: 1000pcs / reel.
- RoHS compliant.

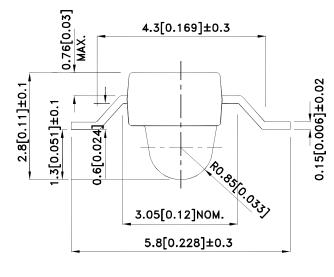
# Description

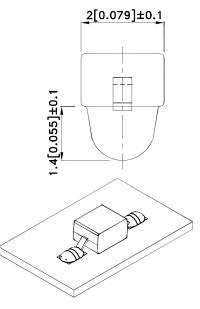
The Super Bright Orange device is made with AlGaInP (on GaAs substrate) light emitting diode chip.

# **Package Dimensions**









### Notes:

- All dimensions are in millimeters (inches).
   Tolerance is ±0.25(0.01") unless otherwise noted.
- 3. Lead spacing is measured where the leads emerge from the package.
- 4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
- 5. The device has a single mounting surface. The device must be mounted according to the specifications.

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# **Selection Guide**

| Part No.     | Dice                          | Iv (mcd) [2]   Dice   Lens Type   @ 20mA |       | ,     | Viewing<br>Angle [1] |
|--------------|-------------------------------|--|-------|-------|----------------------|
|              |                               |  | Min.  | Тур.  | 201/2                |
| AM2520SECK09 | Super Bright Orange (AlGaInP) | Water Clear                              | 1900  | 2700  | 20°                  |
|              |                               |  | *1000 | *1800 |                      |

### 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 the CIE127-2007 compliant national standards.

# Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter                | Device              | Тур. | Max. | Units | Test Conditions |
|--------|--------------------------|---------------------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | Super Bright Orange | 610  |      | nm    | IF=20mA         |
| λD [1] | Dominant Wavelength      | Super Bright Orange | 601  |      | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | Super Bright Orange | 29   |      | nm    | IF=20mA         |
| С      | Capacitance              | Super Bright Orange | 15   |      | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | Super Bright Orange | 2.1  | 2.5  | ٧     | IF=20mA         |
| lR     | Reverse Current          | Super Bright Orange |      | 10   | uA    | VR=5V           |

### Notes:

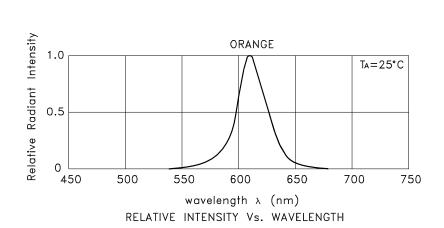
- 1.Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

# Absolute Maximum Ratings at TA=25°C

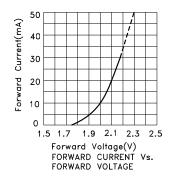
| Parameter                | Super Bright Orange |    |  |
|--------------------------|---------------------|----|--|
| Power dissipation        | 75                  | mW |  |
| DC Forward Current       | 30                  | mA |  |
| Peak Forward Current [1] | 195                 | mA |  |
| Reverse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

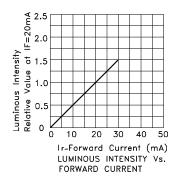
Note: 1. 1/10 Duty Cycle, 0.1ms Pulse Width.

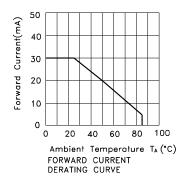
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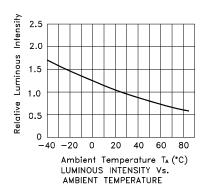


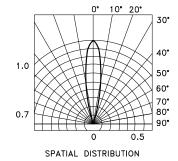
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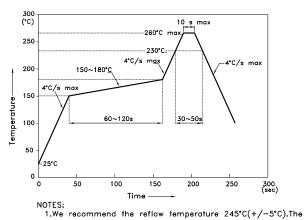
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# **AM2520SECK09**

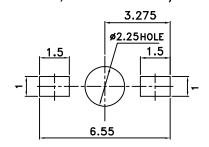
Reflow soldering is recommended and the soldering profile is shown below. Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.



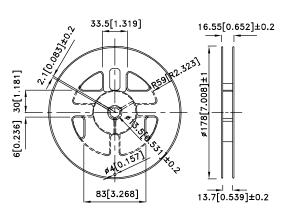
- 1.We recommend the reflow temperature 245°C(+/-5°C). The
  maximum soldering temperature should be limited to 260°C.
   2.Don't cause stress to the epoxy resin while it is exposed
  to high temperature.
- 3.Number of reflow process shall be 2 times or less.

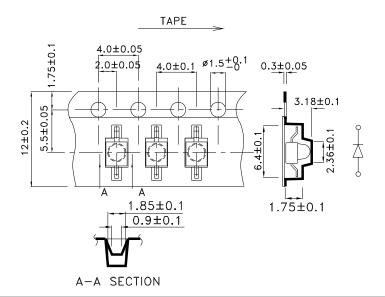
# Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



Tape Dimensions (Units : mm)

# **Reel Dimension**



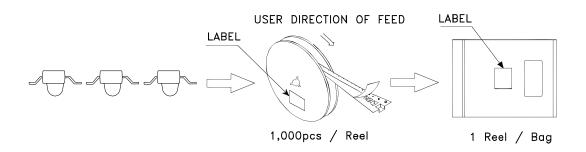


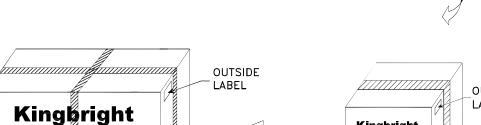
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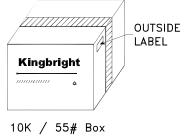
# **PACKING & LABEL SPECIFICATIONS**

# **AM2520SECK09**





20K / 56# BOX



# P/NO: AM2520xxx09 QTY: 1,000 pcs Q.C. Q C XX XX XXXXX PASSED CODE: XXX LOT NO: RoHS Compliant

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

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