

### 2.0x1.25mm SMD CHIP LED LAMP



**ATTENTION OBSERVE PRECAUTIONS** FOR HANDLING ELECTROSTATIC DISCHARGE **SENSITIVE DEVICES** 

Part Number: APT2012SECK

Super Bright Orange

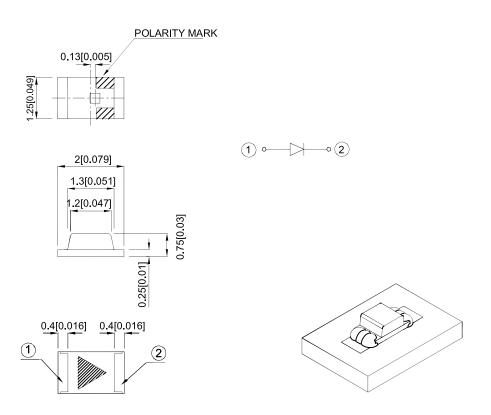
#### **Features**

- 2.0mm x1.25mm SMD LED,0.75mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### **Descriptions**

- The Super Bright Orange device is made with AlGaInP (on GaAs substrate) light emitting diode chip.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or antielectrostatic glove when handling the LEDs.
- All devices, equipment and machinery must be electri cally grounded.

# **Package Dimensions**



SPEC NO: DSAD0946

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- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.1 (0.004")$  unless otherwise noted.
- The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
   The device has a single mounting surface. The device must be mounted according to the specifications.

**REV NO: V.11A** 

**CHECKED: Allen Liu** 

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### **Selection Guide**

Part No.	Emitting Color (Material)	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	201/2
A DT2042CECK	Super Bright Orange (AlGaInP)	Water Clear	120	250	140°
APT2012SECK			*80	*180	

- $1. \, \theta 1/2$  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	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	V <sub>F</sub> =0V;f=1MHz
VF [2]	Forward Voltage	Super Bright Orange	2.1	2.5	V	IF=20mA
lR	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.
- Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

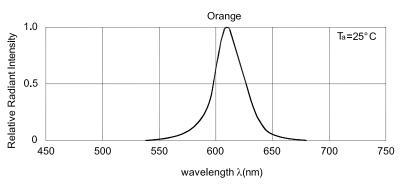
## Absolute Maximum Ratings at TA=25°C

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

### Notes:

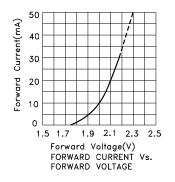
- 1.110 Duty Cycle, 0.1ms Pulse Width.
   Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

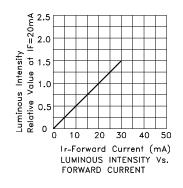
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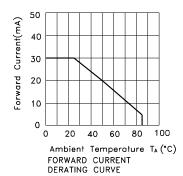


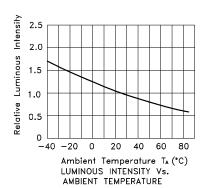
Relative Intensity Vs. Wavelength

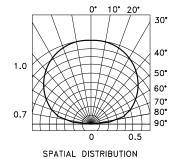
# Super Bright Orange APT2012SECK











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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.



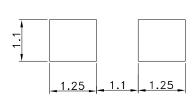
- NOTES:

  1.We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.

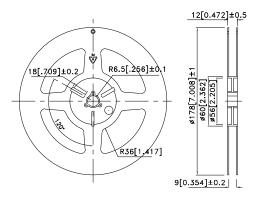
  2.Don't cause stress to the epoxy resin while it is exposed to high temperature.

  3.Number of reflow process shall be 2 times or less.

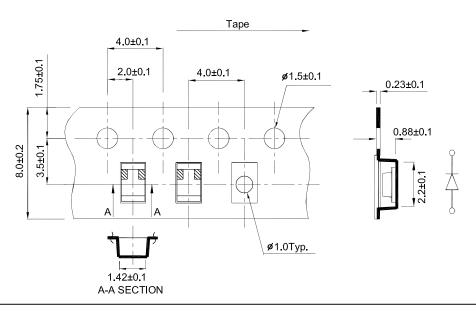
# **Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.1)



### **Reel Dimension**



**Tape Dimensions** (Units: mm)



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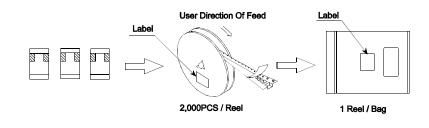
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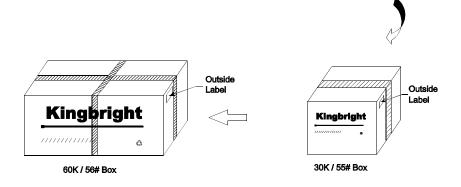
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### **PACKING & LABEL SPECIFICATIONS**

### APT2012SECK







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