

### 1.6X0.8mm SMD CHIP LED LAMP

Super Bright Red Part Number: APT1608SRCPRV

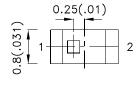
### **Features**

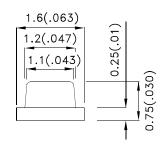
- 1.6mmX0.8mm SMT LED, 0.75mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package: 2000pcs / reel .
- Moisture sensitivity level : level 3.
- RoHS compliant.

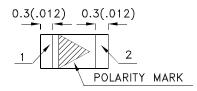
## Description

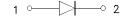
The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

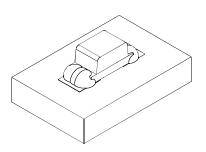
# **Package Dimensions**











- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±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.

SPEC NO: DSAB3726 **REV NO: V.14A DATE: MAR/16/2013** PAGE: 1 OF 5 DRAWN: F.Cui ERP: 1203001749 APPROVED: WYNEC **CHECKED: Allen Liu** 

## **Selection Guide**

Part No.	art No. Dice Lens Type	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	201/2
APT1608SRCPRV	Super Bright Red (GaAlAs)	Water Clear	55	100	- 120°
			*12	*30	

- $1. \theta 1/2$  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 Red	655		nm	IF=20mA
λD [1]	Dominant Wavelength	Super Bright Red	640		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Red	20		nm	IF=20mA
С	Capacitance	Super Bright Red	45		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Super Bright Red	1.85	2.5	V	IF=20mA
lr	Reverse Current	Super Bright Red		10	uA	V <sub>R</sub> = 5V

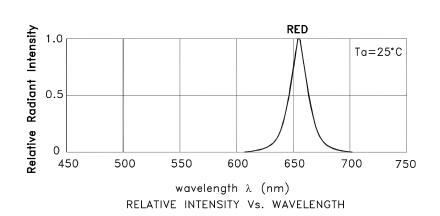
- 1.Wavelength: +/-1nm.
- 2. Forward Voltage: +/-0.1V.
  3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

# Absolute Maximum Ratings at TA=25°C

Parameter	Super Bright Red	Units	
Power dissipation	75	mW	
DC Forward Current	30	mA	
Peak Forward Current [1]	155	mA	
Reverse Voltage	5	V	
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

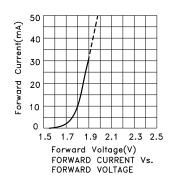
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

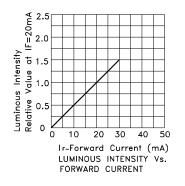
SPEC NO: DSAB3726 **REV NO: V.14A** DATE: MAR/16/2013 PAGE: 2 OF 5 ERP: 1203001749 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: F.Cui

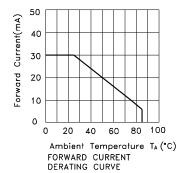


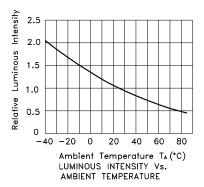
# Super Bright Red

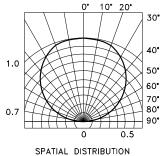
### APT1608SRCPRV











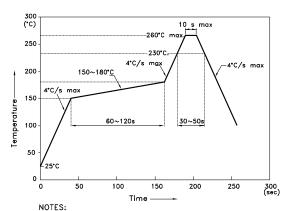
 SPEC NO: DSAB3726
 REV NO: V.14A
 DATE: MAR/16/2013
 PAGE: 3 OF 5

 APPROVED: WYNEC
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### APT1608SRCPRV

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.

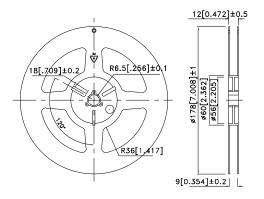
  2.Don't cause stress to the epoxy resin while it is exposed to high temperature.

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

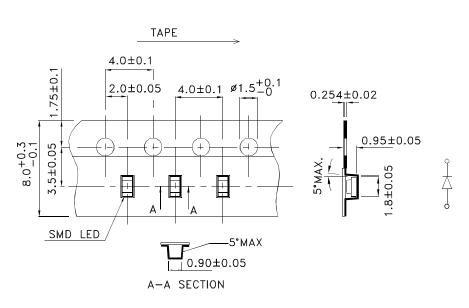
# **Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.1)

# 0.8 8.0 0.85 8.0

## **Reel Dimension**



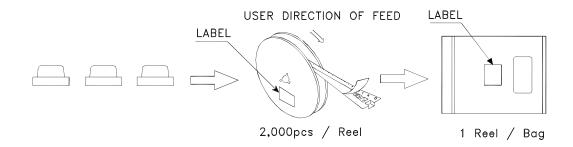
**Tape Dimensions** (Units : mm)

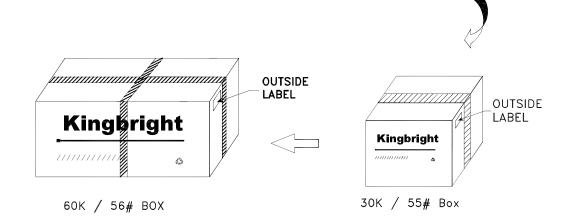


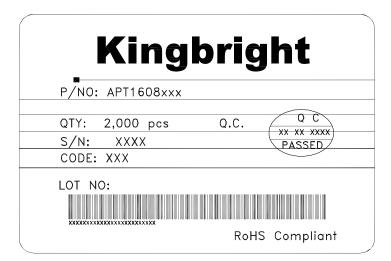
SPEC NO: DSAB3726 **REV NO: V.14A DATE: MAR/16/2013** PAGE: 4 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: F.Cui ERP: 1203001749

## **PACKING & LABEL SPECIFICATIONS**

### APT1608SRCPRV







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

SPEC NO: DSAB3726 APPROVED: WYNEC REV NO: V.14A CHECKED: Allen Liu DATE: MAR/16/2013 DRAWN: F.Cui PAGE: 5 OF 5 ERP: 1203001749