

## 3.0x2.0mm SURFACE MOUNT LED LAMP

Part Number: KA-3021SRT Super Bright Red

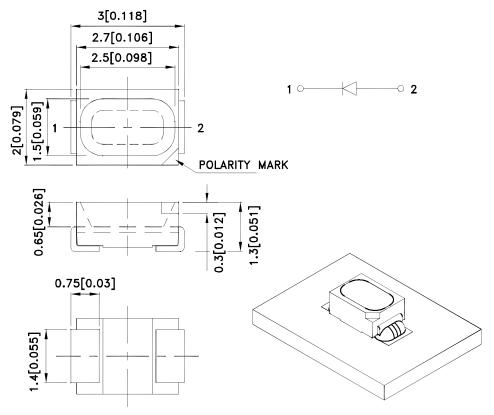
## **Features**

- 3.0mm x 2.0mm, 1.3mm high, only minimum space required.
- Suitable for compact optoelectronic applications.
- Low power consumption.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 4.
- 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  $\pm 0.2(0.008")$  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.

SPEC NO: DSAK5725 **REV NO: V.3A** DATE: AUG/17/2012 PAGE: 1 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: D.M.Su ERP: 1201006215

# **Selection Guide**

Part No.	Dice	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
		,	Min.	Тур.	201/2
KA-3021SRT	Cuper Dright Ded (CaAIAa)	Red Transparent	80	130	- 120°
KA-30215R1	Super Bright Red (GaAlAs)	Red Transparent	*20	*35	

## Notes:

- 1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

# Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Тур.		Max.	Units	Test Conditions	
λpeak	Peak Wavelength	Super Bright Red	660	*655		nm	IF=20mA	
λD [1]	Dominant Wavelength	Super Bright Red	640	*640		nm	IF=20mA	
Δλ1/2	Spectral Line Half-width	Super Bright Red	20			nm	IF=20mA	
С	Capacitance	Super Bright Red	45			pF	V <sub>F</sub> =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.

## Absolute Maximum Ratings at TA=25°C

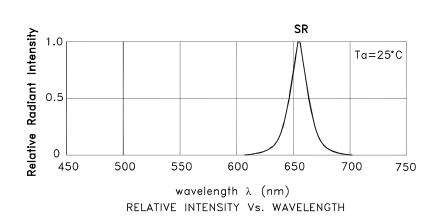
Absolute Maximum Natings at TA-25 C					
Parameter	Super Bright Red	Units			
Power dissipation	75	mW			
DC Forward Current	30	mA			
Peak Forward Current [1]	155	mA			
Reverse Voltage	5	V			
Operating Temperature	-40°C To +85°C				
Storage Temperature	-40°C To +85°C				

SPEC NO: DSAK5725 **REV NO: V.3A** DATE: AUG/17/2012 PAGE: 2 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: D.M.Su ERP: 1201006215

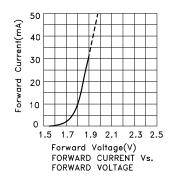
Luminous intensity/ luminous Flux: +/-15%.
 \*Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

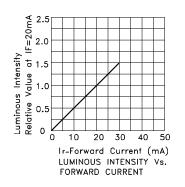
Forward Voltage: +/-0.1V.
 \*Wavelength value is traceable to the CIE127-2007 compliant national standards.

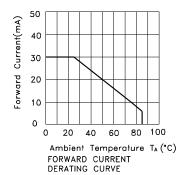
<sup>1. 1/10</sup> Duty Cycle, 0.1ms Pulse Width.

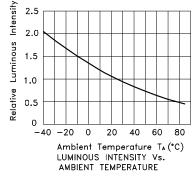


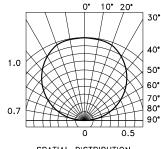
Super Bright Red KA-3021SRT











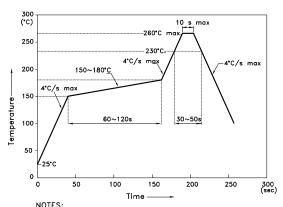
SPATIAL DISTRIBUTION

SPEC NO: DSAK5725 REV NO: V.3A DATE: AUG/17/2012 PAGE: 3 OF 5
APPROVED: WYNEC CHECKED: Allen Liu DRAWN: D.M.Su ERP: 1201006215

## **KA-3021SRT**

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.



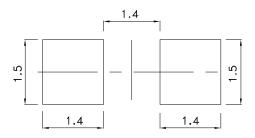
- NOTES:

  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.
- to high temperature.

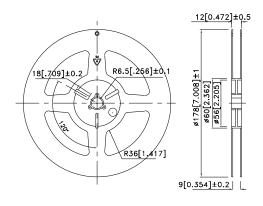
  3.Number of reflow process shall be 2 times or less.

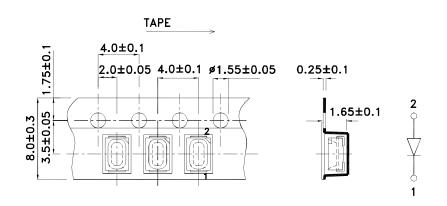
# Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



# Tape Dimensions (Units : mm)

## **Reel Dimension**

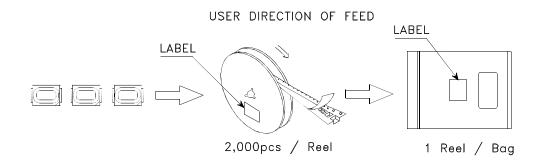


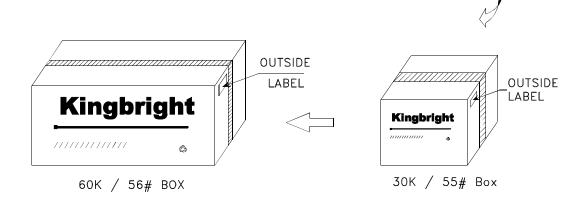


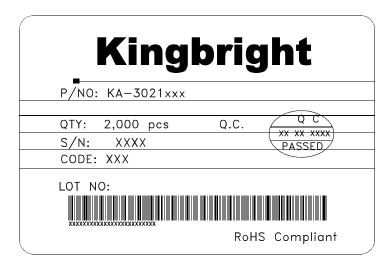
SPEC NO: DSAK5725 REV NO: V.3A DATE: AUG/17/2012 PAGE: 4 OF 5
APPROVED: WYNEC CHECKED: Allen Liu DRAWN: D.M.Su ERP: 1201006215

# **PACKING & LABEL SPECIFICATIONS**

# **KA-3021SRT**







Detailed application notes are listed on our website. http://www.kingbright.com/application notes

SPEC NO: DSAK5725 APPROVED: WYNEC

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PAGE: 5 OF 5 ERP: 1201006215