

Part Number: KPA-1606SURCK

Hyper Red

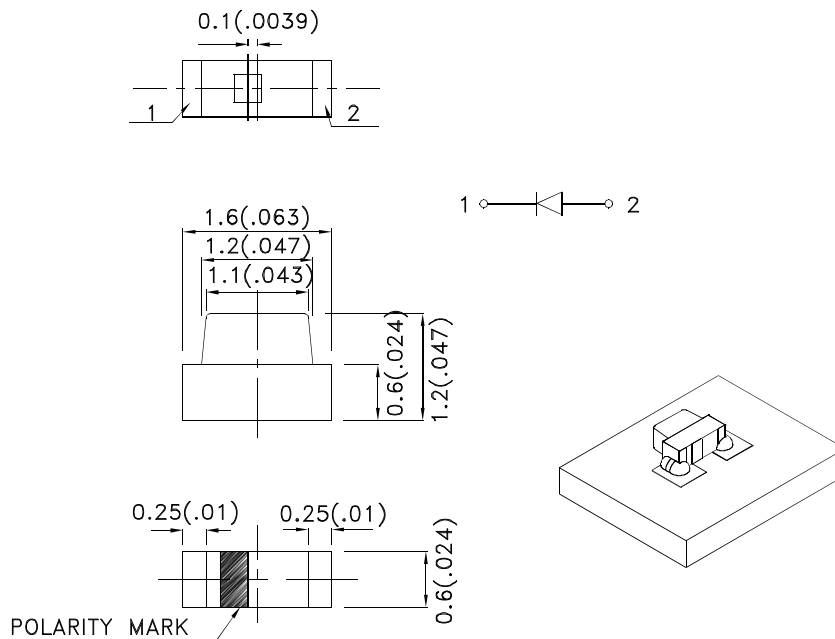
### Features

- 1.6mmx0.6mm right angle SMT LED, 1.2mm 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.
- Tinned pads for improved solderability.
- RoHS compliant.

### Description

The Hyper Red source color devices are made with Al-GaN on GaAs substrate 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
KPA-1606SURCK	Hyper Red (AlGaInP)	Water Clear	120	220	110°
			*40	*80	

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
λ <sub>peak</sub>	Peak Wavelength	Hyper Red	650	*645		nm	I <sub>F</sub> =20mA
λ <sub>D</sub> [1]	Dominant Wavelength	Hyper Red	630	*630		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Hyper Red	28			nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Red	35			pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Hyper Red	1.95		2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Hyper Red			10	uA	V <sub>R</sub> =5V

Notes:

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

## Absolute Maximum Ratings at TA=25°C

Parameter	Hyper Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	185	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.



## Hyper Red

### KPA-1606SURCK



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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.

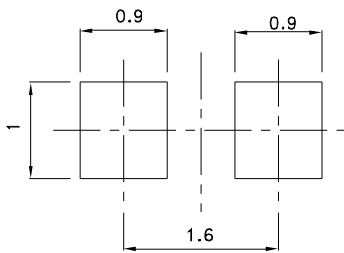
Reflow Soldering Profile For Lead-free SMT Process.



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.

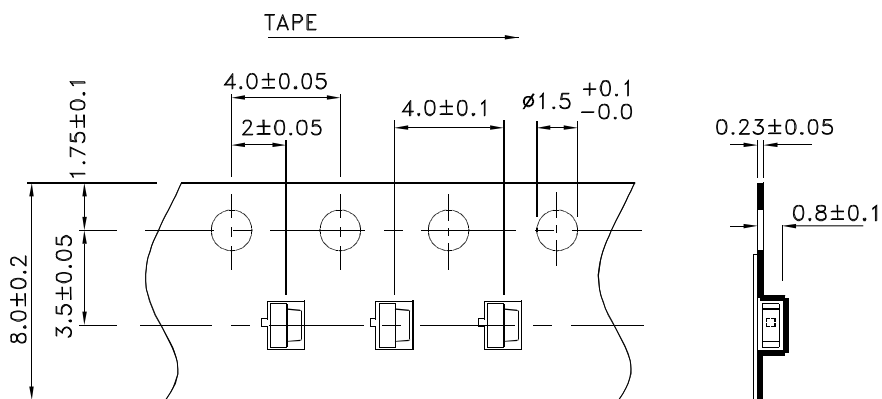
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

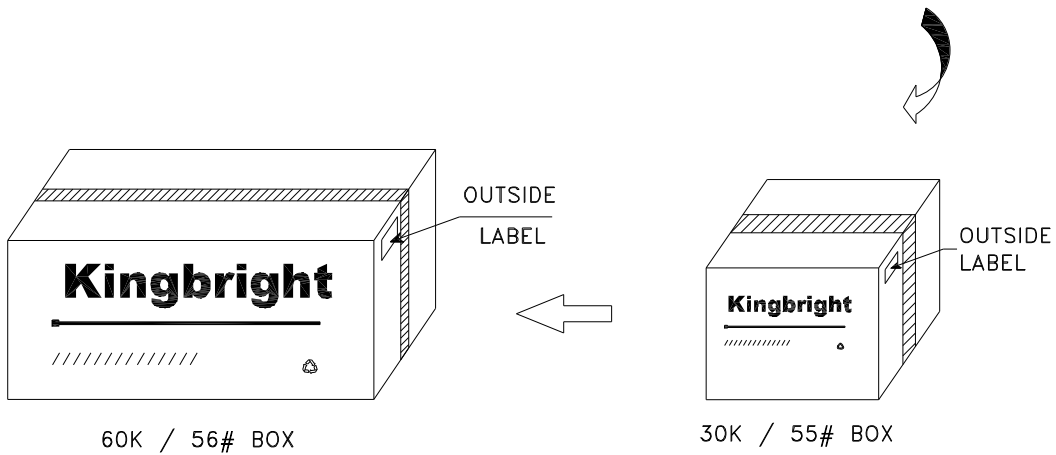
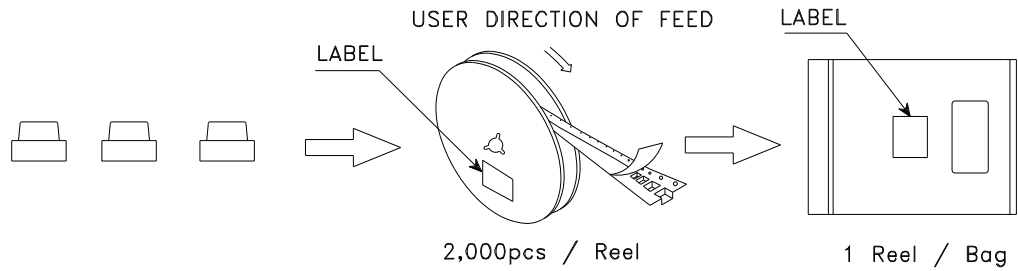


### Tape Dimensions (Units : mm)



**PACKING & LABEL SPECIFICATIONS**

**KPA-1606SURCK**



<h2 style="margin: 0;">Kingbright</h2>	
P/NO: KPA-1606xxx	
QTY: 2,000 pcs	Q.C.
S/N: XXXX	<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">             Q C              xx xx xxxx              PASSED           </div>
CODE: XXX	
LOT NO:	
 <small>xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx</small>	
RoHS Compliant	

Detailed application notes are listed on our website.

[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)