

Part Number: KPG-0603SURC-TT

Hyper Red

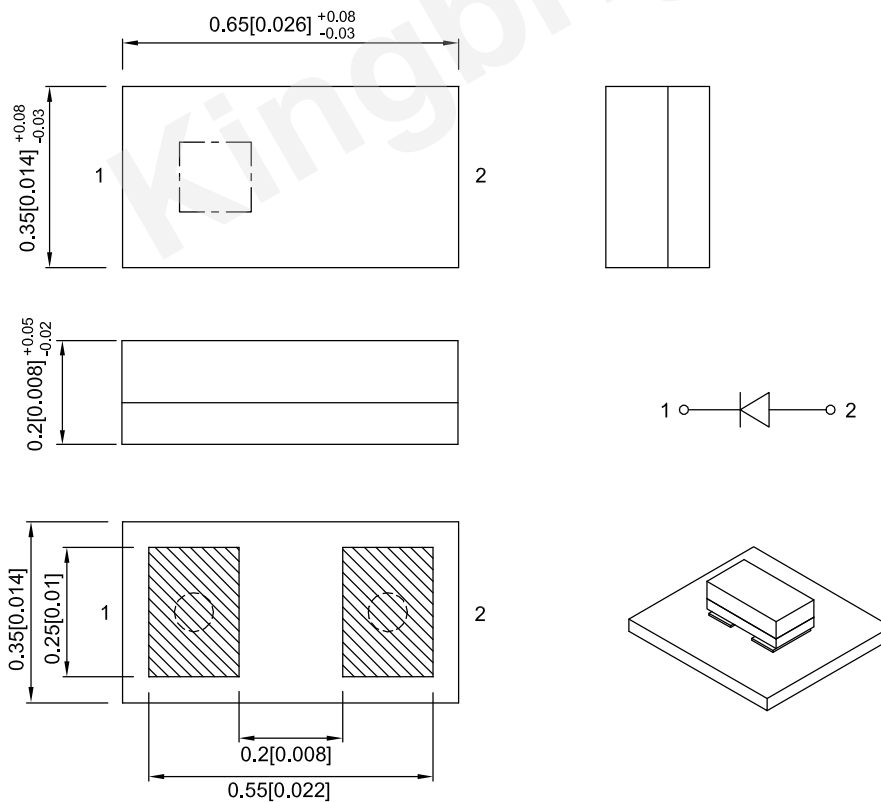
### Features

- 0.65mmX0.35mm SMD LED,0.2mm thickness.
- Low power consumption.
- Wide viewing angle.
- Compatible with automatic placement equipment.
- Package:4000pcs/reel.
- Moisture sensitivity level : level 2.
- RoHS compliant.

### Description

The Hyper Red source color devices are made with Al-GaNp 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.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 10mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KPG-0603SURC-TT	Hyper Red (AlGaInP)	Water Clear	30	105	140°
			*10	*35	

**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 CIE127-2007 standards.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Hyper Red	639		nm	I <sub>F</sub> =10mA
λ <sub>D</sub> [1]	Dominant Wavelength	Hyper Red	631		nm	I <sub>F</sub> =10mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Hyper Red	20		nm	I <sub>F</sub> =10mA
C	Capacitance	Hyper Red	35		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Hyper Red	1.92	2.4	V	I <sub>F</sub> =10mA
I <sub>R</sub>	Reverse Current	Hyper Red		10	uA	V <sub>R</sub> =5V

**Notes:**

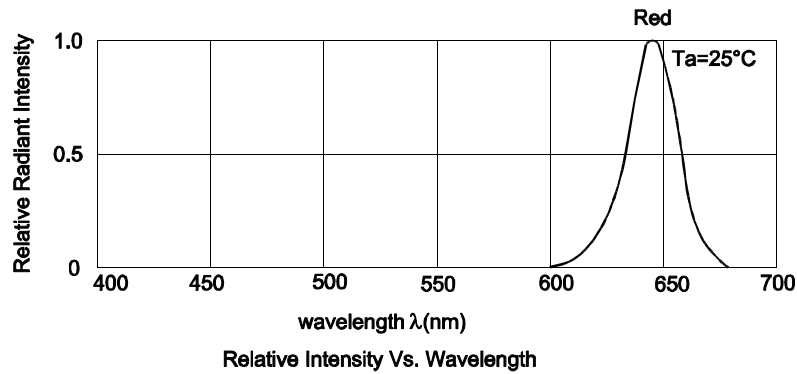
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

Parameter	Values	Units
Power dissipation	48	mW
DC Forward Current	20	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

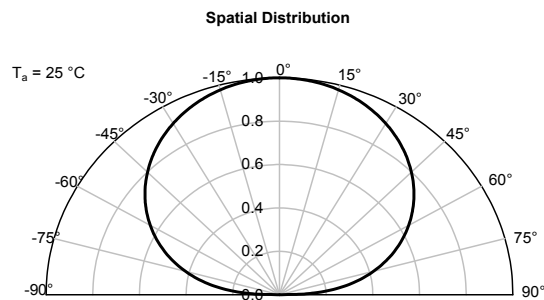
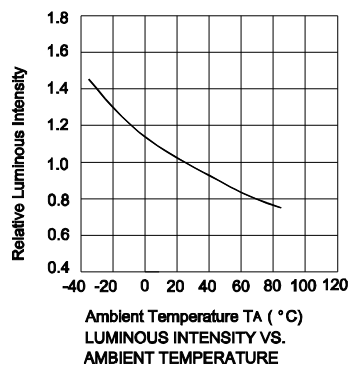
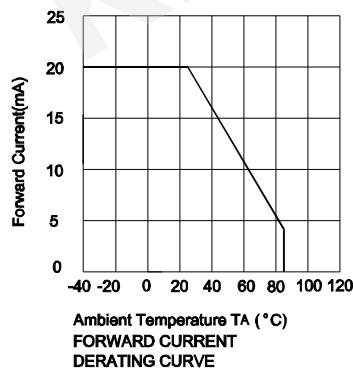
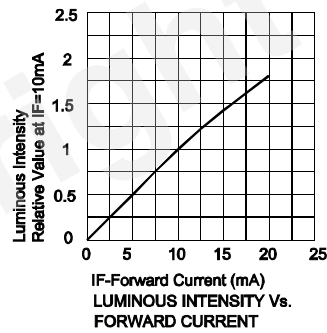
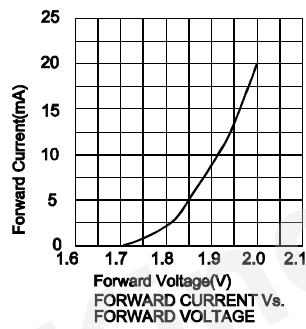
**Notes:**

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 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.



## Hyper Red

### KPG-0603SURC-TT



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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.

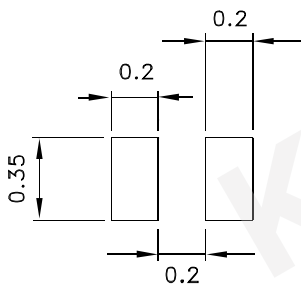
Reflow Soldering Profile For Lead-free SMT Process.



**NOTES:**

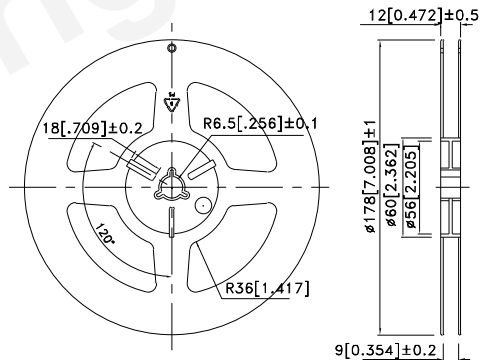
1. We recommend the reflow temperature 245°C (+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

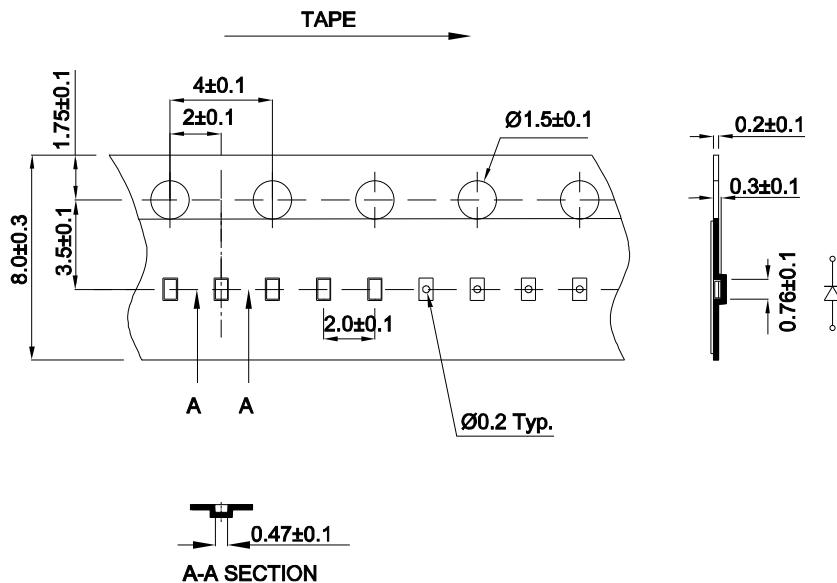


Mask open area ratio:80%  
Mask thickness:80~100um

### Reel Dimension

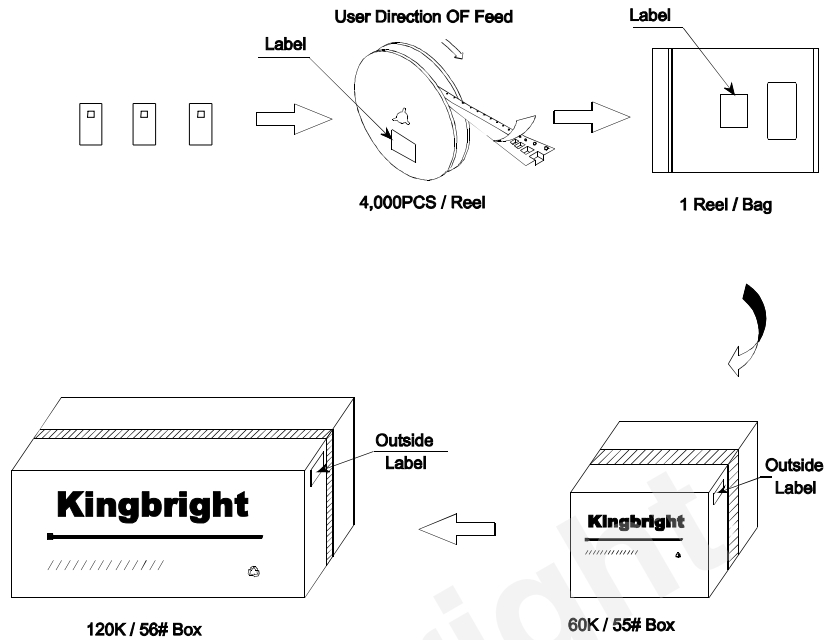



### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

KPG-0603SURC-TT



<b>Kingbright</b>	
P/NO: KPG-0603xxx	
QTY: 4000 pcs	Q.C.
S/N: XXXX	Q C XX XX XXXX PASSED
CODE: XXX	
LOT NO:	
	
RoHS Compliant	

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1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
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