Kingbright

0.65X0.35X0.02mm(0201) SMD CHIP LED LAMP

Part Number: KPG-0603SEC-E-TT Hyper-Red

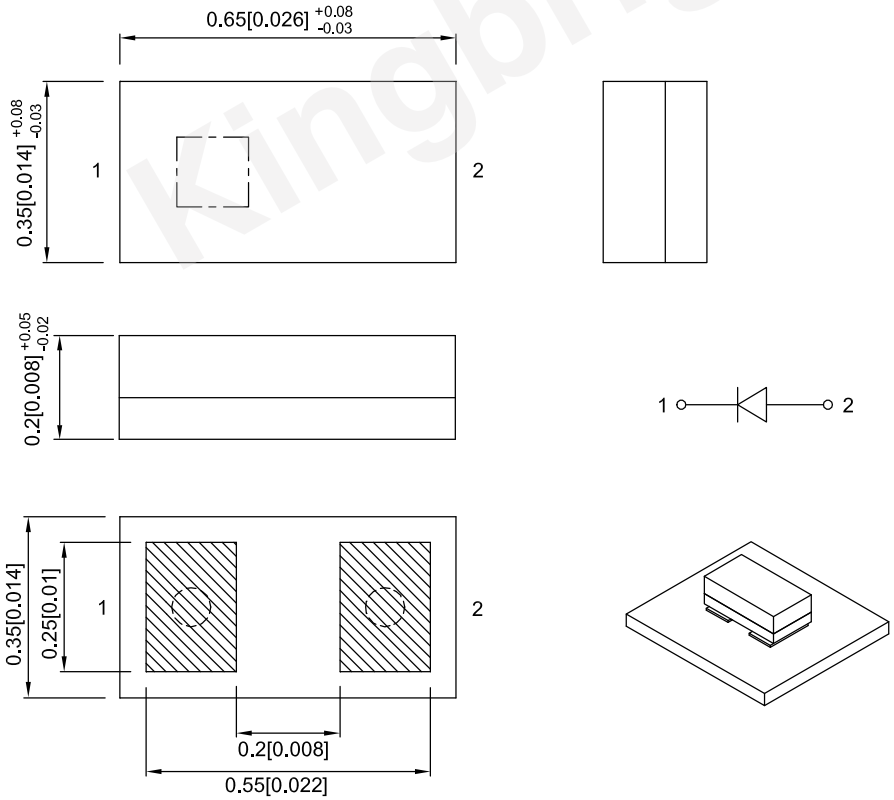
Features

- 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-GaInP on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±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-0603SEC-E-TT	Hyper-Red(AlGaInP)	Water Clear	45	120	140°
			*15	*40	

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

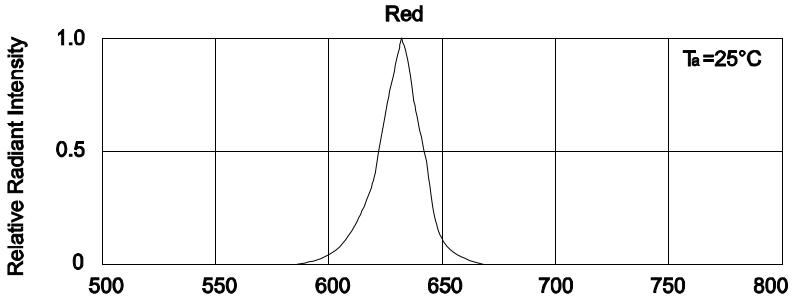
Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper-Red	632		nm	I_F=10mA
λD [1]	Dominant Wavelength	Hyper-Red	624		nm	I_F=10mA
Δλ1/2	Spectral Line Half-width	Hyper-Red	20		nm	I_F=10mA
V_F [2]	Forward Voltage	Hyper-Red	1.93	2.4	V	I_F=10mA
I_R	Reverse Current	Hyper-Red		10	uA	V_R=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.



Relative Intensity Vs. Wavelength

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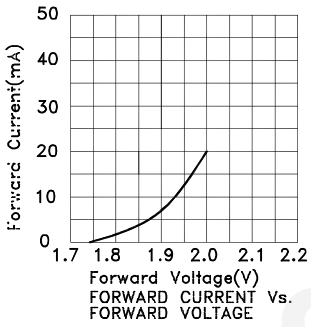
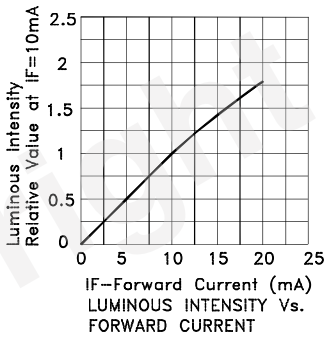
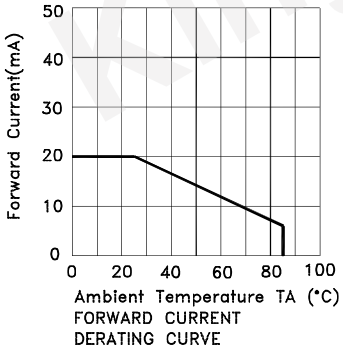
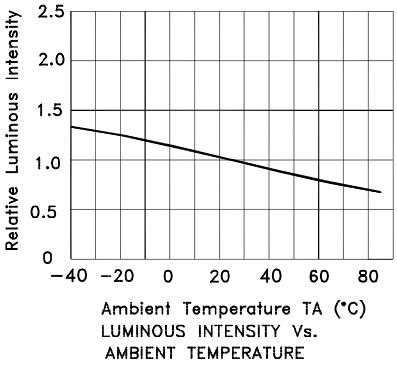
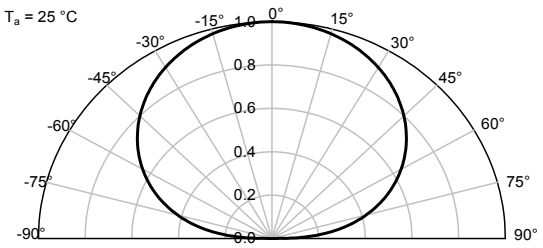








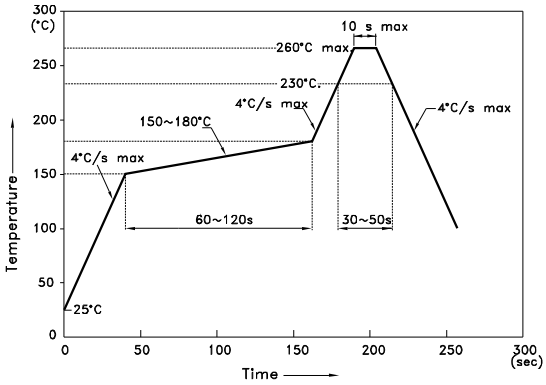
Spatial Distribution



KPG-0603SEC-E-TT

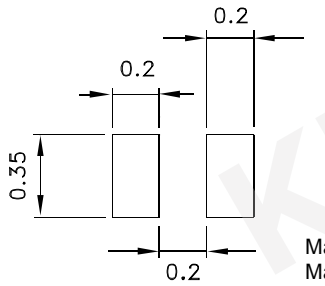
Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.



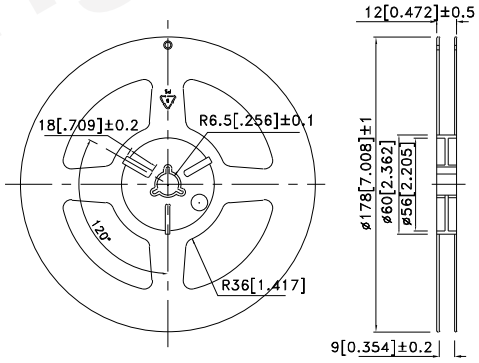
NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

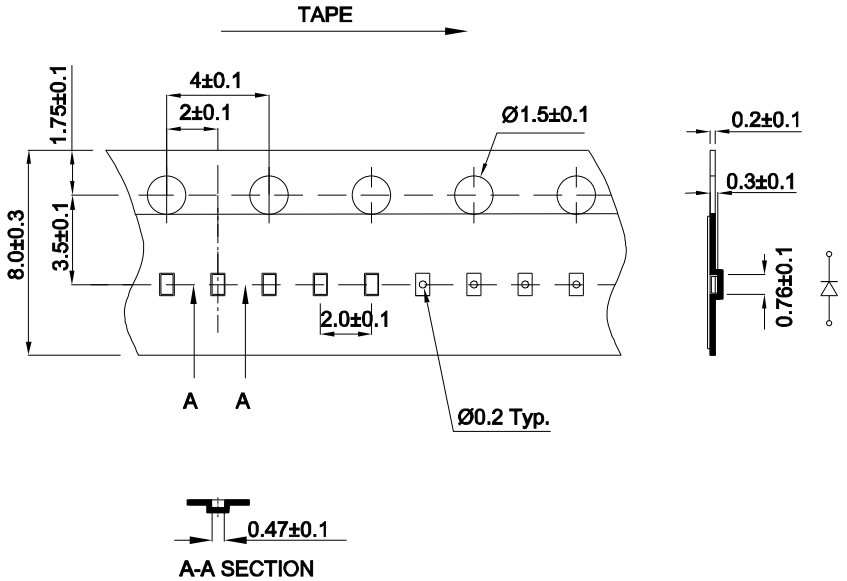


Mask open area ratio:80%
Mask thickness:80~100um

Reel Dimension



Tape Dimensions (Units : mm)



A-A SECTION

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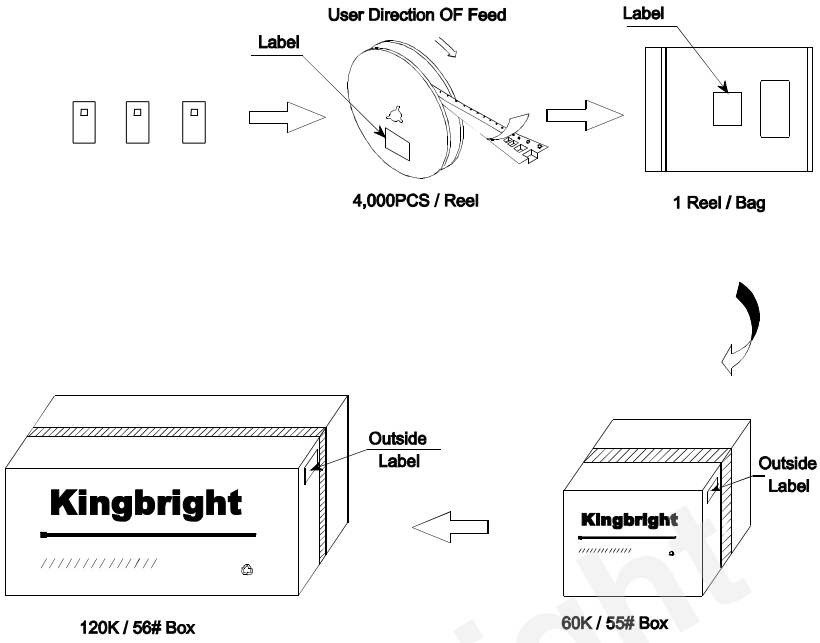
PACKING & LABEL SPECIFICATIONS **KPG-0603SEC-E-TT**



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