

PRELIMINARY SPEC

Part Number: KPG-1005SEC-E-TT

Hyper-Red

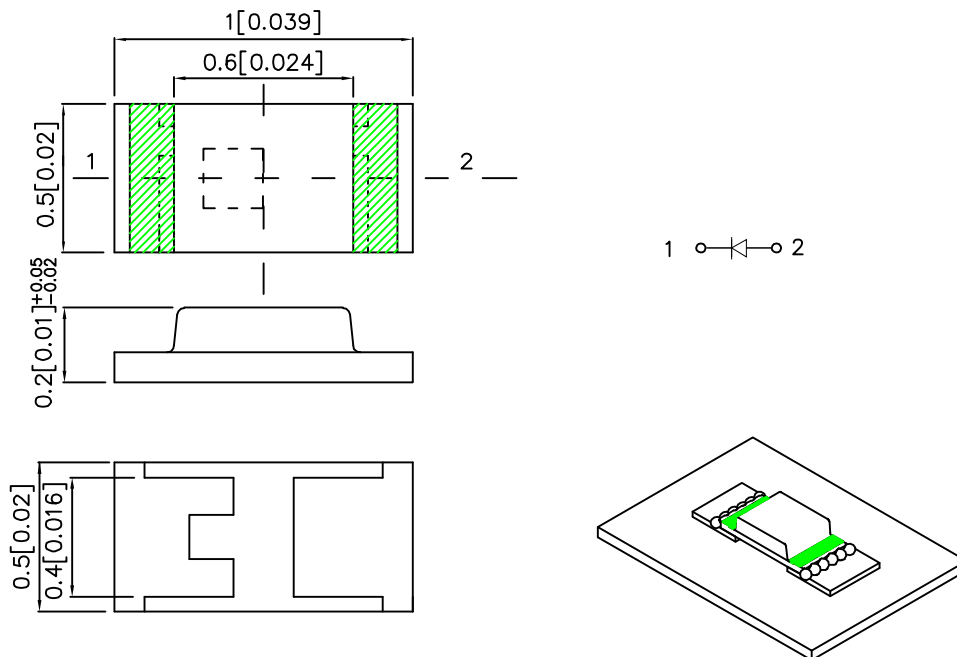
Features

- 1.0mmX0.5mm SMT LED, 0.2mm thickness.
- Low power consumption.
- Wide viewing angle.
- Compatible with automatic placement equipment.
- Ideal for backlight and indicator.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

The Hyper-Red source color devices are made with Al-GaN_P 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.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KPG-1005SEC-E-TT	Hyper-Red (AlGaInP)	Water Clear	55	127	120°

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%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Hyper-Red	632		nm	I _F =20mA
λ _D [1]	Dominant Wavelength	Hyper-Red	624		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Hyper-Red	20		nm	I _F =20mA
V _F [2]	Forward Voltage	Hyper-Red	2.0	2.4	V	I _F =20mA
I _R	Reverse Current	Hyper-Red		10	uA	V _R =5V

Notes:

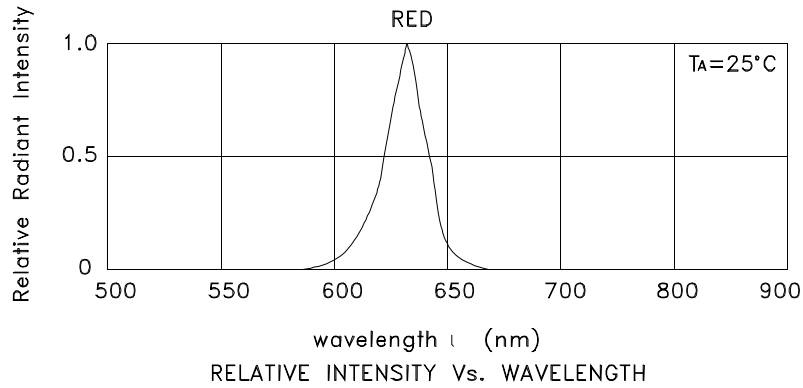
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

Parameter	Hyper-Red	Units
Power dissipation	60	mW
DC Forward Current	25	mA
Peak Forward Current [1]	120	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

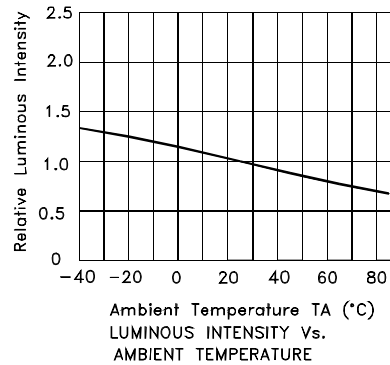
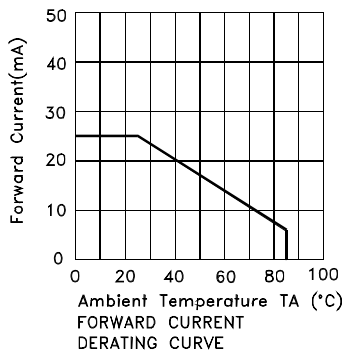
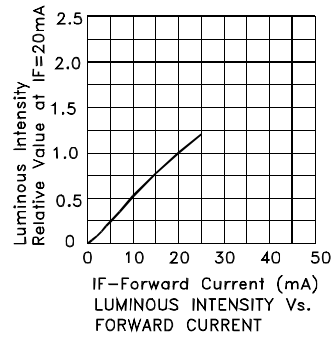
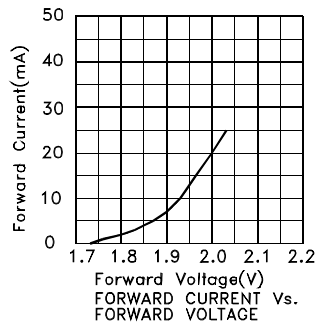
Note:

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



Hyper-Red

KPG-1005SEC-E-TT



KPG-1005SEC-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.

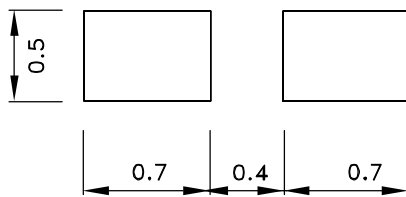
Reflow Soldering Profile For Lead-free SMT Process.



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.

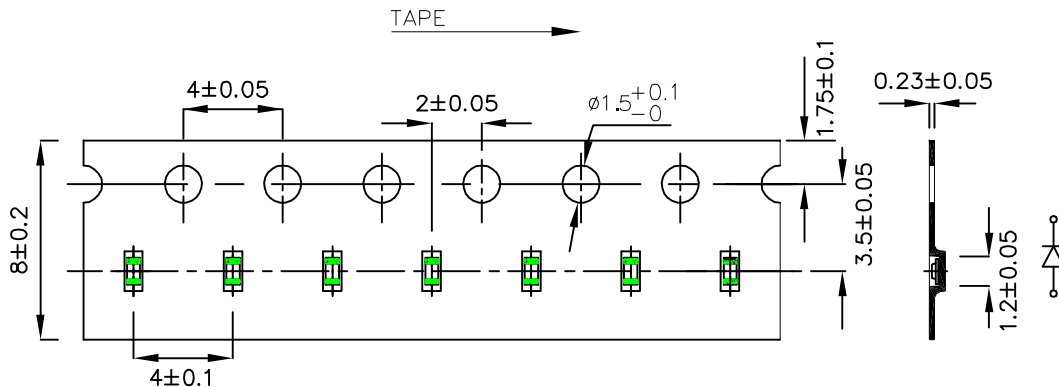
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



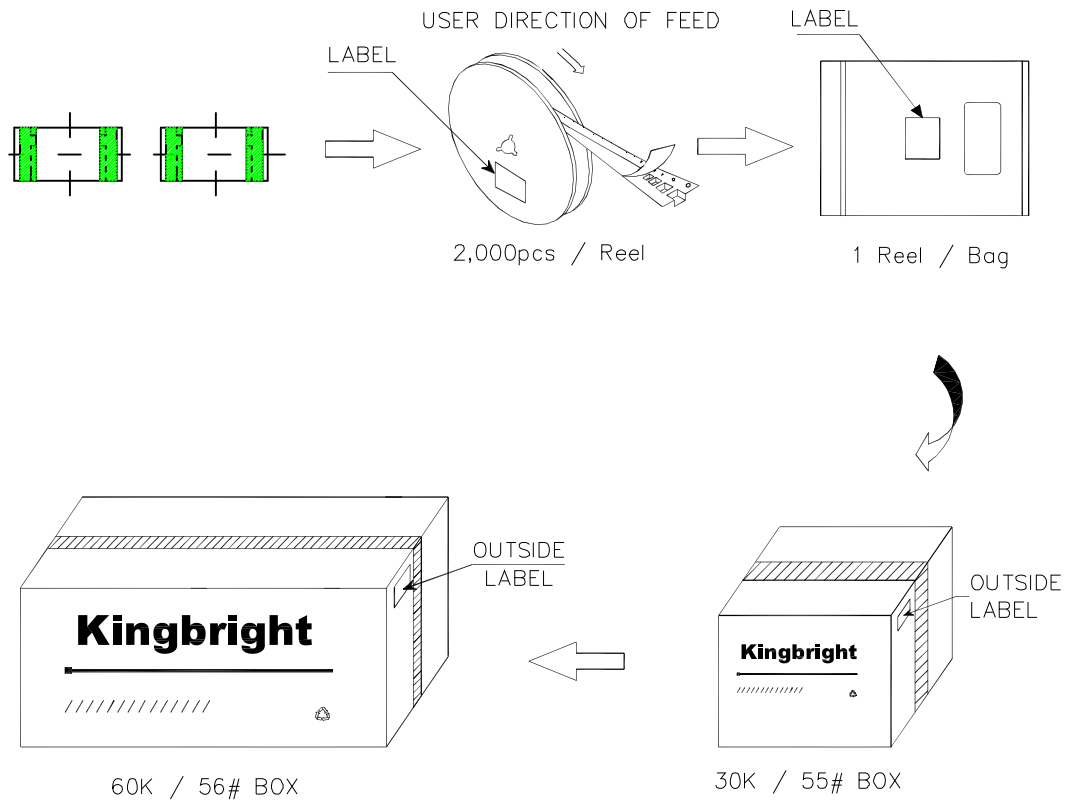
Tape Dimensions (Units : mm)



Kingbright

PACKING & LABEL SPECIFICATIONS

KPG-1005SEC-E-TT



<h1 style="margin: 0;">Kingbright</h1>						
P/NO: KPG-1005xxx						
QTY: 2000 pcs	Q.C.	<table border="1" style="margin: 0; border-collapse: collapse;"> <tr> <td style="text-align: center;">Q C</td> </tr> <tr> <td style="text-align: center;">xx xx xxxx</td> </tr> <tr> <td style="text-align: center;">PASSED</td> </tr> </table>		Q C	xx xx xxxx	PASSED
Q C						
xx xx xxxx						
PASSED						
S/N: XXXX						
CODE: XXX						
LOT NO:						
xxxxxxxxxxxxxxxxxxxxxxxxxxxx						
RoHS Compliant						

Detailed application notes are listed on our website.

http://www.kingbright.com/application_notes