

Part Number: KPHB-1608SYKSURKC-GX

Super Bright Yellow
Hyper Red

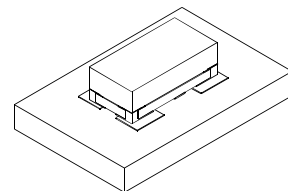
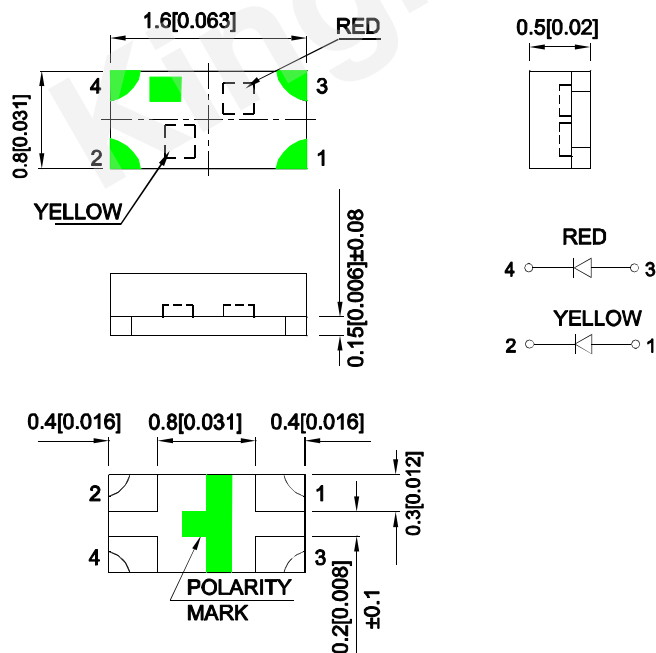
Features

- 1.6mmX0.8mm SMD LED, 0.5mm thickness.
- Compatible with reflow soldering.
- Available in various color combination.
- Package: 2000pcs / reel .
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

Descriptions

- The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip.
- The Hyper Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.15(0.006)$ 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] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KPHB-1608SYKSURKC-GX	Super Bright Yellow (AlGaInP)	Water Clear	80	150	130°
			*80	*150	
	Hyper Red (AlGaInP)		120	250	
			*40	*90	

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	Super Bright Yellow Hyper Red	590 645		nm	IF=20mA
λD [1]	Dominant Wavelength	Super Bright Yellow Hyper Red	590 630		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Yellow Hyper Red	20 28		nm	IF=20mA
C	Capacitance	Super Bright Yellow Hyper Red	20 35		pF	Vf=0V;f=1MHz
Vf [2]	Forward Voltage	Super Bright Yellow Hyper Red	2 1.95	2.5 2.5	V	IF=20mA
IR	Reverse Current	Super Bright Yellow Hyper Red		10 10	uA	VR = 5V

Notes:

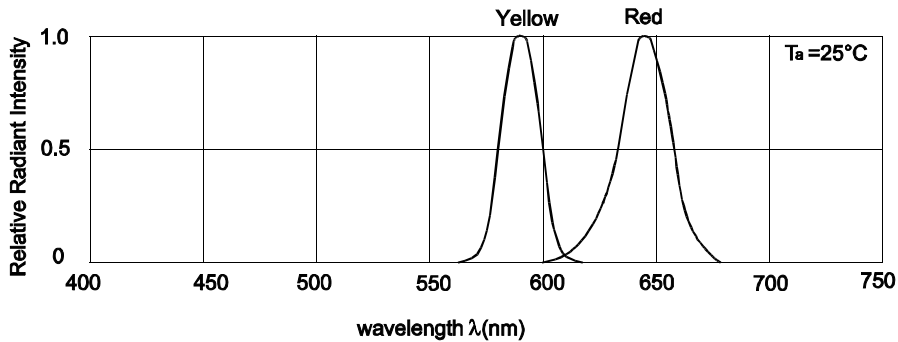
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

Parameter	Super Bright Yellow	Hyper Red	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	175	185	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

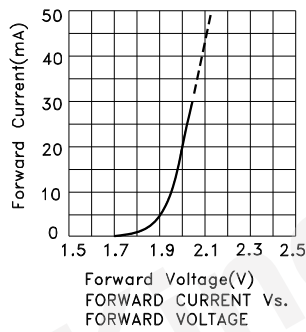
Notes:

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.

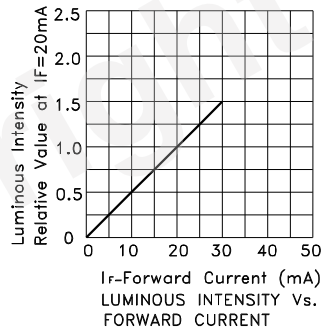


Relative Intensity Vs. Wavelength

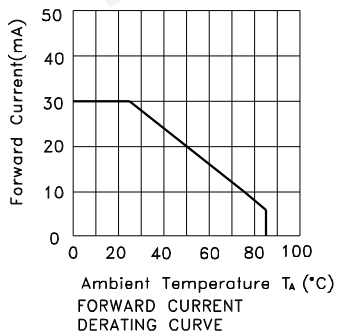
KPHB-1608SYKSURKC-GX
Super Bright Yellow



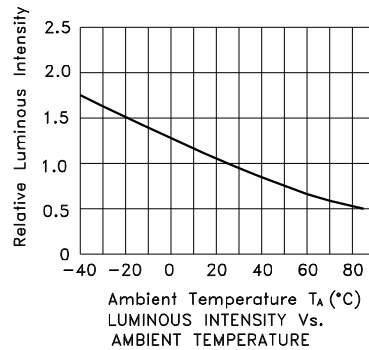
FORWARD CURRENT Vs. FORWARD VOLTAGE



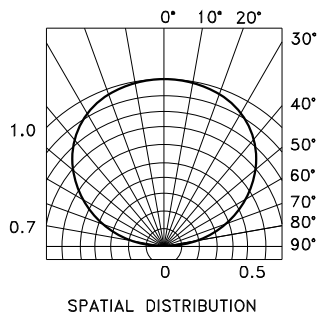
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE

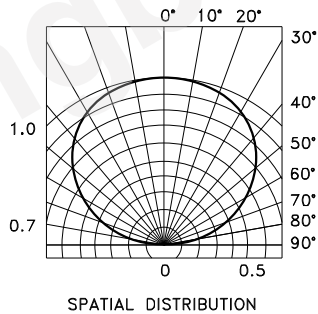
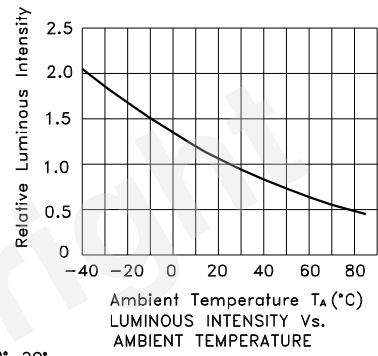
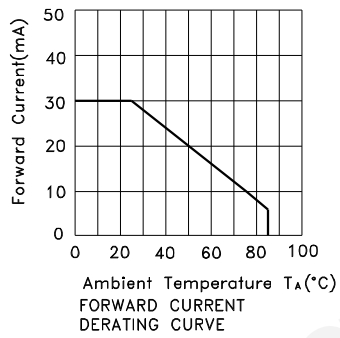
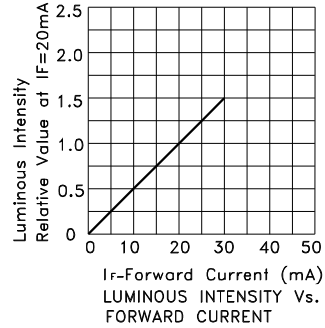
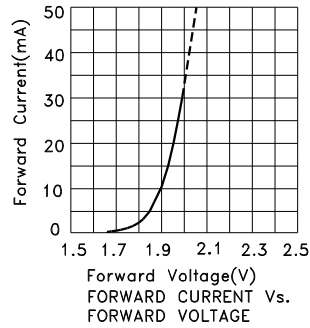


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

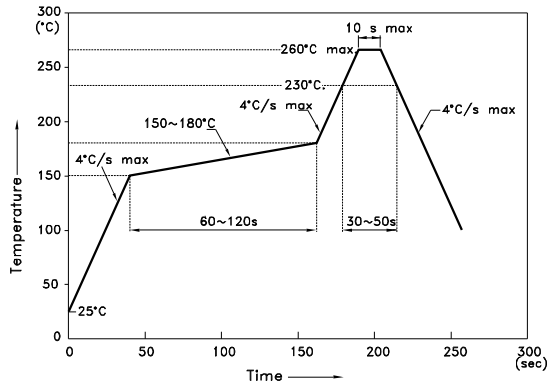
Hyper Red



KPHB-1608SYKSURKC-GX

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.

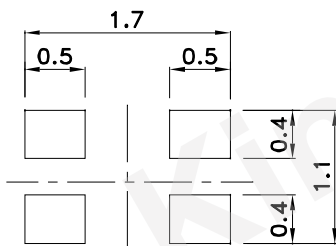
Reflow Soldering Profile For Lead-free SMT Process.



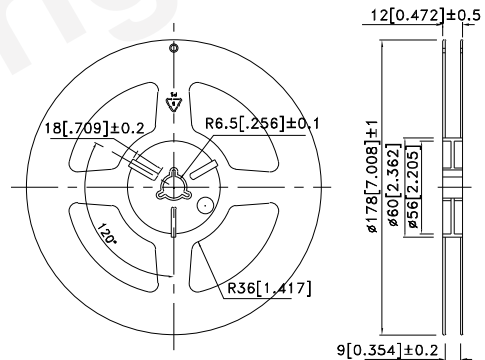
NOTES:

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.

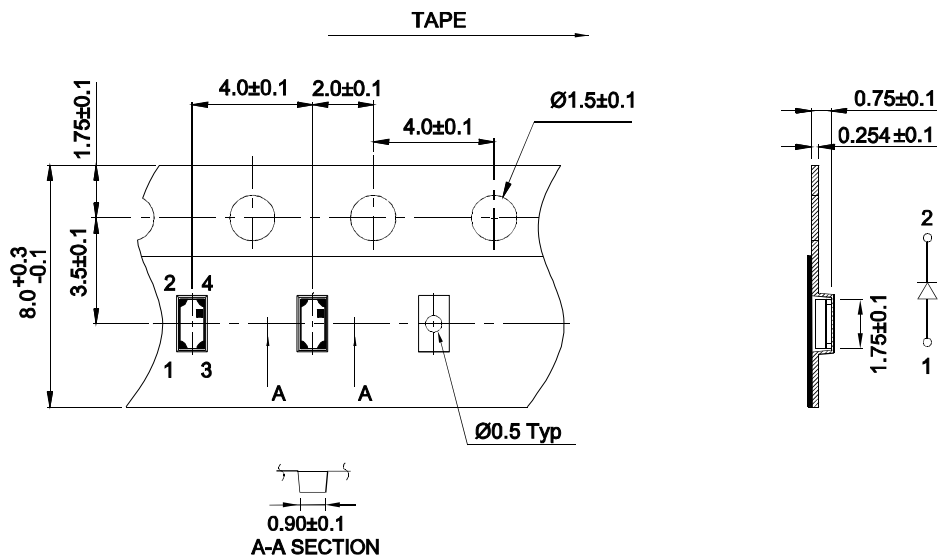
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)

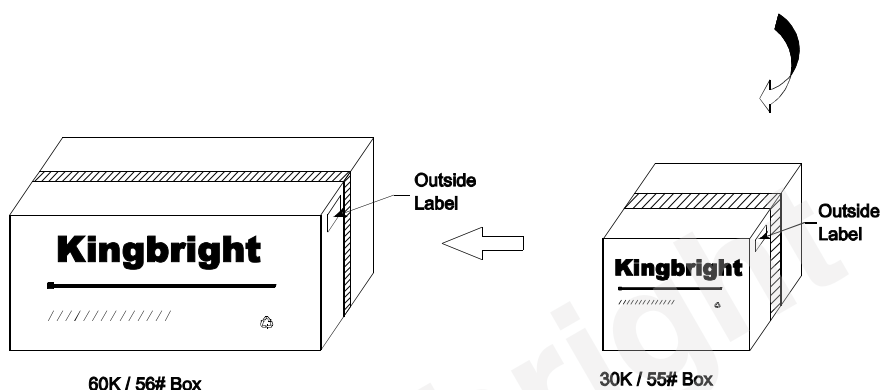
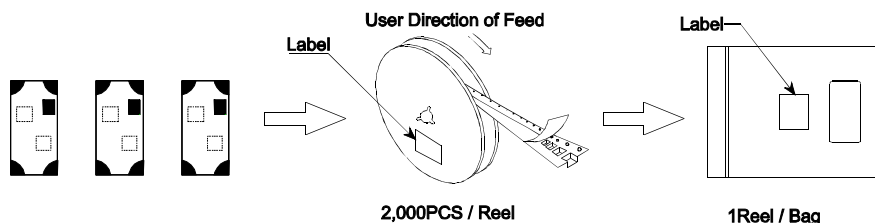



Reel Dimension



Tape Dimensions (Units : mm)





Kingbright				
P/NO: KPHB-1608xxx				
QTY: 2,000 pcs	Q.C.			
S/N: XXXX	<table border="1"> <tr> <td>QC</td> </tr> <tr> <td>XXXX XXXX</td> </tr> <tr> <td>PASSED</td> </tr> </table>	QC	XXXX XXXX	PASSED
QC				
XXXX XXXX				
PASSED				
CODE: XXX				
LOT NO:				
 <small>xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx</small>				
RoHS Compliant				

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