Kingbright

1.6x0.8x0.5mm BI-COLOR SURFACE MOUNT LED

Part Number: APHB1608CGKSURKC

Green
Hyper Red

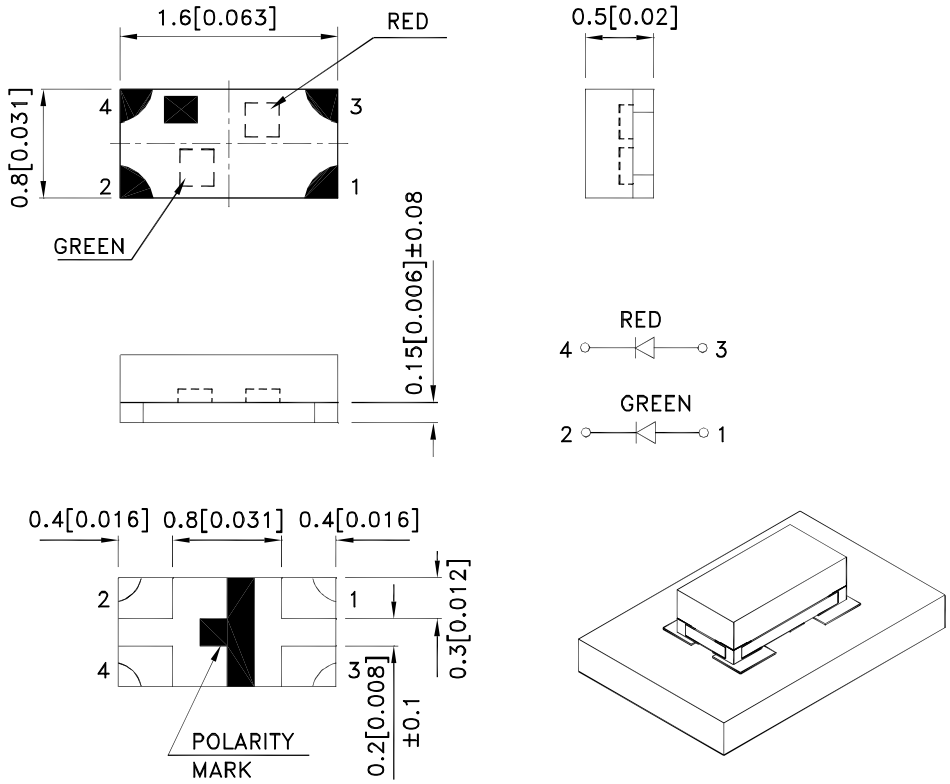
Features

- 1.6mmX0.8mm SMT 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 Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.
- 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 ±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.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APHB1608CGKSURKC	Green (AlGaInP)	Water Clear	20	50	130°
			*20	*50	
	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 the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

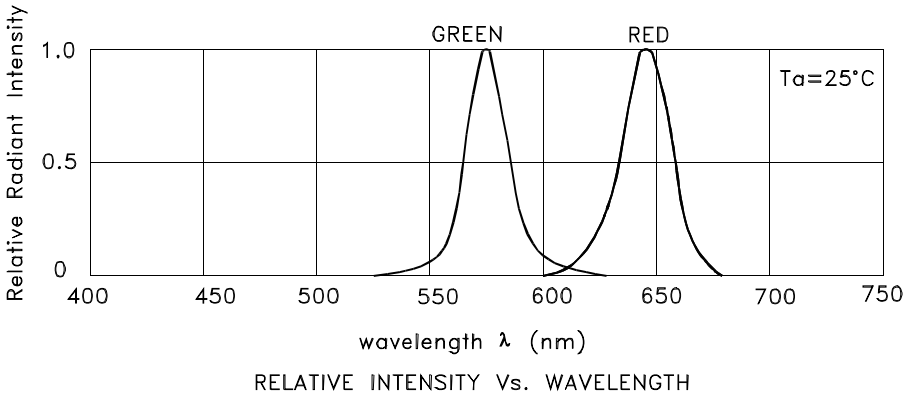
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Green Hyper Red	574 645		nm	I_F=20mA
λD [1]	Dominant Wavelength	Green Hyper Red	570 630		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Green Hyper Red	20 28		nm	I_F=20mA
C	Capacitance	Green Hyper Red	15 35		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Green Hyper Red	2.1 1.95	2.5 2.5	V	I_F=20mA
I_R	Reverse Current	Green Hyper Red		10 10	uA	V_R = 5V

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

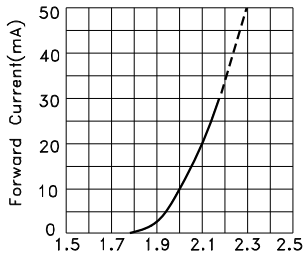
Parameter	Green	Hyper Red	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	150	185	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

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

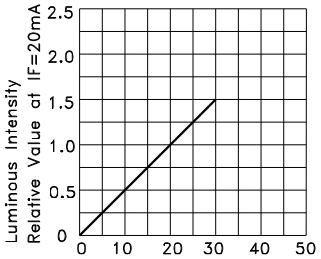


RELATIVE INTENSITY Vs. WAVELENGTH

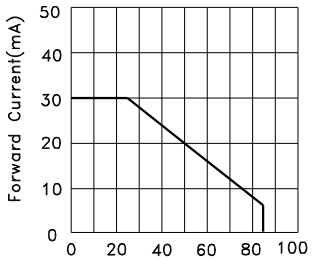
APHB1608CGKSURKC
Green



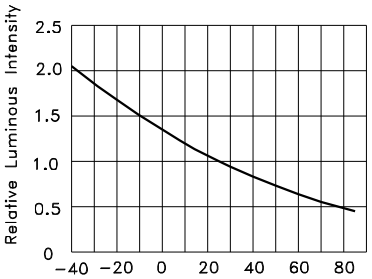
FORWARD CURRENT Vs.
FORWARD VOLTAGE



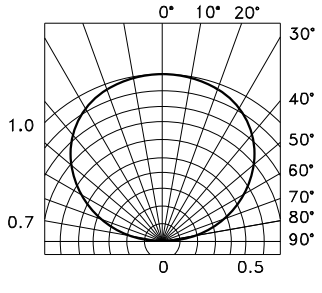
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

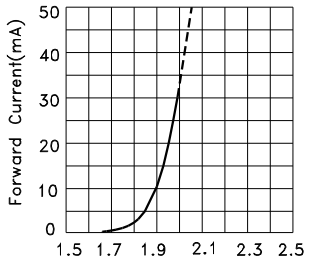


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

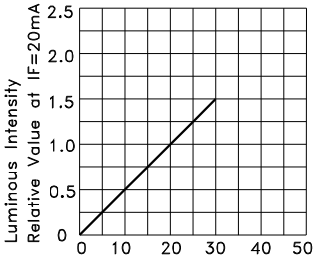


SPATIAL DISTRIBUTION

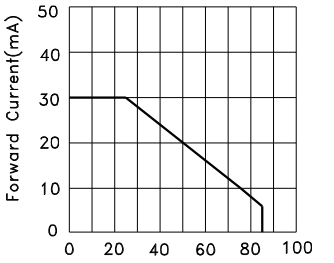
Hyper Red



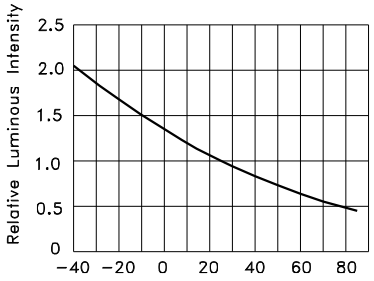
FORWARD CURRENT Vs.
FORWARD VOLTAGE



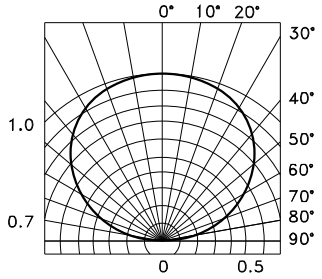
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

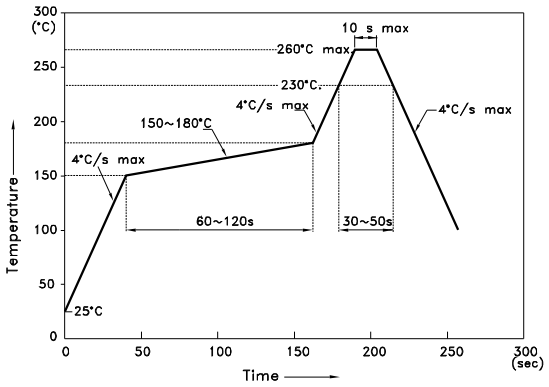


SPATIAL DISTRIBUTION

APHB1608CGKSURKC

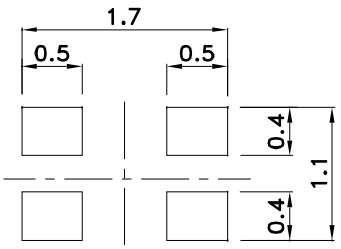
Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.

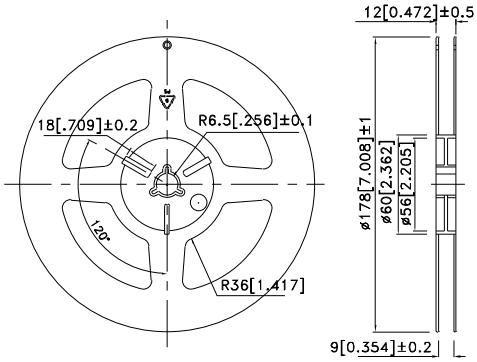


NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

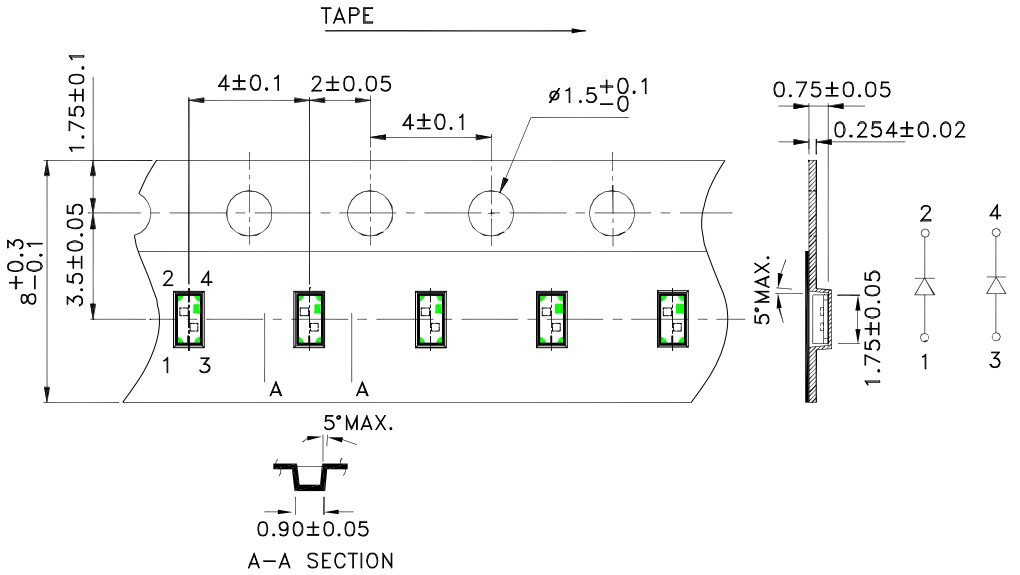
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



Tape Dimensions (Units : mm)



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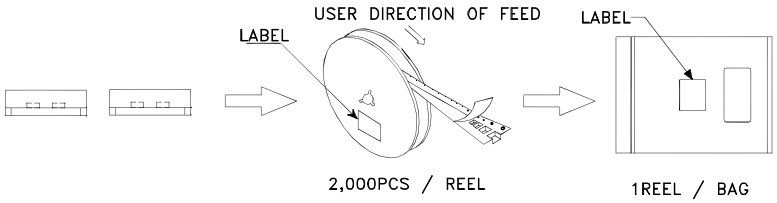
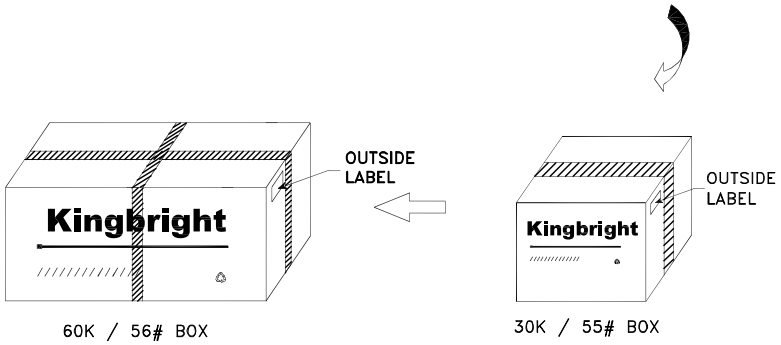
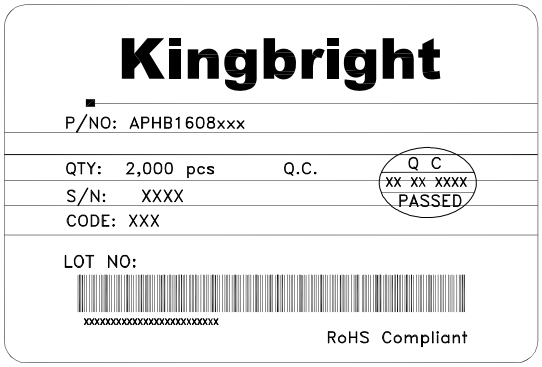
PACKING & LABEL SPECIFICATIONS **APHB1608CGKSURKC**







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