

Part Number: APHB1608SYKSURKC

Super Bright Yellow
Hyper Red

Features

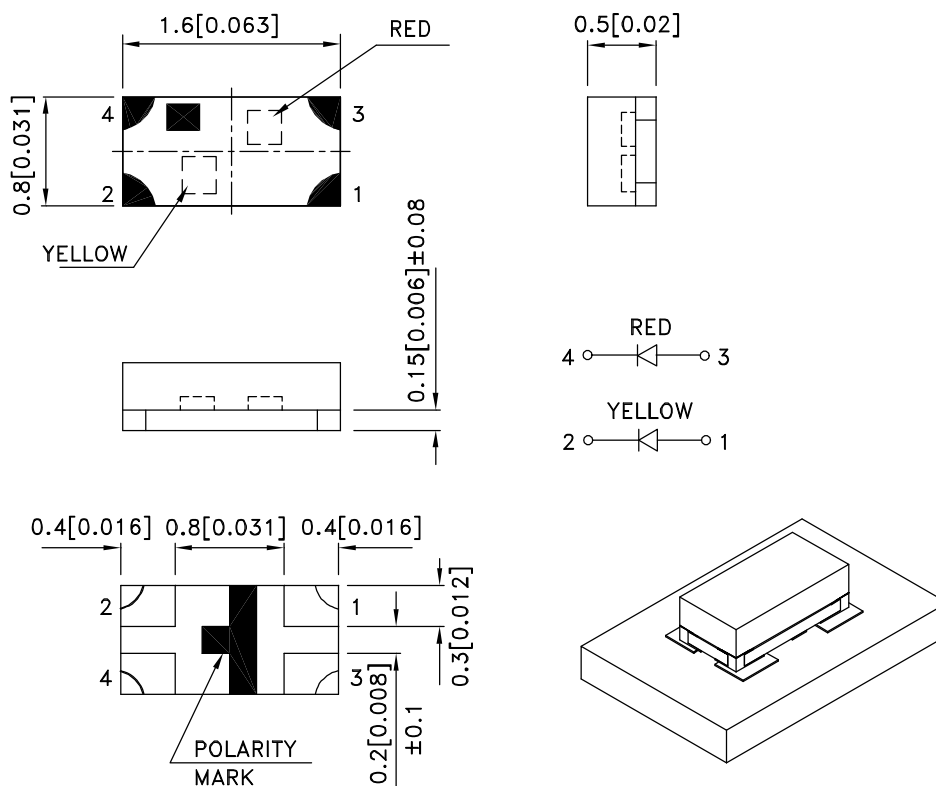
- 1.6mmX0.8mm SMT LED, 0.5mm thickness.
- Compatible with reflow soldering.
- Available in various color combination.
- Package: 2000pcs / reel .
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

Description

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 Al-GaInP 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.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APHB1608SYKSURKC	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 the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	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.

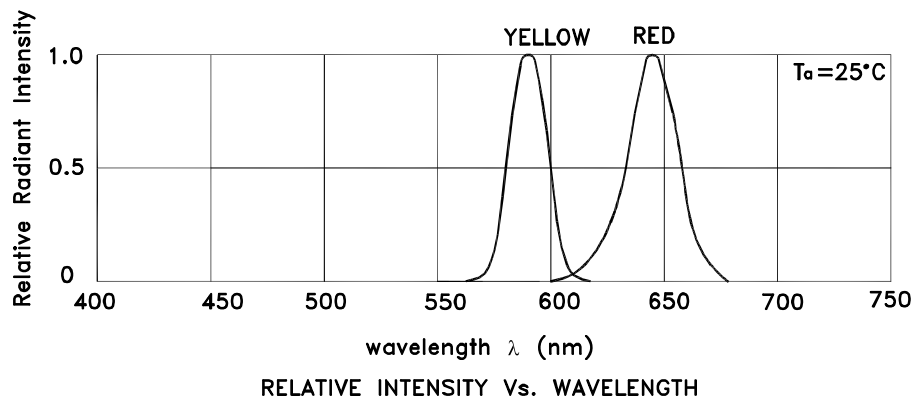
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

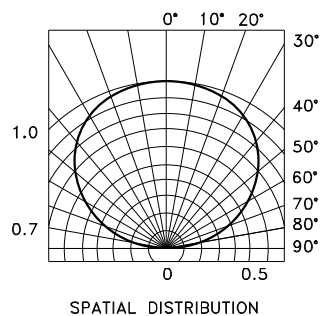
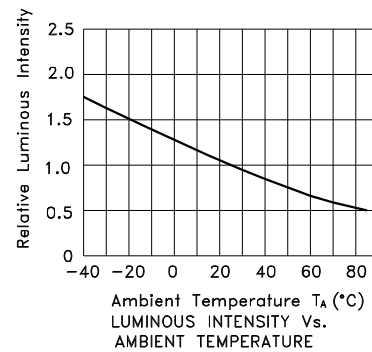
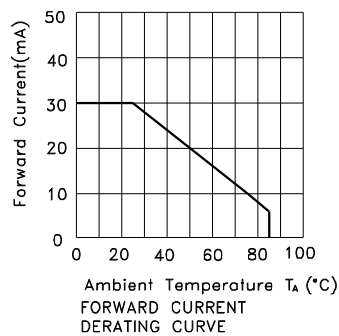
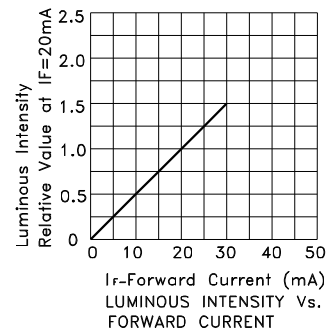
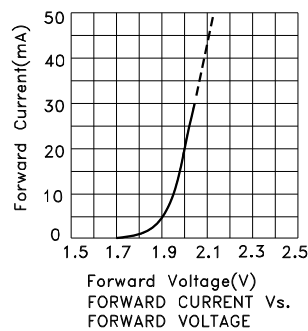
Parameter	Super Bright Yellow	Hyper Red	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	175	185	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

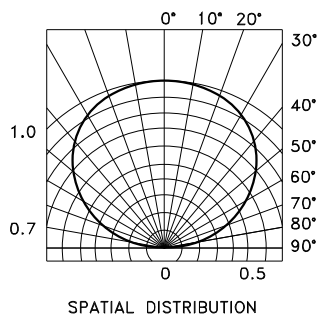
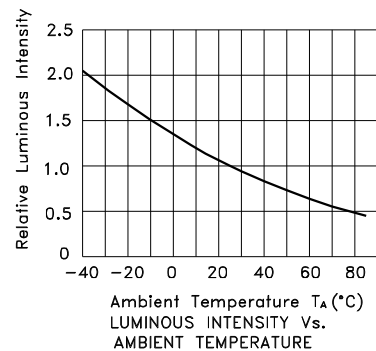
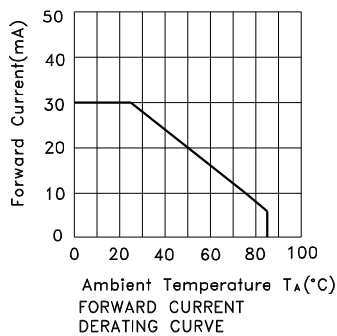
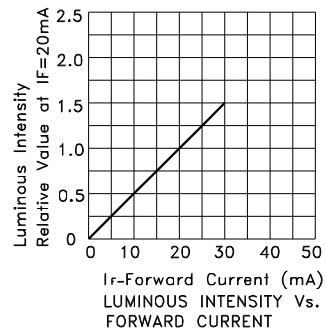
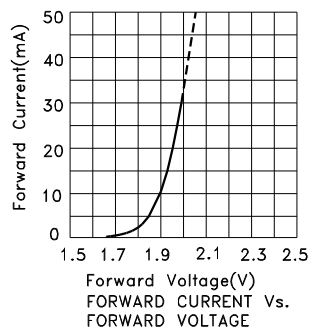
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



APHB1608SYKSURKC Super Bright Yellow



Hyper Red



APHB1608SYKSURKC

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.

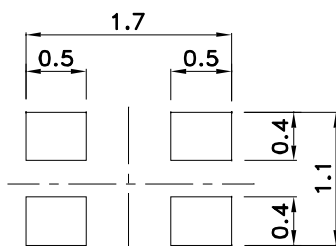
Reflow Soldering Profile For Lead-free SMT Process.



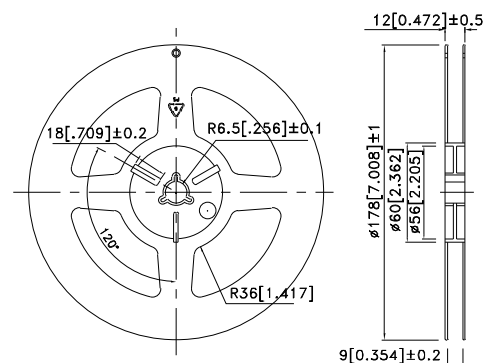
NOTES:

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.

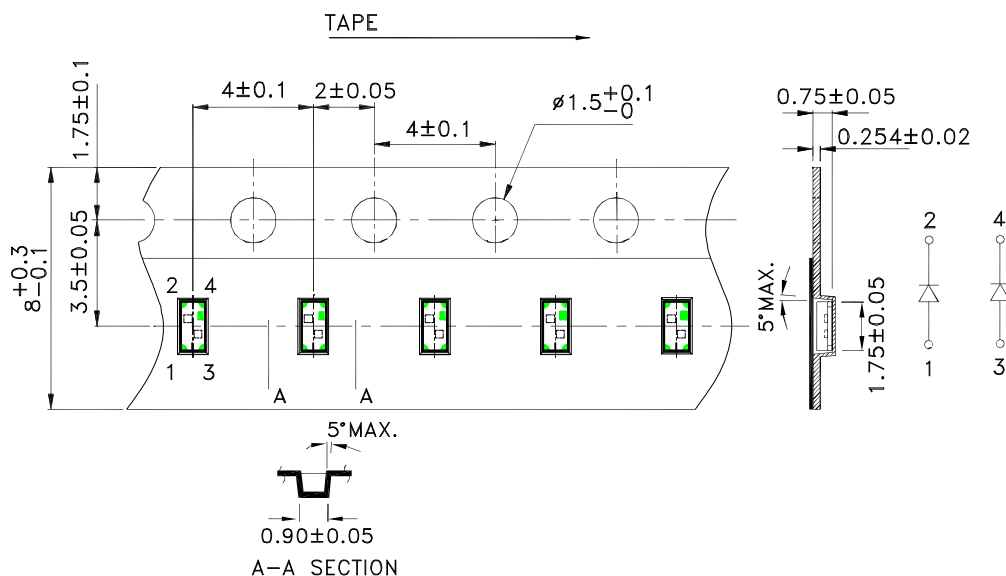
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

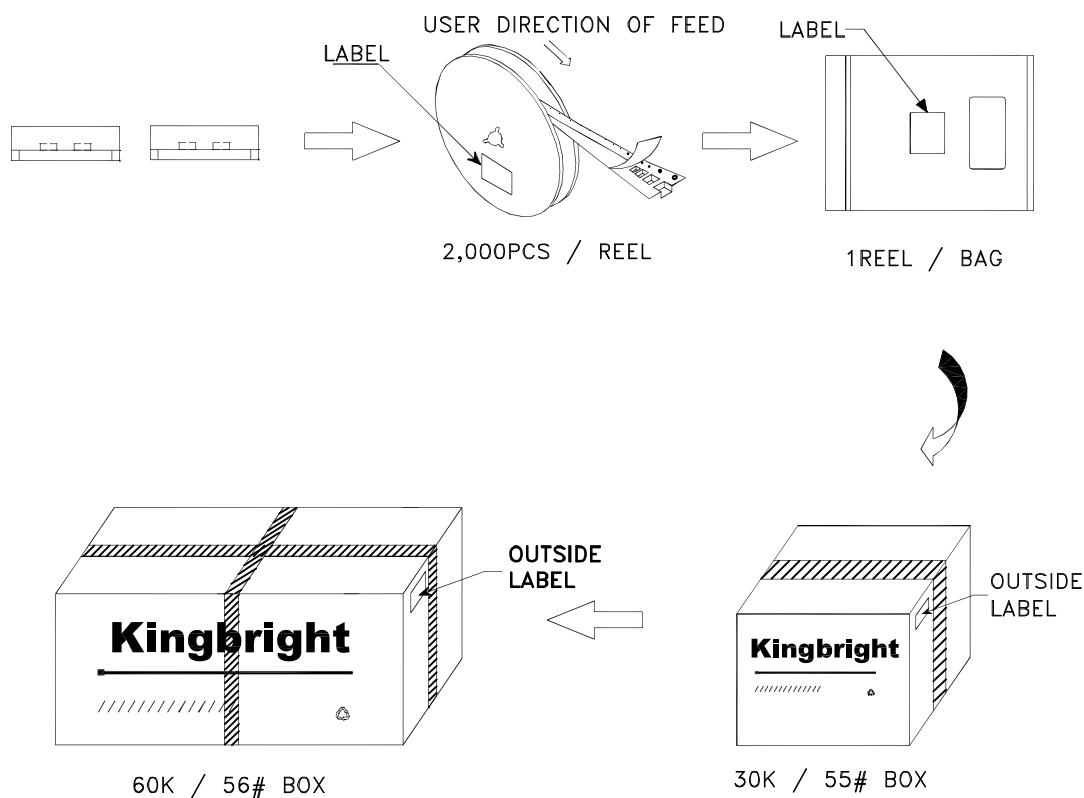



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APHB1608SYKSURKC



Kingbright		
P/NO: APHB1608xxx		
QTY: 2,000 pcs	Q.C.	Q C
S/N: XXXX		XX XX XXXX
CODE: XXX		PASSED
LOT NO:		
		
XXXXXXXXXXXXXXXXXXXX		
RoHS Compliant		

All design applications should refer to Kingbright application notes available at <http://www.KingbrightUSA.com/ApplicationNotes>