



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APHB1608ZGSYKC

Green
Super Bright Yellow

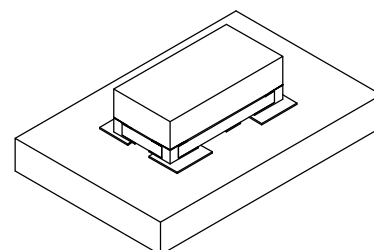
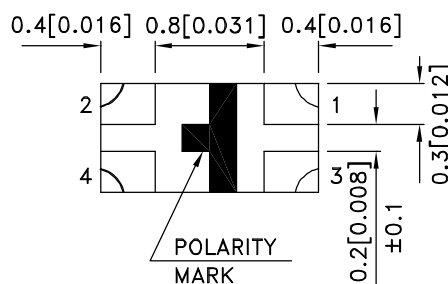
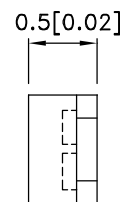
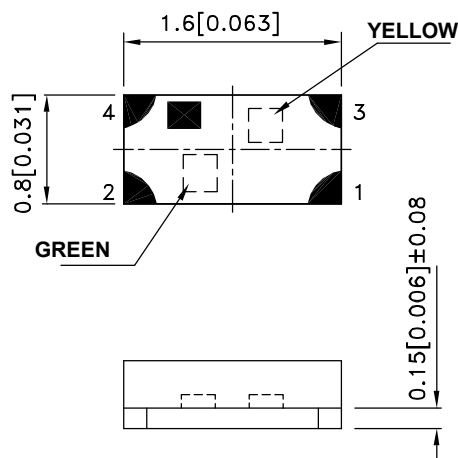
Features

- 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 Green source color devices are made with InGaN on Sapphire Light Emitting Diode.
- The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

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
APHB1608ZGSYKC	Green (InGaN)	Water Clear	200	350	130°
	Super Bright Yellow (AlGaInP)		80	150	

Notes:

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.
3. Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Green Super Bright Yellow	515 590		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	Green Super Bright Yellow	525 590		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Green Super Bright Yellow	30 20		nm	I _F =20mA
C	Capacitance	Green Super Bright Yellow	45 20		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Green Super Bright Yellow	3.3 2	4.1 2.5	V	I _F =20mA
I _R	Reverse Current	Green Super Bright Yellow		50 10	uA	V _R = 5V

Notes:

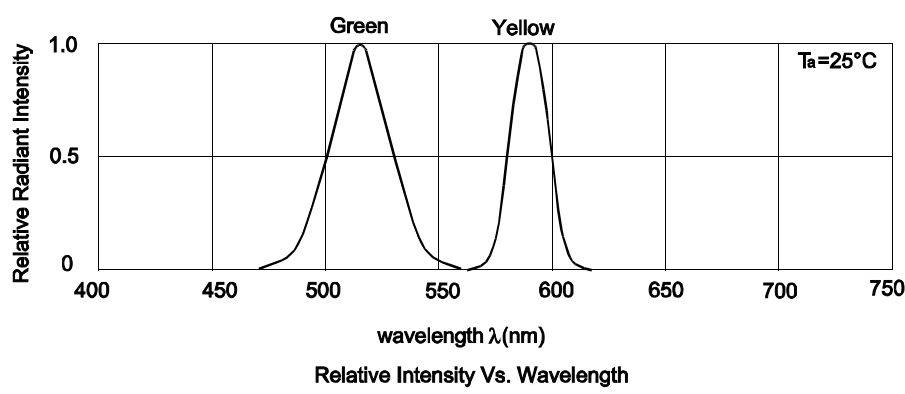
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

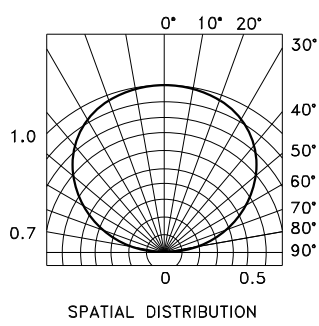
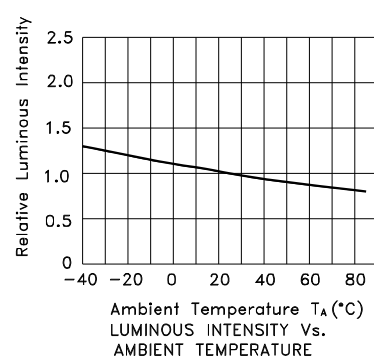
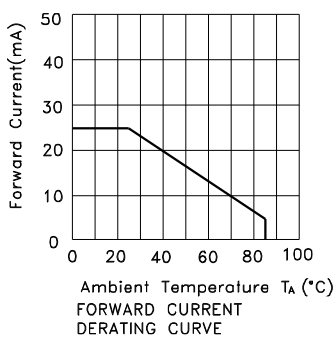
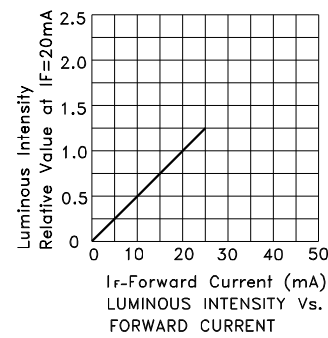
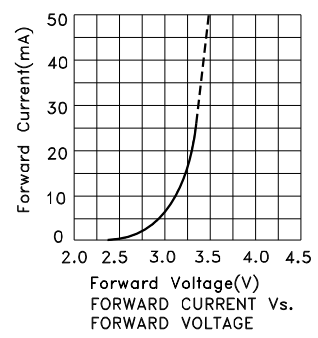
Parameter	Green	Super Bright Yellow	Units
Power dissipation	102.5	75	mW
DC Forward Current	25	30	mA
Peak Forward Current [1]	150	175	mA
Electrostatic Discharge Threshold (HBM)	450	3000	V
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

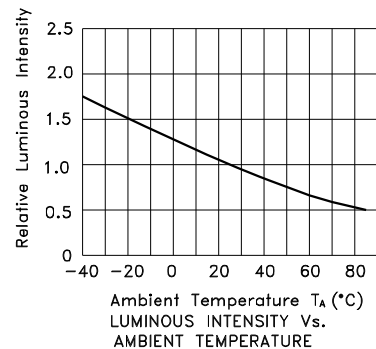
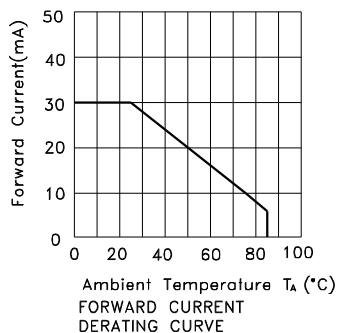
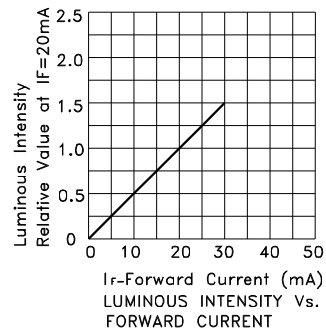
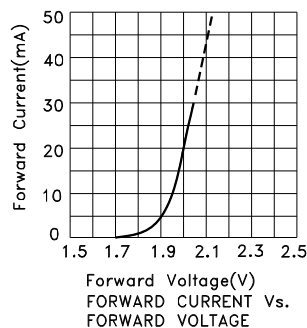
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



APHB1608ZGSYKC
Green



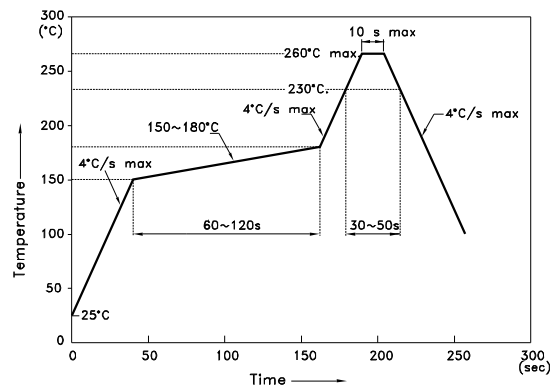
Super Bright Yellow



APHB1608ZGSYKC

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.

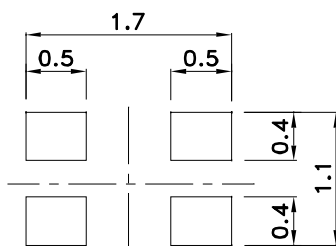
Reflow Soldering Profile For Lead-free SMT Process.



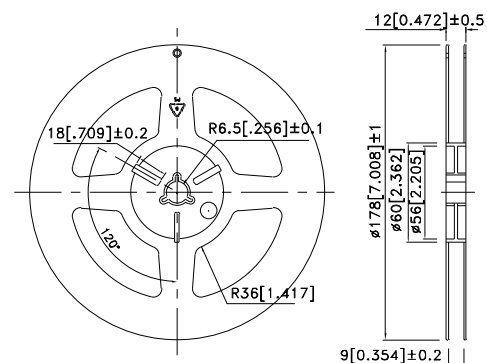
NOTES:

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.

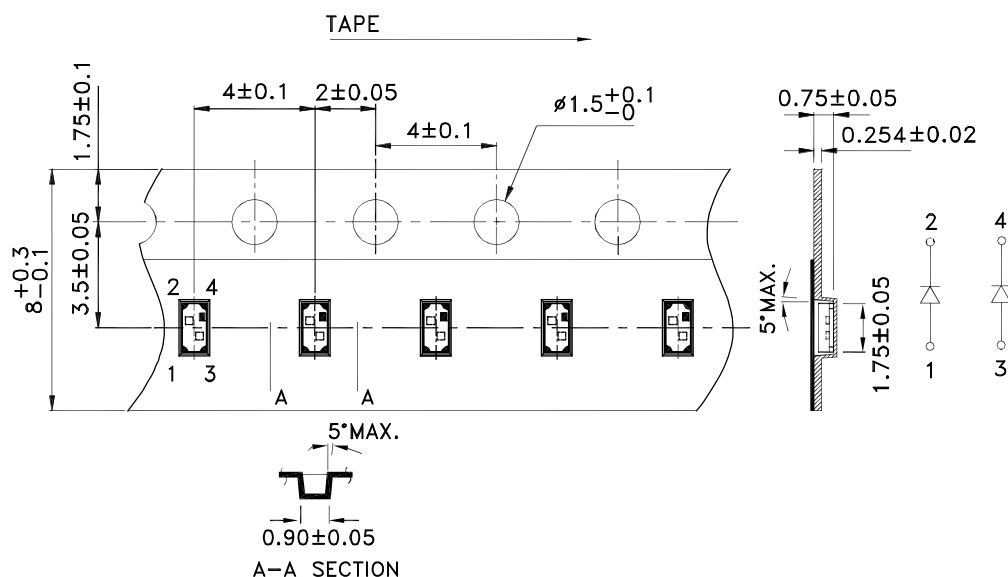
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

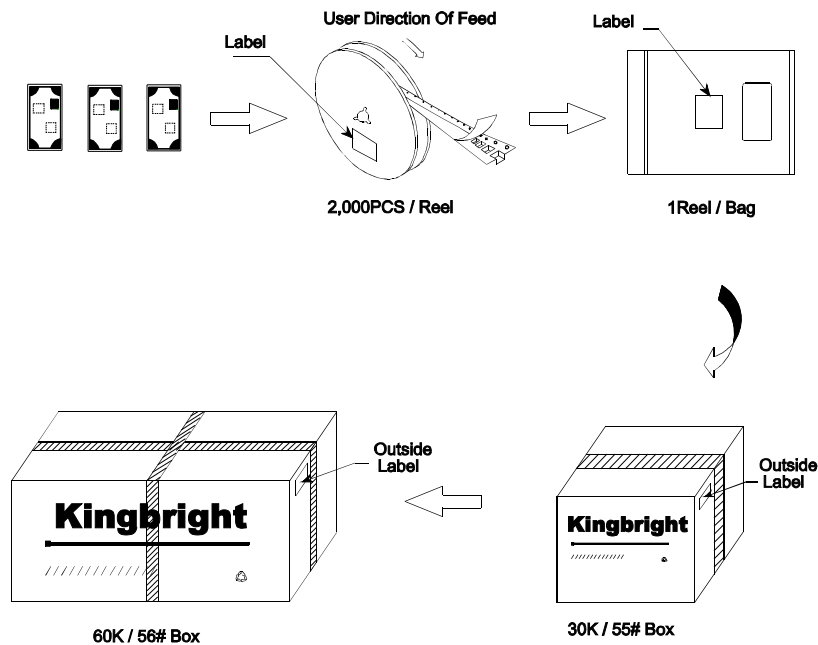



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APHB1608ZGSYKC



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

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