



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APHB1608LZGKSURKC

Green
Hyper Red

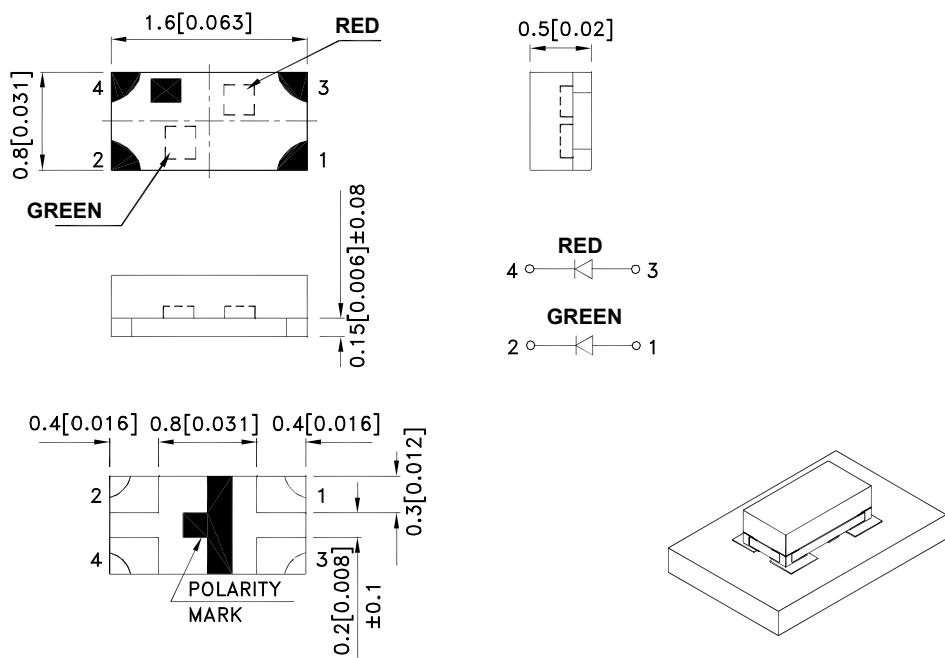
Features

- 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.
- Low current IF=2mA operating.
- RoHS compliant.

Descriptions

- The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.
- The Hyper Red source color devices are made with AlGaNp on GaAs substrate Light Emitting Diode.
- 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.



Kingbright

Selection Guide

Part No.	Emitting Color (Material)	Lens Type	I _v (mcd) [2] @ 2mA		Viewing Angle [1]
			Min.	Typ.	
APHB1608LZGKSURKC	Green (InGaN)	Water Clear	20	40	130°
	Hyper Red (AlGaNp)		*20	*40	
			10	20	
			*2	*8	

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	Emitting Color	Min.	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Green Hyper Red		515 645		nm	I _f =2mA
λD [1]	Dominant Wavelength	Green Hyper Red		525 630		nm	I _f =2mA
Δλ1/2	Spectral Line Half-width	Green Hyper Red		35 28		nm	I _f =2mA
C	Capacitance	Green Hyper Red		45 35		pF	V _f =0V;f=1MHz
V _f [2]	Forward Voltage	Green Hyper Red	2.2 1.5	2.65 1.75	3.1 2.1	V	I _f =2mA
I _R	Reverse Current	Green Hyper Red			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.

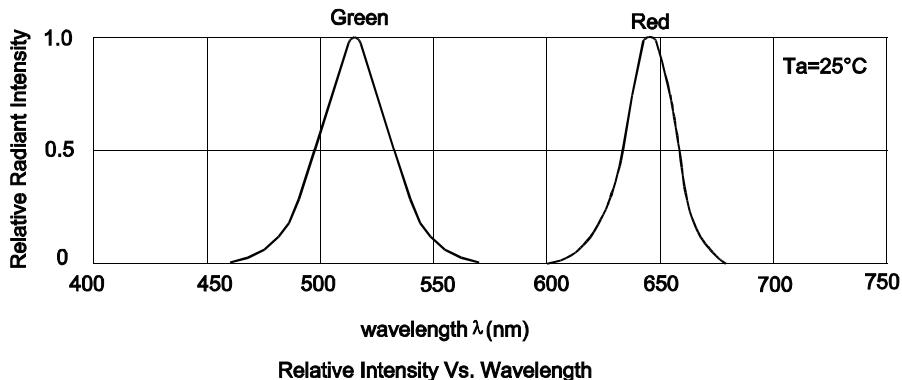
4. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

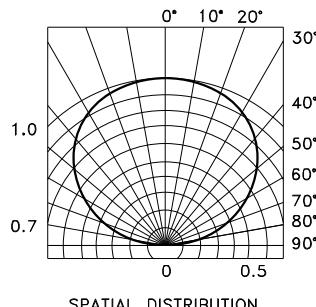
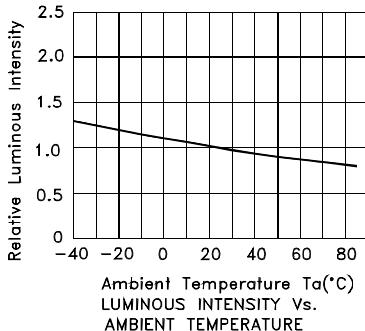
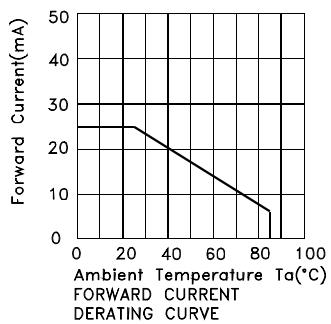
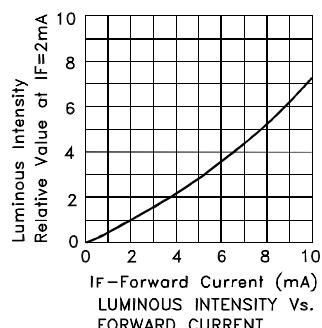
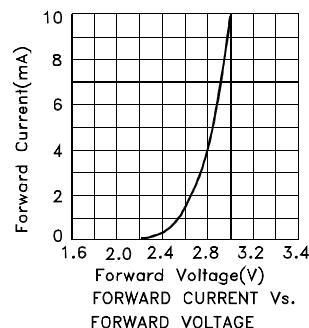
Parameter	Green	Hyper Red	Units
Power dissipation	77.5	63	mW
DC Forward Current	25	30	mA
Peak Forward Current [1]	150	185	mA
Electrostatic Discharge Threshold (HBM)	450	3000	V
Reverse Voltage	5		V
Operating Temperature		-40°C To +85°C	
Storage Temperature		-40°C To +85°C	

Note:

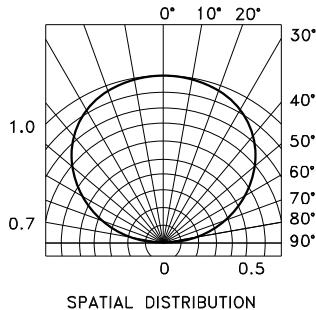
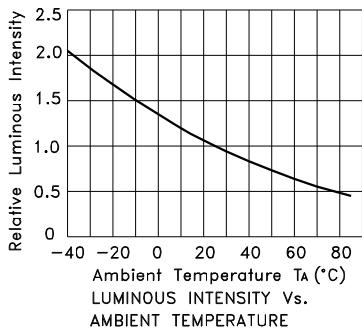
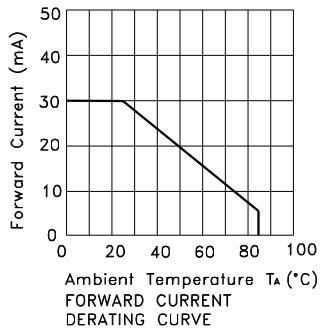
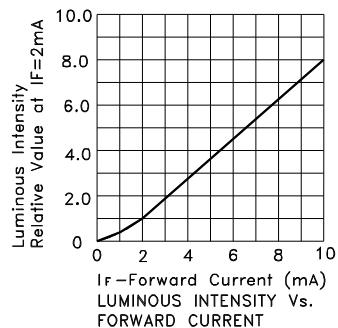
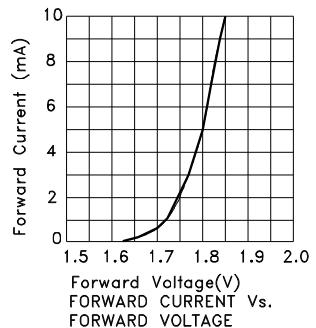
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



APHB1608LZGKSURKC
Green



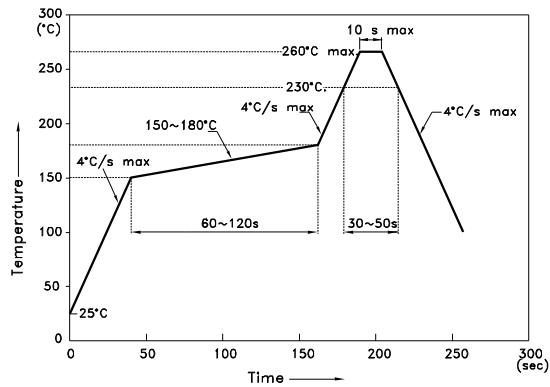
Hyper Red



APHB1608LZGKSURKC

**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.**

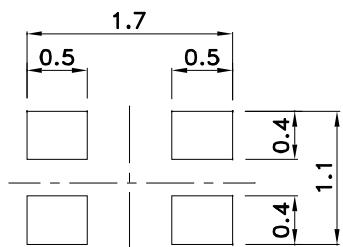
Reflow Soldering Profile For Lead-free SMT Process.



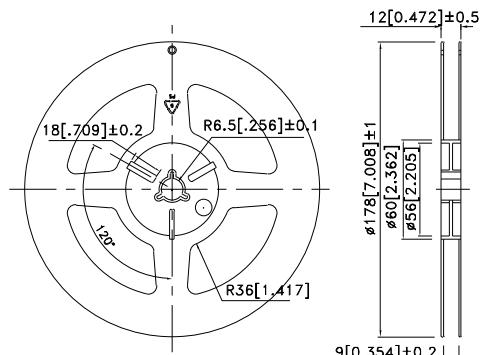
NOTES:

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.

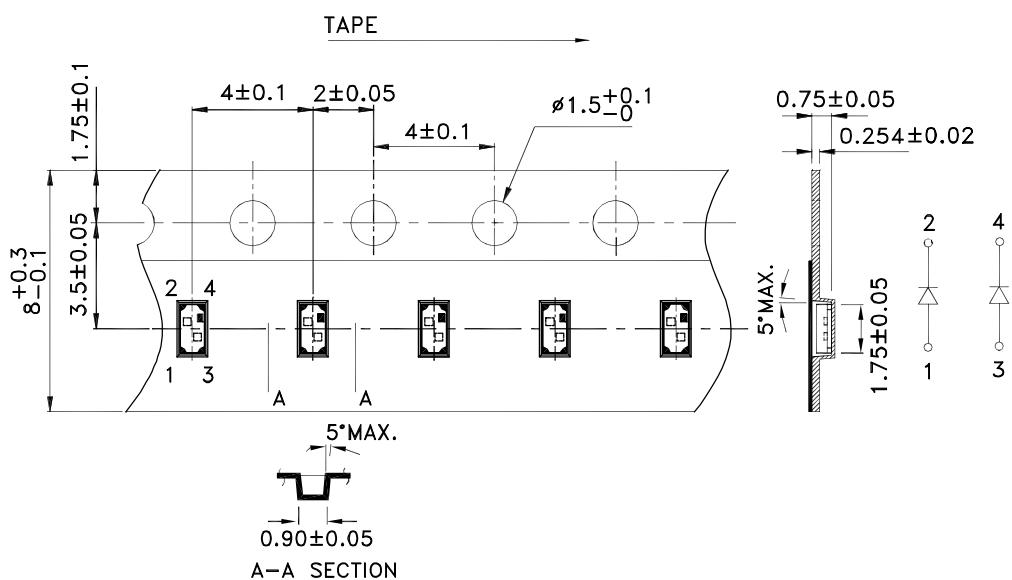
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)

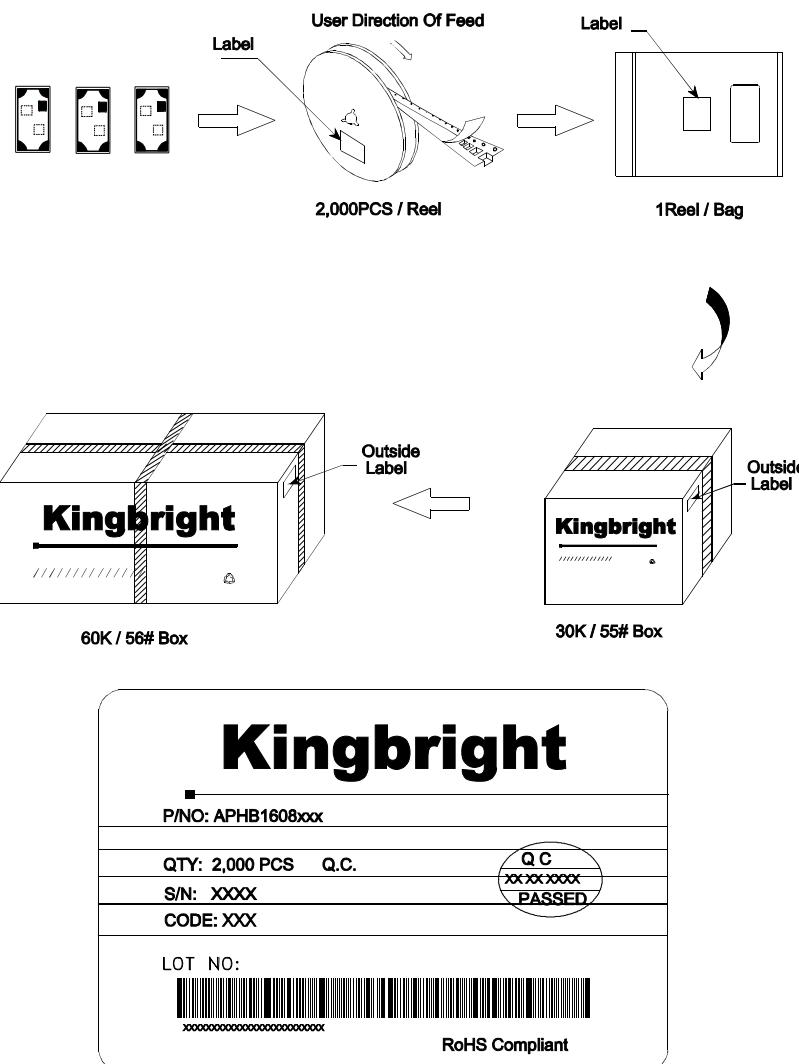


Reel Dimension



Tape Dimensions (Units : mm)





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