



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APHB1608ZGSURKC

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.

Description

The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

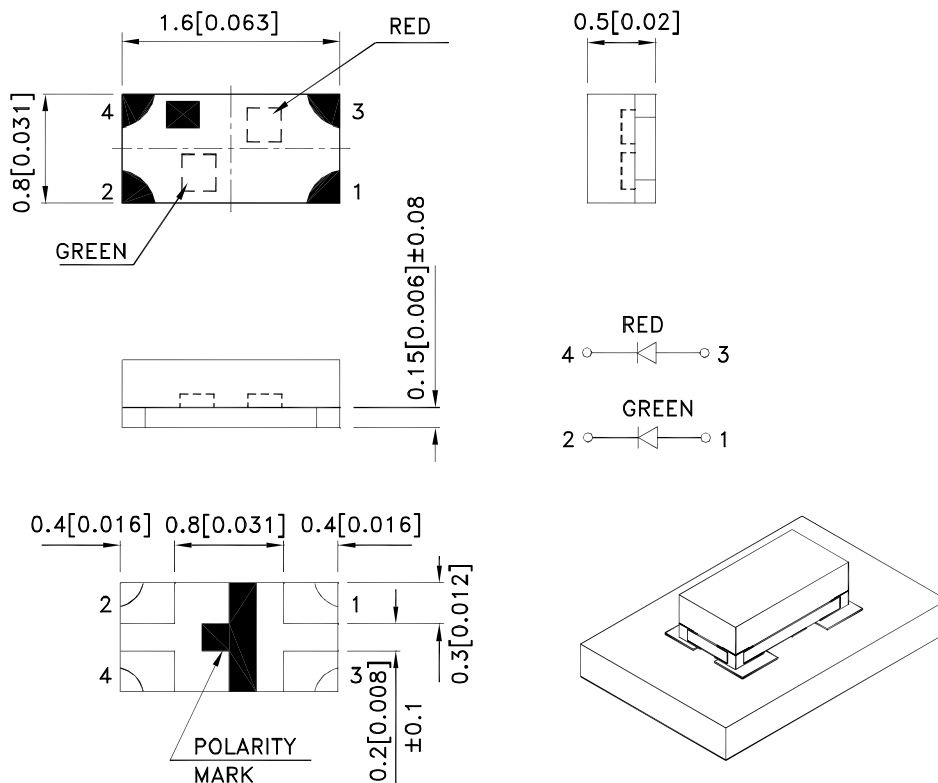
The Hyper Red source color devices are made with Al-GaN on GaAs substrate Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery 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.	Dice	Lens Type	Iv (mcd) [2] @ 20mA			Viewing Angle [1]
			Min.	Typ.	Max.	2θ1/2
APHB1608ZGSURKC	Green (InGaN)	Water Clear	200	-	500	130°
			*200	-	*500	
	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	515 645		nm	IF=20mA
λD [1]	Dominant Wavelength	Green Hyper Red	525 630		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Green Hyper Red	30 28		nm	IF=20mA
C	Capacitance	Green Hyper Red	45 35		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Green Hyper Red	3.3 1.95	4.1 2.5	V	IF=20mA
IR	Reverse Current	Green Hyper Red		50 10	uA	VR = 5V

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

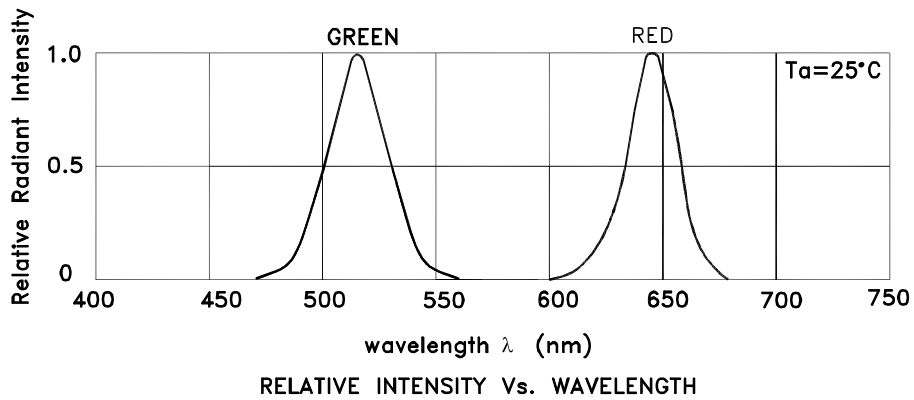
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

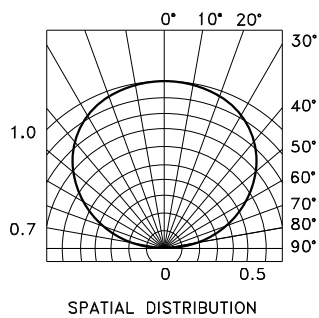
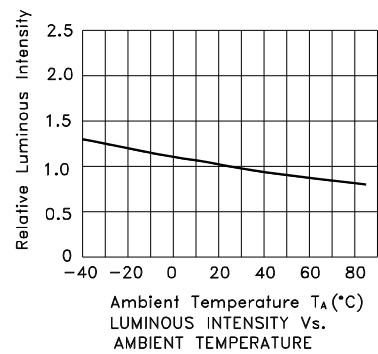
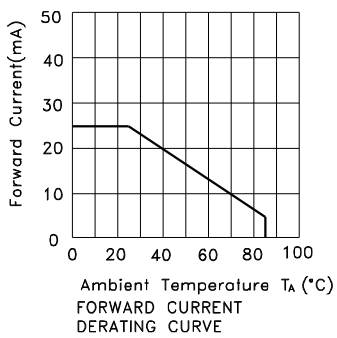
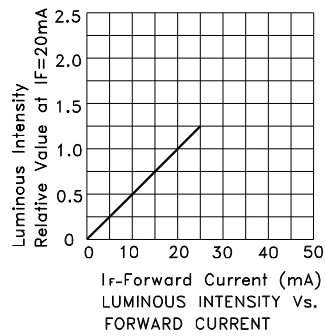
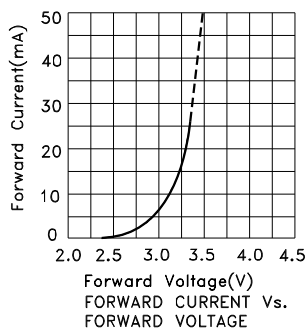
Parameter	Green	Hyper Red	Units
Power dissipation	102.5	75	mW
DC Forward Current	25	30	mA
Peak Forward Current [1]	150	185	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

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

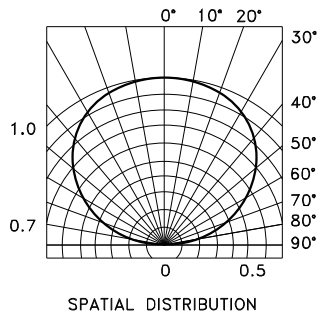
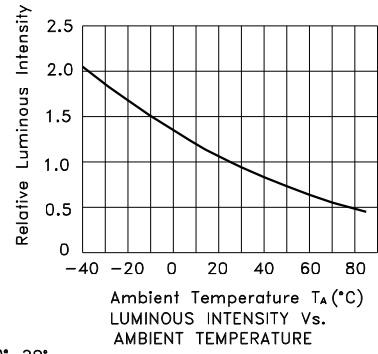
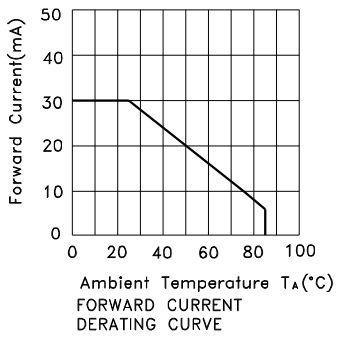
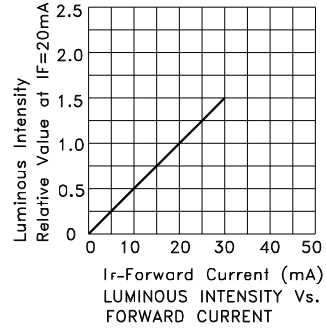
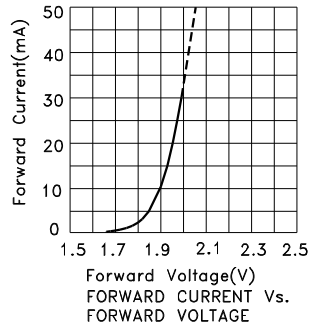


APHB1608ZGSURKC
Green



Kingbright

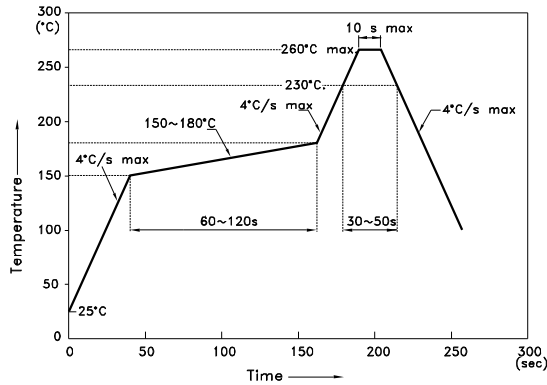
Hyper Red



APHB1608ZGSURKC

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.

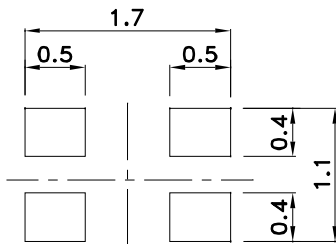
Reflow Soldering Profile For Lead-free SMT Process.



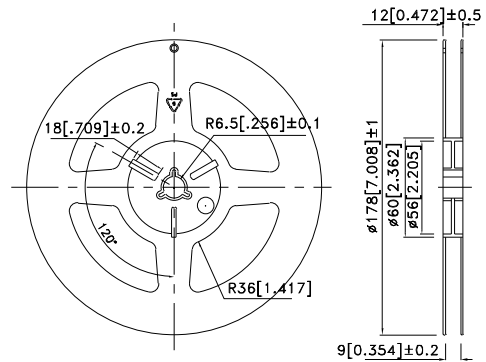
NOTES:

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.

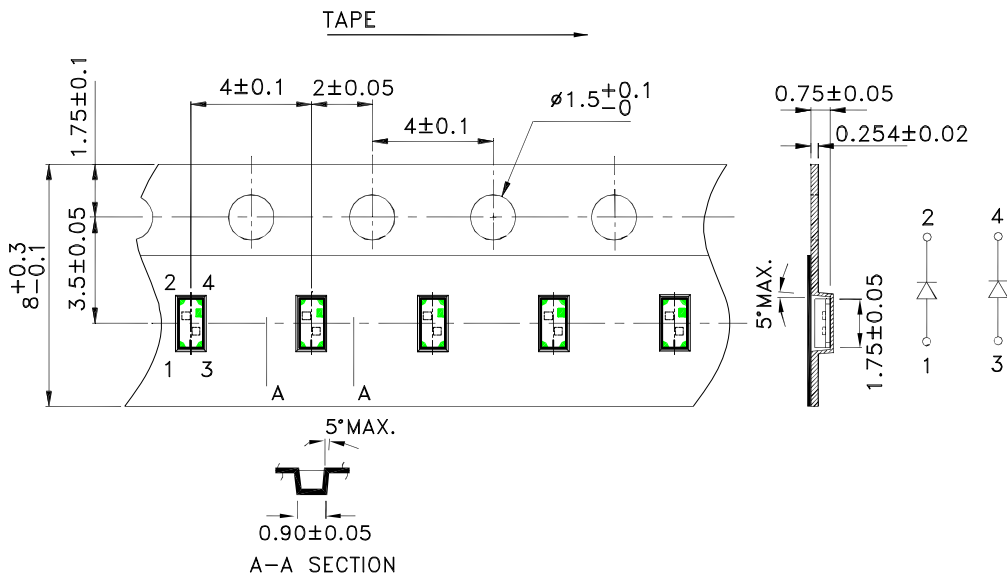
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

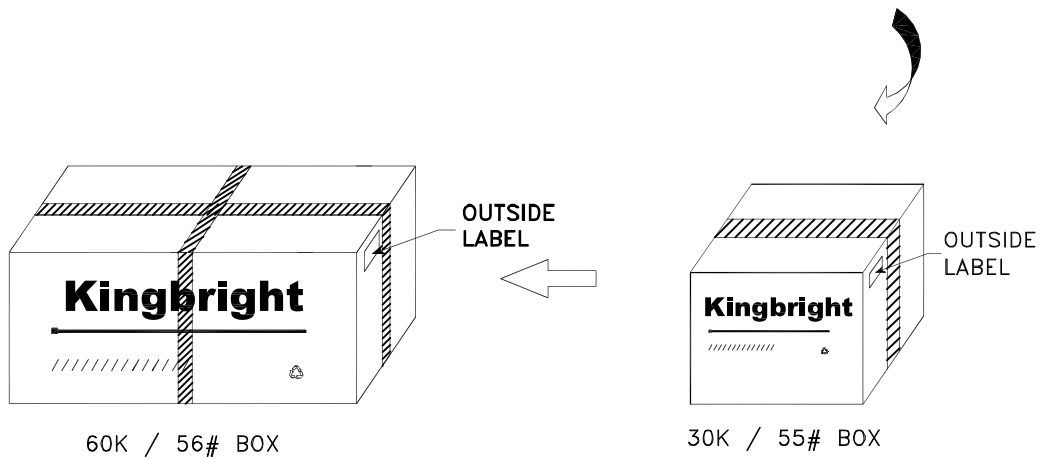
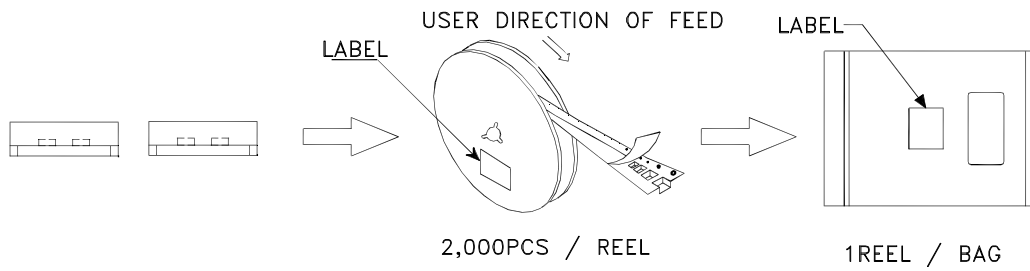



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APHB1608ZGSURKC



<h1>Kingbright</h1>	
P/NO: APHB1608xxx	
QTY: 2,000 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
	
xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

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

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