

Part Number: APHB1608CGKSURKC

Green  
Hyper Red

### Features

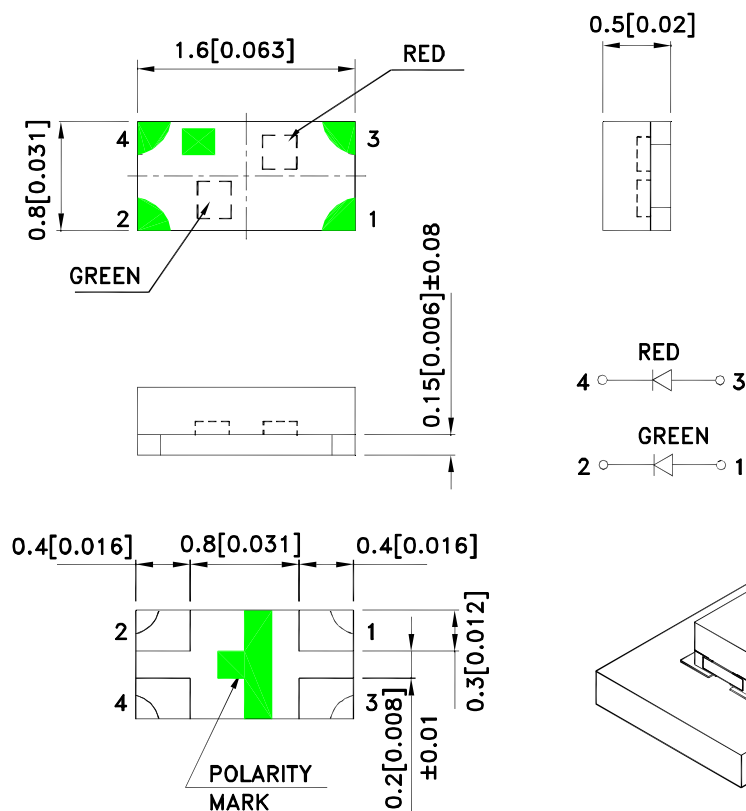
- 1.6mmX0.8mm SMT LED, 0.5mm thickness.
- Compatible with reflow soldering.
- Available in various color combination.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

### Description

The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

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]<br>@ 20mA |      | Viewing<br>Angle [1] |
|------------------|---------------------|-------------|------------------------|------|----------------------|
|                  |                     |             | Min.                   | Typ. | 2θ1/2                |
| APHB1608CGKSURKC | Green (AlGaInP)     | Water Clear | 20                     | 50   | 130°                 |
|                  |                     |             | *20                    | *50  |                      |
|                  |                     |             | 120                    | 250  |                      |
|                  | Hyper Red (AlGaInP) |             | *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<br>Hyper Red | 574<br>650  | *574<br>*645 |            | nm    | If=20mA         |
| λD [1] | Dominant Wavelength      | Green<br>Hyper Red | 570<br>630  | *570<br>*630 |            | nm    | If=20mA         |
| Δλ1/2  | Spectral Line Half-width | Green<br>Hyper Red | 20<br>28    |              |            | nm    | If=20mA         |
| C      | Capacitance              | Green<br>Hyper Red | 15<br>35    |              |            | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | Green<br>Hyper Red | 2.1<br>1.95 |              | 2.5<br>2.5 | V     | If=20mA         |
| IR     | Reverse Current          | Green<br>Hyper Red |             |              | 10<br>10   | uA    | VR = 5V         |

Notes:

1.Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

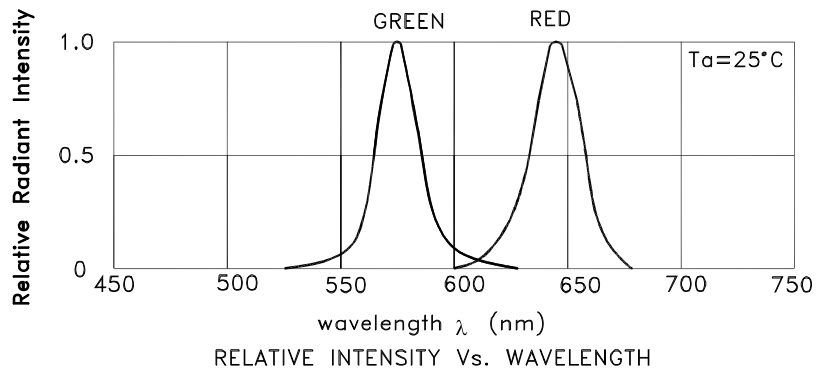
\*Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

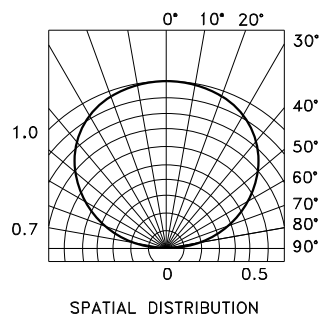
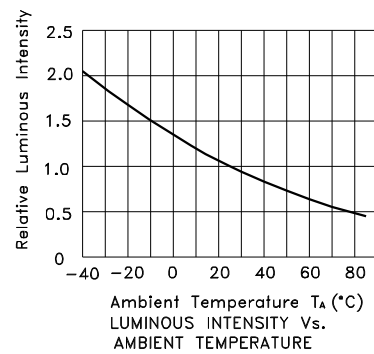
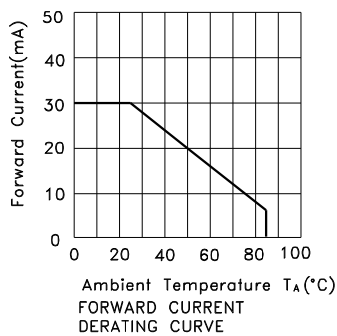
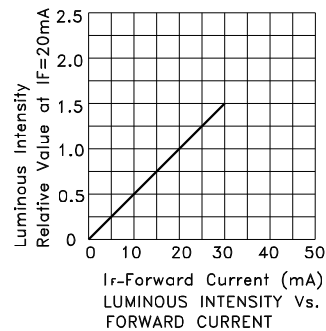
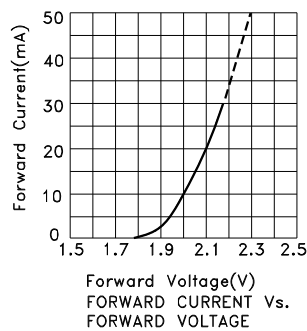
| Parameter                | Green          | Hyper Red | Units |
|--------------------------|----------------|-----------|-------|
| Power dissipation        | 75             | 75        | mW    |
| DC Forward Current       | 30             | 30        | mA    |
| Peak Forward Current [1] | 150    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

Note:

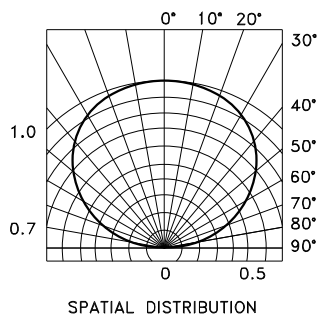
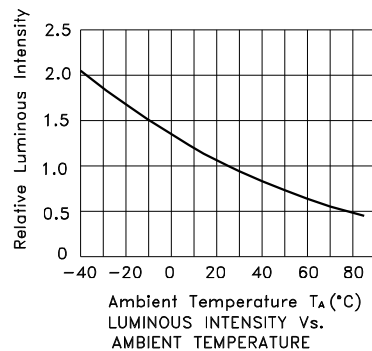
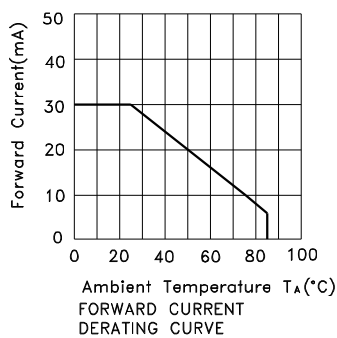
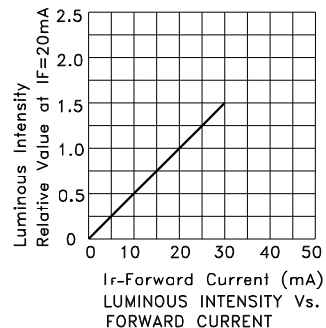
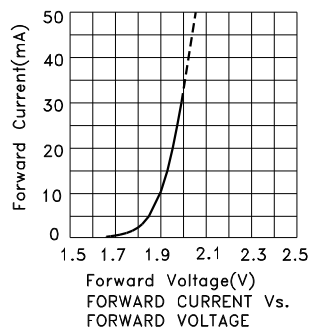
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



## APHB1608CGKSURKC Green



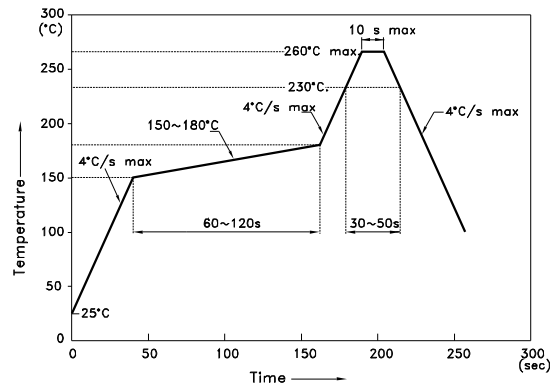
## Hyper Red



## 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.

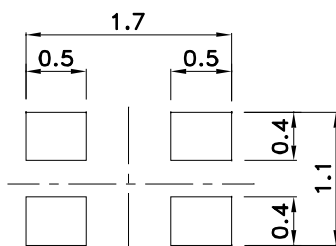
Reflow Soldering Profile For Lead-free SMT Process.



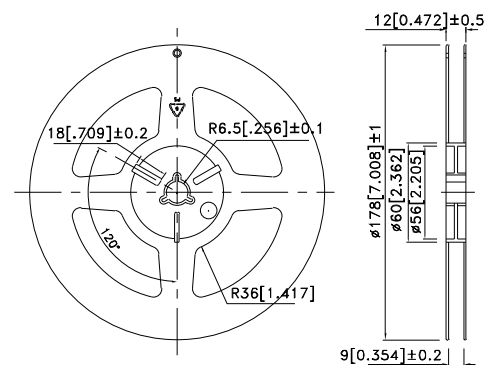
### NOTES:

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.

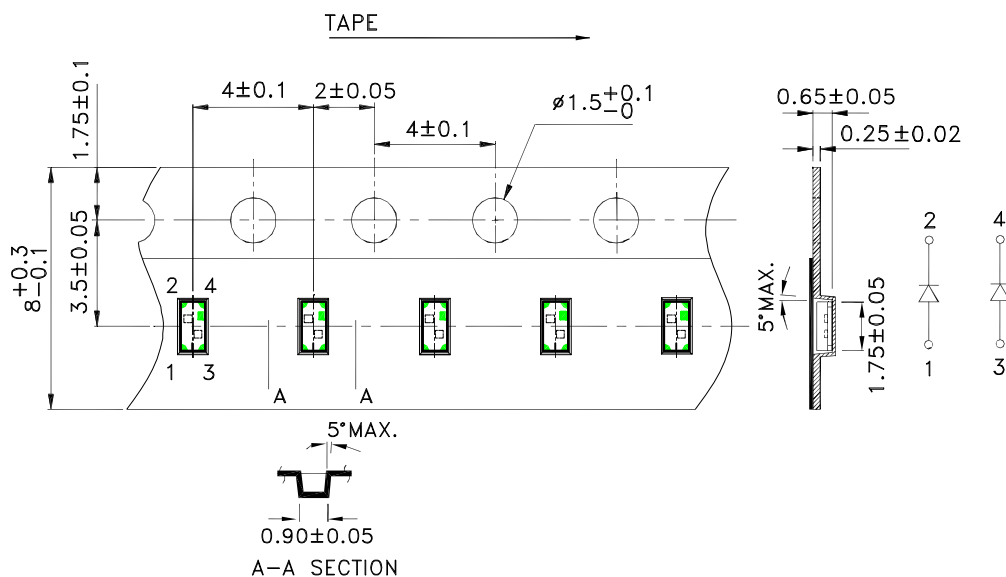
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Reel Dimension

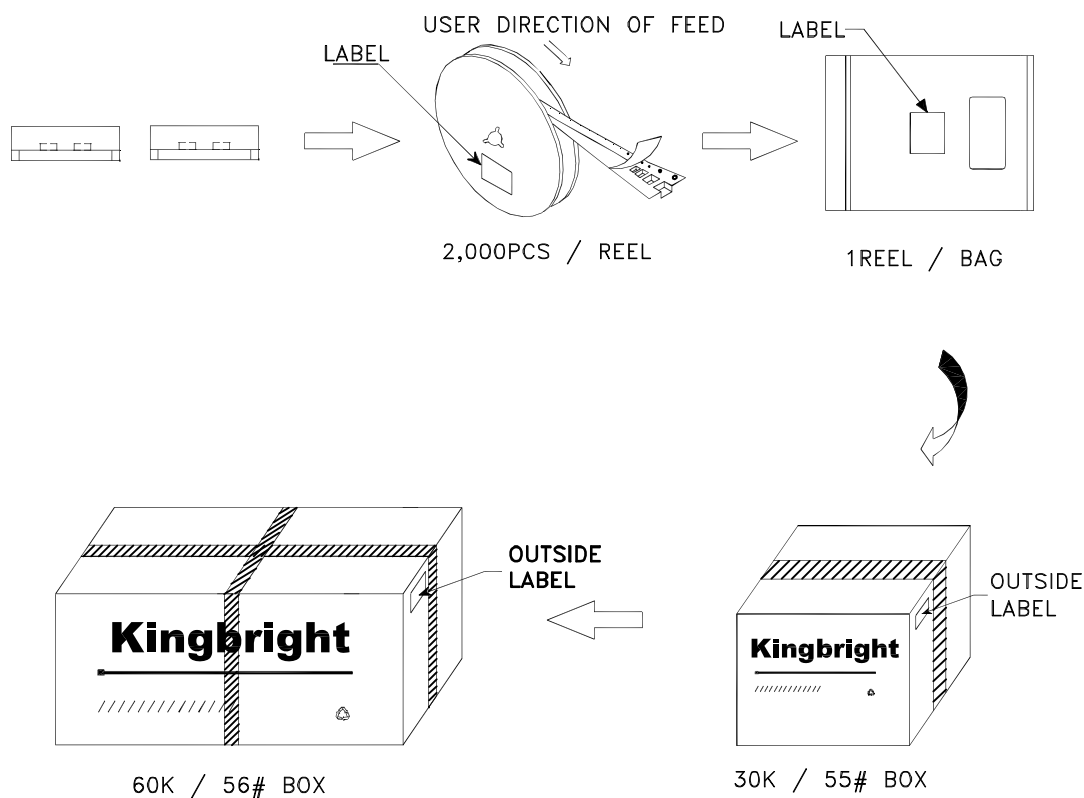


### Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APHB1608CGKSURKC



|                                                                                      |      |                                          |
|--------------------------------------------------------------------------------------|------|------------------------------------------|
| <b>Kingbright</b>                                                                    |      |                                          |
| P/NO: APHB1608xxx                                                                    |      |                                          |
| QTY: 2,000 pcs                                                                       | Q.C. | <div>Q C<br/>XX XX XXXX<br/>PASSED</div> |
| S/N: XXXX                                                                            |      |                                          |
| CODE: XXX                                                                            |      |                                          |
| LOT NO:                                                                              |      |                                          |
|  |      |                                          |
| XXXXXXXXXXXXXXXXXXXX                                                                 |      |                                          |
| RoHS Compliant                                                                       |      |                                          |



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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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