

PRELIMINARY SPEC

Part Number: APHBM2012SURKCGKC HYPHER RED GREEN

Features

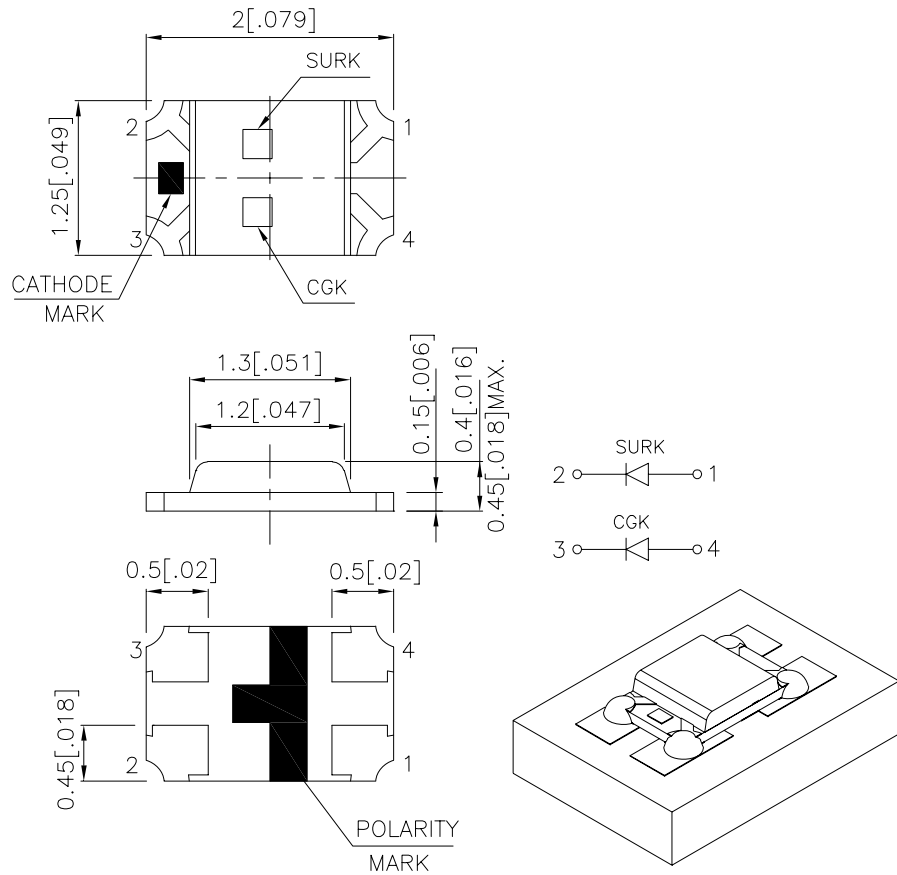
- 2.0mmx1.25mm SMT LED, 0.45mm MAX. THICKNESS.
- BI -COLOR, LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

Description

The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

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

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.1 (0.004") unless otherwise noted.
3. Specifications are subject to change without 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 |
| APHBM2012SURKCGKC | HYPER RED (InGaAlP) | WATER CLEAR | 70 | 200 | 120° |
| | GREEN (InGaAlP) | | 36 | 80 | |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous Intensity / Luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|--------------------|--------------------------|--------------------|-------------|------------|-------|---------------------------|
| λ _{peak} | Peak Wavelength | Hyper Red Green | 650 574 | | nm | I _F =20mA |
| λ _D [1] | Dominant Wavelength | Hyper Red Green | 635 570 | | nm | I _F =20mA |
| Δλ _{1/2} | Spectral Line Half-width | Hyper Red Green | 28 20 | | nm | I _F =20mA |
| C | Capacitance | Hyper Red Green | 35 15 | | pF | V _F =0V;f=1MHz |
| V _F [2] | Forward Voltage | Hyper Red Green | 1.95 2.1 | 2.5 2.5 | V | I _F =20mA |
| I _R | Reverse Current | Hyper Red Green | | 10 10 | uA | V _R = 5V |

Notes:

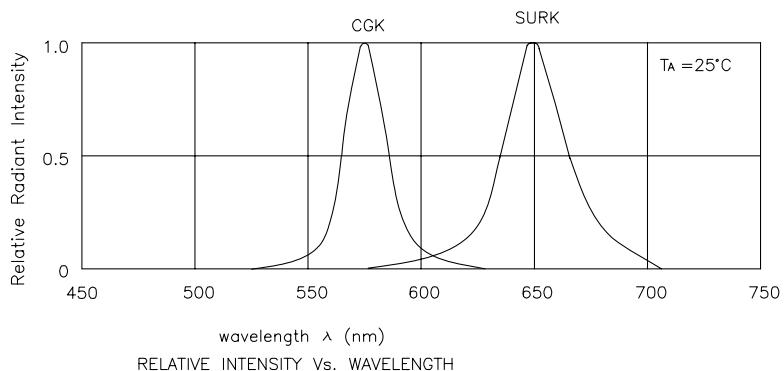
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

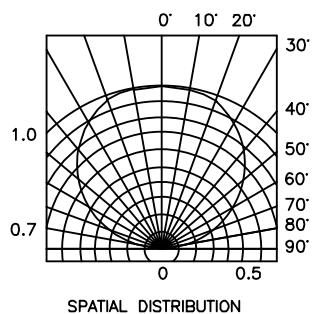
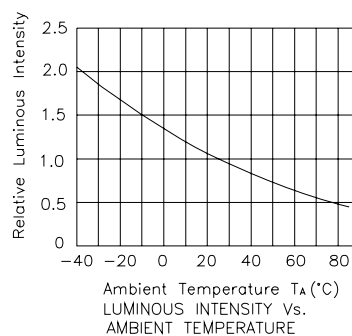
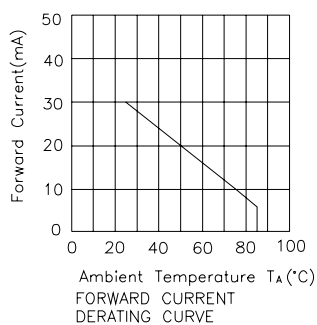
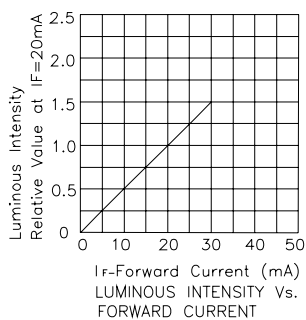
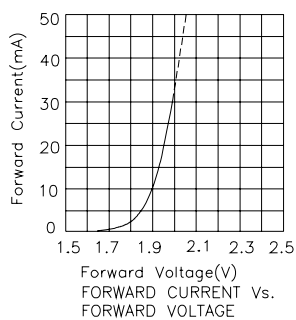
| Parameter | Hyper Red | Green | Units |
|---------------------------------|----------------|-------|-------|
| Power dissipation | 75 | 75 | mW |
| DC Forward Current | 30 | 30 | mA |
| Peak Forward Current [1] | 185 | 150 | mA |
| Reverse Voltage | 5 | 5 | V |
| Operating / Storage Temperature | -40°C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

Note:

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

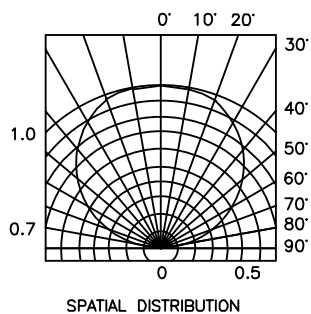
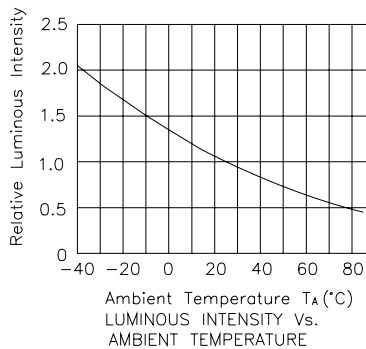
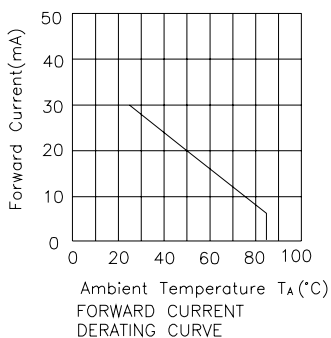
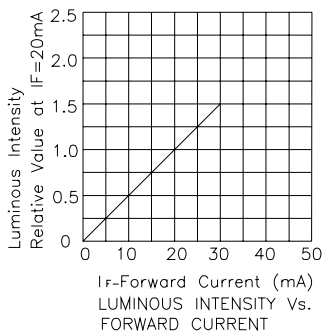
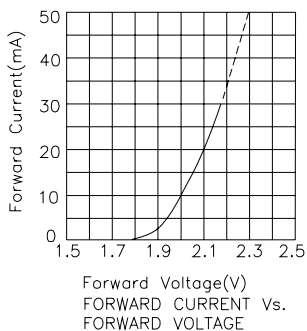


APHBM2012SURKCGKC Hyper Red



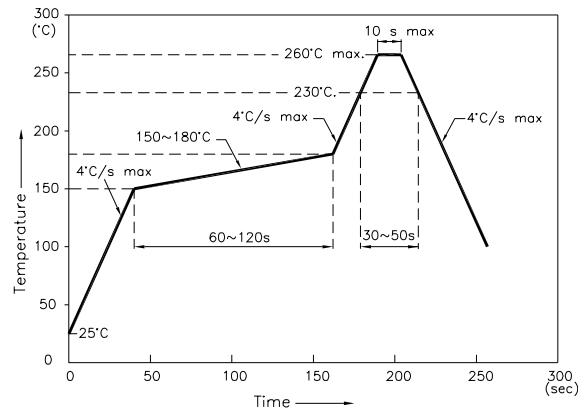
Kingbright

Green



APHBM2012SURKCGKC

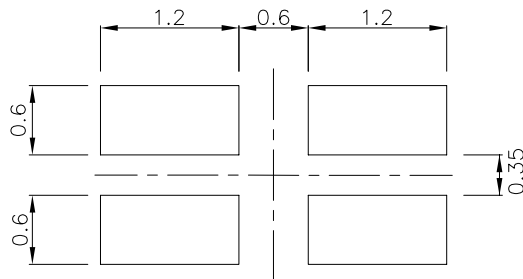
Reflow Soldering Profile For Lead-free SMT Process.



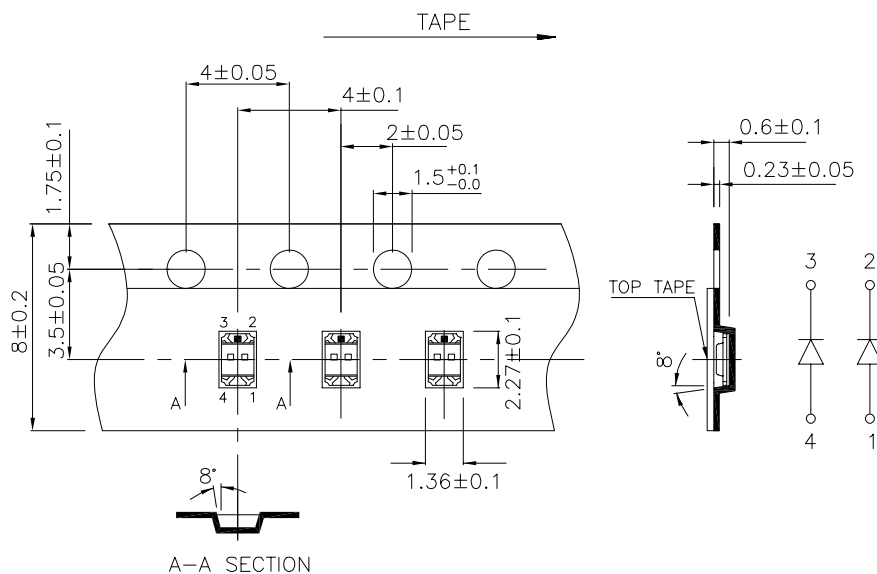
NOTES:

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)

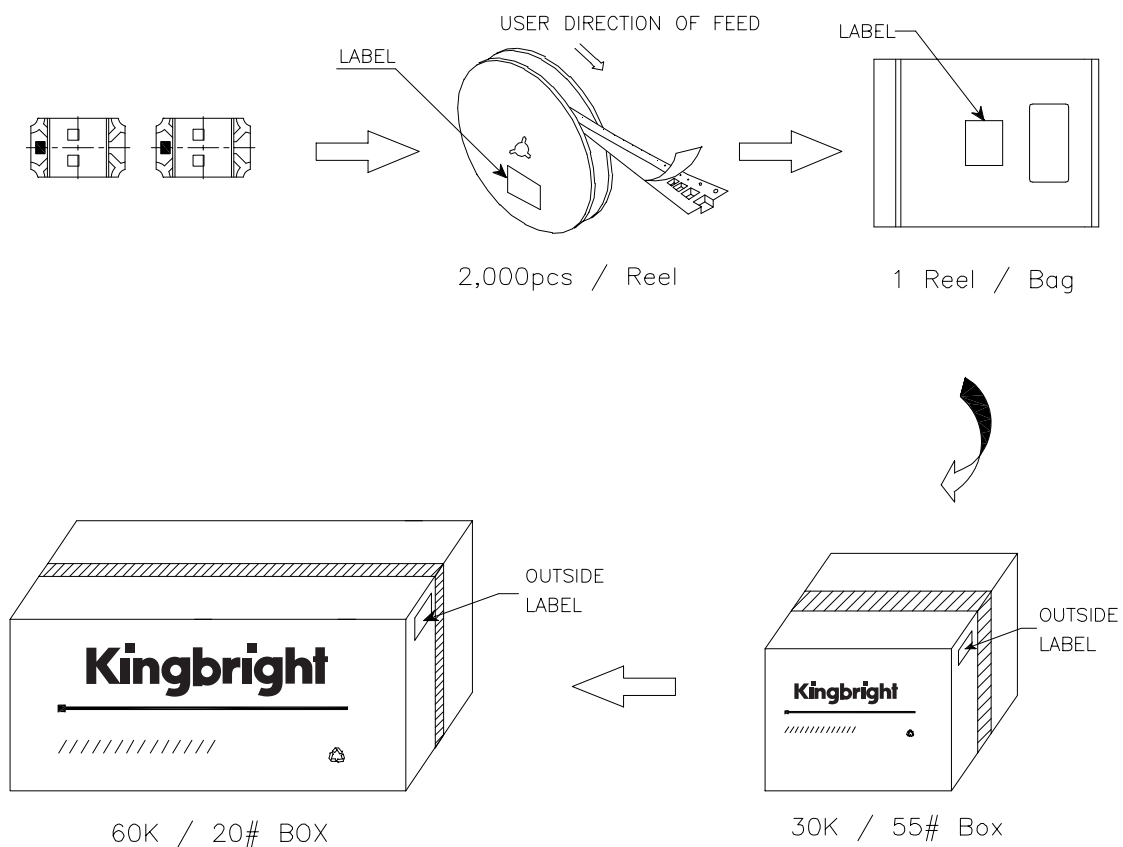



Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

APHBM2012SURKCGKC



| | |
|--|---|
| Kingbright | |
| P/NO: APHBM2012XXX | |
| QTY: 2,000 pcs | Q.C. xx xx xxxx |
| S/N: XXXX | PASSED |
| CODE: XXX | Date |
| LOT NO: | |
|  | |
| MADE IN CHINA | RoHS Compliant |