

PRELIMINARY SPEC

Part Number: KPHBM-2012CGKSEKC

GREEN

SUPER BRIGHT ORANGE

### Features

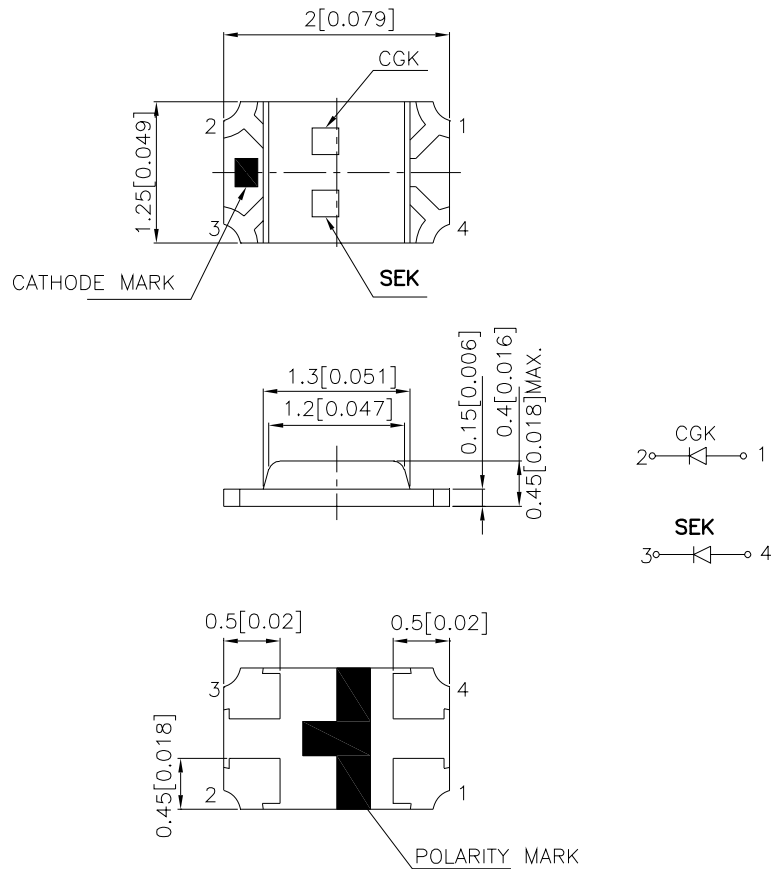
- 2.0mmx1.25mm SMT LED, 0.45mm MAX. THICKNESS.
- BI-COLOR, LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

### Description

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

The Super Bright Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1$  (0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

## Selection Guide

| Part No.          | Dice                          | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|-------------------|-------------------------------|-------------|------------------------|------|----------------------|
|                   |                               |             | Min.                   | Typ. | 2θ1/2                |
| KPHBM-2012CGKSEKC | GREEN (InGaAIP)               | WATER CLEAR | 36                     | 80   | 120°                 |
|                   | SUPER BRIGHT ORANGE (InGaAIP) |             | 110                    | 250  |                      |

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 <sub>peak</sub>  | Peak Wavelength          | Green<br>Super Bright Orange | 574<br>610 |            | nm    | I <sub>F</sub> =20mA      |
| λ <sub>D</sub> [1] | Dominant Wavelength      | Green<br>Super Bright Orange | 570<br>601 |            | nm    | I <sub>F</sub> =20mA      |
| Δλ <sub>1/2</sub>  | Spectral Line Half-width | Green<br>Super Bright Orange | 20<br>29   |            | nm    | I <sub>F</sub> =20mA      |
| C                  | Capacitance              | Green<br>Super Bright Orange | 15<br>15   |            | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2] | Forward Voltage          | Green<br>Super Bright Orange | 2.1<br>2.1 | 2.5<br>2.5 | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>     | Reverse Current          | Green<br>Super Bright Orange |            | 10<br>10   | uA    | V <sub>R</sub> = 5V       |

Notes:

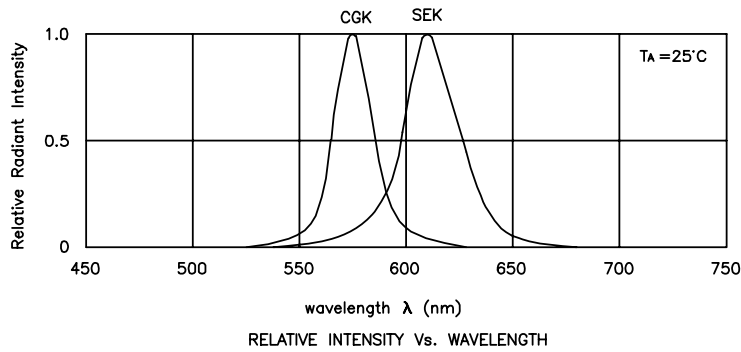
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

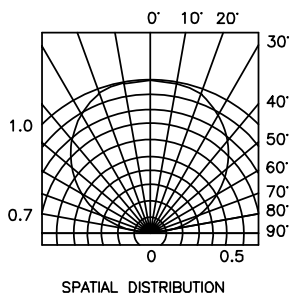
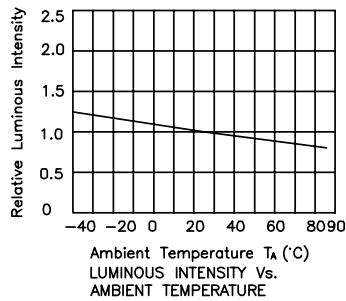
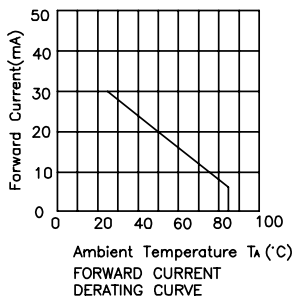
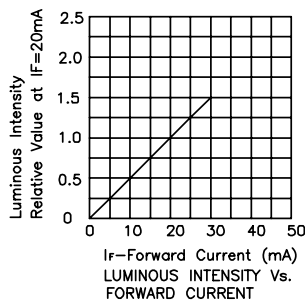
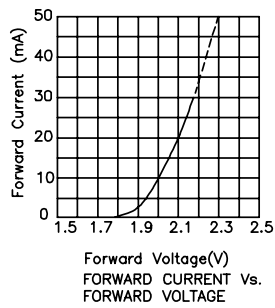
| Parameter                     | Green          | Super Bright Orange | Units |
|-------------------------------|----------------|---------------------|-------|
| Power dissipation             | 75             | 75                  | mW    |
| DC Forward Current            | 30             | 30                  | mA    |
| Peak Forward Current [1]      | 150            | 195                 | mA    |
| Reverse Voltage               | 5              |                     |       |
| Operating/Storage Temperature | -40°C To +85°C |                     |       |

Note:

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

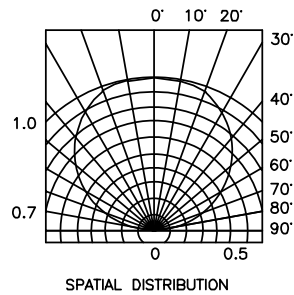
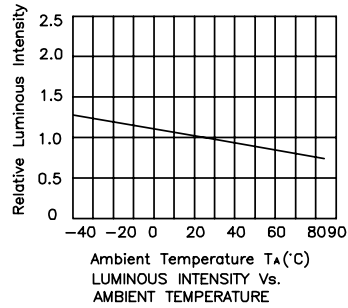
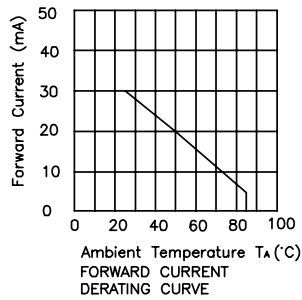
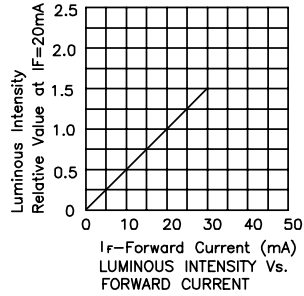
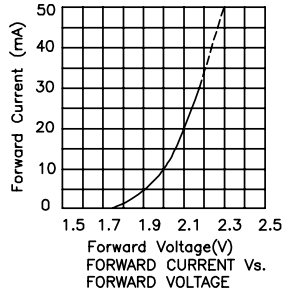


**KPHBM-2012CGKSEKC**  
Green



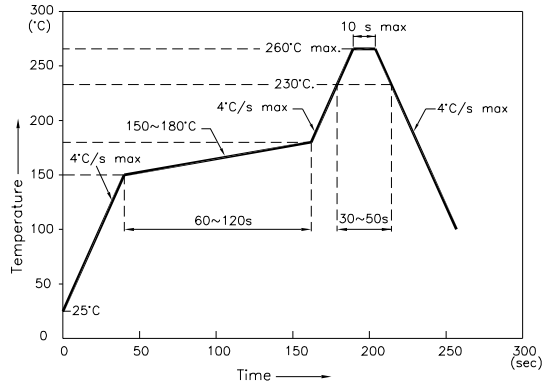
# Kingbright

## Super Bright Orange



## KPHBM-2012CGKSEKC

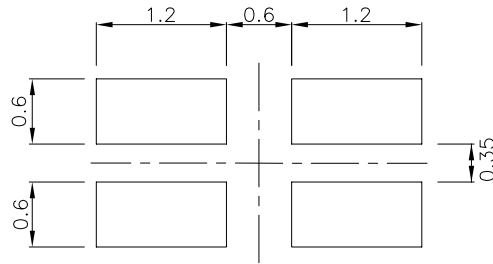
Reflow Soldering Profile For Lead-free SMT Process.



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)

