

Part Number: KPBA-3010ESGC

HIGH EFFICIENCY RED  
SUPER BRIGHT GREEN

### Features

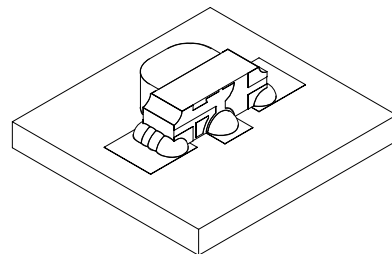
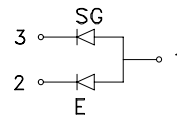
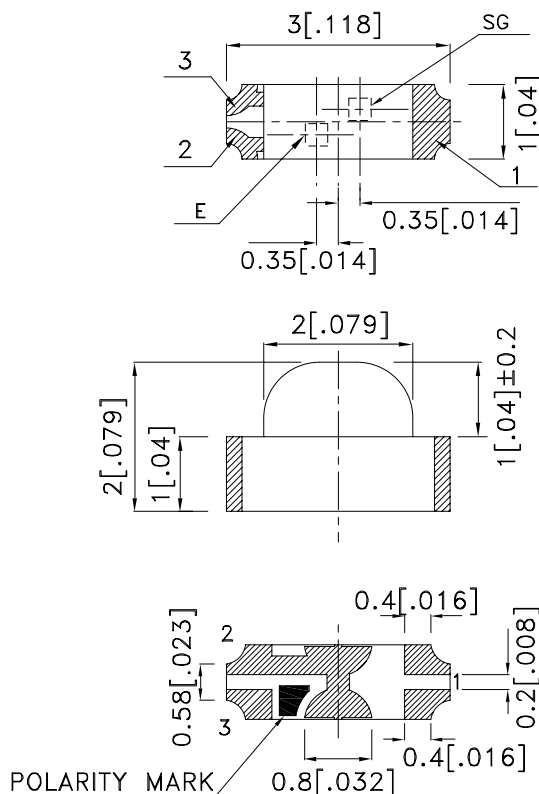
- 3.0mmx1.0mm RIGHT ANGLE SMT LED, 2.0mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLRS AND LENS TYPES AVAILABLE.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

### Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.15(0.006") 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]<br>@ 20mA |      | Viewing<br>Angle [1] |
|---------------|---------------------------------|-------------|------------------------|------|----------------------|
|               |                                 |             | Min.                   | Typ. | 2θ1/2                |
| KPBA-3010ESGC | HIGH EFFICIENCY RED (GaAsP/GaP) | WATER CLEAR | 4                      | 12   | 140°                 |
|               | SUPER BRIGHT GREEN (GaP)        |             | 4                      | 12   |                      |

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          | High Efficiency Red<br>Super Bright Green | 627<br>565 |            | nm    | I <sub>F</sub> =20mA      |
| λ <sub>D</sub> [1] | Dominant Wavelength      | High Efficiency Red<br>Super Bright Green | 625<br>568 |            | nm    | I <sub>F</sub> =20mA      |
| Δλ <sub>1/2</sub>  | Spectral Line Half-width | High Efficiency Red<br>Super Bright Green | 45<br>30   |            | nm    | I <sub>F</sub> =20mA      |
| C                  | Capacitance              | High Efficiency Red<br>Super Bright Green | 15<br>15   |            | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2] | Forward Voltage          | High Efficiency Red<br>Super Bright Green | 2.0<br>2.2 | 2.5<br>2.5 | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>     | Reverse Current          | High Efficiency Red<br>Super Bright Green |            | 10<br>10   | uA    | V <sub>R</sub> = 5V       |

Notes:

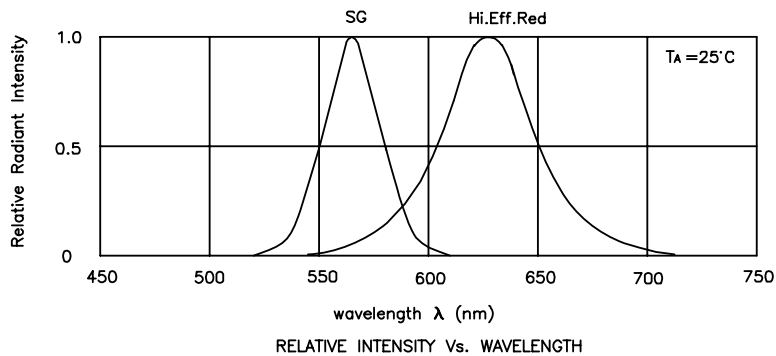
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

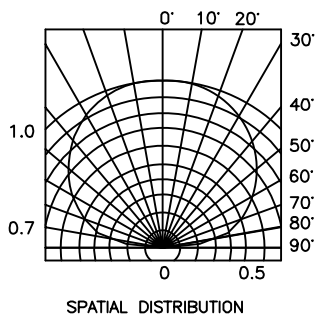
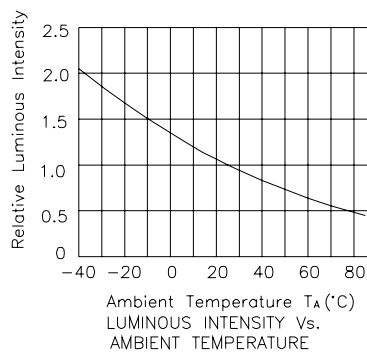
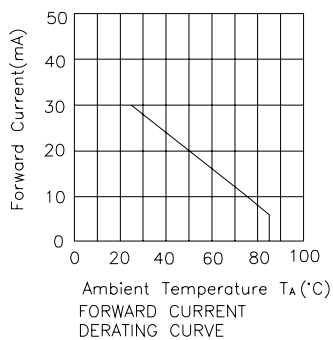
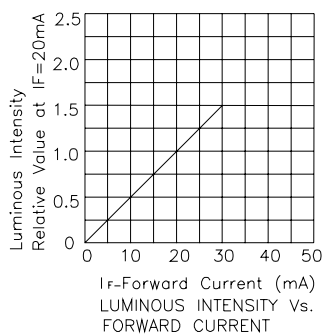
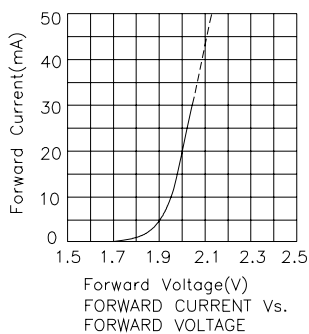
| Parameter                       | High Efficiency Red | Super Bright Green | Units |
|---------------------------------|---------------------|--------------------|-------|
| Power dissipation               | 75                  | 62.5               | mW    |
| DC Forward Current              | 30                  | 25                 | mA    |
| Peak Forward Current [1]        | 160                 | 140                | mA    |
| Reverse Voltage                 | 5                   |                    | V     |
| Operating / Storage Temperature | -40°C To +85°C      |                    |       |

Note:

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

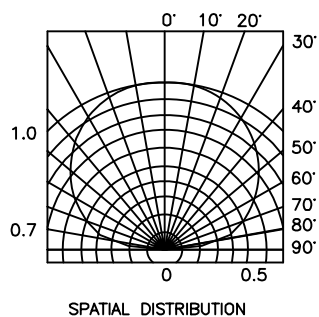
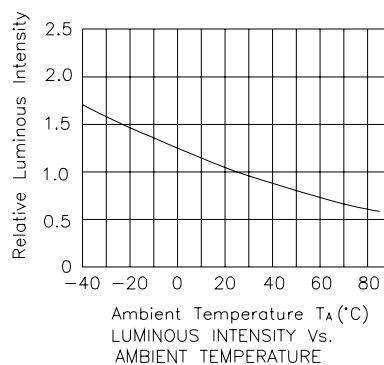
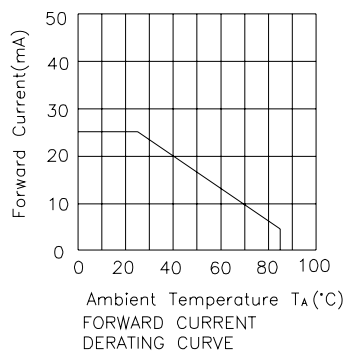
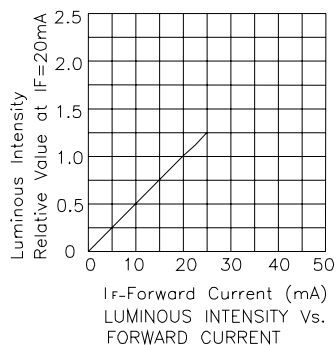
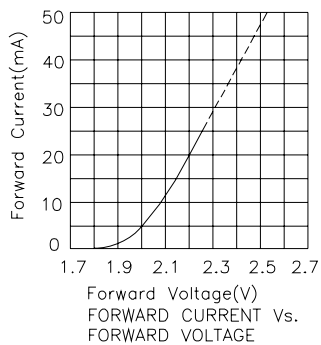


## KPBA-3010ESGC High Efficiency Red



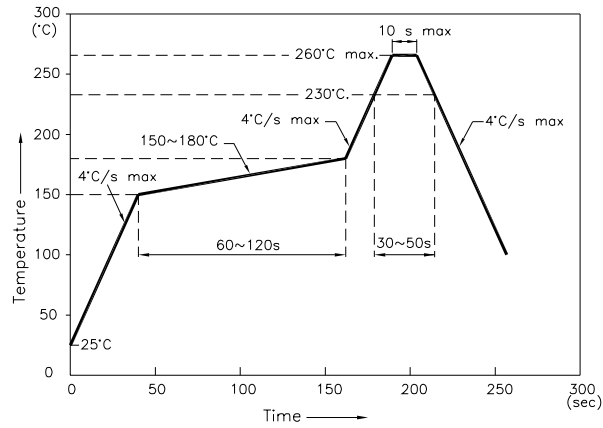
# Kingbright

## Super Bright Green



## KPBA-3010ESGC

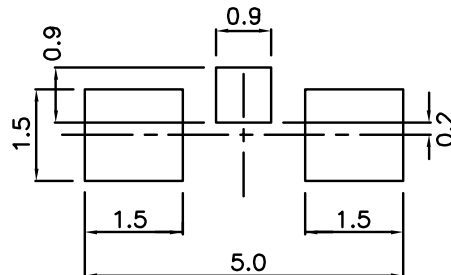
Reflow Soldering Profile For Lead-free SMT Process.



**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)

