

### 3.0mmx1.0mm RIGHT ANGLE SMD CHIP LED **LAMP**

Part Number: KPBA-3010SURKSGC

Hyper Red Super Bright Green

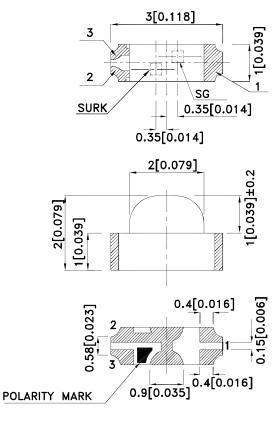
#### **Features**

- 3.0mmx1.0mm right angle SMT LED, 2.0mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package: 2000 pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability
- RoHS compliant.

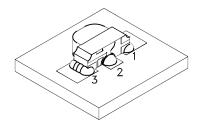
### **Descriptions**

- The Hyper Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.
- The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

## **Package Dimensions**







- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±0.15(0.006") unless otherwise noted.
- The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
   The device has a single mounting surface. The device must be mounted according to the specifications.

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### **Selection Guide**

| Part No.         | Dice                     | Lens Type     | lv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|------------------|--------------------------|---------------|------------------------|------|----------------------|
|                  |                          |               | Min.                   | Тур. | 201/2                |
| KPBA-3010SURKSGC | Hyper Red (AlGaInP)      | - Water Clear | 120                    | 300  | - 140°               |
|                  |                          |               | *40                    | *80  |                      |
|                  | Super Bright Green (GaP) |               | 5                      | 15   |                      |
|                  |                          |               | *5                     | *15  |                      |

- 1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

### Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter                | Device                          | Тур.        | Max.       | Units | Test Conditions     |  |
|--------|--------------------------|---------------------------------|-------------|------------|-------|---------------------|--|
| λpeak  | Peak Wavelength          | Hyper Red<br>Super Bright Green | 645<br>565  |            | nm    | I==20mA             |  |
| λD [1] | Dominant Wavelength      | Hyper Red<br>Super Bright Green | 630<br>568  |            | nm    | nm IF=20mA          |  |
| Δλ1/2  | Spectral Line Half-width | Hyper Red<br>Super Bright Green | 28<br>30    |            | nm    | IF=20mA             |  |
| С      | Capacitance              | Hyper Red<br>Super Bright Green | 35<br>15    |            | pF    | VF=0V;f=1MHz        |  |
| VF [2] | Forward Voltage          | Hyper Red<br>Super Bright Green | 1.95<br>2.2 | 2.5<br>2.5 | V     | I==20mA             |  |
| lR     | Reverse Current          | Hyper Red<br>Super Bright Green |             | 10<br>10   | uA    | V <sub>R</sub> = 5V |  |

### Notes:

- 1.Wavelength: +/-1nm.
- Forward Voltage: +/-0.1V.
   Wavelength value is traceable to the CIE127-2007 compliant national standards.

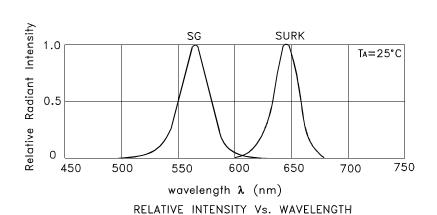
# Absolute Maximum Ratings at TA=25°C

| Parameter                | Hyper Red      | Super Bright Green | Units |  |  |
|--------------------------|----------------|--------------------|-------|--|--|
| Power dissipation        | 75             | 62.5               | mW    |  |  |
| DC Forward Current       | 30             | 25                 | mA    |  |  |
| Peak Forward Current [1] | 185            | 140                | mA    |  |  |
| Reverse Voltage          |                | V                  |       |  |  |
| Operating Temperature    | -40°C To +85°C |                    |       |  |  |
| Storage Temperature      | -40°C To +85°C |                    |       |  |  |

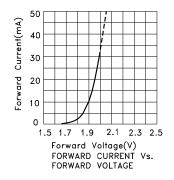
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

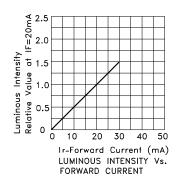
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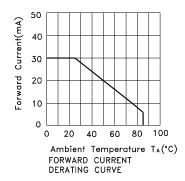
Luminous intensity/ luminous Flux: +/-15%.
 \*Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

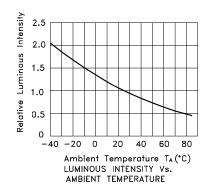


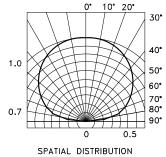
# KPBA-3010SURKSGC Hyper Red





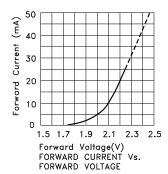


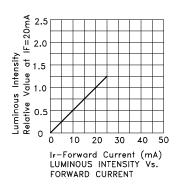


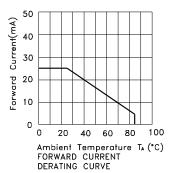


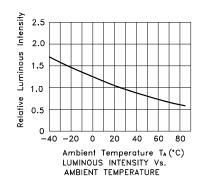
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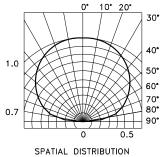
# **Super Bright Green**









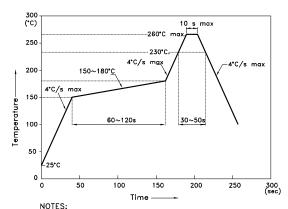


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### **KPBA-3010SURKSGC**

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.



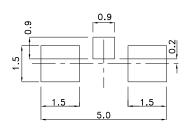
- NOTES:

  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.

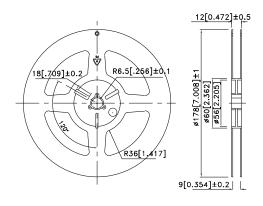
  3.Number of reflow process shall be 2 times or less.

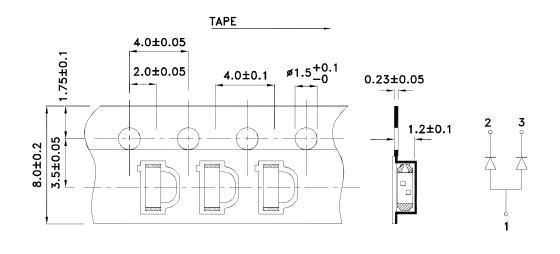
**Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.1)



**Tape Dimensions** (Units: mm)

### **Reel Dimension**

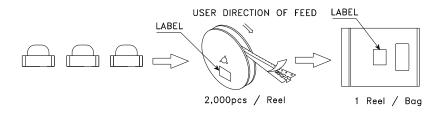


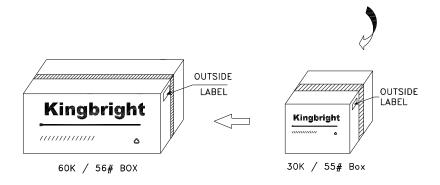


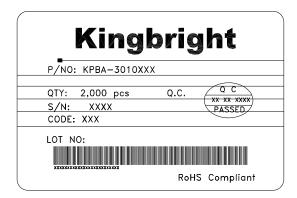
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### **PACKING & LABEL SPECIFICATIONS**

### **KPBA-3010SURKSGC**







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