

Part Number: KPTBD-3216ESGC

High Efficiency Red  
Super Bright Green

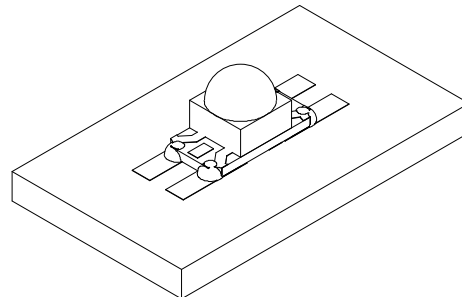
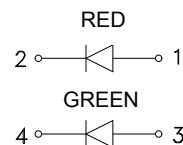
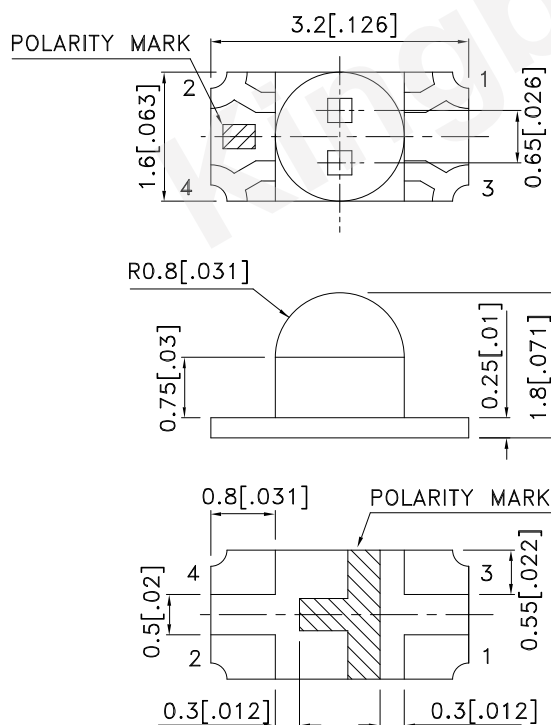
### Features

- 3.2mmx1.6mm SMD LED, 1.8mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Descriptions

- 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  $\pm 0.2$  (0.008") 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.       | Emitting Color (Material)       | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|----------------|---------------------------------|-------------|------------------------|------|----------------------|
|                |                                 |             | Min.                   | Typ. | 2θ1/2                |
| KPTBD-3216ESGC | High Efficiency Red (GaAsP/GaP) | Water Clear | 8                      | 20   | 30°                  |
|                |                                 |             | *3                     | *8   |                      |
|                | Super Bright Green (GaP)        |             | 20                     | 40   |                      |
|                |                                 |             | *20                    | *40  |                      |

### Notes:

1.  $\theta_{1/2}$  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 CIE127-2007 standards.

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

| Symbol                | Parameter                | Emitting Color                            | Typ.       | Max.       | Units | Test Conditions            |
|-----------------------|--------------------------|---|------------|------------|-------|----------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | High Efficiency Red<br>Super Bright Green | 627<br>565 |            | nm    | I <sub>F</sub> =20mA       |
| $\lambda_D$ [1]       | Dominant Wavelength      | High Efficiency Red<br>Super Bright Green | 617<br>568 |            | nm    | I <sub>F</sub> =20mA       |
| $\Delta\lambda_{1/2}$ | 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<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.

3. Wavelength value is traceable to CIE127-2007 standards.

4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

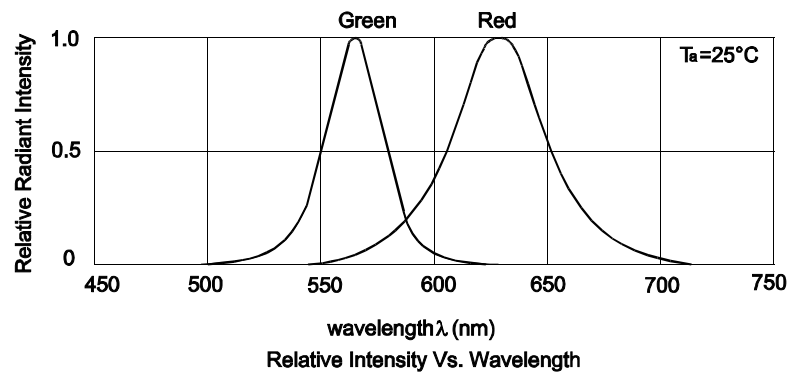
## Absolute Maximum Ratings at TA=25°C

| 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 Temperature    | -40°C To +85°C      |                    |       |
| Storage Temperature      | -40°C To +85°C      |                    |       |

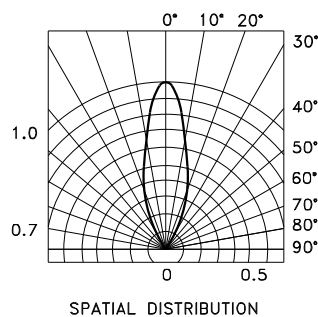
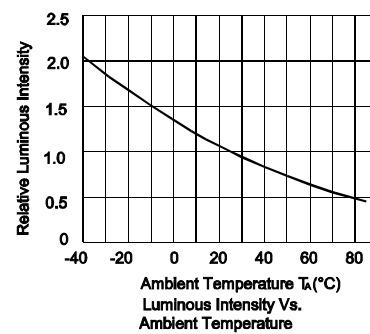
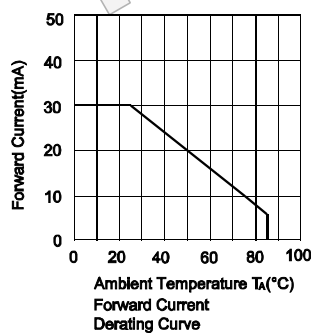
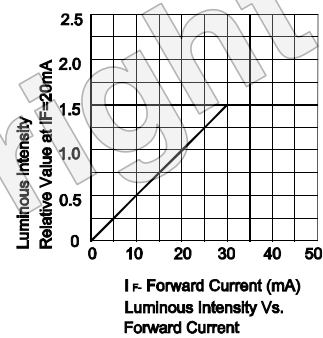
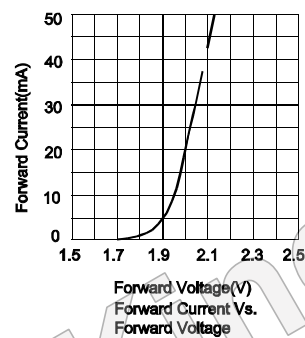
### Notes:

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

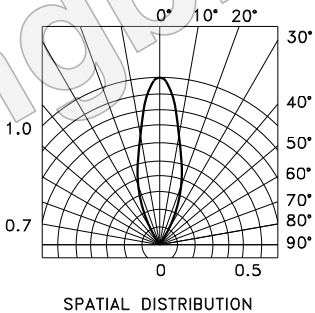
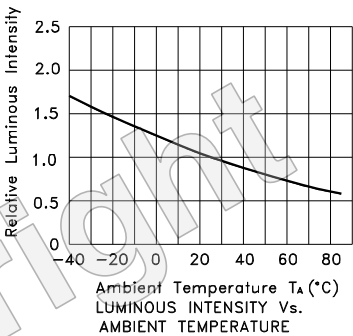
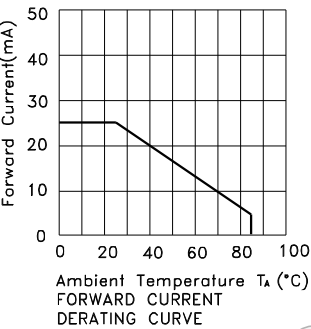
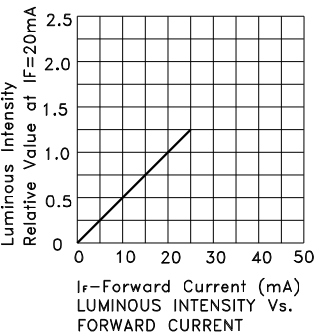
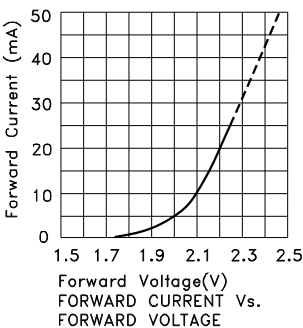
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



**KPTBD-3216ESGC**  
**High Efficiency Red**



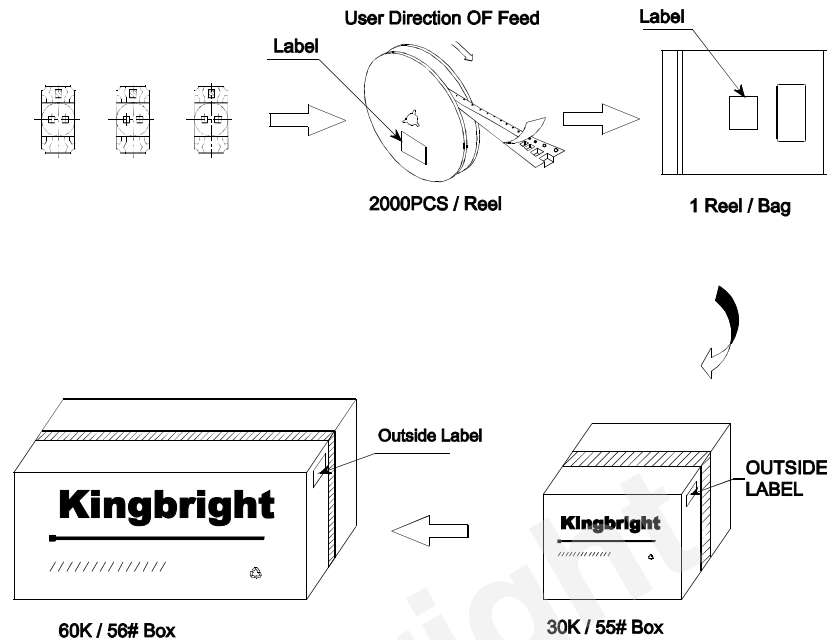
## Super Bright Green






## PACKING & LABEL SPECIFICATIONS

## KPTBD-3216ESGC



|  |      |  |
|--|------|--|
| <b>Kingbright</b>  |      |  |
| P/NO: KPTBD-3216xxx  |      |  |
| QTY: 2000 pcs  | Q.C. | <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;">           Q.C.<br/>           xxxxxx<br/>           PASSED         </div> |
| S/N: XXXX  |      |  |
| CODE: XXX  |      |  |
| LOT NO:  |      |  |
|  |      |  |
| RoHS Compliant   |      |  |

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