



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

### Features

- 3.2mmX1.6mm SMT LED, 1.8mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package: 2000pcs / reel .
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

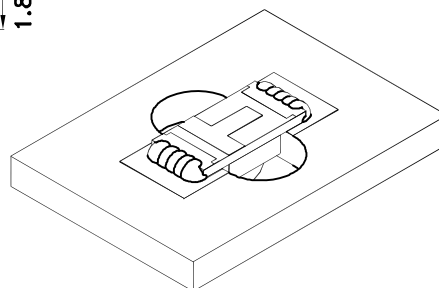
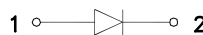
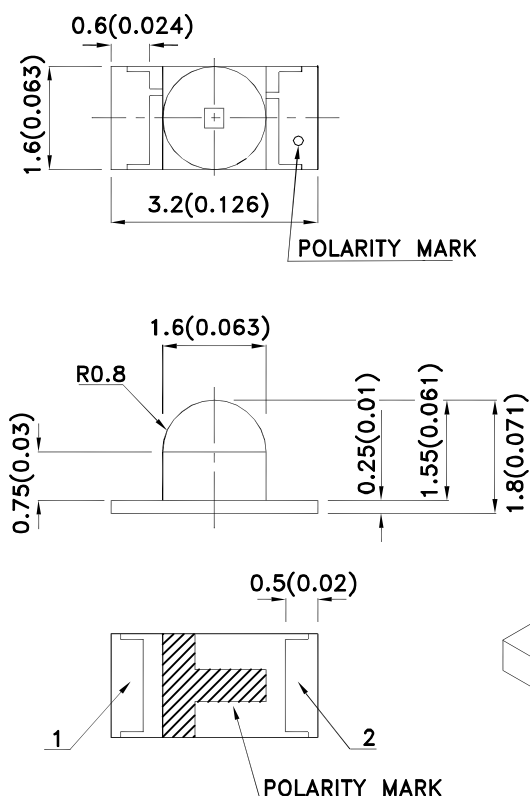
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

### 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.        | Dice          | Lens Type   | Iv (mcd) [2]<br>@ 20mA |       | Viewing<br>Angle [1] |
|-----------------|---------------|-------------|------------------------|-------|----------------------|
|                 |               |             | Min.                   | Typ.  | 2θ1/2                |
| KPTD-3216ZGC-01 | Green (InGaN) | Water Clear | 1800                   | 2500  | 50°                  |
|                 |               |             | *1300                  | *2300 |                      |

### Notes:

1. θ1/2 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 the CIE127-2007 compliant national standards.

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

| Symbol | Parameter                | Device | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|--------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | Green  | 515  |      | nm    | IF=20mA         |
| λD [1] | Dominant Wavelength      | Green  | 525  |      | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | Green  | 30   |      | nm    | IF=20mA         |
| C      | Capacitance              | Green  | 45   |      | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | Green  | 3.3  | 4.1  | V     | IF=20mA         |
| IR     | Reverse Current          | Green  |      | 50   | uA    | VR=5V           |

### Notes:

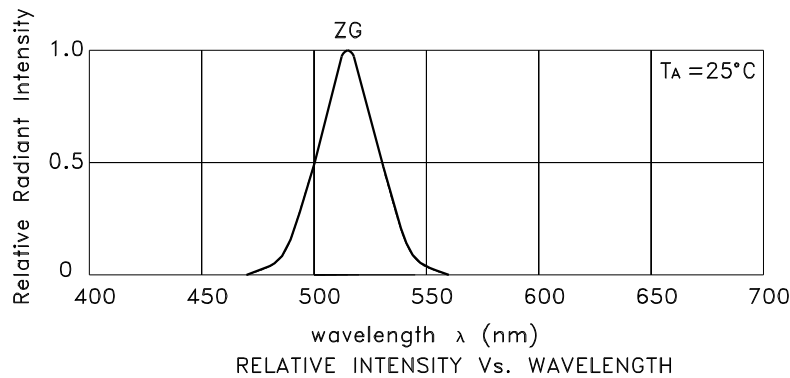
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

| Parameter                | Green          | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 102.5          | mW    |
| DC Forward Current       | 25             | mA    |
| Peak Forward Current [1] | 150            | mA    |
| Reverse Voltage          | 5              | V     |
| Operating Temperature    | -40°C To +85°C |       |
| Storage Temperature      | -40°C To +85°C |       |

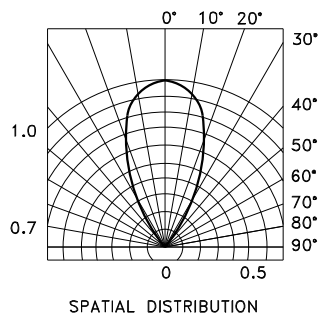
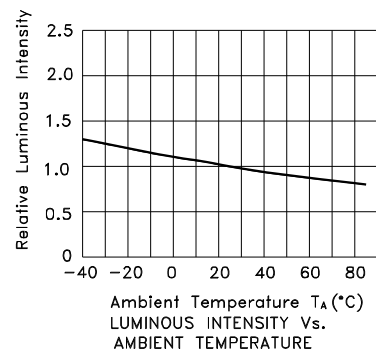
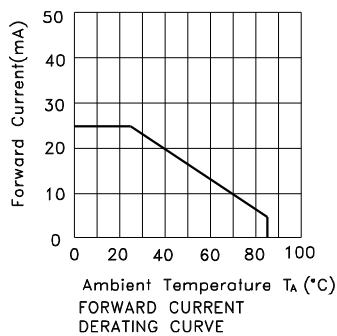
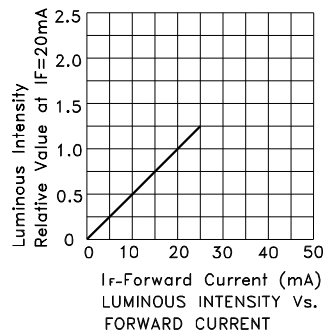
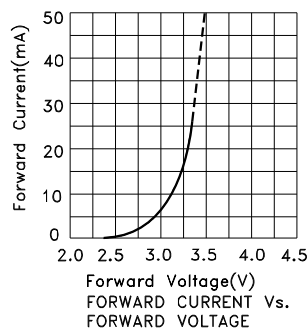
### Note:

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



Green

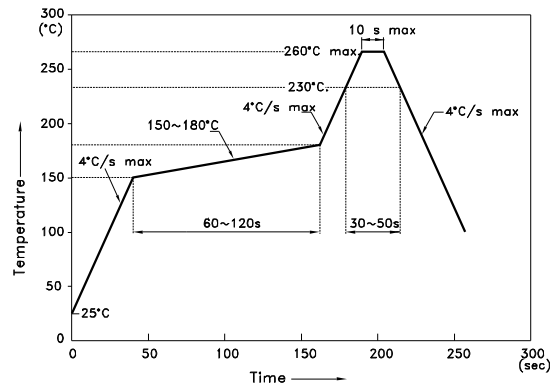
KPTD-3216ZGC-01



## KPTD-3216ZGC-01

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.

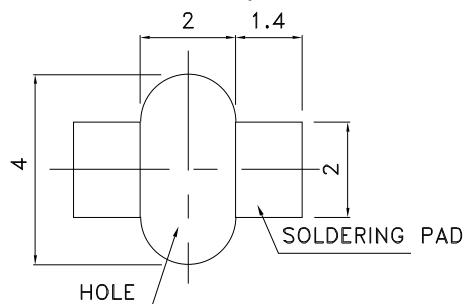
Reflow Soldering Profile For Lead-free SMT Process.



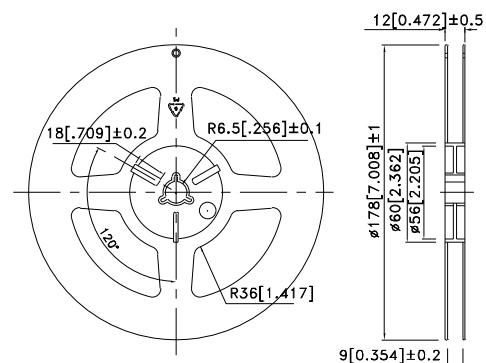
NOTES:

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.

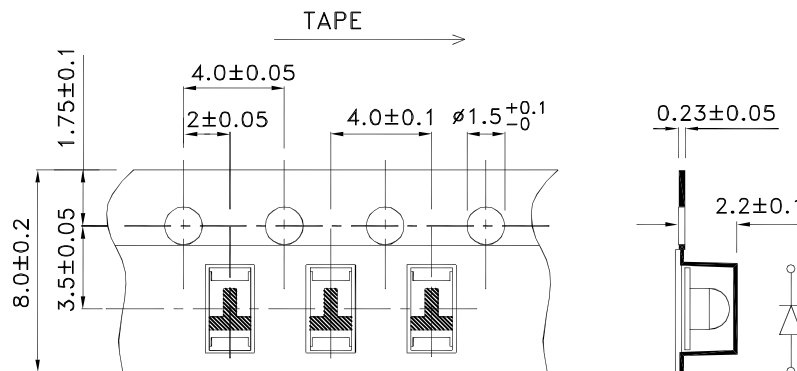
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Reel Dimension

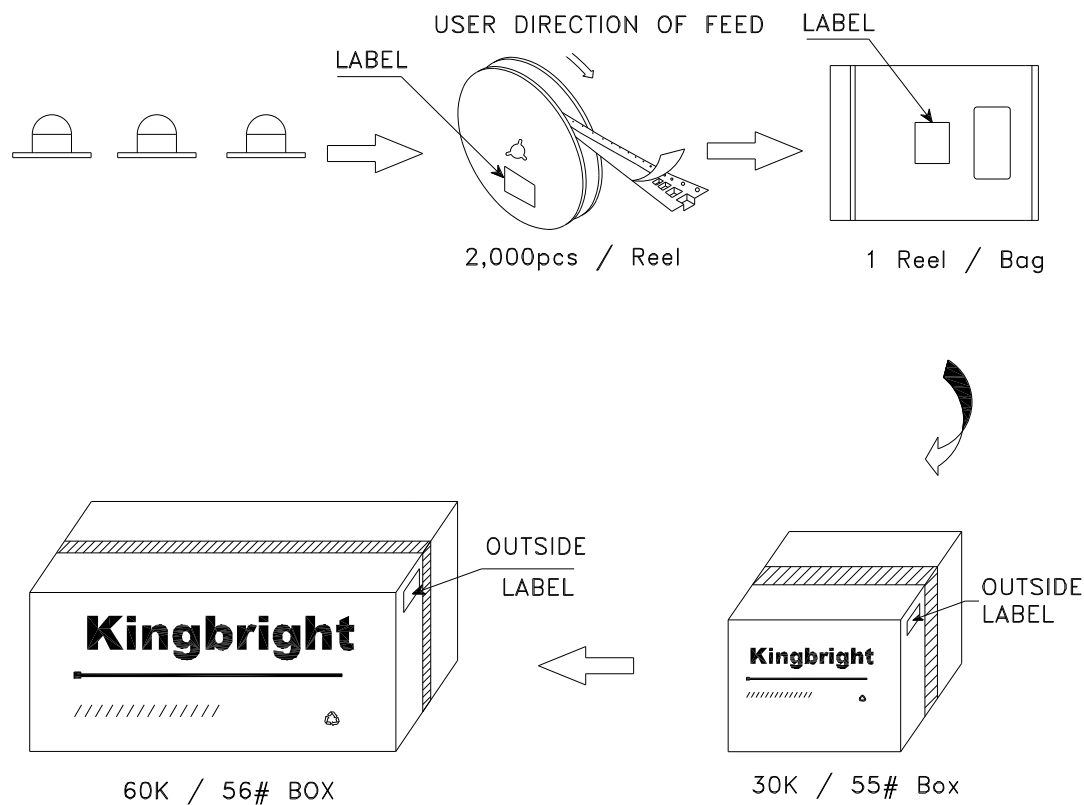


### Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KPTD-3216ZGC-01



|                                                                                                                      |                                               |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Kingbright</b>                                                                                                    |                                               |
| P/NO: KPTD-3216xxx                                                                                                   |                                               |
| QTY: 2,000 pcs                                                                                                       | Q.C. <div>Q C<br/>xx xx xxxx<br/>PASSED</div> |
| S/N: XXXX                                                                                                            |                                               |
| CODE: XXX                                                                                                            |                                               |
| LOT NO:                                                                                                              |                                               |
| <br>xxxxxxxxxxxxxxxxxxxxxxxxxxxx |                                               |
| RoHS Compliant                                                                                                       |                                               |