

Part Number: KPTD-1608QBC-D

Blue



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

### Features

- 1.6mmX0.8mm SMT LED, 0.95mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package: 2000pcs / reel .
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

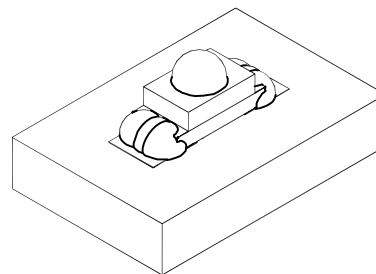
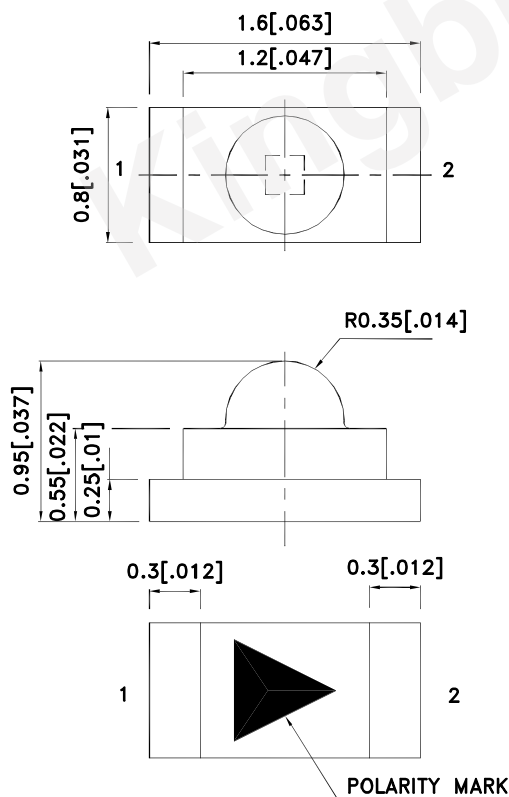
The Blue source color devices are made with InGaN Light Emitting Diode.

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  $\pm 0.15(0.006")$  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-1608QBC-D | Blue (InGaN) | Water Clear | 80                     | 200  | 40°                  |

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%.
3. 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           |
|--------------------|--------------------------|--------|------|------|-------|---------------------------|
| λ <sub>peak</sub>  | Peak Wavelength          | Blue   | 460  |      | nm    | I <sub>F</sub> =20mA      |
| λ <sub>D</sub> [1] | Dominant Wavelength      | Blue   | 465  |      | nm    | I <sub>F</sub> =20mA      |
| Δλ <sub>1/2</sub>  | Spectral Line Half-width | Blue   | 25   |      | nm    | I <sub>F</sub> =20mA      |
| C                  | Capacitance              | Blue   | 100  |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2] | Forward Voltage          | Blue   | 3.3  | 4    | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>     | Reverse Current          | Blue   |      | 50   | uA    | V <sub>R</sub> =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                | Blue           | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 120            | mW    |
| DC Forward Current       | 30             | 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 |       |

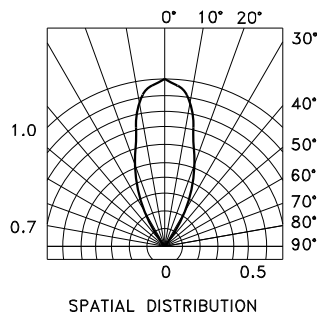
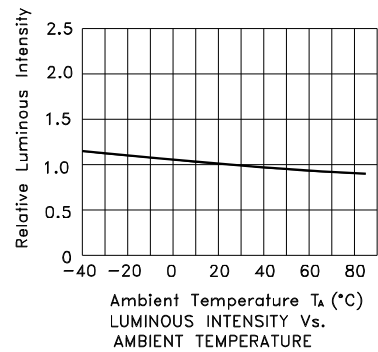
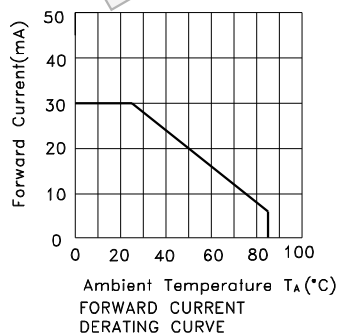
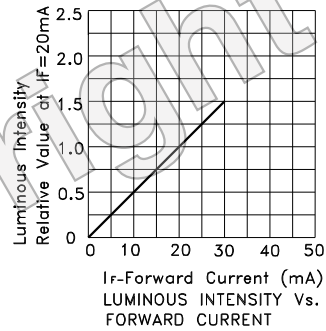
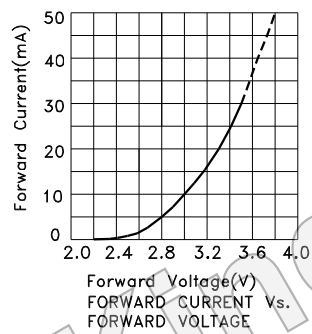
Note:

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



**Blue**

**KPTD-1608QBC-D**



## KPTD-1608QBC-D

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.

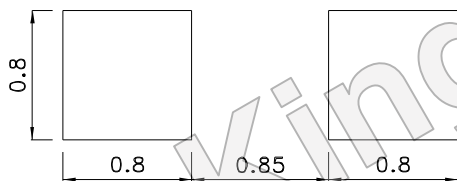
Reflow Soldering Profile For Lead-free SMT Process.



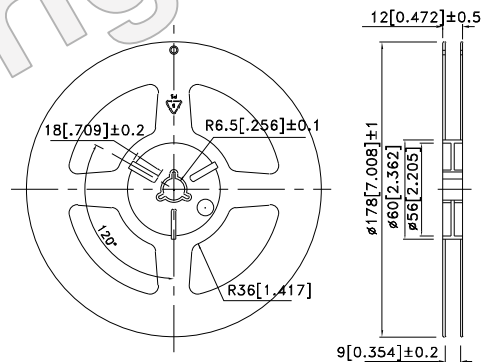
NOTES:

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.

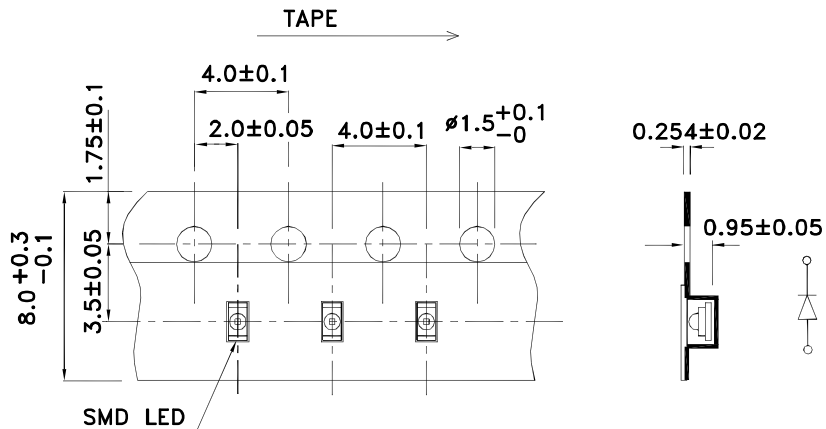
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension



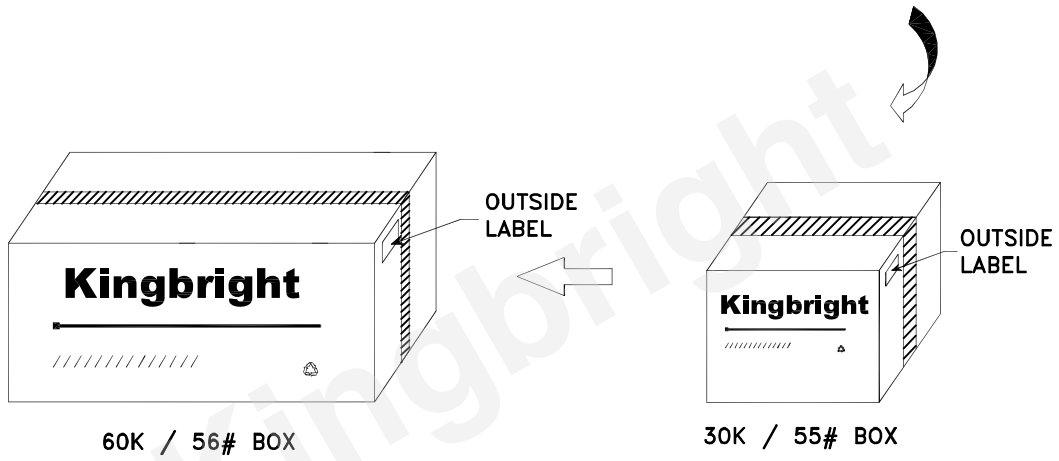
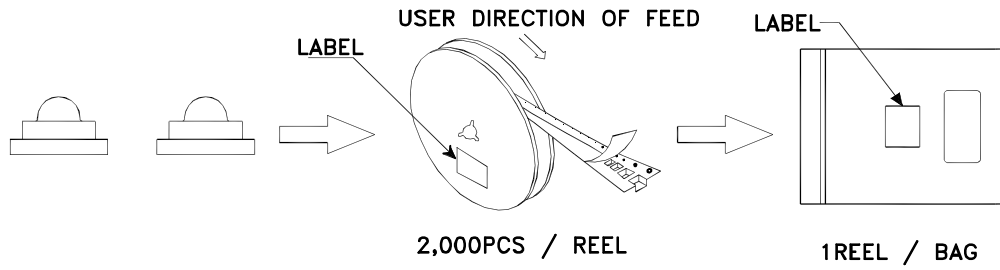
### Tape Dimensions (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

## KPTD-1608QBC-D



|   |      |   |     |            |        |
|---|------|---|-----|------------|--------|
| <b>Kingbright</b>   |      |   |     |            |        |
| P/NO: KPTD-1608xxx  |      |   |     |            |        |
| QTY: 2,000 pcs  | Q.C. | <table border="1"> <tr> <td>Q C</td> </tr> <tr> <td>XX XX XXXX</td> </tr> <tr> <td>PASSED</td> </tr> </table> | Q C | XX XX XXXX | PASSED |
| Q C   |      |   |     |            |        |
| XX XX XXXX  |      |   |     |            |        |
| PASSED  |      |   |     |            |        |
| S/N: XXXX   |      |   |     |            |        |
| CODE: XXX   |      |   |     |            |        |
| LOT NO:   |      |   |     |            |        |
| <br><small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</small> |      |   |     |            |        |
| RoHS Compliant  |      |   |     |            |        |

Detailed application notes are listed on our website.  
[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)