

Part Number: KP-1608P1BT

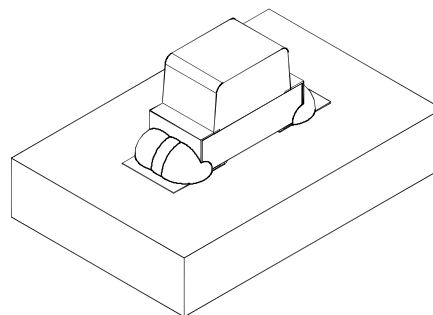
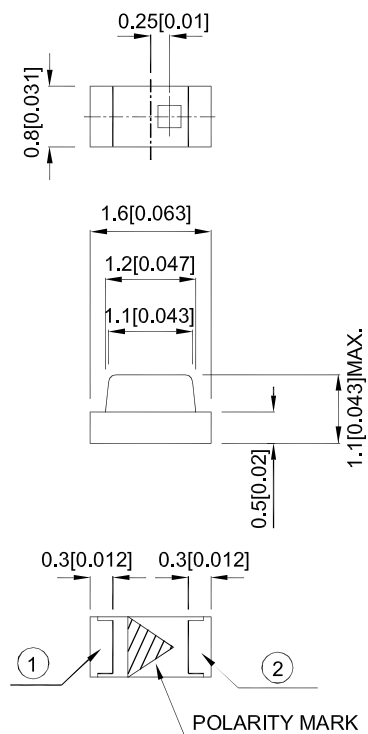
### Features

- 1.6mmX0.8mm SMD LED, 1.1mm thickness.
- Mechanically and spectrally matched to infrared emitting LED lamp.
- Blue Transparent lens.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Phototransistor with daylight filter.
- RoHS compliant.

### Description

Made with silicon phototransistor chips.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1(0.004)$  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.

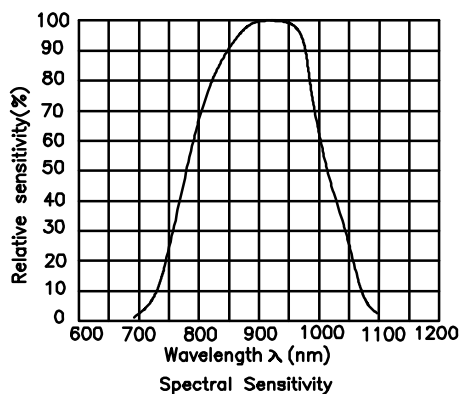


## Electrical / Optical Characteristics at TA=25°C

| Symbol                | Parameter                               | Min. | Typ. | Max. | Units | Test Conditions                                                        |
|-----------------------|-----------------------------------------|------|------|------|-------|------------------------------------------------------------------------|
| V <sub>BR CEO</sub>   | Collector-to-Emitter Breakdown Voltage  | 30   |      |      | V     | I <sub>C</sub> =100uA<br>E <sub>e</sub> =0mW/cm <sup>2</sup>           |
| V <sub>BR ECO</sub>   | Emitter-to-Collector Breakdown Voltage  | 5    |      |      | V     | I <sub>E</sub> =100uA<br>E <sub>e</sub> =0mW/cm <sup>2</sup>           |
| V <sub>CE (SAT)</sub> | Collector-to-Emitter Saturation Voltage |      |      | 0.8  | V     | I <sub>C</sub> =2mA<br>E <sub>e</sub> =20mW/cm <sup>2</sup>            |
| I <sub>CEO</sub>      | Collector Dark Current                  |      |      | 100  | nA    | V <sub>CE</sub> =10V<br>E <sub>e</sub> =0mW/cm <sup>2</sup>            |
| T <sub>R</sub>        | Rise Time (10% to 90% )                 |      | 15   |      | us    | V <sub>CE</sub> = 5V<br>I <sub>C</sub> =1mA<br>R <sub>L</sub> =1000Ω   |
| T <sub>F</sub>        | Fall Time (90% to 10% )                 |      | 15   |      | us    |                                                                        |
| I <sub>(ON)</sub>     | On State Collector Current              | 0.1  | 0.25 |      | mA    | V <sub>CE</sub> = 5V<br>E <sub>e</sub> =1mW/cm <sup>2</sup><br>λ=940nm |

## Absolute Maximum Ratings at TA=25°C

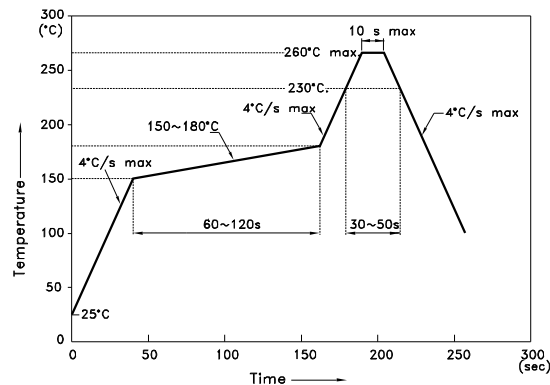
| Parameter                                                 | Max.Ratings    |
|-----------------------------------------------------------|----------------|
| Collector-to-Emitter Voltage                              | 30V            |
| Emitter-to-Collector Voltage                              | 5V             |
| Power Dissipation at (or below) 25°C Free Air Temperature | 100mW          |
| Operating Temperature                                     | -40°C To +85°C |
| Storage Temperature                                       | -40°C To +85°C |



## KP-1608P1BT

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.

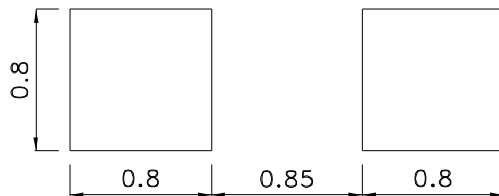
Reflow Soldering Profile For Lead-free SMT Process.



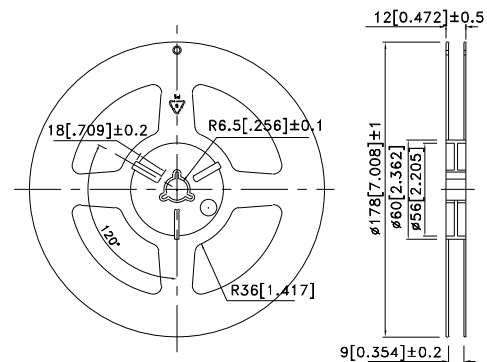
### NOTES:

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.

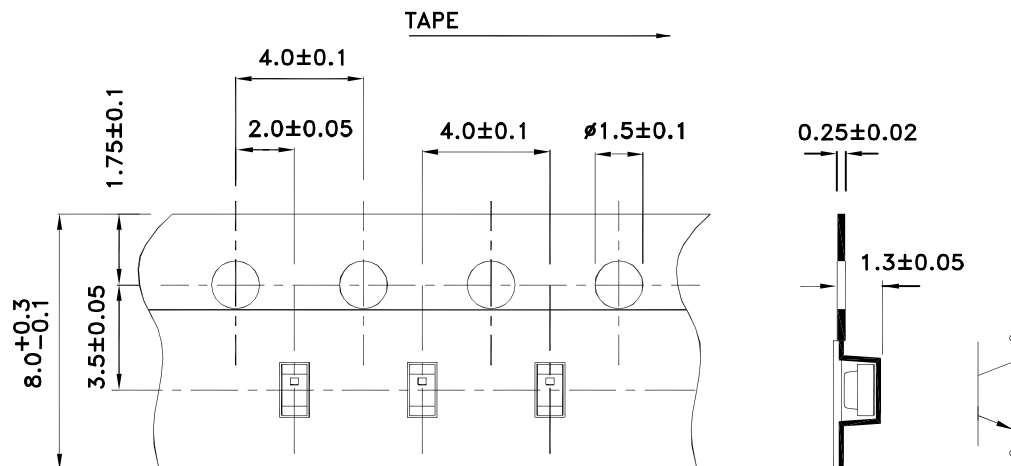
## Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



## Reel Dimension

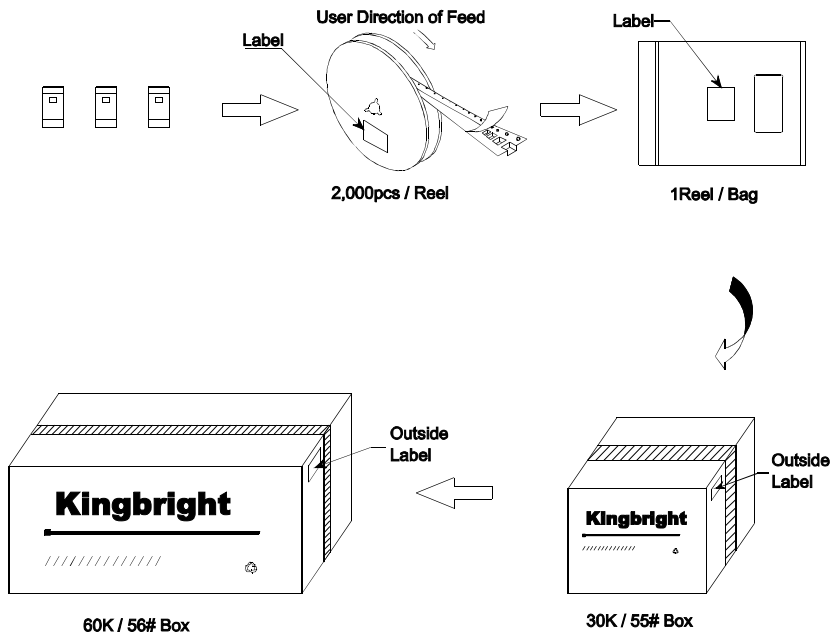


## Tape Specifications (Units : mm)



## PACKING & LABEL SPECIFICATIONS

KP-1608P1BT



|                                                                                      |                             |
|--------------------------------------------------------------------------------------|-----------------------------|
| <b>Kingbright</b>                                                                    |                             |
| P/NO: KP-1608XXX                                                                     |                             |
| QTY: 2,000 pcs                                                                       | Q.C.                        |
| S/N: XXXX                                                                            | Q C<br>XX XX XXXX<br>PASSED |
| CODE: XXX                                                                            |                             |
| LOT NO:                                                                              |                             |
|  |                             |
| RoHS Compliant                                                                       |                             |

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