

# Kingbright

## 3.0mmx1.0mm RIGHT ANGLE PHOTOTRANSISTOR

### PRELIMINARY SPEC

Part Number: APA3010P3BT

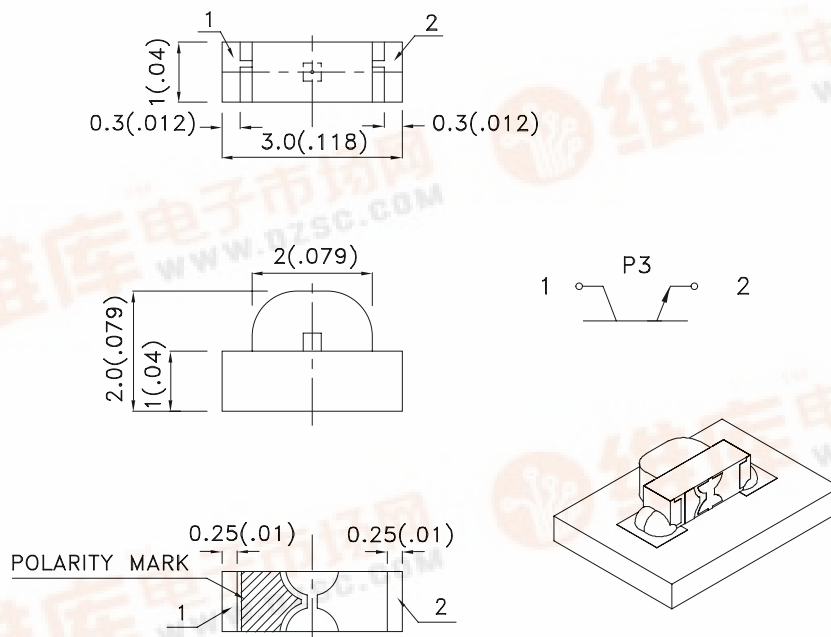
### Features

- 3.0mmx1.0mm RIGHT ANGLE SMT LED, 2.0mm THICKNESS.
- MECHANICALLY AND SPECTRALLY MATCHED TO THE INFRARED EMITTING LED LAMP.
- BLUE TRANSPARENT LENS.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

### Description

Made with NPN silicon phototransistor chips.

### Package Dimensions



### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.15(0.006")$  unless otherwise noted.
3. Specifications are subject to change without 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

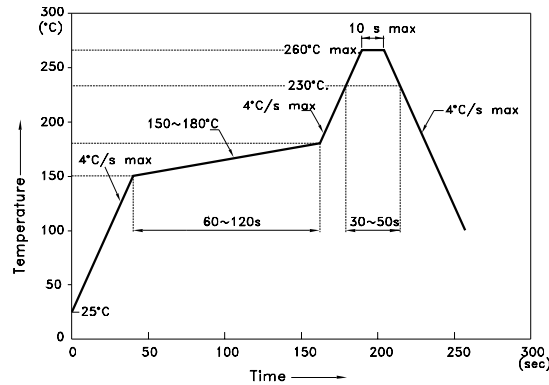
| Symbol                | Parameter                               | Min. | Typ. | Max. | Units | Test Conditions                                                        |
|-----------------------|-----------------------------------------|------|------|------|-------|------------------------------------------------------------------------|
| 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              | 0.2  | 0.8  |      | mA    | V <sub>CE</sub> = 5V<br>E <sub>e</sub> =1mW/cm <sup>2</sup><br>λ=940nm |
| 2θ1/2                 | Viewing Angle                           |      | 110  |      | deg   |                                                                        |

## 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 |

## APA3010P3BT

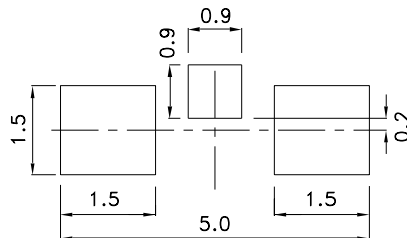
Reflow Soldering Profile For Lead-free SMT Process.



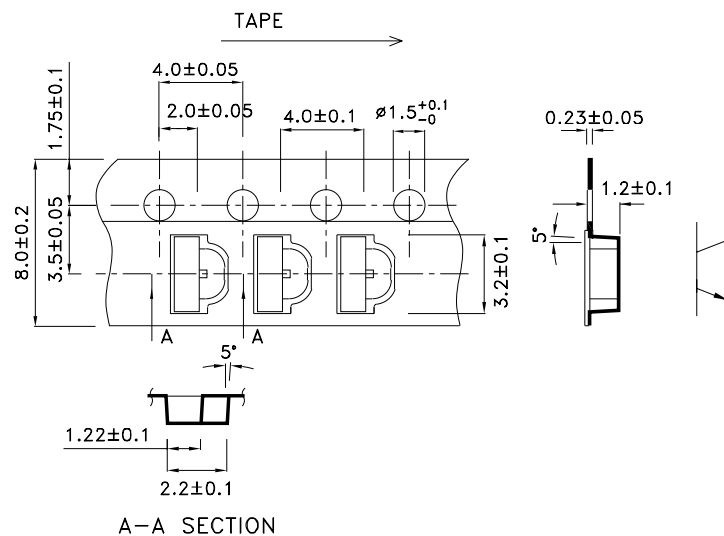
NOTES:

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: $\pm 0.1$ )

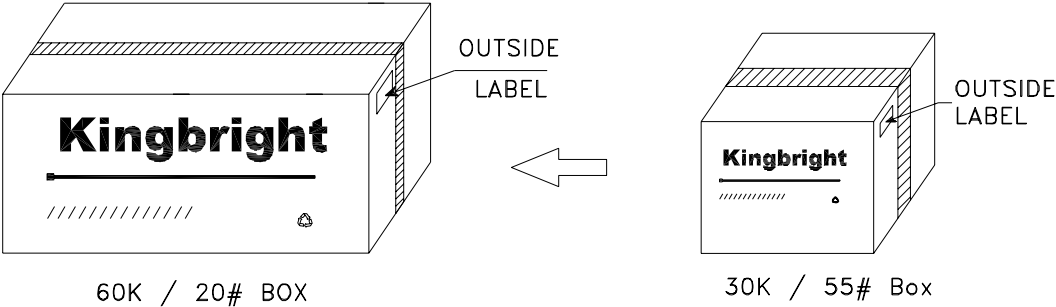
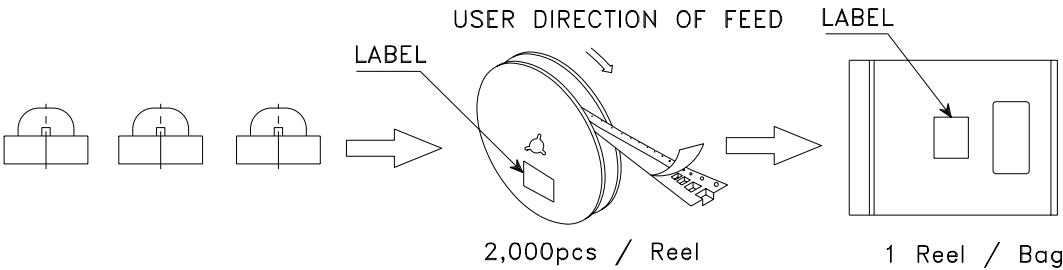


## Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

APA3010P3BT



|                                                                                                              |                                               |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Kingbright</b>                                                                                            |                                               |
| P/NO: APA3010xxx                                                                                             |                                               |
| QTY: 2,000 pcs                                                                                               | Q.C. <div>Q C<br/>xx xx xxxx<br/>PASSED</div> |
| S/N: XXXX                                                                                                    |                                               |
| CODE: XXX                                                                                                    |                                               |
| LOT NO:                                                                                                      |                                               |
| <br>XXXXXXXXXXXXXXXXXXXX |                                               |
| RoHS Compliant                                                                                               |                                               |