

**QT-Brightek Chip LED Series**

**SMD 1206 Side View LED**

**Part No.: QBLP615-IW-XX**

**XX=CW**

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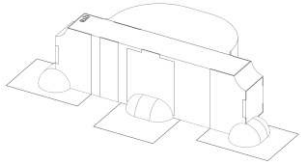
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## Introduction

### Feature:

- Yellow diffused lens
- Package in tape and reel
- Ultra bright 1206 side view LED package
- InGaN technology
- Viewing angle 150° typ.



### Description:

These ultra bright 1206 side view LEDs have a height profile of 1.00mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

### Application:

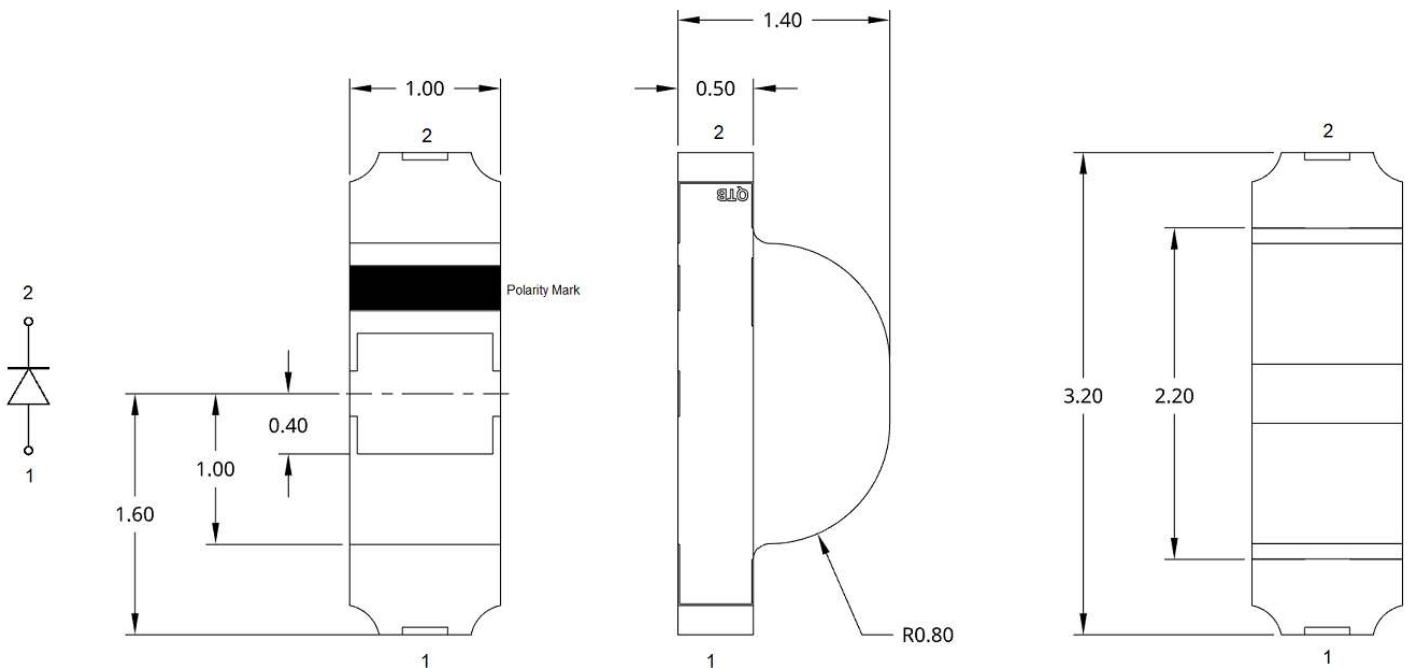
- Status indication
- Back lighting application

### Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



### Dimension:



Units: mm / tolerance = +/-0.1mm

### Electrical / Optical Characteristic (Ta=25 °C)

| Product       | Color      | I <sub>F</sub> (mA) | V <sub>F</sub> (V) |      | CCT Coordinate |                  |      | I <sub>V</sub> (mcd) |      |
|---------------|------------|---------------------|--------------------|------|----------------|------------------|------|----------------------|------|
|               |            |                     | Typ.               | Max. | Min.           | Typ.             | Max. | Min.                 | Typ. |
| QBLP615-IW-CW | Cool White | 20                  | 3.1                | 3.7  | -              | X=0.28<br>Y=0.29 | -    | 200                  | 280  |

### Absolute Maximum Rating

| Material | P <sub>d</sub> (mW) | I <sub>F</sub> (mA) | I <sub>FP</sub> (mA)* | V <sub>R</sub> (V) | T <sub>OP</sub> (°C) | T <sub>ST</sub> (°C) | T <sub>SOL</sub> (°C)** |
|----------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|-------------------------|
| InGaN    | 111                 | 30                  | 125                   | 5                  | -40 ~ +80            | -40 ~ +85            | 260                     |

\*Duty 1/8 @ 1KHz

\*\*IR Reflow for no more than 10 sec @ 260 °C

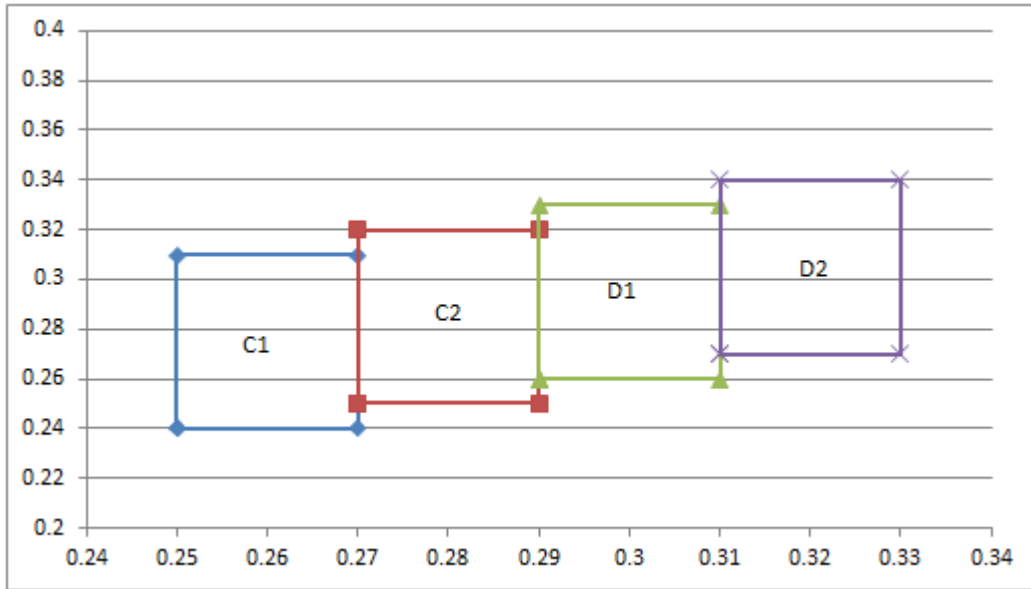
### Forward Voltage V<sub>F</sub> @ I<sub>F</sub>=20mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| f   | 2.8  | 3.1  | V    |
| g   | 3.1  | 3.4  |      |
| h   | 3.4  | 3.7  |      |

### Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=20mA

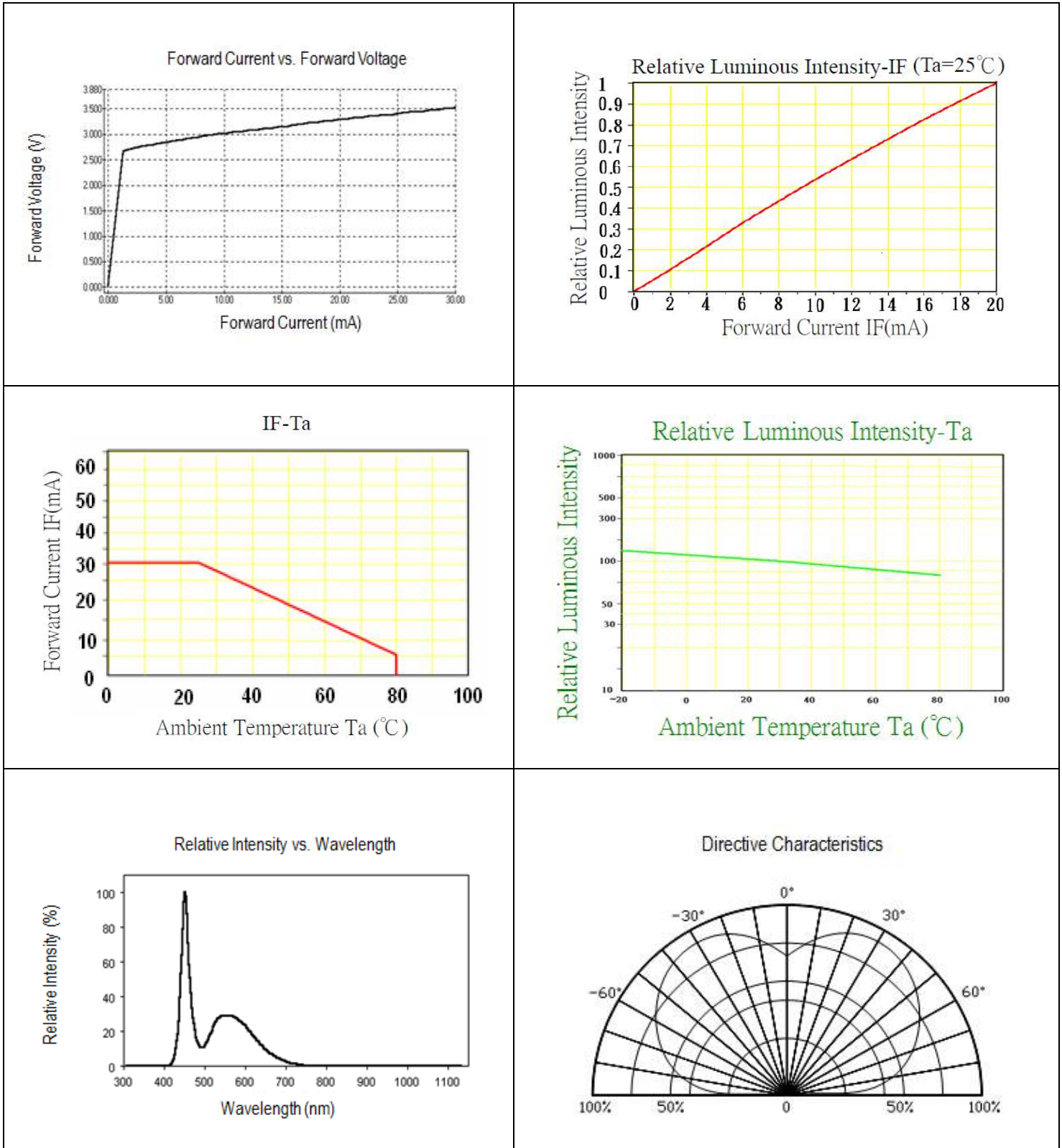
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| 2   | 200  | 250  | mcd  |
| 3   | 250  | 320  |      |
| 4   | 320  | 400  |      |
| 5   | 400  | 500  |      |

### CIE Chromaticity Diagram



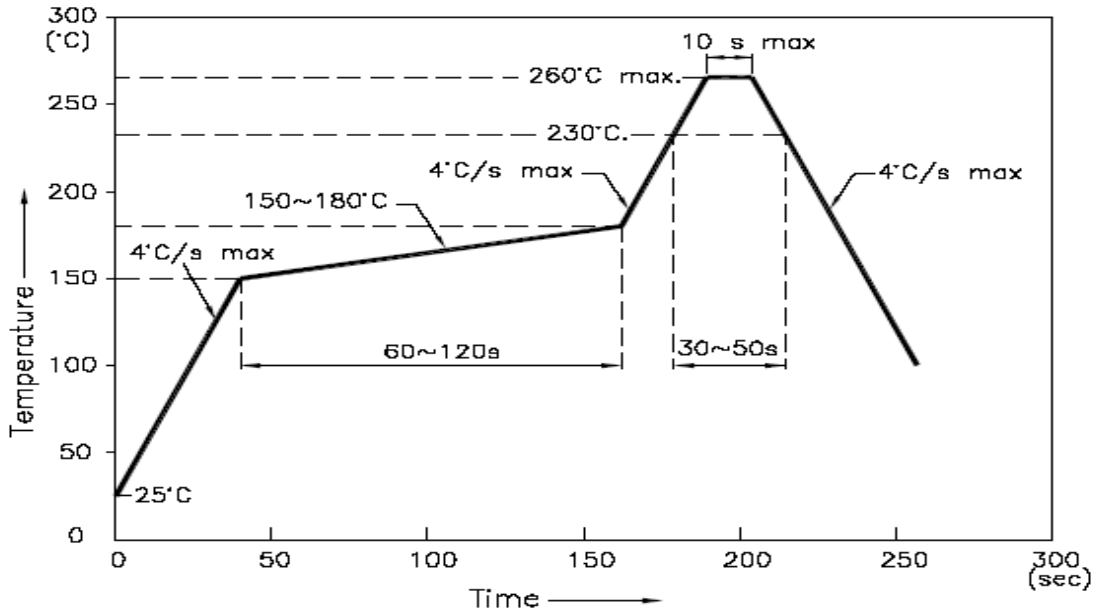
| Rank | Chromaticity coordinates |       |       |       |       |
|------|--------------------------|-------|-------|-------|-------|
| C1   | 0.25                     | 0.250 | 0.270 | 0.270 | 0.25  |
|      | 0.240                    | 0.310 | 0.310 | 0.240 | 0.240 |
| C2   | 0.270                    | 0.270 | 0.290 | 0.290 | 0.270 |
|      | 0.250                    | 0.320 | 0.320 | 0.250 | 0.250 |
| D1   | 0.290                    | 0.290 | 0.310 | 0.310 | 0.290 |
|      | 0.260                    | 0.330 | 0.330 | 0.260 | 0.260 |
| D2   | 0.310                    | 0.310 | 0.330 | 0.330 | 0.310 |
|      | 0.270                    | 0.340 | 0.340 | 0.27  | 0.270 |

**Characteristic Curves**

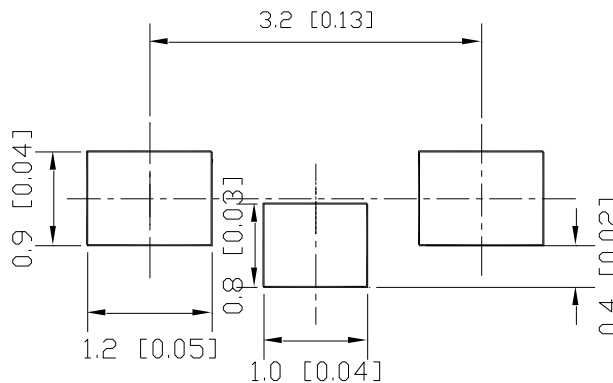


## Solder Profile & Footprint

- Recommended tin solder specifications: melting temperature in the range of 178~192 °C
- The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):

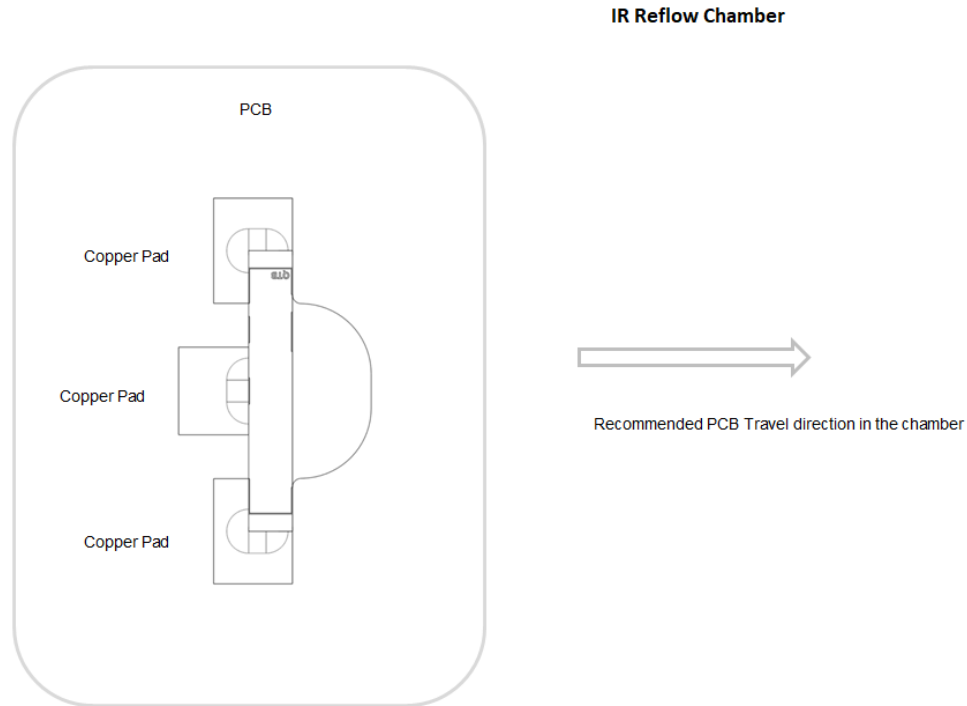


### Recommended Pad Layout

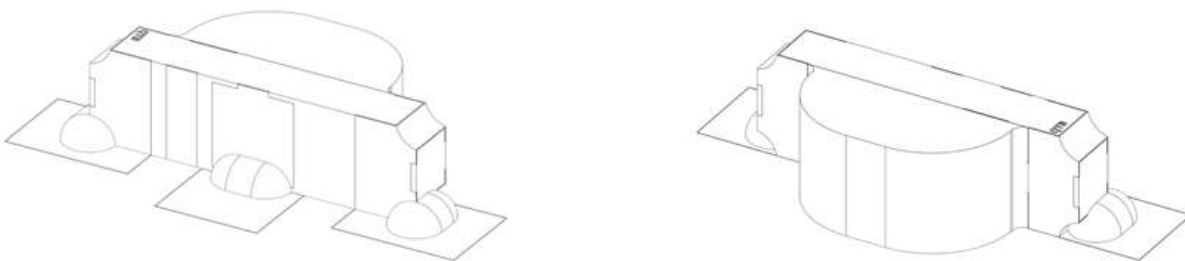


Units: mm

- The recommended IR reflow direction for a right angle (side view) SMD led is illustrated below to insure the solder on each lead melts simultaneously during the SMT reflow soldering process.



## Mounting the LED on PCB

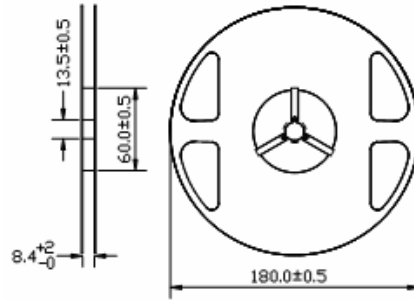


Note: The amount of solder paste applied as shown in the picture is just for illustration purpose only. When mounting and soldering the LEDs, avoid excess solder paste from overflowing onto or near the epoxy lens.



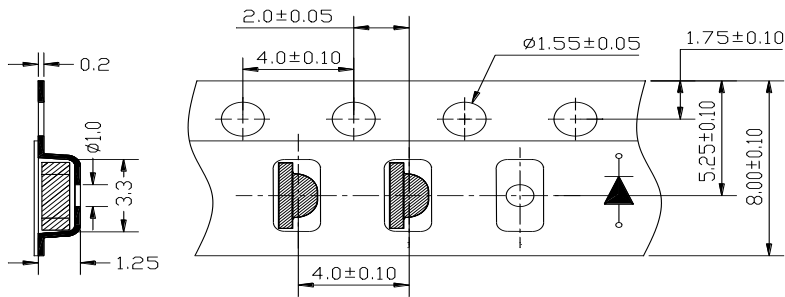
## Packing

Reel Dimension:



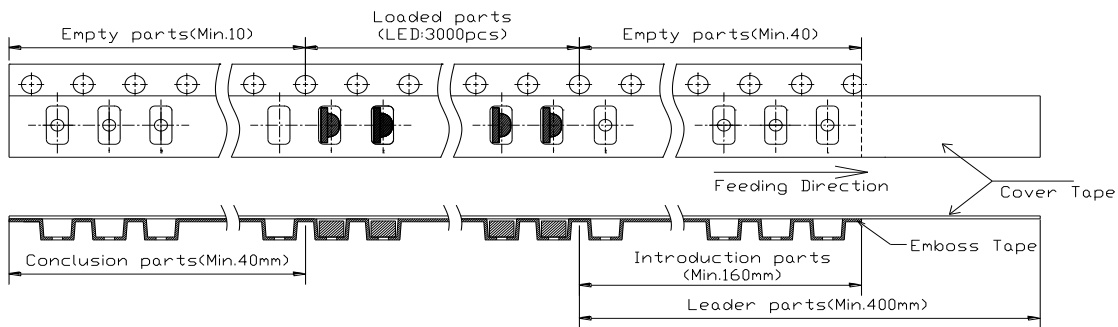
Unit: mm

Tape Dimension:

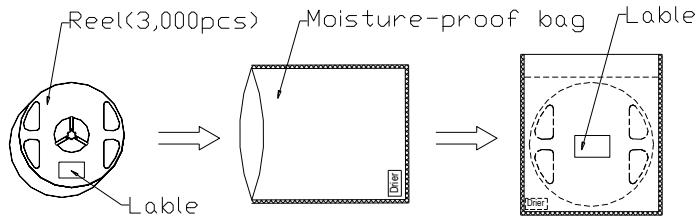


Unit in mm

Arrangement of Tape:



Packaging Specifications:



## Labeling



Part No: \_\_\_\_\_  
Customer P/N: \_\_\_\_\_  
Item: \_\_\_\_\_  
Q'ty: \_\_\_\_\_  
Vf: \_\_\_\_\_  
Iv: \_\_\_\_\_  
WI: \_\_\_\_\_  
Date: \_\_\_\_\_

**Made in China**

## Ordering Information

| Part #        | Orderable Part # | Spec Range   | Quantity per reel |
|---------------|------------------|--|-------------------|
| QBLP615-IW-CW | QBLP615-IW-CW    | Iv=280mcd typ. @ I <sub>F</sub> =20mA / CCT<br>Coordinate: (X=0.28, Y=0.29) typ. | 3,000 units       |

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## Revision History

| Description:   | Revision # | Revision Date |
|--|------------|---------------|
| New Release of QBLP615-IW-XX   | V1.0       | 03/27/2014    |
| Add recommended SMT and mounting suggestion / Optimize drawing dimensions in the datasheet | V1.1       | 09/29/2022    |
|  |            |               |
|  |            |               |
|  |            |               |
|  |            |               |



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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.