

# QT-Brightek Chip LED Series

## SMD 0805 Green LED

Part No.: QBLP631-IG5

5: 5mA

|                      |                      |             |
|----------------------|----------------------|-------------|
| Product: QBLP631-IG5 | Date: March 27, 2024 | Page 1 of 9 |
|                      | Version# 1.0         |             |

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## Introduction

### Feature:

- Water clear lens
- Package in tap and reel
- 0805 LED package
- InGaN technology
- Viewing angle: 140 deg typ.

### Description:

These ultra bright 0805 LEDs have a height profile of 0.8mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

### Application:

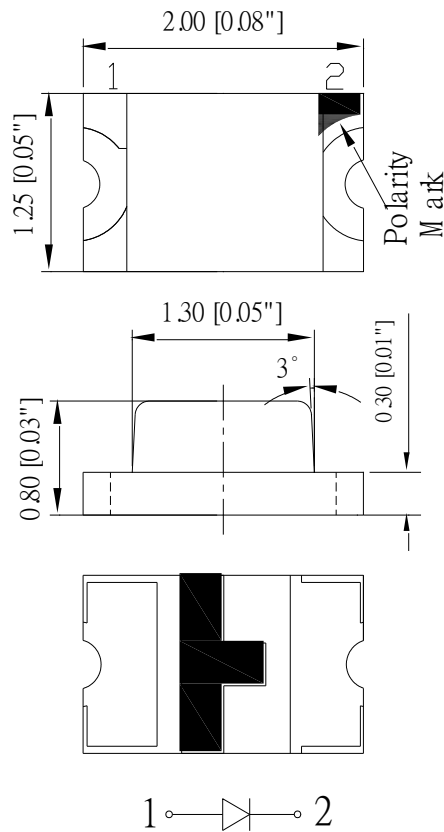
- Status indication
- Back lighting application

### Certification & Compliance:

- 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) |      | λ <sub>D</sub> (nm) |      |      | λ <sub>P</sub> (nm) | I <sub>V</sub> (mcd) |       |
|-------------|-------|---------------------|--------------------|------|---------------------|------|------|---------------------|----------------------|-------|
|             |       |                     | Typ.               | Max. | Min.                | Typ. | Max. | Typ.                | Min.                 | Typ.  |
| QBLP631-IG5 | Green | 5                   | 2.7                | 3.4  | 525                 | 528  | 535  | 523                 | 128                  | 260.5 |

### 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    | 102                 | 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>=5mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| e   | 2.5  | 2.8  | V    |
| f   | 2.8  | 3.1  |      |
| g   | 3.1  | 3.4  |      |

### Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=5mA

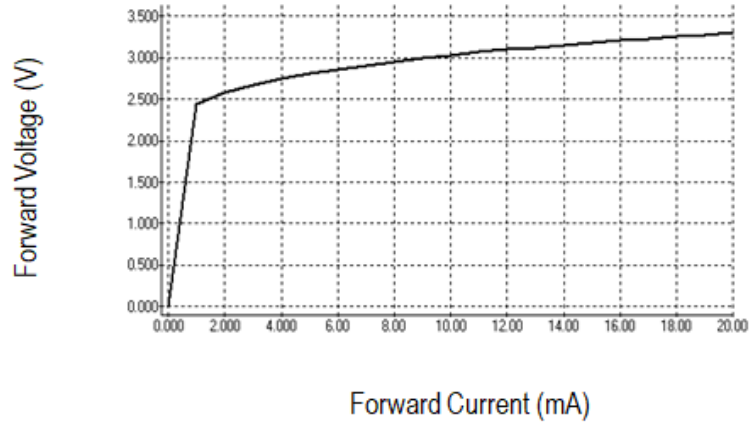
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| 2K  | 128  | 165  | mcd  |
| 2L  | 165  | 212  |      |
| 2M  | 212  | 270  |      |
| 2N  | 270  | 348  |      |
| 2O  | 348  | 445  |      |

### Dominant Wavelength λ<sub>D</sub> @ I<sub>F</sub>=5mA

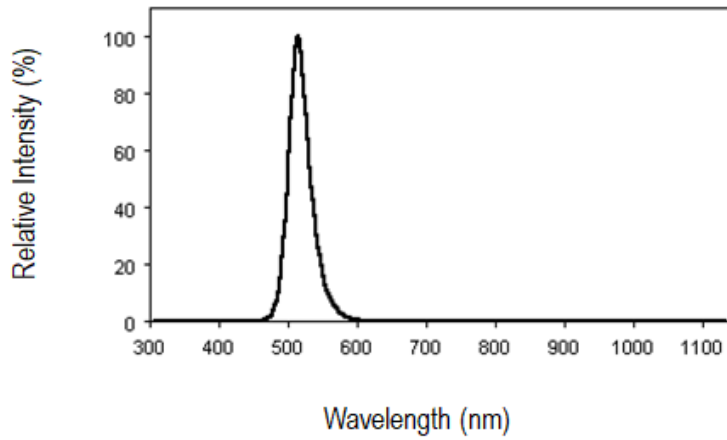
| Bin | Min.  | Max.  | Unit |
|-----|-------|-------|------|
| W   | 525   | 527.5 | nm   |
| X   | 527.5 | 530   |      |
| Y   | 530   | 532.5 |      |
| Z   | 532.5 | 535   |      |

**Characteristic Curves**

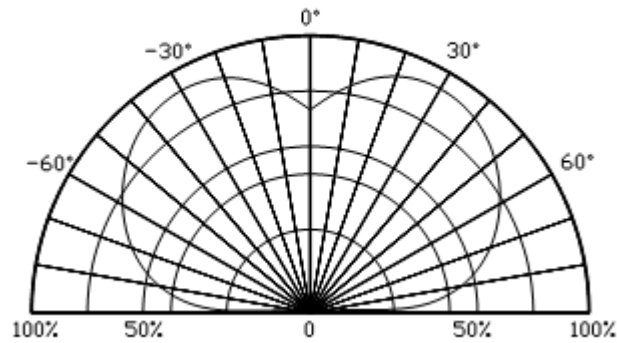
Forward Current vs. Forward Voltage



Relative Intensity vs. Wavelength

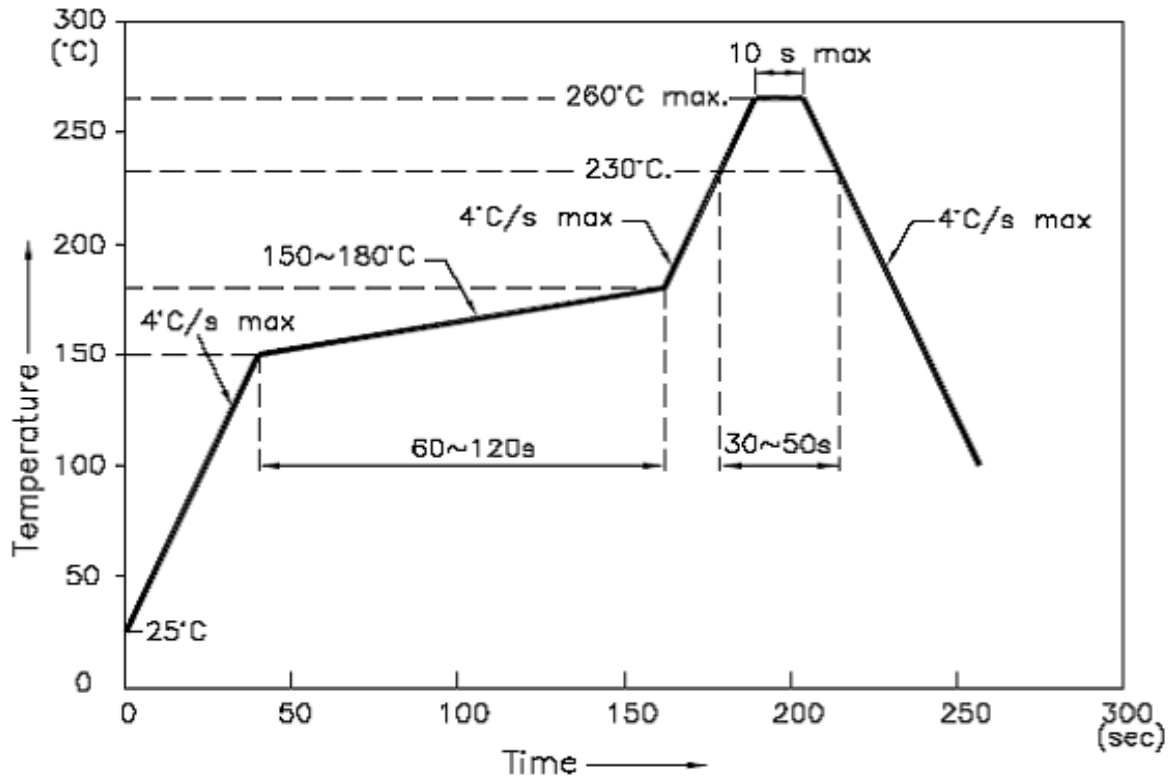


Directive Characteristics

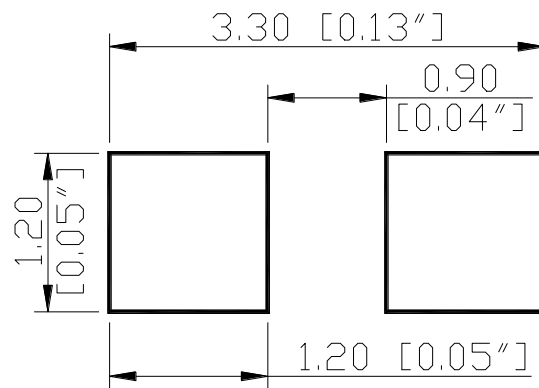


**Solder Profile & Footprint**

-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



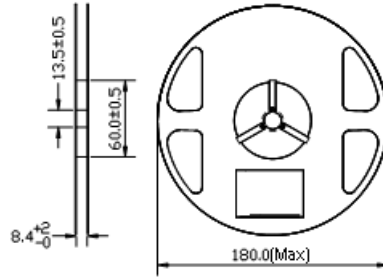
**Recommended Pad Layout**



Units: mm

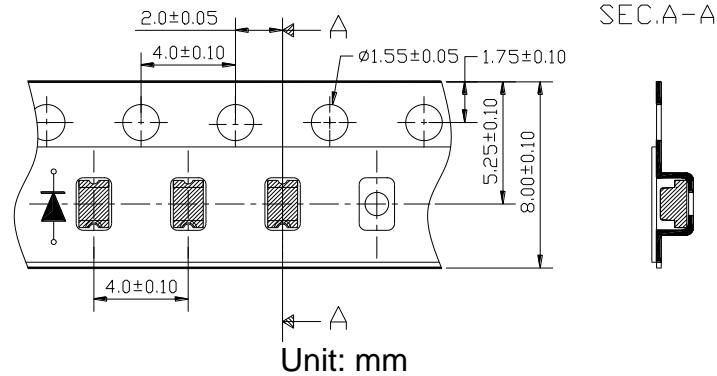
## Packing

### Reel Dimension:



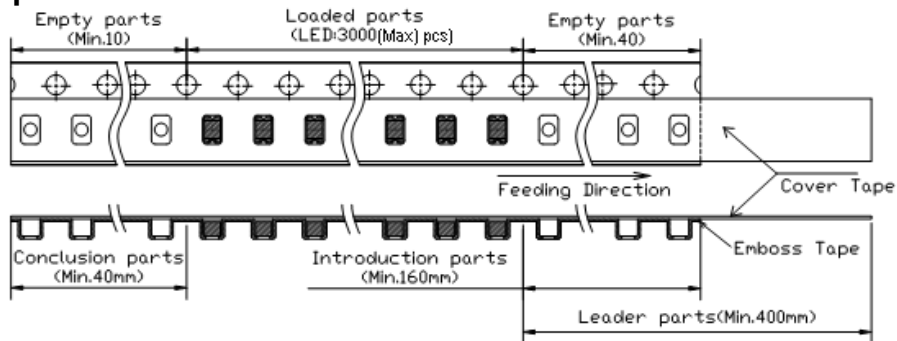
Unit: mm

### Tape Dimension:

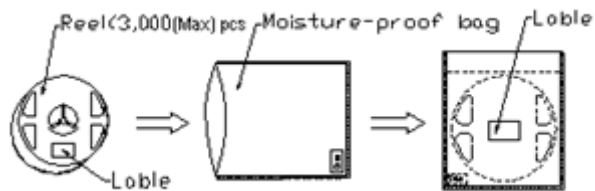


Unit: mm

### Arrangement of Tape:



### Packaging Specification:



## Labeling



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

**Made in China**

## Ordering Information

| Orderable Part # | Spec Range   | Quantity per reel |
|------------------|--|-------------------|
| QBLP631-IG5      | Iv=260.5mcd typ. / $\lambda_D = 525\text{nm to } 535\text{nm @ } 5\text{mA}$ | 3000 units        |



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## Revision History

| Description:               | Revision # | Revision Date |
|----------------------------|------------|---------------|
| New Release of QBLP631-IG5 | V1.0       | 03/27/2024    |
|                            |            |               |
|                            |            |               |
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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.