

QT-Brightek Chip LED Series

SMD 0805 Blue LED

Part No.: QBLP631-IB-2897

2897: High Brightness Version

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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:

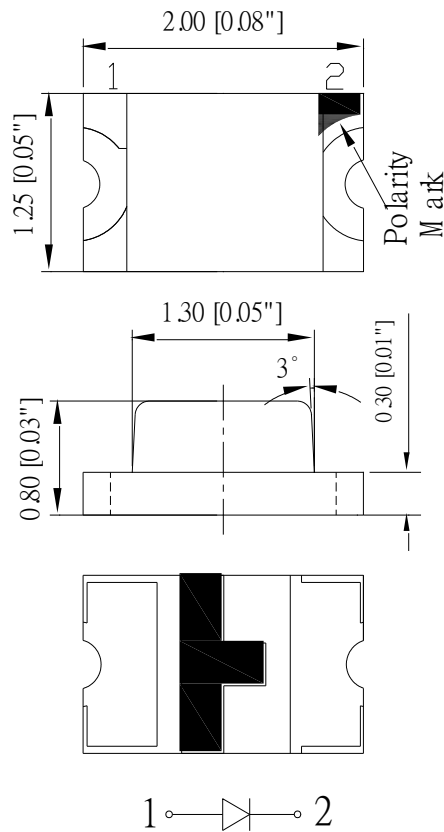
- Status indication
- Back lighting application

Certification & Compliance:

- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

| Product | Color | I _F (mA) | V _F (V) | | λ _D (nm) | | | λ _P (nm) | I _V (mcd) | |
|-----------------|-------|---------------------|--------------------|------|---------------------|------|------|---------------------|----------------------|------|
| | | | Typ. | Max. | Min. | Typ. | Max. | Typ. | Min. | Typ. |
| QBLP631-IB-2897 | Blue | 20 | 3.1 | 3.7 | 465 | 470 | 475 | 465 | 100 | 180 |

Absolute Maximum Rating

| Material | P _d (mW) | I _F (mA) | I _{FP} (mA)* | V _R (V) | T _{OP} (°C) | T _{ST} (°C) | T _{SOL} (°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_F @ I_F=20mA

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

Luminous Intensity I_V @ I_F=20mA

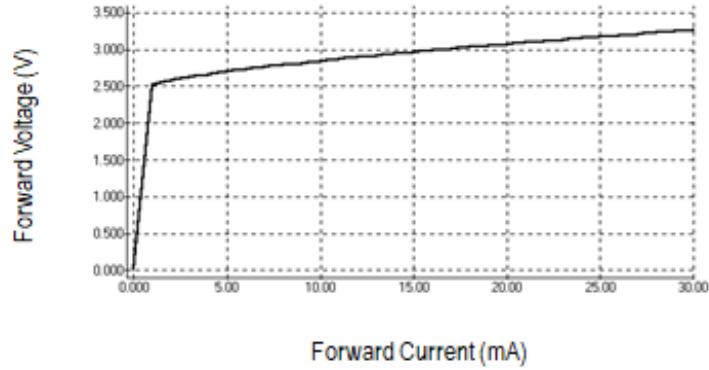
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| J | 100 | 125 | mcd |
| K | 125 | 160 | |
| L | 160 | 200 | |
| M | 200 | 250 | |
| N | 250 | 320 | |

Dominant Wavelength λ_D @ I_F=20mA

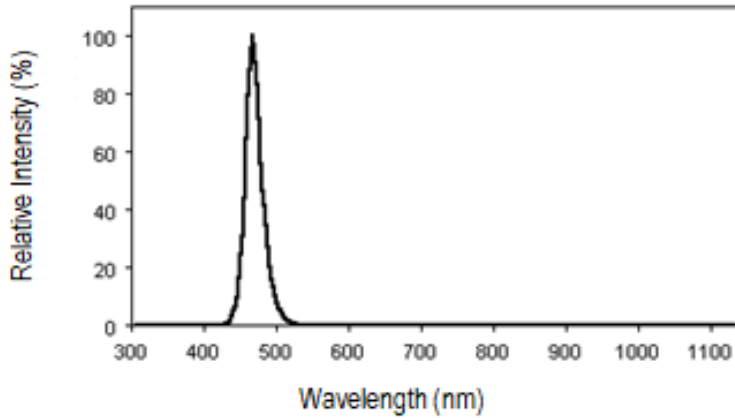
| Bin | Min. | Max. | Unit |
|-----|-------|-------|------|
| G | 465 | 467.5 | nm |
| H | 467.5 | 470 | |
| I | 470 | 472.5 | |
| J | 472.5 | 475 | |

Characteristic Curves

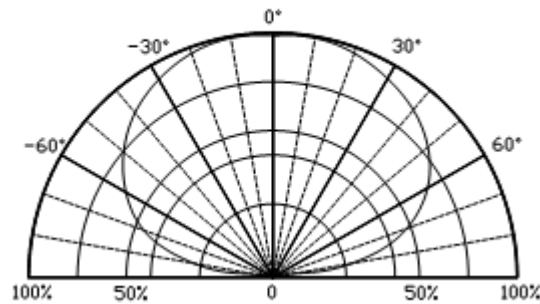
Forward Current vs. Forward Voltage



Relative Intensity vs. Wavelength

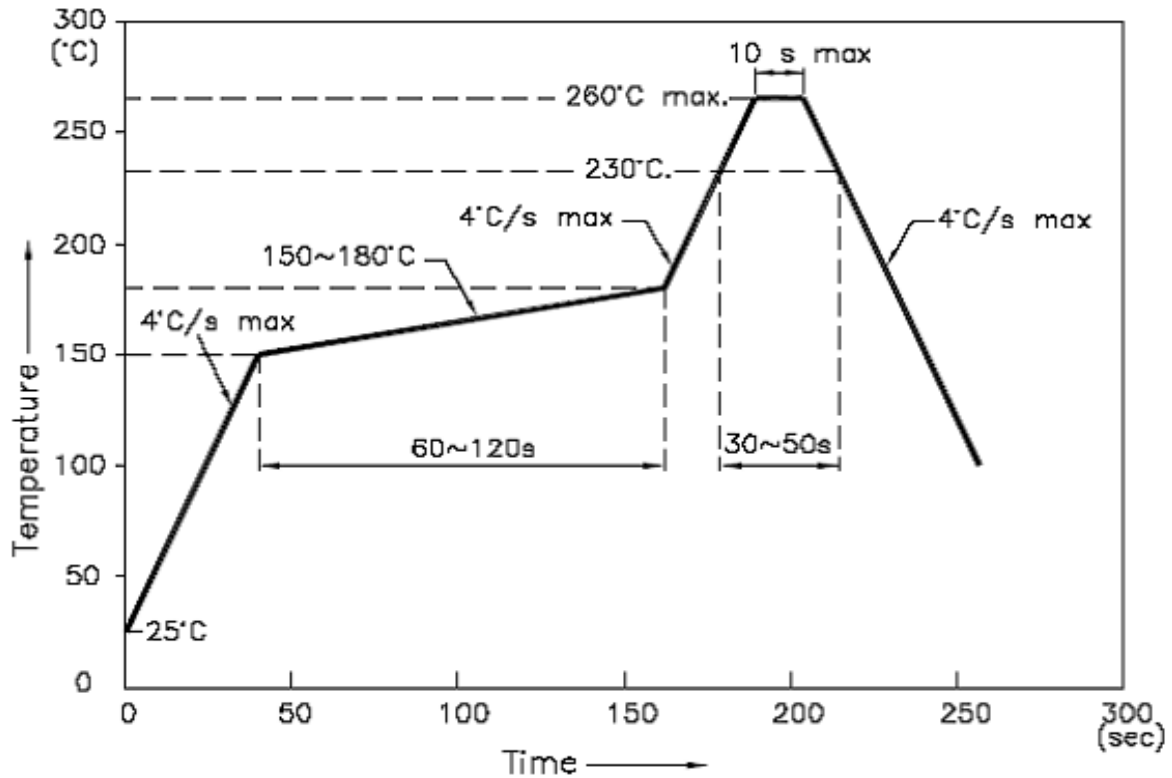


Directive Characteristics

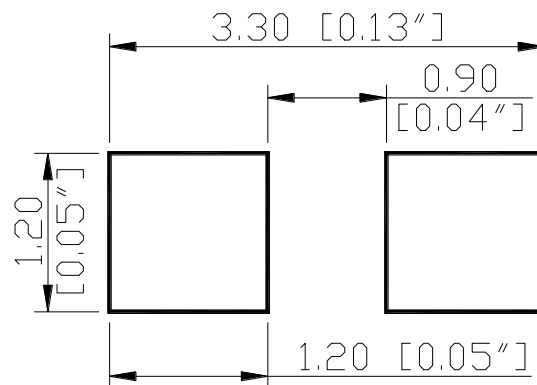


Solder Profile & Footprint

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



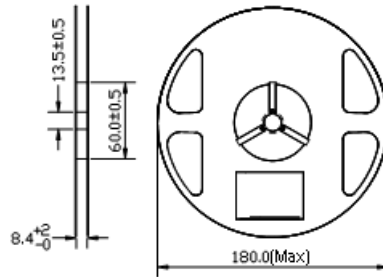
Recommended Pad Layout



Units: mm

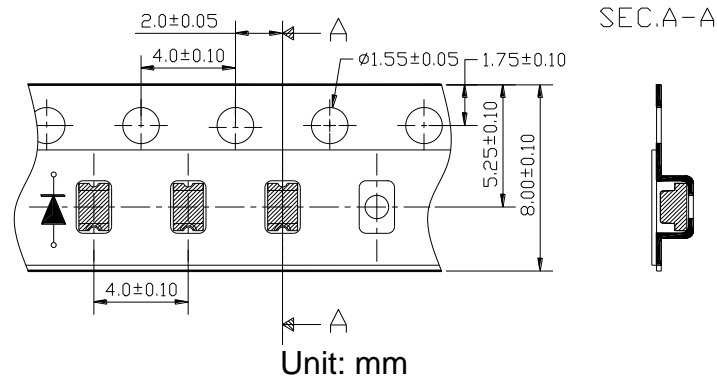
Packing

Reel Dimension:



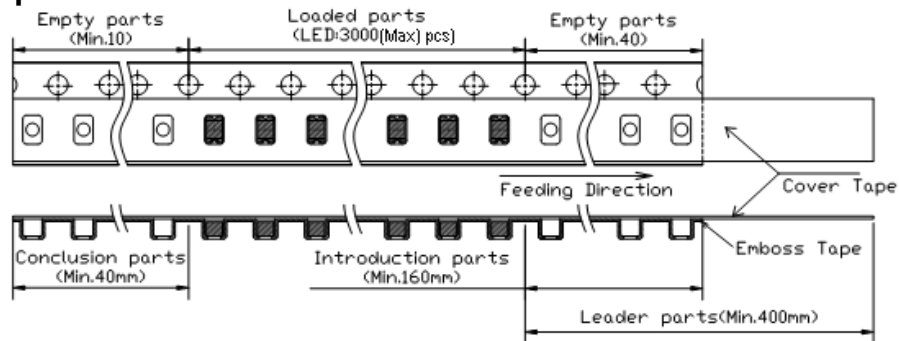
Unit: mm

Tape Dimension:

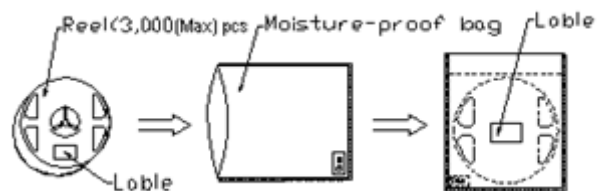


Unit: mm

Arrangement of Tape:



Packaging Specification:



Labeling



Part No: _____
Customer P/N: _____
Item: _____
Q'ty: _____
Vf: _____
Iv: _____
Wl: _____
Date: _____

Made in China

Ordering Information

| Orderable Part # | Spec Range | Quantity per reel |
|------------------|---|-------------------|
| QBLP631-IB-2897 | Iv=180mcd typ. / $\lambda_D = 465\text{nm to } 475\text{nm @ } 20\text{mA}$ | 3000 units |

Revision History

| Description: | Revision # | Revision Date |
|--------------------------------|------------|---------------|
| New Release of QBLP631-IB-2897 | V1.0 | 03/27/2024 |
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