

# **QT-Brightek Chip LED Series**

## **SMD 0402 Orange LED**

**Part No.: QBLP595-O-2897**

**2897: High Brightness Version**

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## Introduction

### Feature:

- Water clear lens
- Color: orange
- Package in tape and reel
- Compact 0402 package
- AlInGaP technology
- Viewing angle: 140° typ.
- Height profile: 0.5mm

### Application:

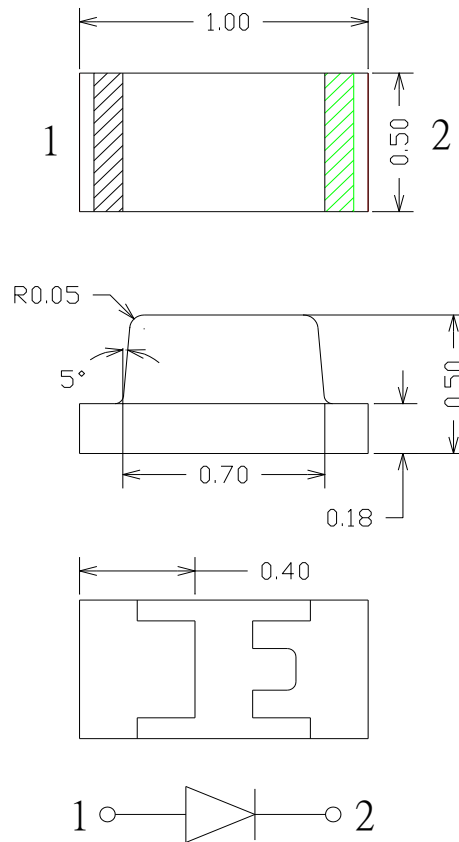
- Status indication
- Back lighting application

### 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. |
| QBLP595-O-2897 | Orange | 20                  | 2.0                | 2.5  | 600                 | 605  | 610  | 610                 | 200                  | 390  |

## Absolute Maximum Rating

| Chip 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)** |
|---------------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|-------------------------|
| AlInGaP       | 75                  | 30                  | 100                   | 5                  | -40 ~ +80            | -40 ~ +85            | 260                     |

\*Duty 1/10 @ 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 |
|-----|------|------|------|
| □   | 1.7  | 2.5  | V    |

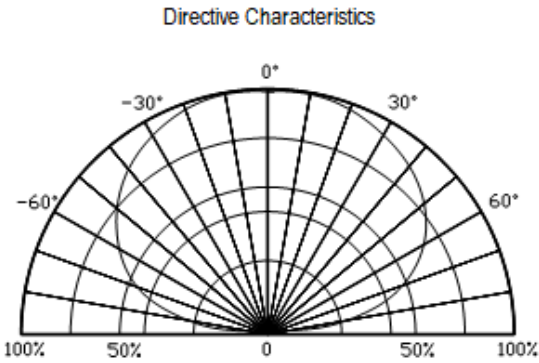
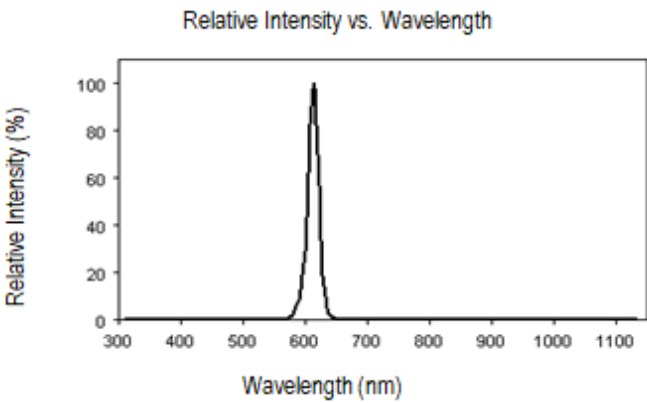
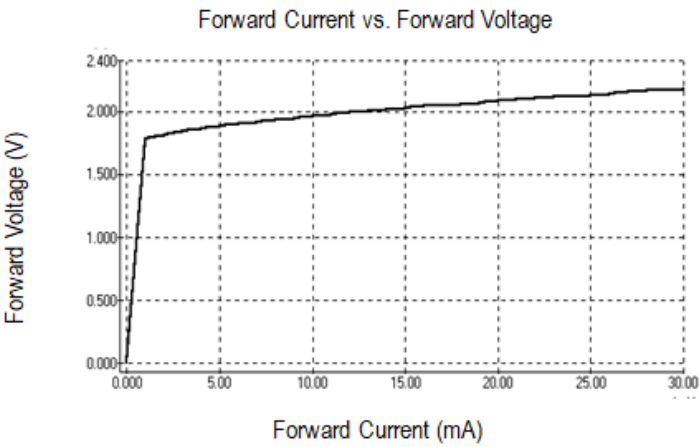
## Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=20mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| M   | 200  | 250  | mcd  |
| N   | 250  | 320  |      |
| O   | 320  | 400  |      |
| P   | 400  | 500  |      |
| Q   | 500  | 630  |      |

## Dominant Wavelength λ<sub>D</sub> @ I<sub>F</sub>=20mA

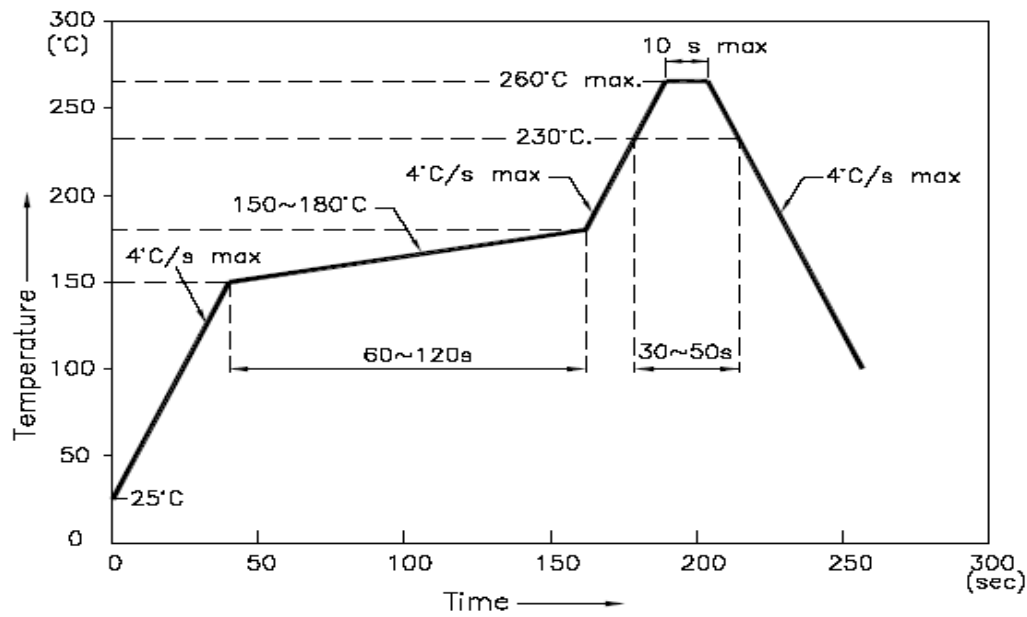
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| p   | 600  | 605  | nm   |
| q   | 605  | 610  |      |

Characteristic Curves

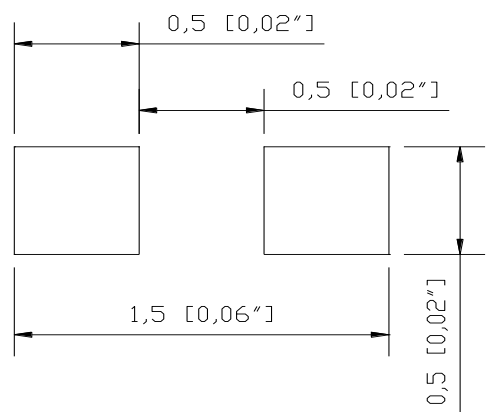


# Solder Profile & Footprint

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



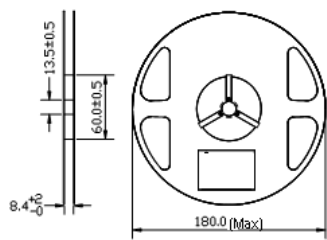
## Recommended Pad Layout



Units: mm

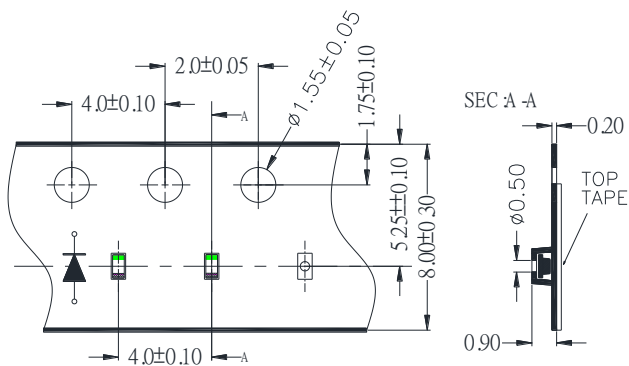
## Packing

### Reel Dimension:



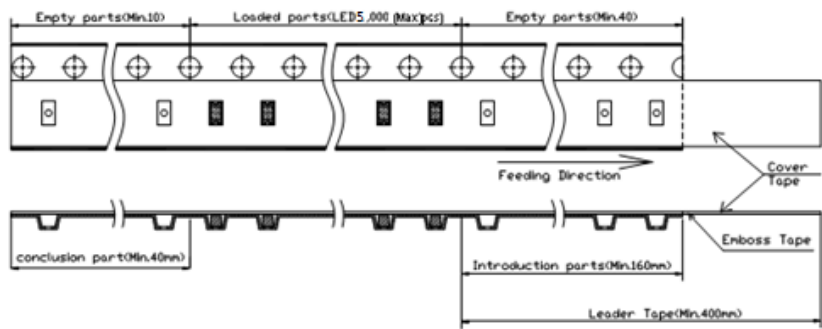
Unit: mm

### Tape Dimension:

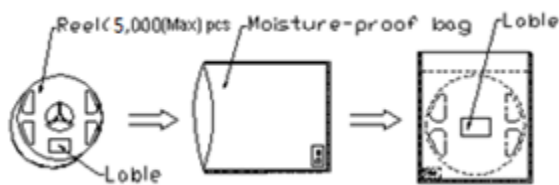


Unit: mm

### Arrangement of Tape:



### Packaging Specifications:



Labeling



QT-Brightek





Part No:

Customer P/N:

Item:

Q'ty:

Vf:

Iv:

WI:

Date:

Made in China

Ordering Information

|                  |                                               |                   |
|------------------|-----------------------------------------------|-------------------|
| Orderable Part # | Spec Range                                    | Quantity per reel |
| QBLP595-O-2897   | Iv=390mcd typ. @ If=20mA / Color=600 to 610nm | 5,000 units       |





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## Revision History

| Description:                  | Revision # | Revision Date |
|-------------------------------|------------|---------------|
| New Release of QBLP595-O-2897 | V1.0       | 04/11/2025    |
|                               |            |               |
|                               |            |               |
|                               |            |               |
|                               |            |               |

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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.