

**QT-Brightek Chip LED Series**

**1206 Chip LED with Inner Lens**

**Part No.: QBLP651-S1**

|                     |                          |             |
|---------------------|--------------------------|-------------|
| Product: QBLP651-S1 | Date: September 18, 2014 | Page 1 of 9 |
|                     | Version# 1.0             |             |

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## Introduction

### Feature:

- Water clear lens
- Tape and reel packaging
- Bright LED package
- AlGaAs technology
- 40° Viewing Angle)

### Description:

These 1206 LEDs have a height profile of 1.40mm. With a combination of high brightness output and a small footprint, these LEDs are ideal for status indication.

### Application:

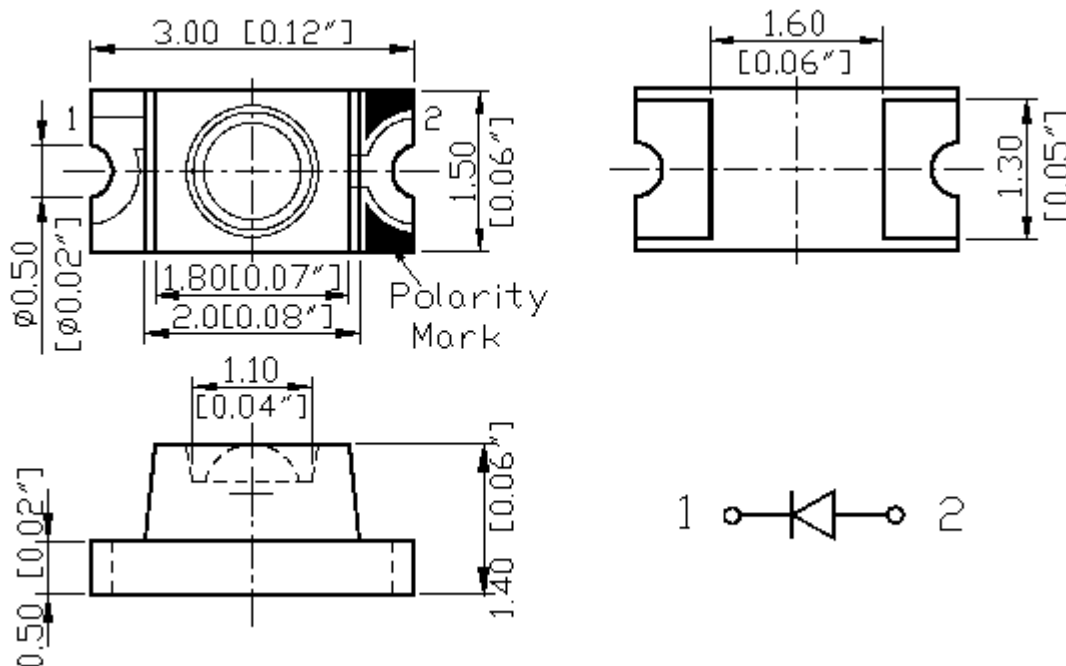
- Status indication
- Back lighting application

### Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



### Dimension:



Units: mm / tolerance = +/-0.1mm

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

| Product Number | Color    | I <sub>F</sub> (mA) | V <sub>F</sub> (V) |      |      | λ <sub>D</sub> (nm) |      |      | I <sub>V</sub> (mcd) |      |
|----------------|----------|---------------------|--------------------|------|------|---------------------|------|------|----------------------|------|
|                |          |                     | Min.               | Typ. | Max. | Min.                | Typ. | Max. | Min.                 | Typ. |
| QBLP651-S1     | Deep Red | 20                  | 1.7                | 2.0  | 2.5  | 630                 | 640  | 650  | 20                   | 40   |

**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)** |
|----------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|-------------------------|
| AlGaAs   | 75                  | 30                  | 125                   | 5                  | -40 to +80           | -40 to +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 |
|-----|------|------|------|
| □   | 1.7  | 2.5  | V    |

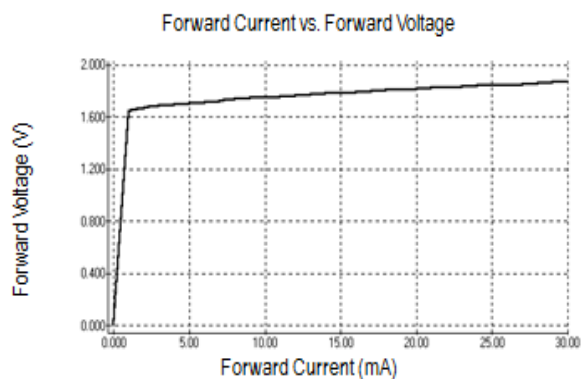
**Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=20mA**

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| C   | 20   | 25   | mcd  |
| D   | 25   | 32   |      |
| E   | 32   | 40   |      |
| F   | 40   | 50   |      |
| G   | 50   | 63   |      |

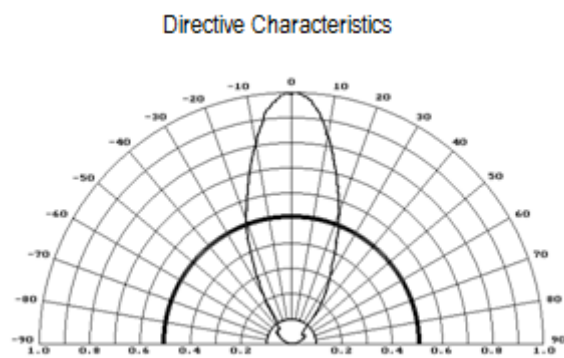
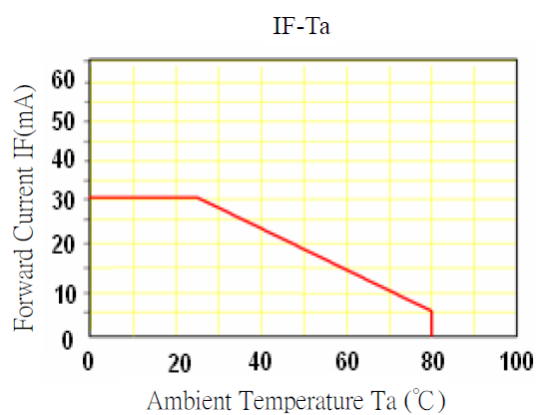
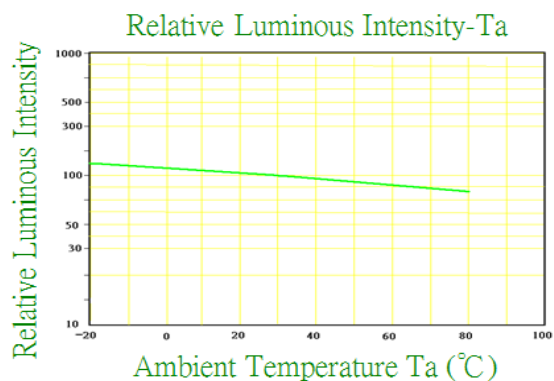
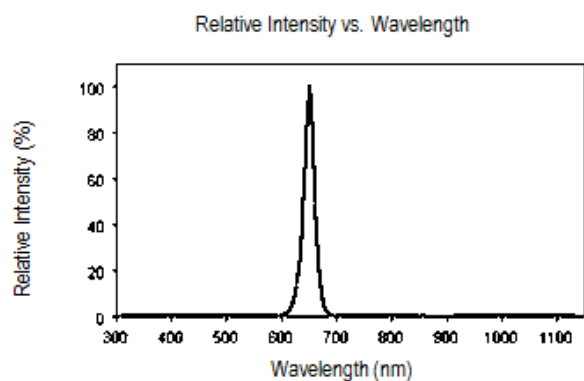
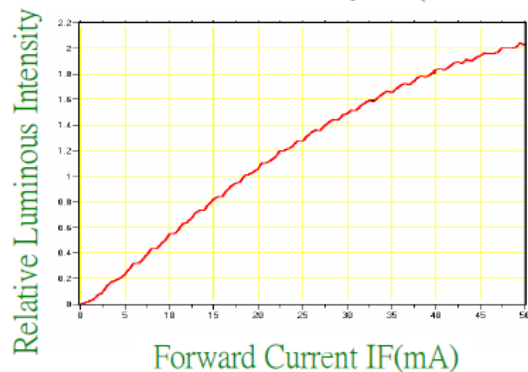
**Dominant Wavelength λ<sub>D</sub> @ I<sub>F</sub>=20mA**

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| v   | 630  | 635  | nm   |
| w   | 635  | 650  |      |

## Characteristic Curves

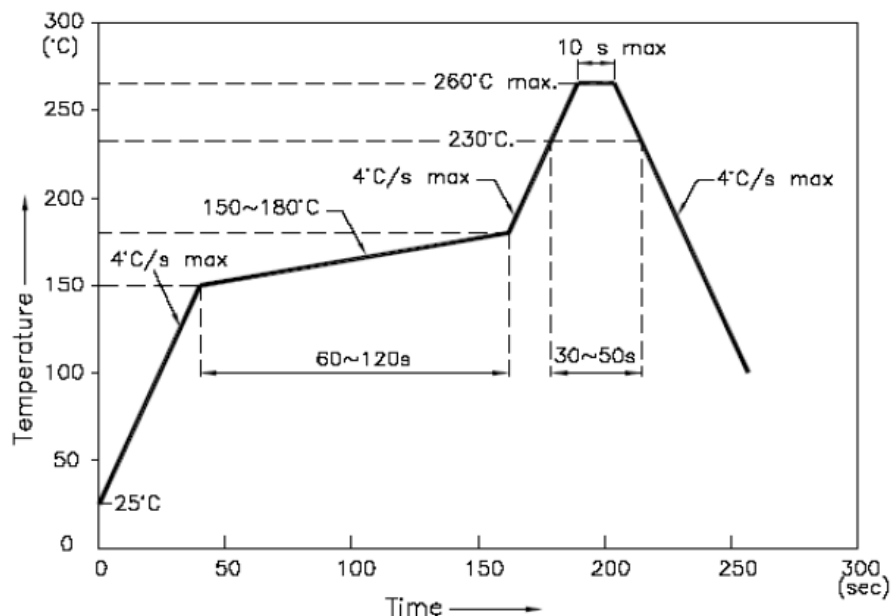


Relative Luminous Intensity-IF (Ta=25°C)

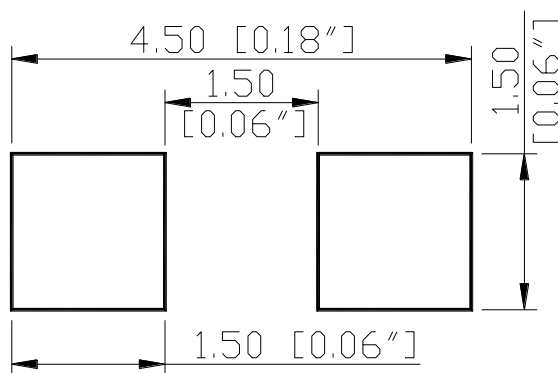


## Solder Profile

- 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

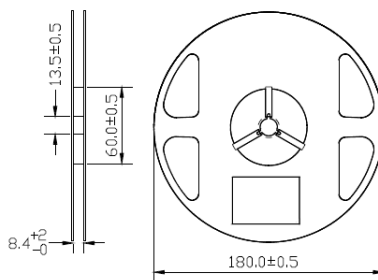


Units: mm

Tolerance:  $\pm 0.1\text{mm}$

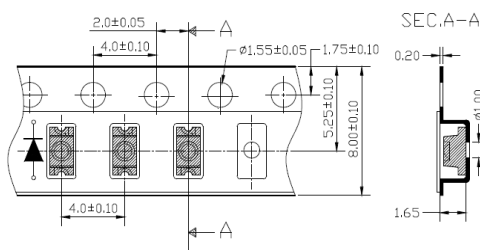
## Packing

### Reel Dimensions:



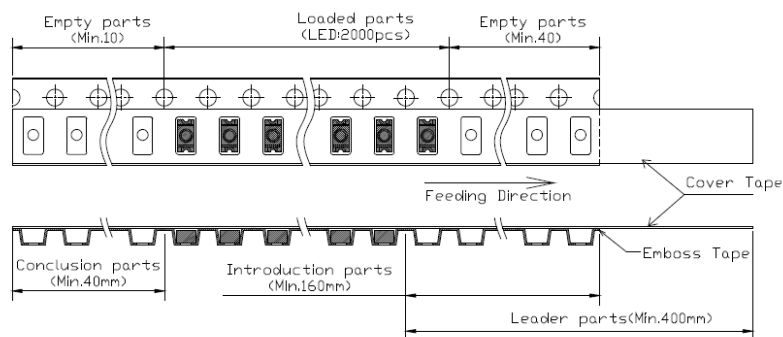
Unit: mm

### Tape Dimensions:

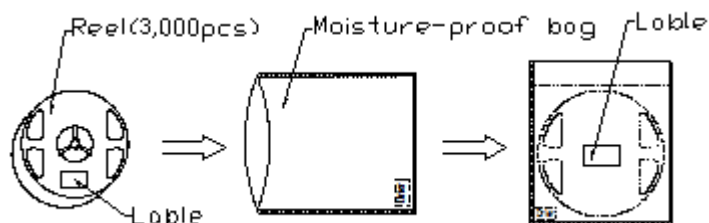


Unit: mm

### Arrangement of Tape:



### Packing specifications:



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**Labeling**

|                                                                                    |                     |                                                                                     |
|------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------|
|   | <b>QT-Brighttek</b> |  |
|  |                     |                                                                                     |
| <b>Part No:</b> _____                                                              |                     |                                                                                     |
| <b>Customer P/N:</b> _____                                                         |                     |                                                                                     |
| <b>Item:</b> _____                                                                 |                     |                                                                                     |
| <b>Q'ty:</b> _____                                                                 |                     |                                                                                     |
| <b>Vf:</b> _____                                                                   |                     |                                                                                     |
| <b>Iv:</b> _____                                                                   |                     |                                                                                     |
| <b>Wl:</b> _____                                                                   |                     |                                                                                     |
| <b>Date:</b> _____                                                                 |                     |                                                                                     |
| <b>Made in China</b>                                                               |                     |                                                                                     |

**Ordering Information**

| Part #     | Orderable Part # | Spec Range                                                                      | Quantity per reel |
|------------|------------------|---------------------------------------------------------------------------------|-------------------|
| QBLP651-S1 | QBLP651-S1       | I <sub>V</sub> =40mcd typ. @ I <sub>F</sub> =20mA, λ <sub>D</sub> =630 to 650nm | 3,000 pcs         |



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## Revision History

| Description:              | Revision # | Revision Date |
|---------------------------|------------|---------------|
| New Release of QBLP651-S1 | V1.0       | 09/18/2014    |
|                           |            |               |
|                           |            |               |
|                           |            |               |
|                           |            |               |

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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.



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Электрон  
Связь**

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