

QT-Brightek Chip LED Series

0402 SMD Chip LED

Part No.: QBLP595-IW-2897

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Introduction

Feature:

- Diffused lens
- Package in tape and reel
- Compact 0402 package
- InGaN technology for IW
- Viewing Angle: 150° typ.

Description:

These compact 0402 LEDs have a height profile of 0.5mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

Application:

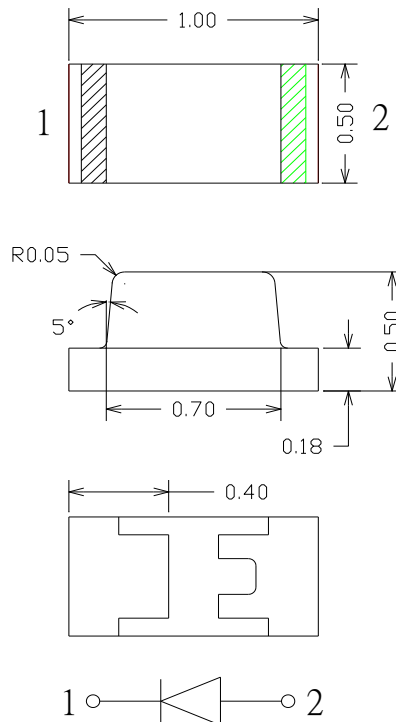
- Status indication
- Back lighting application

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) | | CCT Coordinate | | | I _V (mcd) | |
|-----------------|-------|---------------------|--------------------|------|----------------|------------------|------|----------------------|------|
| | | | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. |
| QBLP595-IW-2897 | White | 20 | 3.1 | 3.7 | - | X=0.33 Y=0.33 | - | 250 | 420 |

Absolute Maximum Rating

| Material | P _d (mW) | I _F (mA) | I _{FP} (mA)* | V _R (V) | T _{OP} (°C) | T _{ST} (°C) | T _{SO L} (°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

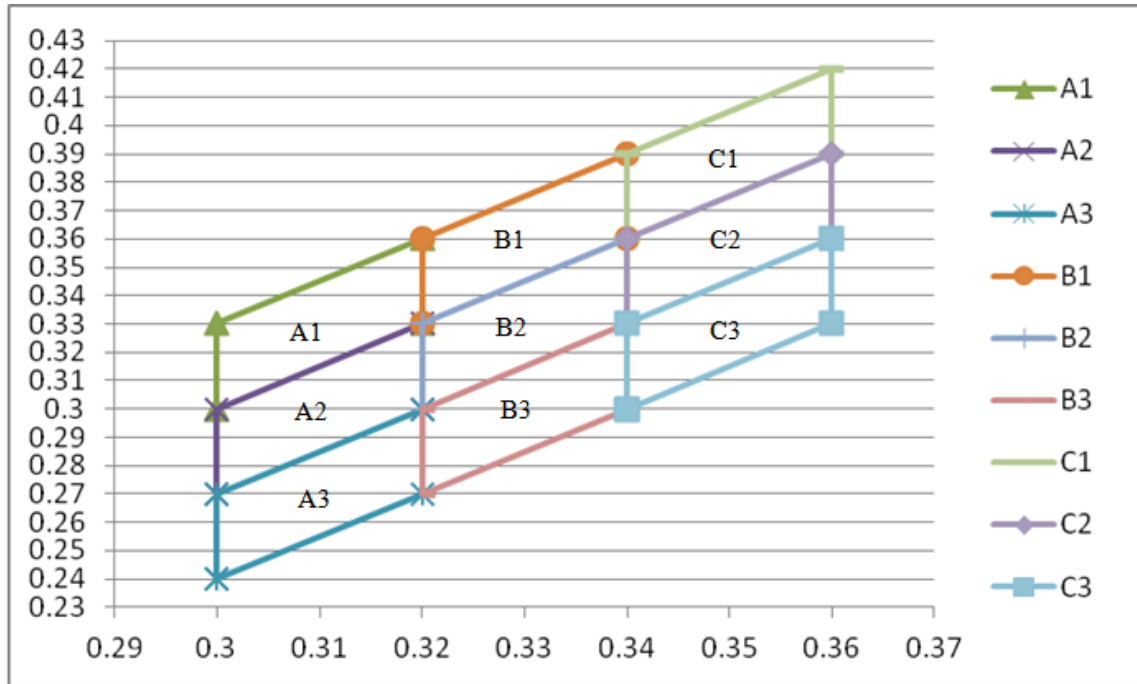
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| N | 250 | 320 | mcd |
| O | 320 | 400 | |
| P | 400 | 500 | |
| Q | 500 | 630 | |
| R | 630 | 800 | |

Note:

Tolerance of measurement of forward voltage: ±0.1V

Tolerance of measurement of luminous intensity: ±15%

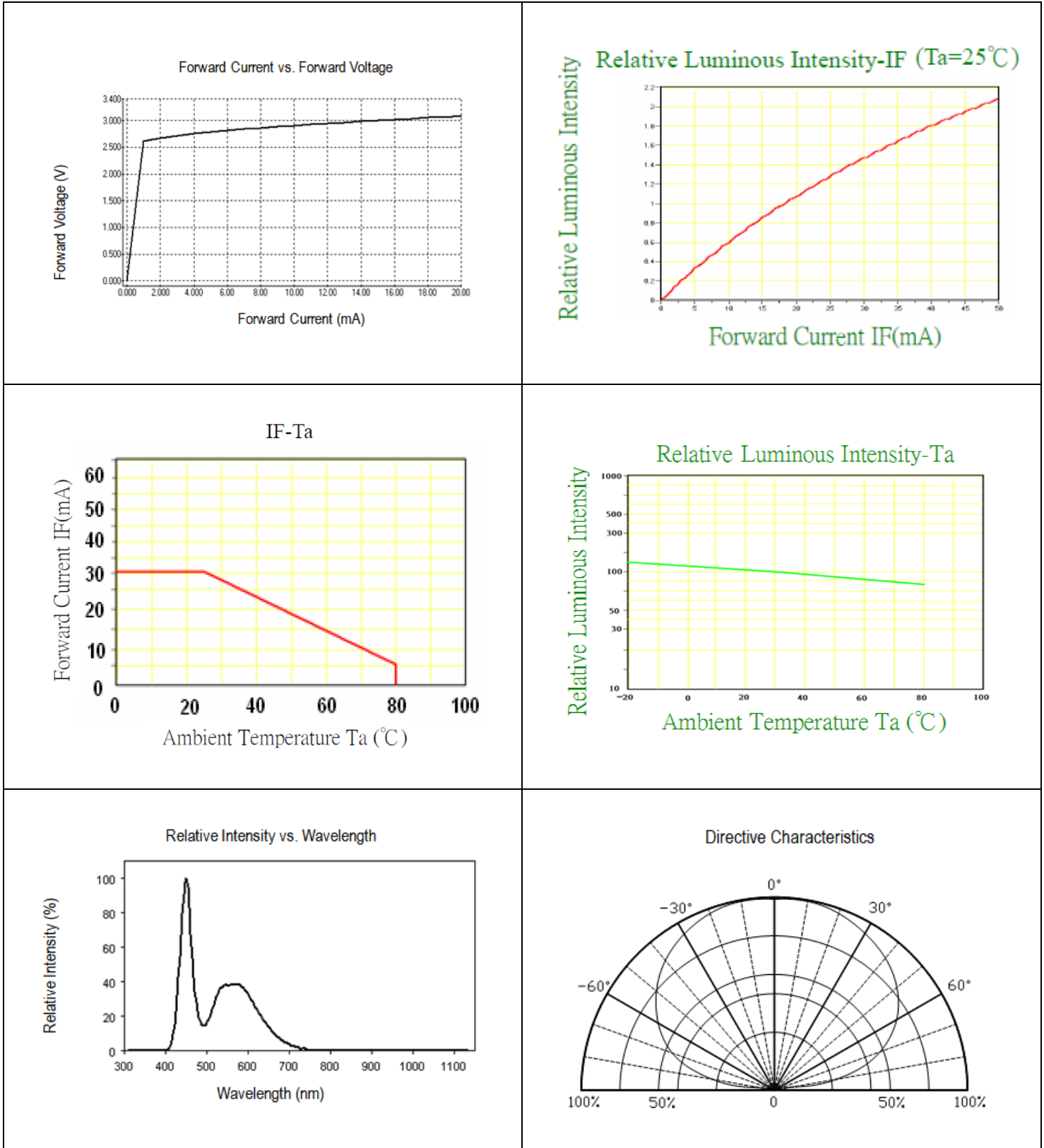
Correlated Color Temperature Chart



| Rank | Chromaticity coordinates | | | | |
|------|--------------------------|------|------|------|------|
| A1 | X | 0.3 | 0.3 | 0.32 | 0.32 |
| | Y | 0.3 | 0.33 | 0.36 | 0.33 |
| A2 | X | 0.3 | 0.3 | 0.32 | 0.32 |
| | Y | 0.27 | 0.3 | 0.33 | 0.3 |
| A3 | X | 0.3 | 0.3 | 0.32 | 0.32 |
| | Y | 0.24 | 0.27 | 0.3 | 0.27 |
| B1 | X | 0.32 | 0.32 | 0.34 | 0.34 |
| | Y | 0.33 | 0.36 | 0.39 | 0.36 |
| B2 | X | 0.32 | 0.32 | 0.34 | 0.34 |
| | Y | 0.3 | 0.33 | 0.36 | 0.33 |
| B3 | X | 0.32 | 0.32 | 0.34 | 0.34 |
| | Y | 0.27 | 0.3 | 0.33 | 0.3 |
| C1 | X | 0.34 | 0.34 | 0.36 | 0.36 |
| | Y | 0.36 | 0.39 | 0.42 | 0.39 |
| C2 | X | 0.34 | 0.34 | 0.36 | 0.36 |
| | Y | 0.33 | 0.36 | 0.39 | 0.36 |
| C3 | X | 0.34 | 0.34 | 0.36 | 0.36 |
| | Y | 0.3 | 0.33 | 0.36 | 0.33 |

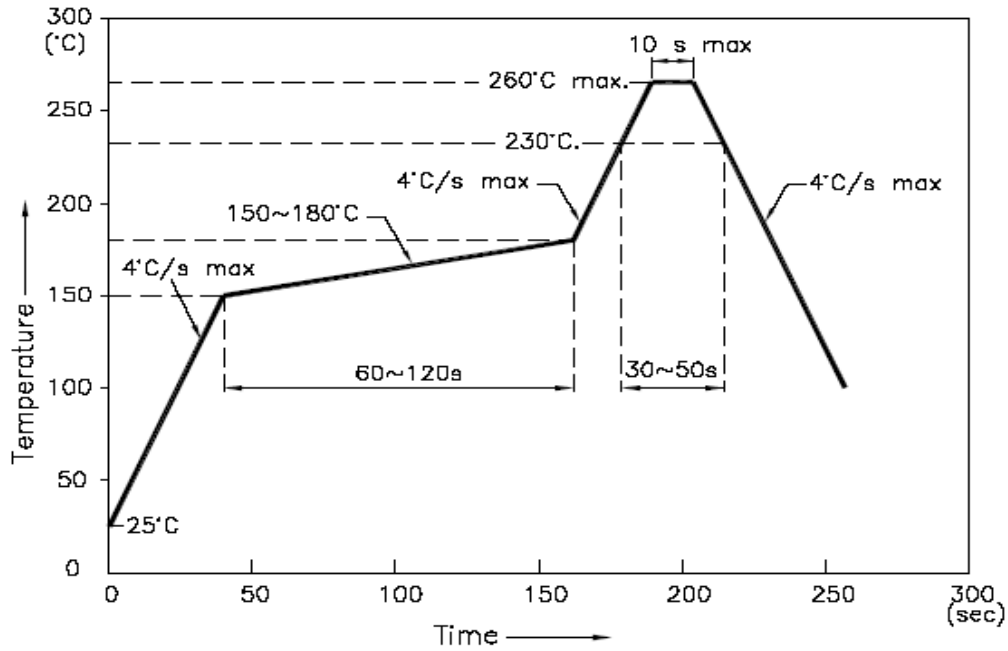
Note:
Tolerance of measurement of color coordinates: ±0.01

Characteristic Curves

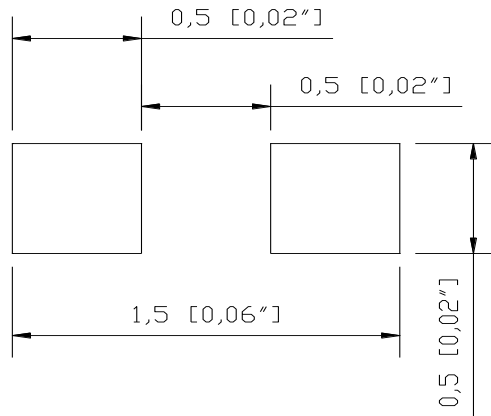


Solder Profile & Footprint

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



Recommended Pad Layout

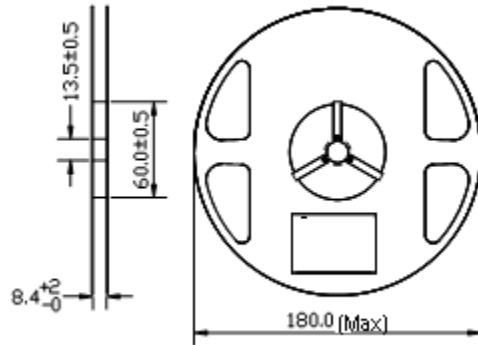


Units: mm

Tolerance: ±0.1mm

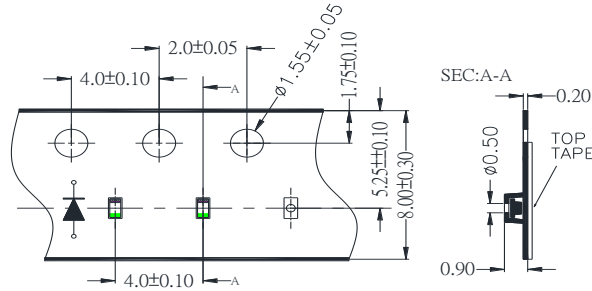
Packing

Reel Dimension:



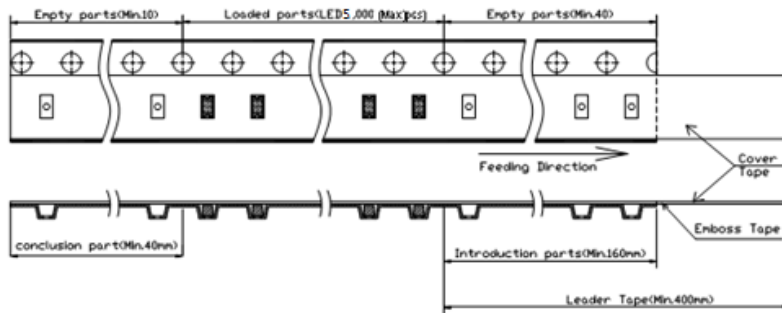
(Unit: mm)

Tape Dimension:

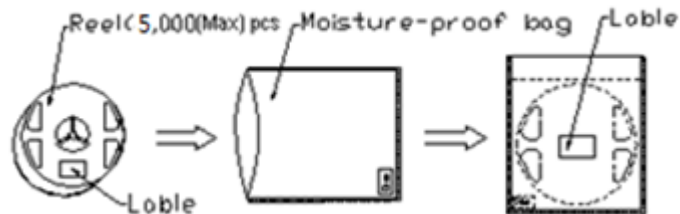


(Unit: mm)

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 |
|-----------------|------------------|--|-------------------|
| QBLP595-IW-2897 | QBLP595-IW-2897 | Iv=420mcd typ. @ If=20mA / CCT: (X=0.33, Y=0.33) typ. | 5,000 units |

Revision History

| Description: | Revision # | Revision Date |
|--------------------------------|------------|---------------|
| New Release of QBLP595-IW-2897 | V1.0 | 02/09/2018 |
| | | |
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