

QT-Brightek Chip LED Series

SMD 0603 LED

Part No.: QBLP601-IW5

5: 5mA

| | | |
|----------------------|------------------------|--------------|
| Product: QBLP601-IW5 | Date: October 06, 2021 | Page 1 of 10 |
| | Version# 1.0 | |

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Introduction

Feature:

- Yellow diffused lens
- Package in tape and reel
- Ultra bright 0603 LED package
- InGaN technology
- Viewing angle: 140° typ.

Description:

These ultra bright 0603 LEDs have a height profile of 0.60mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

Application:

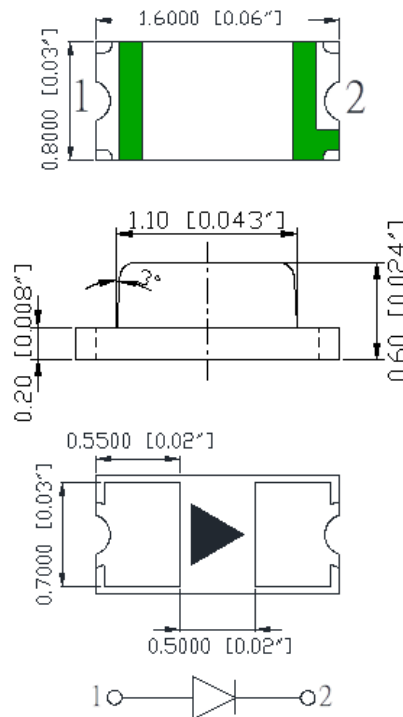
- Status indication
- Back lighting application

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) | | | CIE Coordinate | I _V (mcd) | | |
|-------------|-------|---------------------|--------------------|------|------|--------------------|----------------------|------|------|
| | | | Min. | Typ. | Max. | Typ. | Min. | Typ. | Max. |
| QBLP601-IW5 | White | 5 | 2.5 | 2.8 | 3.1 | X=0.295 Y=0.285 | 40 | 78 | 125 |

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 | 95 | 30 | 125 | 5 | -40 ~ +80 | -40 ~ +85 | 260 |

*Duty 1/8 @ 1kHz

**IR Reflow for no more than 10 sec @ 260 °C

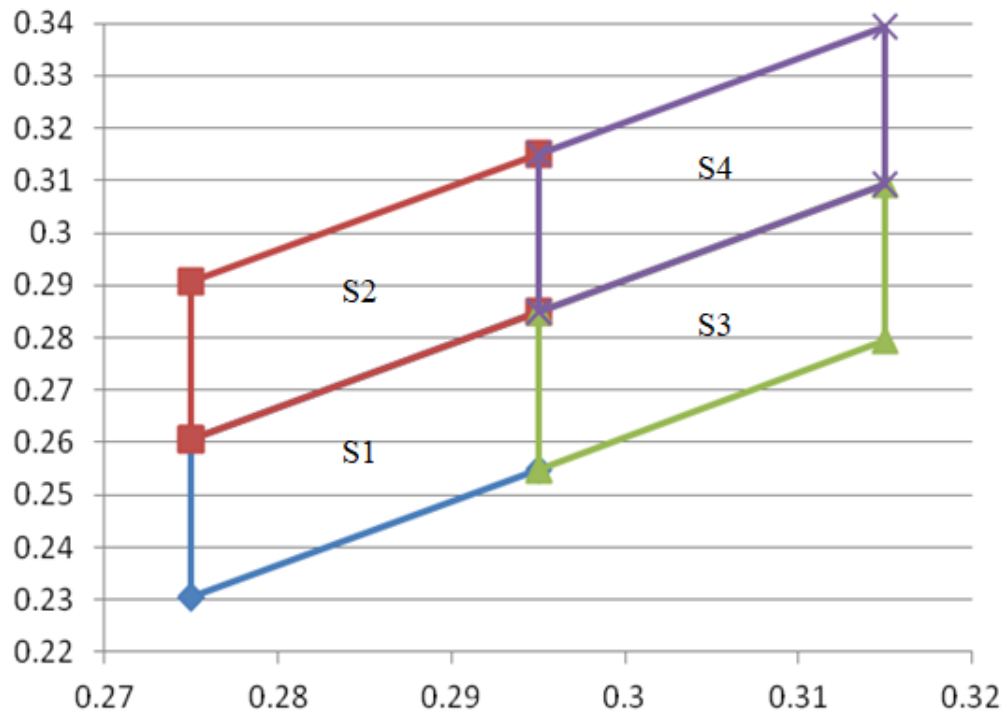
Forward Voltage V_F @ I_F=5mA

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

Luminous Intensity I_V @ I_F=5mA

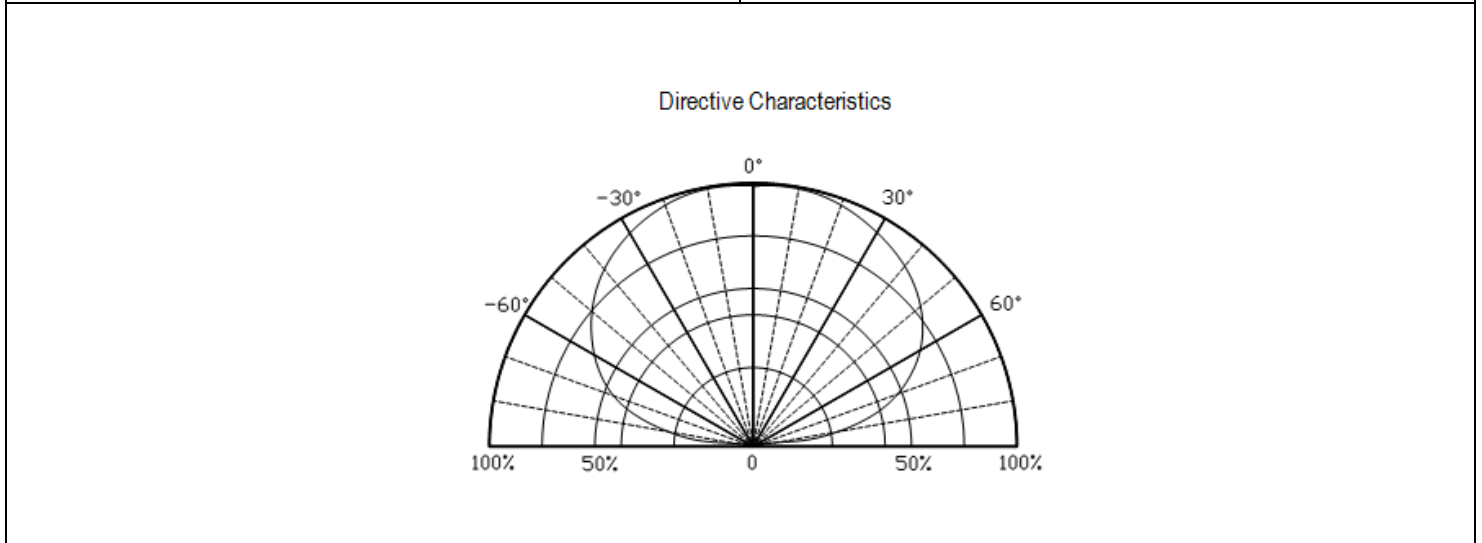
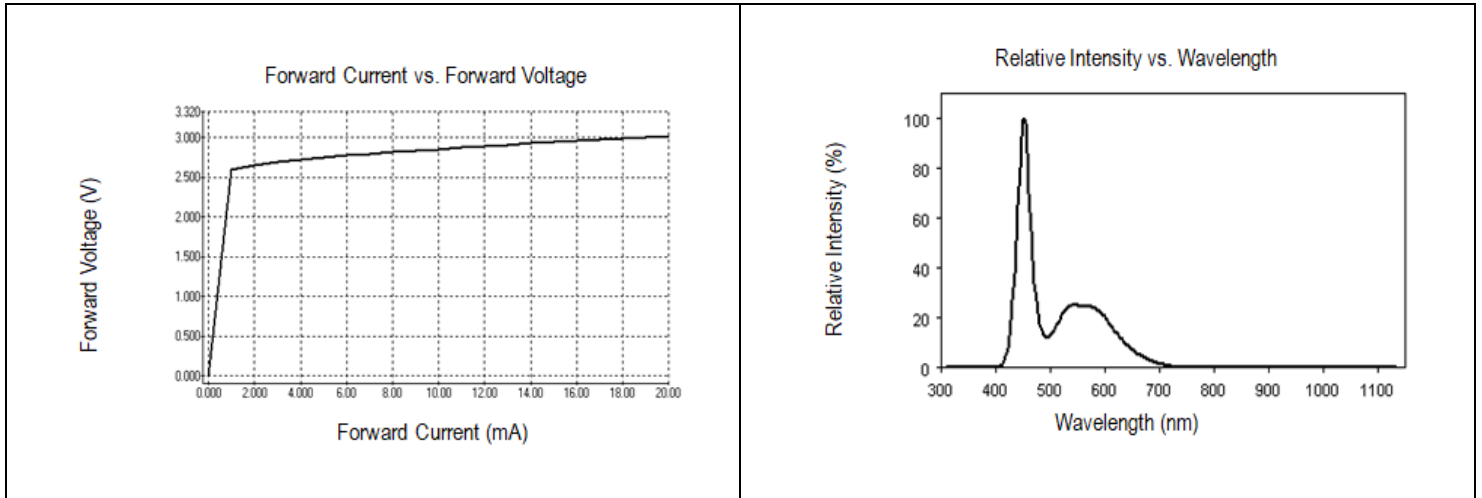
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| F | 40 | 50 | mcd |
| G | 50 | 63 | |
| H | 63 | 80 | |
| I | 80 | 100 | |
| J | 100 | 125 | |

CIE Chromaticity Diagram



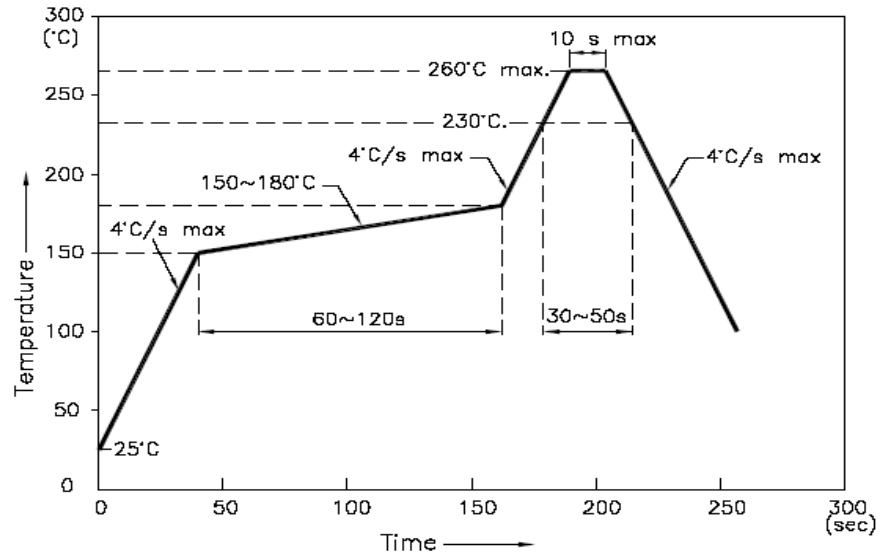
| Rank | Chromaticity coordinates | | | | |
|------|--------------------------|-------|-------|-------|-------|
| | S1 | X | 0.275 | 0.275 | 0.295 |
| | Y | 0.231 | 0.261 | 0.285 | 0.255 |
| S2 | X | 0.275 | 0.275 | 0.295 | 0.295 |
| | Y | 0.261 | 0.291 | 0.315 | 0.285 |
| S3 | X | 0.295 | 0.295 | 0.315 | 0.315 |
| | Y | 0.255 | 0.285 | 0.309 | 0.279 |
| S4 | X | 0.295 | 0.295 | 0.315 | 0.315 |
| | Y | 0.285 | 0.315 | 0.339 | 0.309 |

Characteristic Curves

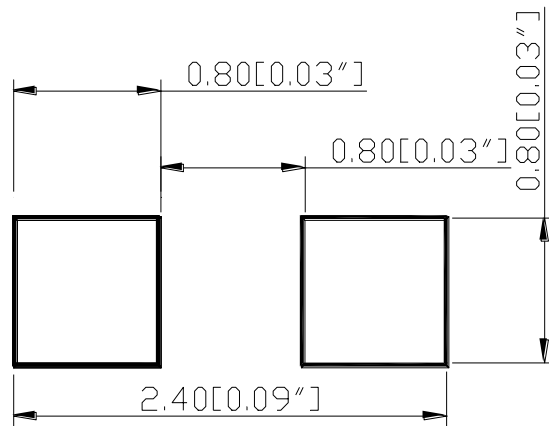


Solder Profile & Footprint

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



Recommended Pad Layout

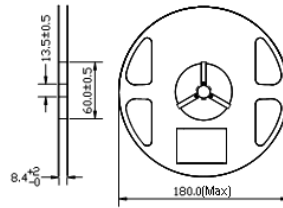


Units: mm

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

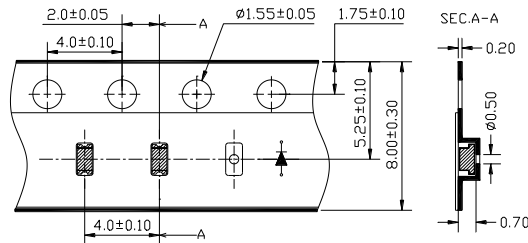
Packing

Reel Dimension:



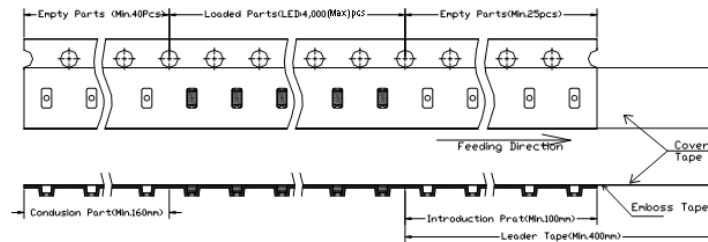
Unit: mm

Tape Dimension:

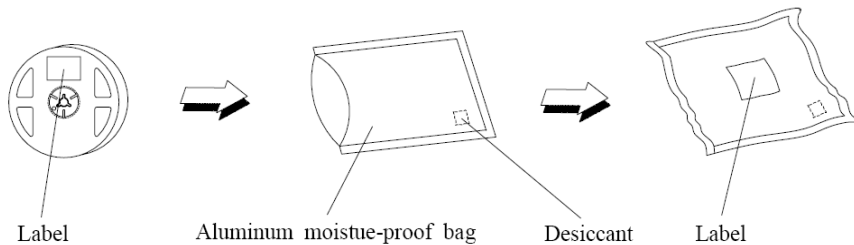


Unit: mm

Arrangement of Tape:



Packaging Specifications:



| | | |
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Ordering Information

| Part # | Orderable Part # | Spec Range | Quantity per reel |
|-------------|------------------|--|-------------------|
| QBLP601-IW5 | QBLP601-IW5 | Iv=78mcd typ. @ I _f =5mA / CIE Coordinate: (X=0.295, Y=0.285) typ. | 4,000 units |

Revision History

| Description: | Revision # | Revision Date |
|----------------------------|------------|---------------|
| New Release of QBLP601-IW5 | V1.0 | 10/06/2021 |
| | | |
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