

QT-Brightek Chip LED Series

SMD 0603 Green LED

Part No.: QBLP601-AG1

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Introduction

Feature:

- Water clear lens
- Color: Green
- Package in tape and reel
- Ultra bright 0603 LED package
- AlInGaP technology
- Viewing angle: 140 deg 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:

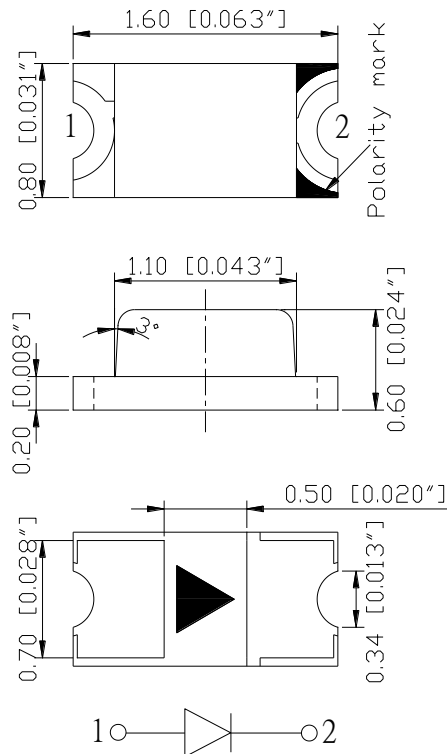
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- 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) | | | I _V (mcd) | |
|-------------|-------|---------------------|--------------------|------|---------------------|------|------|----------------------|------|
| | | | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. |
| QBLP601-AG1 | Green | 20 | 2.0 | 2.5 | 566 | 570 | 575 | 32 | 55 |

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)** |
|----------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|--------------------------|
| AllnGaP | 75 | 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 |
|-----|------|------|------|
| b | 1.6 | 1.9 | V |
| c | 1.9 | 2.2 | |
| d | 2.2 | 2.5 | |

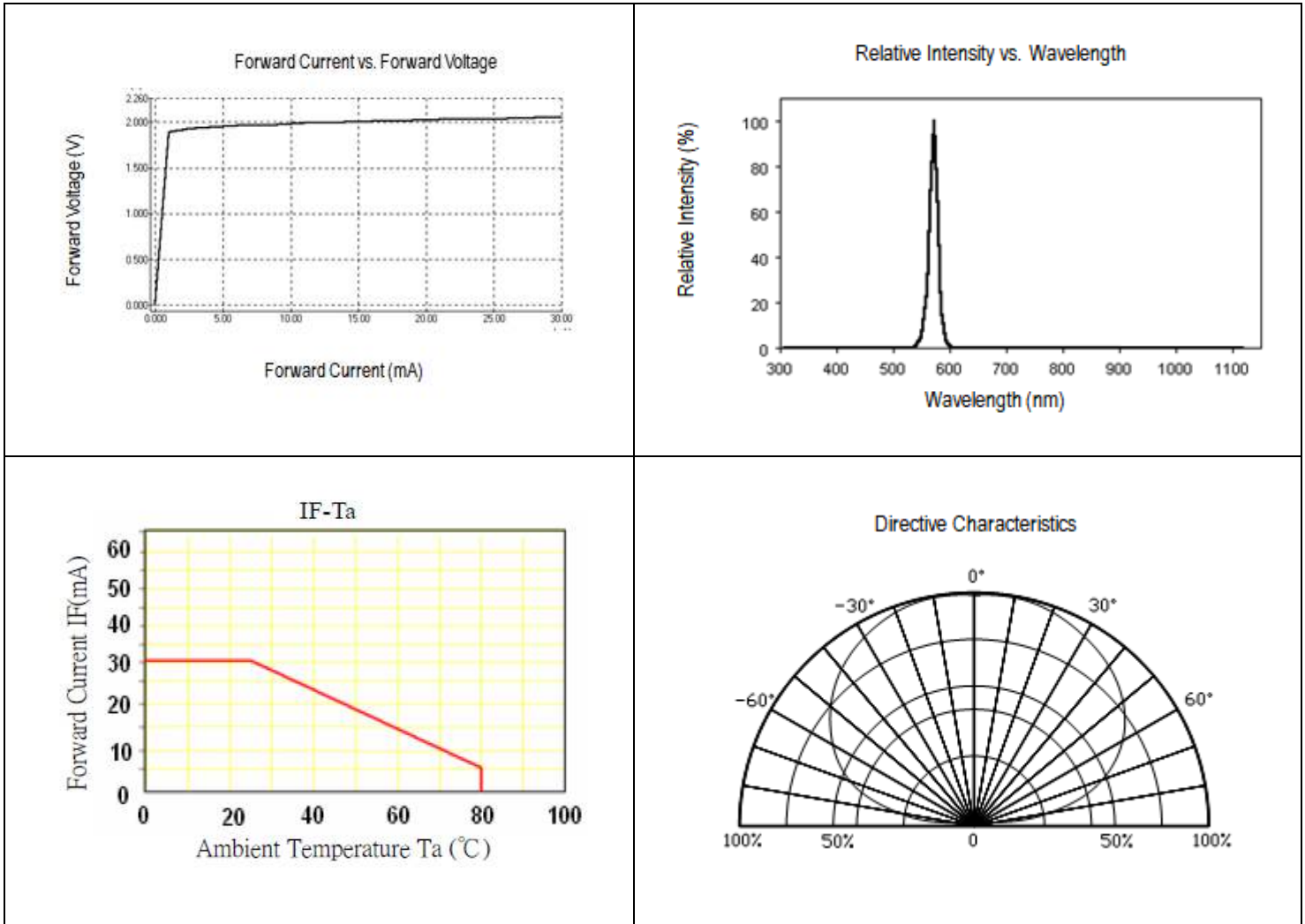
Luminous Intensity I_V @ I_F=20mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| E | 32 | 40 | mcd |
| F | 40 | 50 | |
| G | 50 | 63 | |
| H | 63 | 80 | |

Dominant Wavelength λ_D @ I_F=20mA

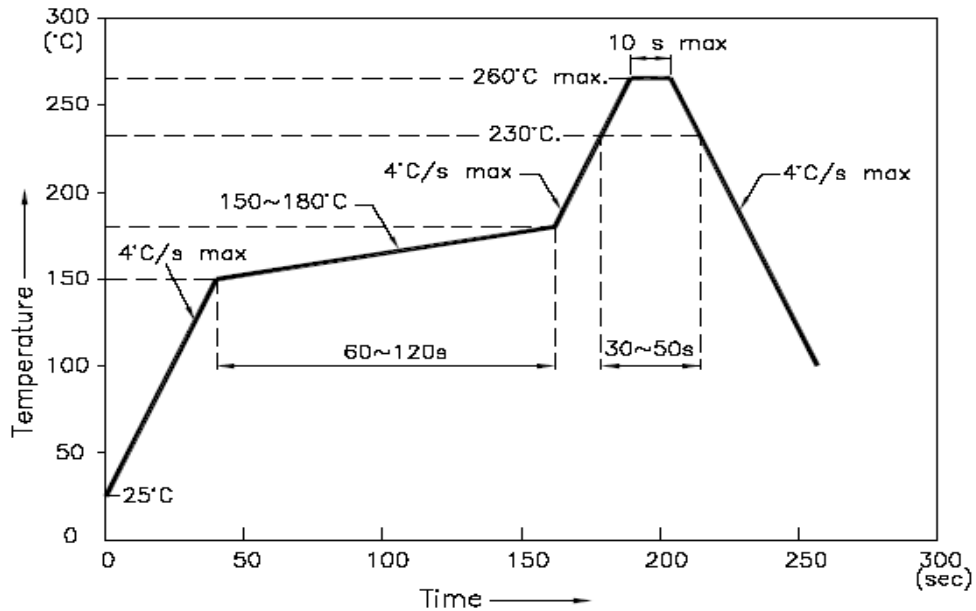
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| H | 566 | 569 | nm |
| I | 569 | 572 | |
| J | 572 | 575 | |

Characteristic Curves

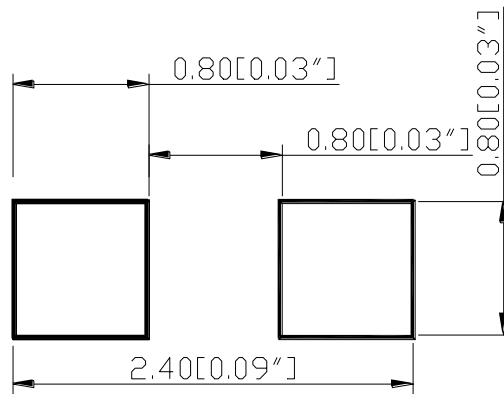


Solder Profile & Footprint

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



Recommended Pad Layout



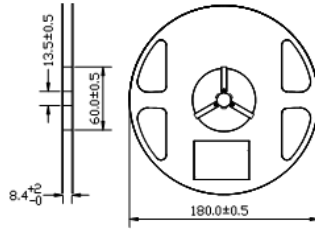
Units: mm

Tolerance: ±0.1mm

| | | |
|----------------------|-------------------------|-------------|
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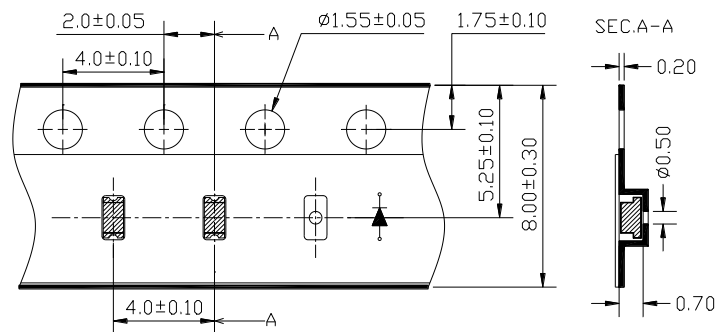
Packing

Reel Dimension:



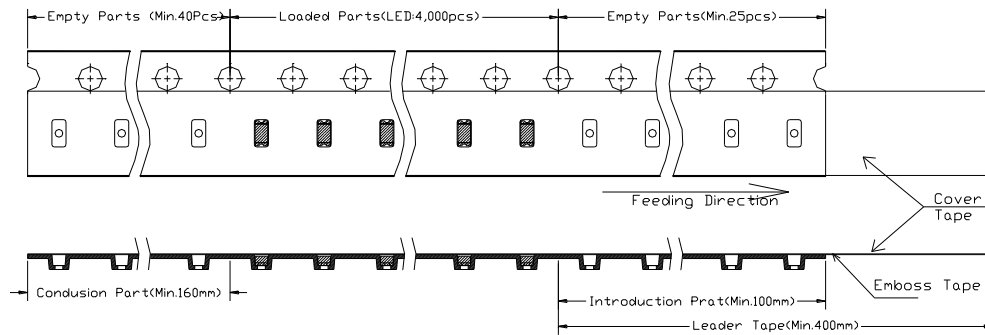
Unit: mm

Tape Dimension:

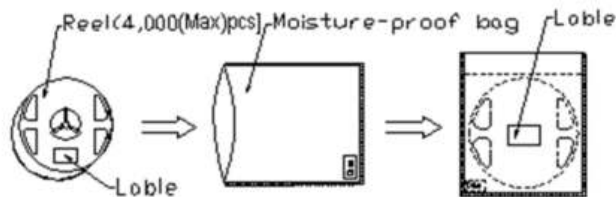


Unit: mm

Arrangement of Tape:



Packaging Specifications:





Ordering Information

| Part # | Orderable Part # | Spec Range | Quantity per reel |
|-------------|------------------|--|-------------------|
| QBLP601-AG1 | QBLP601-AG1 | Iv=55mcd typ. @ I _F =20mA / Color=566 to 575nm | 4,000 units |

Revision History

| Description: | Revision # | Revision Date |
|----------------------------|------------|---------------|
| New Release of QBLP601-AG1 | V1.0 | 02/25/2021 |
| | | |
| | | |
| | | |
| | | |

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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.