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QT-Brightek PLCC2 Series
PLCC2 Reverse Mount LED
Part No.: QBLP670R-IW-CW

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Introduction

Feature:

- Package in tape and reel
- Ultra bright reflector type PLCC2 LED
- InGaN technology for White
- 120 degree viewing angle
- Reverse Mountable

Description:

These ultra bright reflector type PLCC2 LEDs have a height profile of 1.85mm. With a combination of high brightness output and robust package, these LEDs are ideal for architecture lighting, status indication, and industrial equipment lighting applications.

Application:

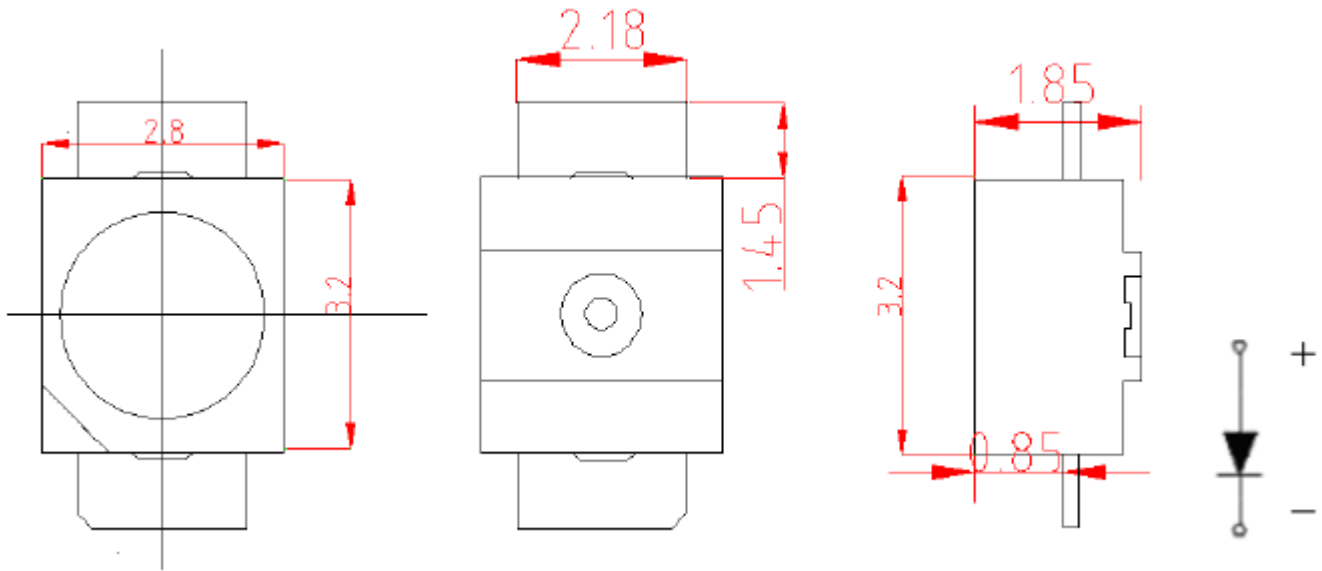
- Status indication
- Industrial equipment backlighting
- Architecture lighting

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.2mm

Electrical / Optical Characteristic (Ta=25 °C)

| Product | Color | I _F (mA) | V _F (V) | | CCT(K) | | | Φ _v (lm) | |
|----------------|-------|---------------------|--------------------|------|--------|------|------|---------------------|------|
| | | | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. |
| QBLP670R-IW-CW | White | 20 | 3.1 | 3.6 | 5300 | 6020 | 7050 | 6.0 | 7.5 |

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 | 100 | 35 | 100 | 5 | -40 to +85 | -40 to +100 | 260 |

*Duty 1/10 @ 1KHz

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

Forward Voltage V_F @ I_F=20mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| V2C | 2.7 | 3.0 | V |
| V3A | 3.0 | 3.3 | |
| V3B | 3.3 | 3.6 | |

Luminous Flux Φ_v @ I_F=20mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| P60 | 6.0 | 6.5 | lm |
| P65 | 6.5 | 7.0 | |
| P70 | 7.0 | 7.5 | |
| P75 | 7.5 | 8.0 | |
| P80 | 8.0 | 8.5 | |
| P85 | 8.5 | 9.0 | |

Correlated Color Temperature (CCT) @ I_F=20mA

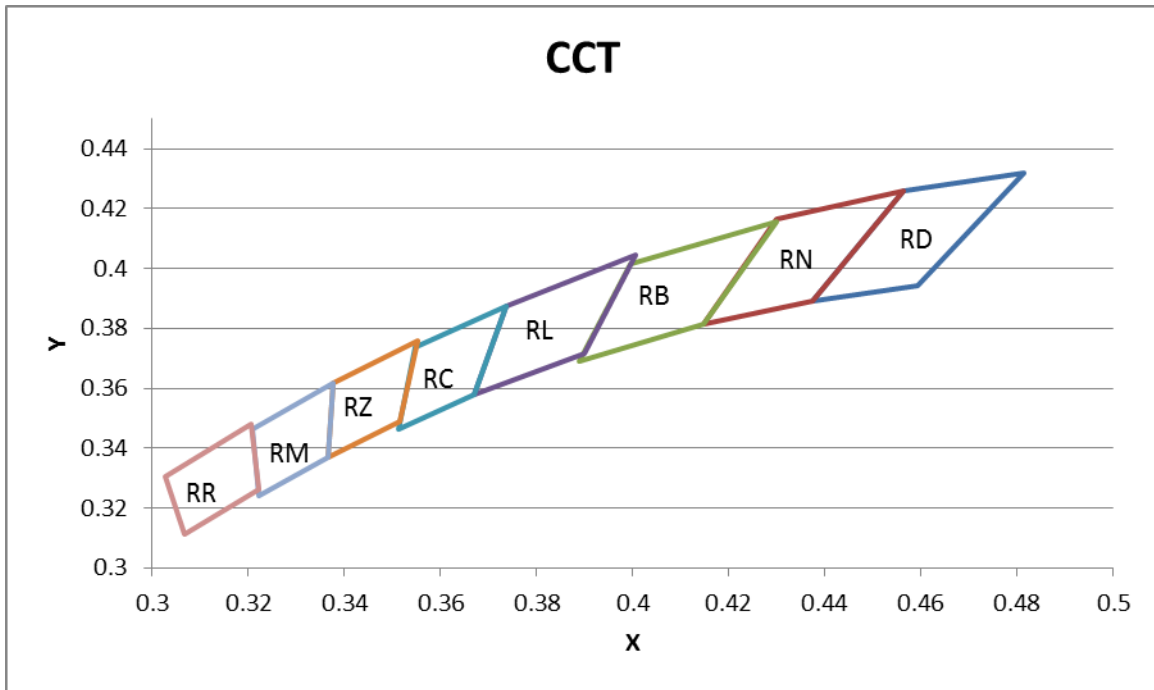
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| RM | 5300 | 6020 | K |
| RR | 6020 | 7050 | |

Note:

Tolerance of measurement of forward voltage: ±0.1V

Tolerance of measurement of luminous flux: ±15%

Correlated Color Temperature Chart



| Color Ranks @ I _F =20mA | | | |
|------------------------------------|--------|--------|--------|
| RM | | RR | |
| 0.3376 | 0.3616 | 0.3205 | 0.3481 |
| 0.3207 | 0.3462 | 0.3028 | 0.3304 |
| 0.3222 | 0.3243 | 0.3068 | 0.3113 |
| 0.3366 | 0.3369 | 0.3221 | 0.3261 |
| 0.3376 | 0.3616 | 0.3205 | 0.3481 |

Note:
Tolerance of measurement of color coordinates: ±0.01

Characteristic Curves (Ta=25°C)

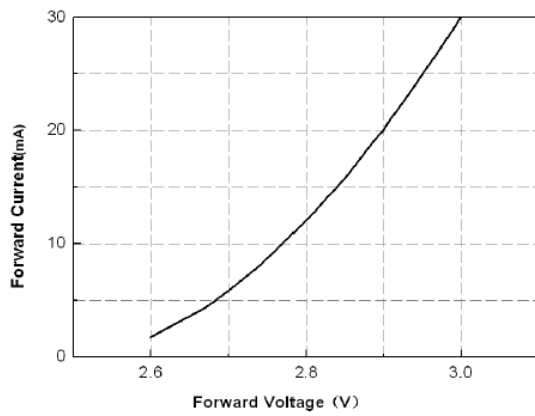


Figure1. Forward Current VS. Forward Voltage

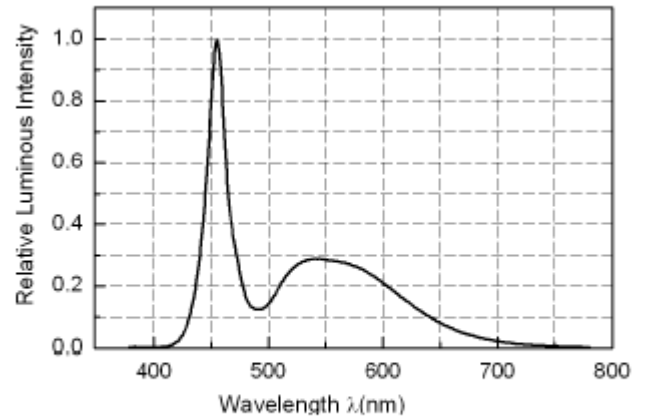


Figure2. Spectral Power Distribution vs. Wavelength

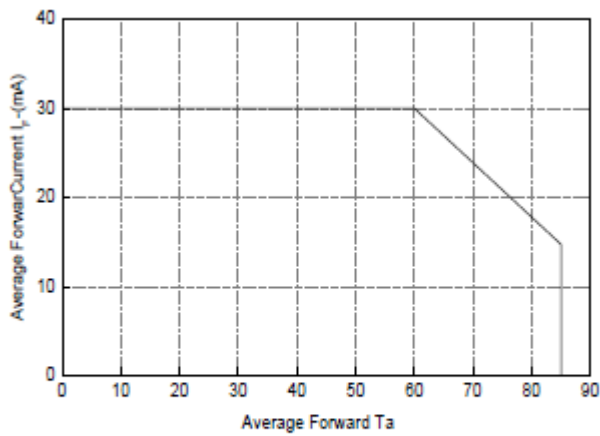


Figure3. Forward Current vs. Ambient Temperature

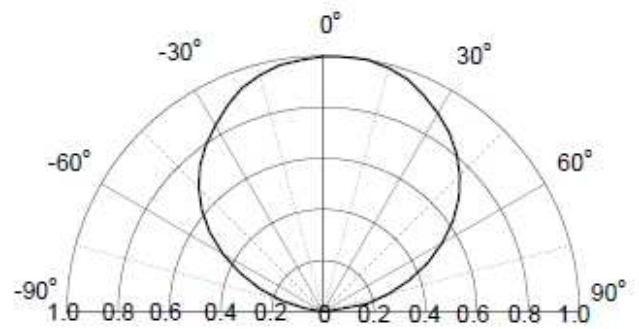
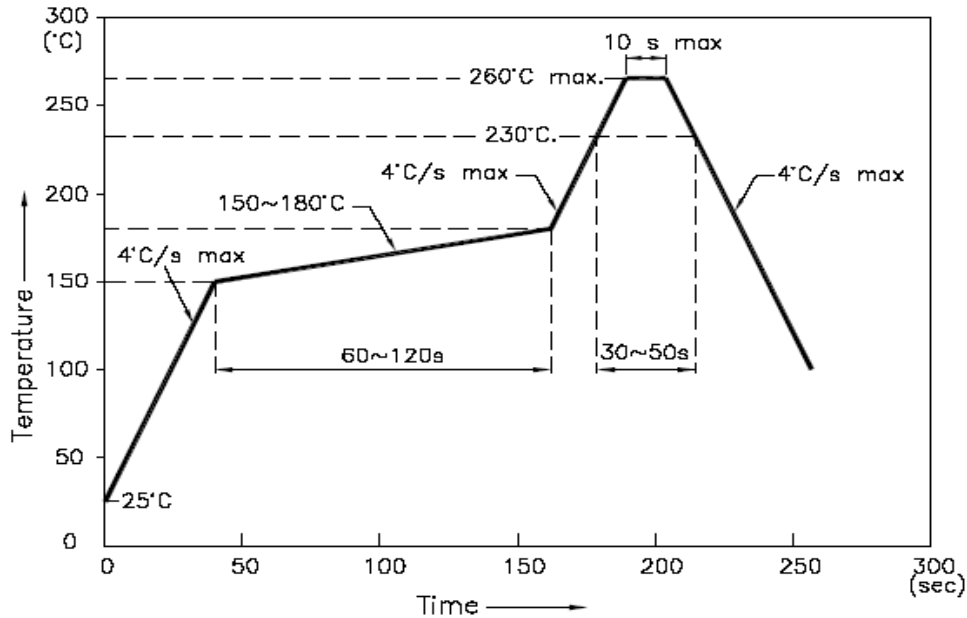


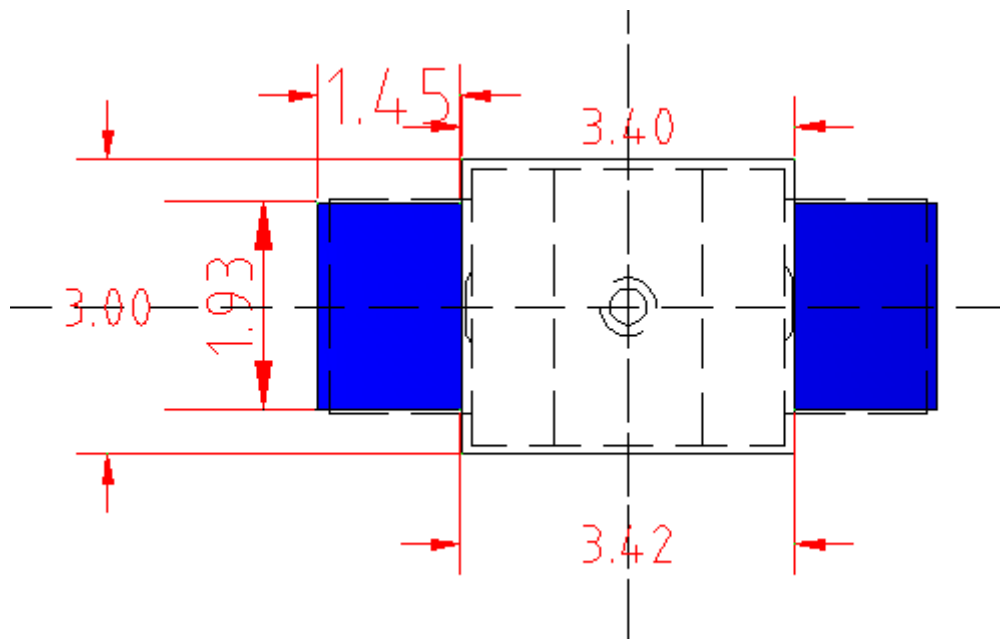
Figure4. Relative Luminosity VS. Radiation Angle

Solder Profile & Footprint

- 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

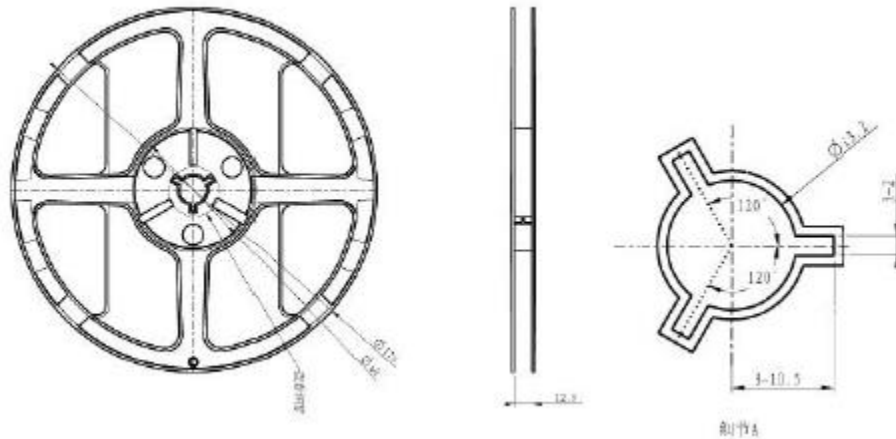


Units: mm

Tolerance: ± 0.2mm

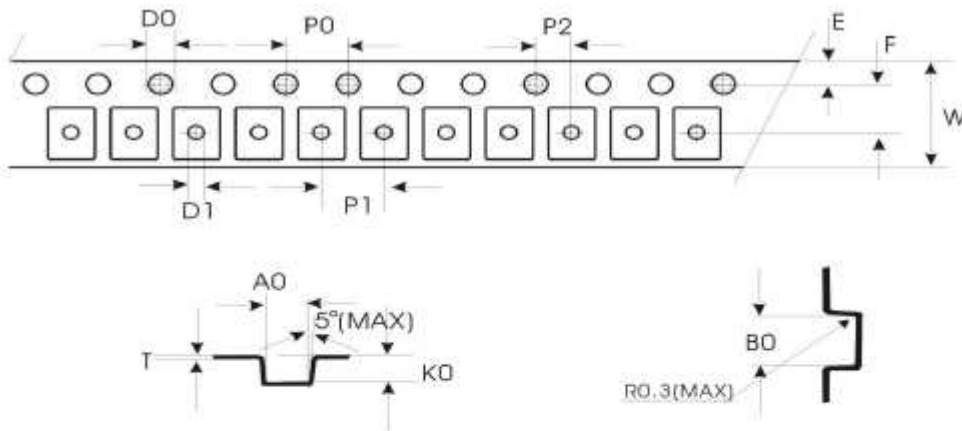
Packing

Reel Dimension:



Unit: mm

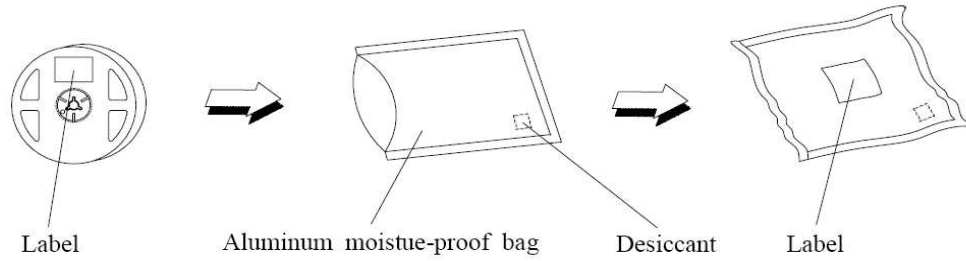
Tape Dimension:



| | | | | | | | |
|--------|-----------|----------|----------|----------|---------|----------|-----------|
| Symbol | A0 | B0 | K0 | P0 | P1 | P2 | T |
| Spec | 3.07±0.1 | 5.80±0.1 | 2.42±0.1 | 4.0±0.1 | 4.0±0.1 | 2.00±0.1 | 0.25±0.05 |
| Symbol | E | F | D0 | D1 | W | 10P0 | |
| Spec | 1.75±0.10 | 5.5±0.05 | 1.55±0.1 | 1.50±0.1 | 12±0.1 | 40.0±0.2 | |

Unit: mm

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 |
|----------------|------------------|------------|-------------------|
| QBLP670R-IW-CW | QBLP670R-IW-CW | -- | 2,000 units |

Revision History

| Description: | Revision # | Revision Date |
|-------------------------------|------------|---------------|
| New Release of QBLP670R-IW-CW | V1.0 | 08/11/2017 |
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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.