

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:

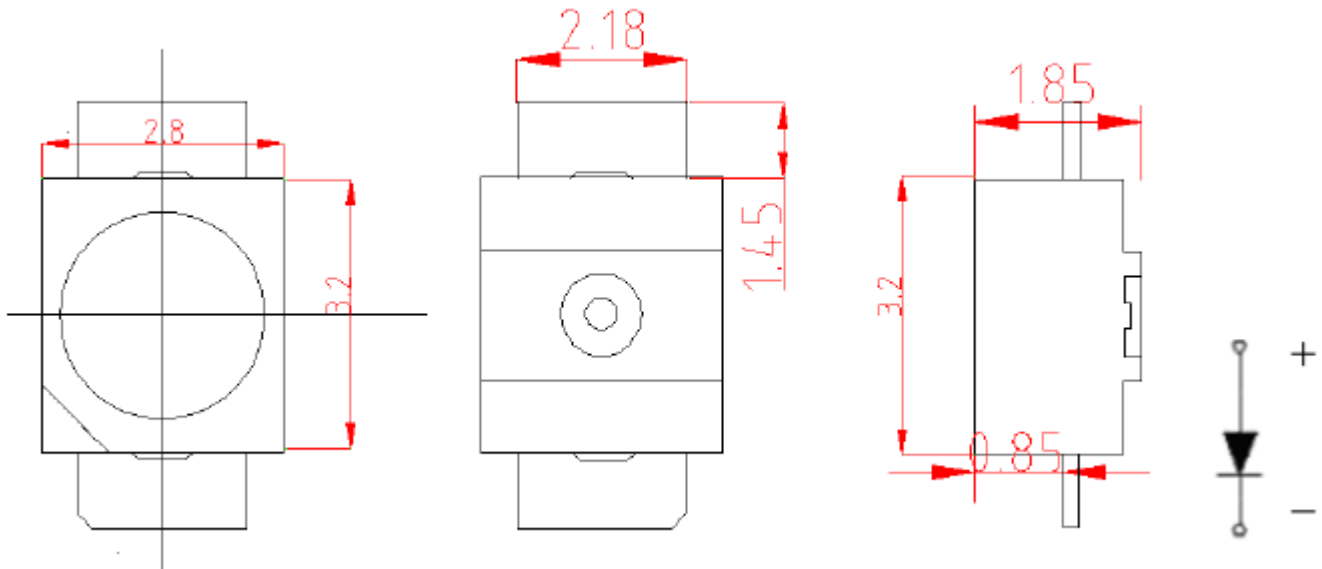
- Status indication
- Industrial equipment backlighting
- Architecture lighting

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	6.5	8.5

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	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
P65	6.5	7.0	lm
P70	7.0	7.5	
P75	7.5	8.0	
P80	8.0	8.5	
P85	8.5	9.0	
P90	9.0	9.5	
P95	9.5	10	

Correlated Color Temperature (CCT) @ I_F=20mA

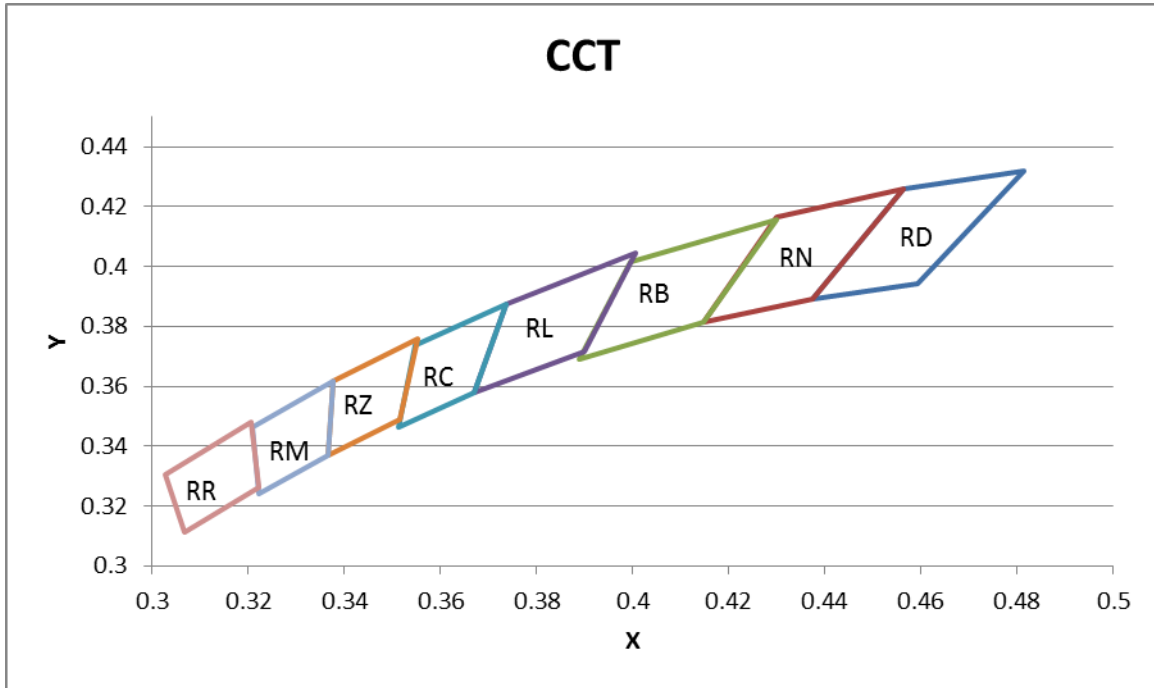
Bin	Min.	Max.	Unit
RM	5300	6020	K
RR	6020	7050	

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)

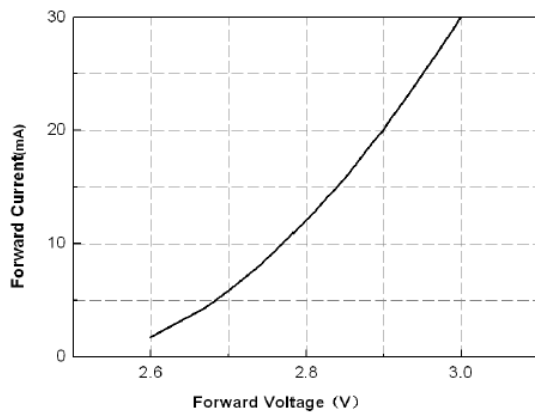


Figure1. Forward Current VS. Forward Voltage

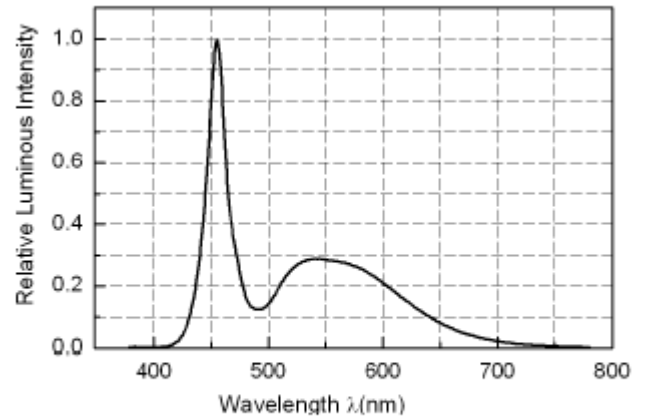


Figure2. Spectral Power Distribution vs. Wavelength

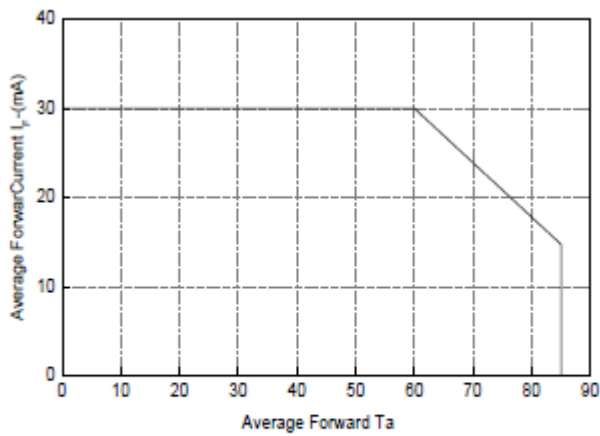


Figure3. Forward Current vs. Ambient Temperature

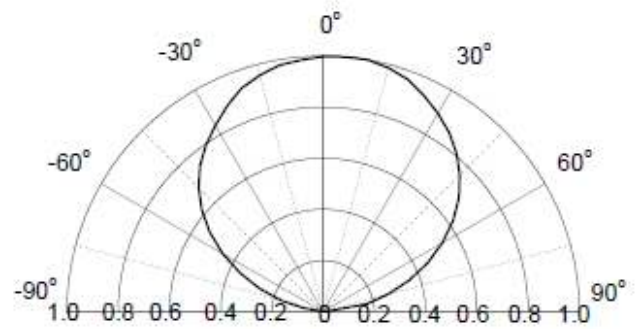
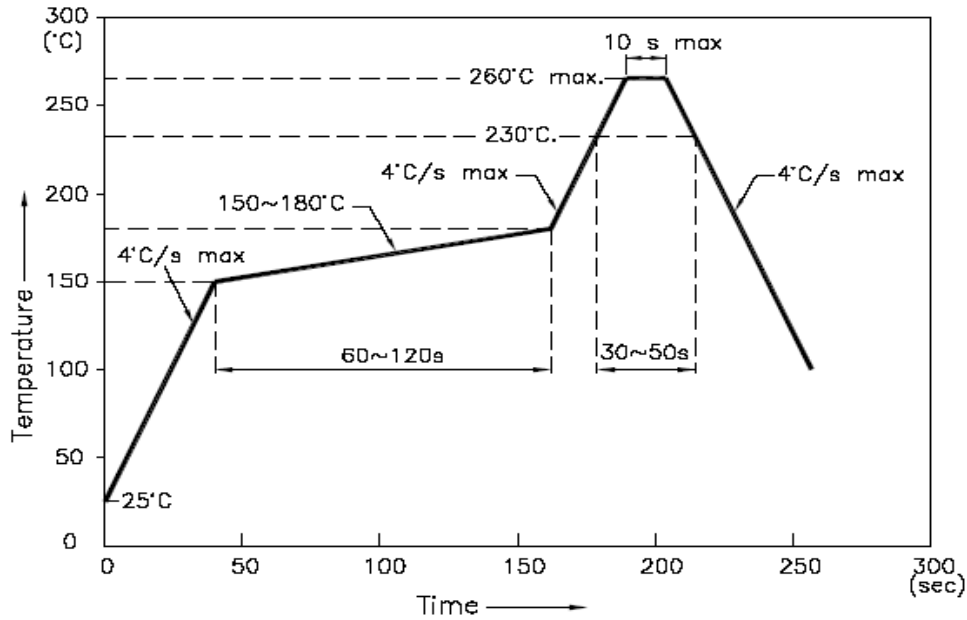


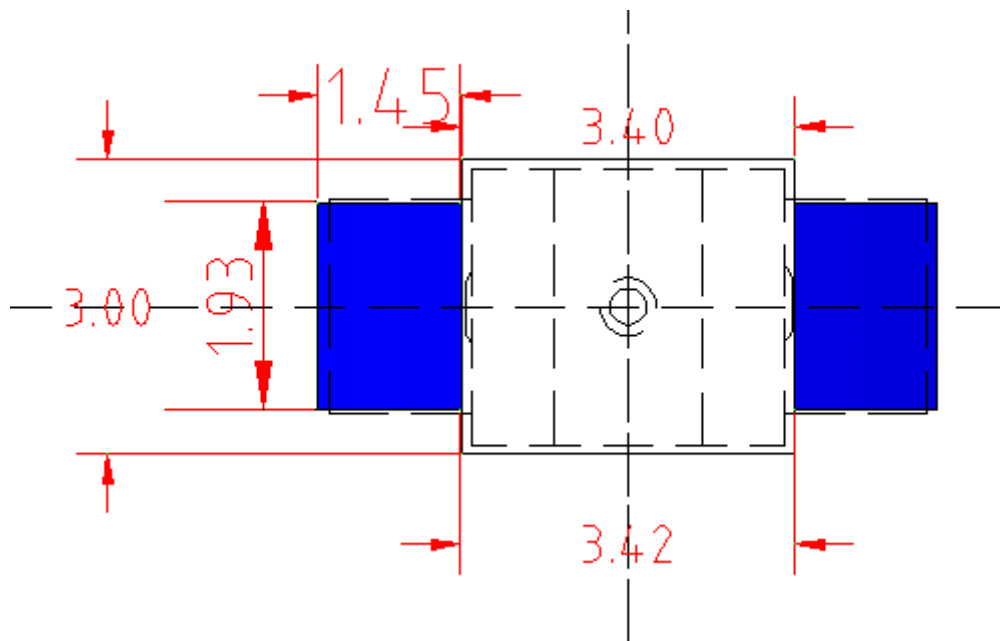
Figure4. Relative Luminosity VS. Radiation Angle

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

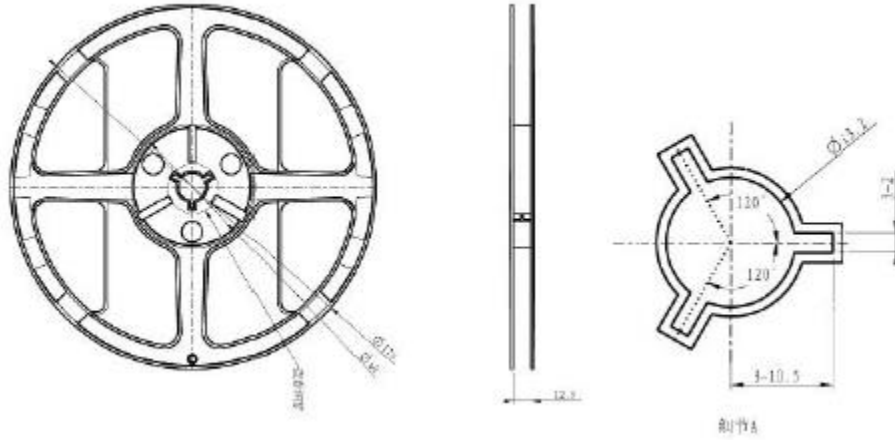


Units: mm

Tolerance: ± 0.2mm

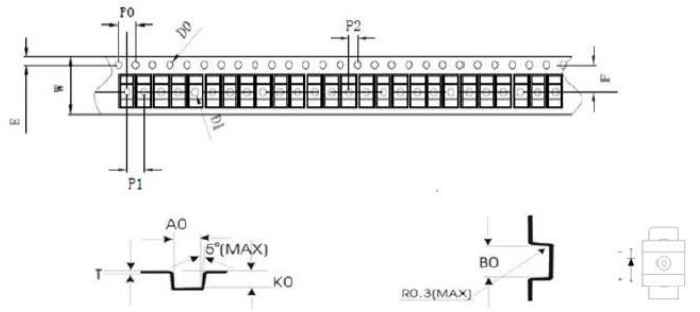
Packing

Reel Dimension:



Unit: mm

Tape Dimension:



Symbol	A0	B0	K0	P0	P1	P2	T
Spec	3.10±0.1	6.45±0.05	2.15±0.05	4.0±0.1	4.0±0.1	2.00±0.05	0.23±0.03
Symbol	E	F	D0	D1	W	10P0	
Spec	1.75±0.10	5.5±0.05	1.5±0.1	1.5±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	$\Phi_v=8.5\text{lm typ. @ }20\text{mA}$, CCT: 6020K typ.	2,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP670R-IW-CW	V1.0	08/11/2017
Update Luminous Flux Φ_V Bins due to chip brightness improvement	V1.1	04/24/2021

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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.