

QT-Brightek PLCC2 Series

PLCC2 Reverse Mount LED

Part No.: QBLP670R-R

670R: Reverse Mount PLCC-2

Product: QBLP670R-R	Date: September 16 2024	Page 1 of 9
	Version# 2.0	

Table of Contents:

Introduction 3

Electrical / Optical Characteristic (Ta=25 °C) 4

Absolute Maximum Rating 4

Characteristic Curves (Ta=25°C) 5

Solder Profile & Footprint 6

Packing 7

Labeling 8

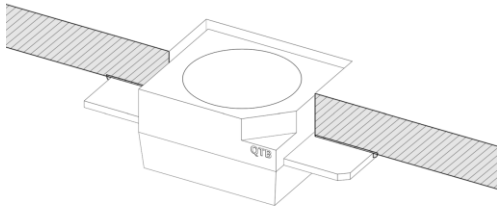
Ordering Information 9

Disclaimer 9

Introduction

Feature:

- Package in tape and reel
- Clear lens
- Ultra bright reflector type PLCC2 LED
- AllnGaP technology
- Beam angle: 120 degree typ.
- Reverse mount



Application:

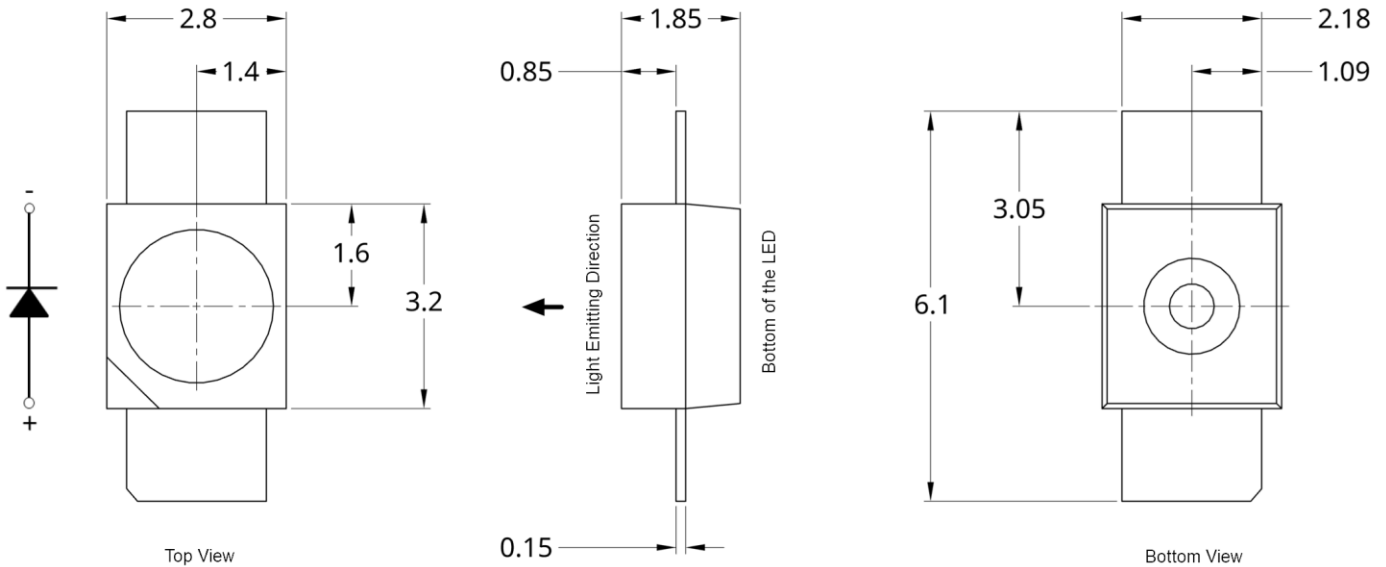
- Status indication
- Industrial equipment backlighting
- Architecture lighting

Certification & Compliance:

- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.2mm

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.	Max.
QBLP670R-R	Red	20	2.1	2.4	615	621	630	490	680	830

Absolute Maximum Rating

Chip Material	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)**
AlInGaP	72	30	100	5	-40 to +85	-40 to +100	260

*Pulse width ≤ 0.1msec, duty ≤ 1/10

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

Forward Voltage V_F @ I_F=20mA

Bin	Min.	Max.	Unit
V1B	1.5	1.8	V
V1C	1.8	2.1	
V2A	2.1	2.4	

Luminous Intensity I_V @ I_F=20mA

Bin	Min.	Max.	Unit
25	490	640	mcd
26	640	830	
27	700	830	

Dominant Wavelength λ_D @ I_F=20mA

Bin	Min.	Max.	Unit
A5	615	620	nm
R1	620	625	
R2	625	630	

Characteristic Curves (Ta=25°C)

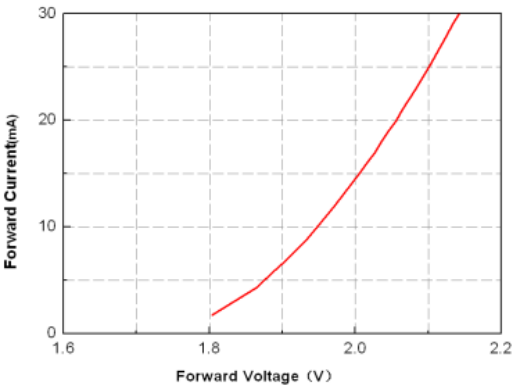


Figure1. Forward Current VS. Forward Voltage

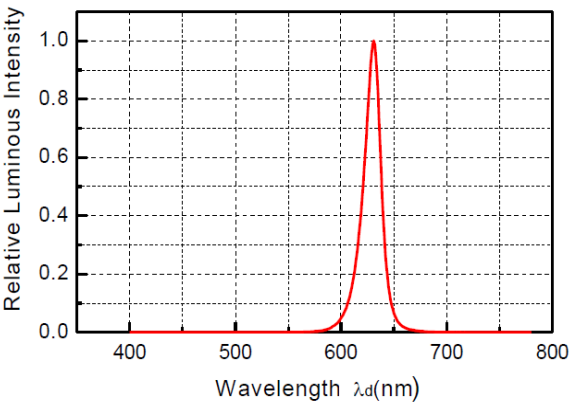


Figure2. Relative Luminous Intensity VS Wavelength

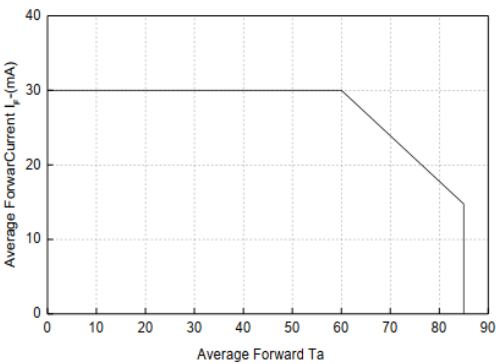


Figure3. Forward Current vs. Ambient Temperature

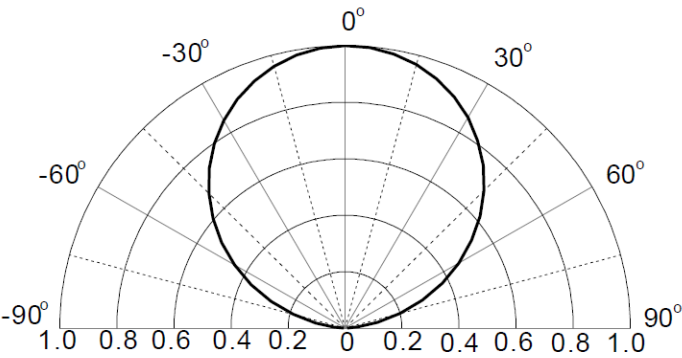
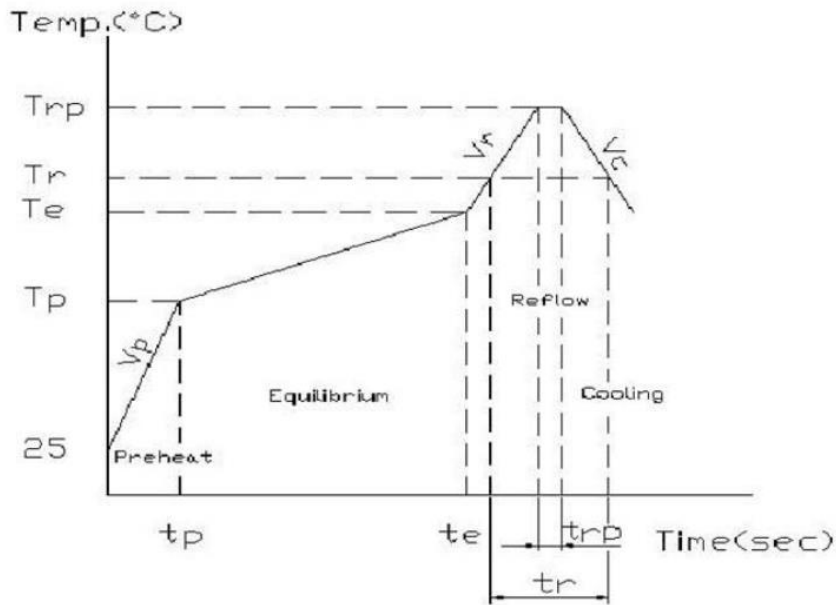


Figure4. Relative Luminosity VS. Radiation Angle

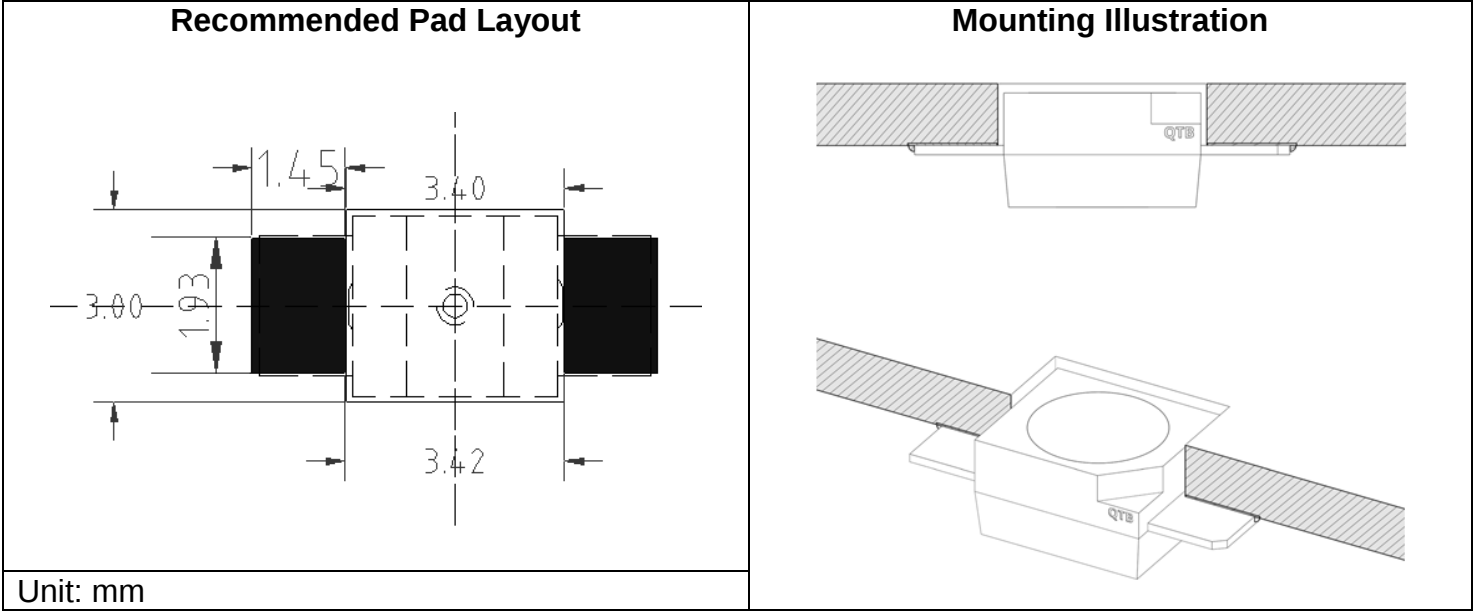
Solder Profile & Footprint

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



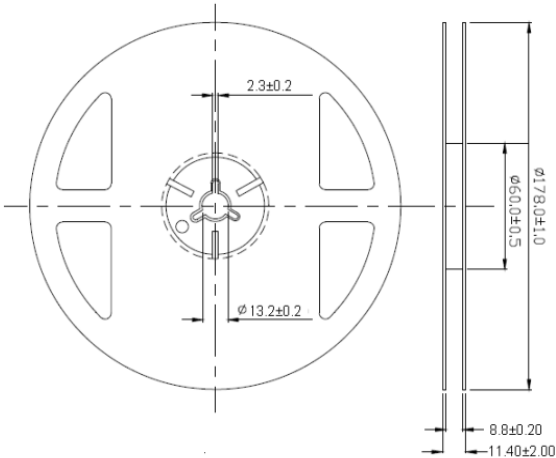
IR-reflow Condition (Pb free)

Area	Title	Symbol	Min	Max	Unit
(1)Preheat	Ramp-up rate	Vp	1	5	°C/sec
	temperature	Tp	150	–	°C
	time	tp	–	–	sec
(2)Equilibrium	Ramp-up rate	Ve	–	–	°C/sec
	temperature	Te	150	200	°C
	Time	te	60	120	sec
(3)Reflow	Ramp-up rate	Vr	1	5	°C/sec
	temperature	Tr	220	–	°C
	Time	tr	–	60	sec
	Peak temperature	Trp	–	260	°C
	Peak time	trp	–	10	sec
(4)Cooling	Ramp-down rate	Vc	3	6	°C/sec



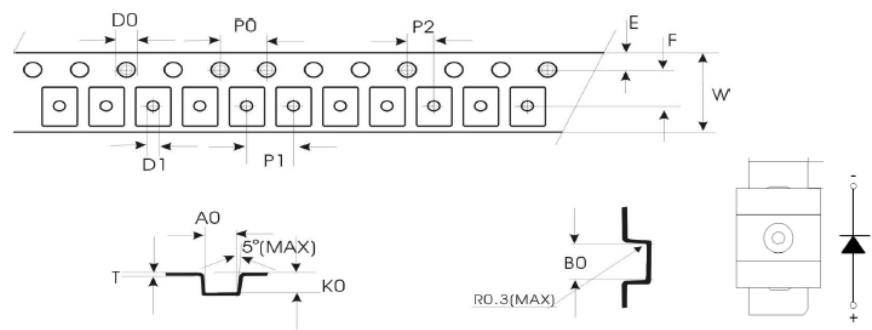
Packing

Reel Dimension:



Unit: mm

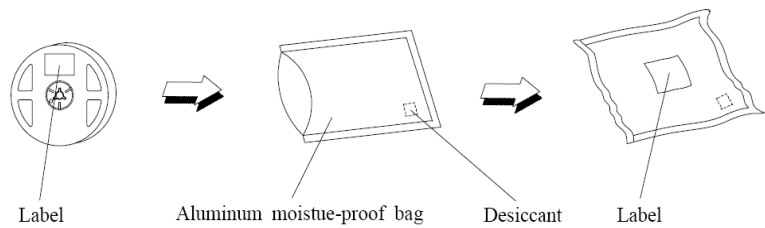
Tape Dimension:



Symbol	A0	B0	K0	P0	P1	P2
Spec	3.1±0.1	6.45±0.05	2.15±0.05	4.0±0.1	4.0±0.1	2.00±0.05
Symbol	E	F	D0	D1	W	T
Spec	1.75±0.1	5.5±0.1	1.5±0.1	1.5±0.1	12±0.1	0.23±0.03

Unit: mm

Packaging Specifications:



Labeling

QT-Brightek

Part No:

Customer P/N:

Item:

Q'ty:

Vf:

Iv:

WI:

Date:

Made in China

Ordering Information

Orderable Part #	Spec Range	Quantity per reel
QBLP670R-R	Iv=680mcd typ. @ 20mA, , λ_D =615nm to 630nm	2,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP670R-R	V1.0	06/13/2017
Update drawing and spec	V2.0	09/16/2024

Disclaimer

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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.