

# QT-Brightek PLCC Series

## PLCC6 LED

Part No.: QBLP679E-XXK

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## Introduction

**Feature:**

- Package in tape and reel
- Ultra bright PLCC6
- InGaN technology
- 120 degree viewing angle

**Description:**

This PLCC6 LEDs have a height profile of 1.60mm. Combination of high brightness output and robust package, this LED is ideal for architecture lighting, status indication, and general application.

**Application:**

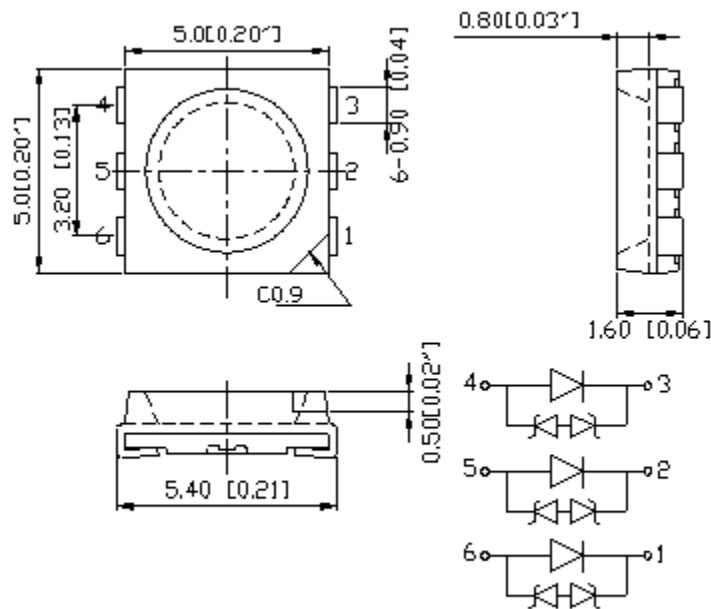
- Status indication
- Industrial equipment backlighting
- Architecture lighting

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.2mm

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

Product	Color	I <sub>F</sub> (mA)*	V <sub>F</sub> (V)		λ <sub>D</sub> (nm)			I <sub>V</sub> (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP679E-IBK	Blue	60	3.3	3.7	462.5	467	472.5	780	1100
QBLP679E-IGK	True Green	60	3.3	3.7	520	525	535	3600	4700

\*Total forward current for three dies

**Absolute Maximum Rating**

Material	P <sub>d</sub> (mW)	I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)*	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)	T <sub>SO L</sub> (°C)**	ESD (V)
InGaN	324	90	125	5	-40 ~ +80	-40 ~ +85	260	HBM 12000

\*Duty 1/8 @ 1KHz

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

**Forward Voltage V<sub>F</sub> for InGaN @ I<sub>F</sub>=60mA**

Bin	Min.	Max.	Unit
f	2.8	3.1	V
g	3.1	3.4	
h	3.4	3.7	

**Dominant Wavelength λ<sub>D</sub> for Blue @ I<sub>F</sub>=60mA**

Bin	Min.	Max.	Unit
D	462.5	467.5	nm
E	467.5	472.5	

**Dominant Wavelength λ<sub>D</sub> for Green @ I<sub>F</sub>=60mA**

Bin	Min.	Max.	Unit
G	520	525	nm
H	525	530	
I	530	535	

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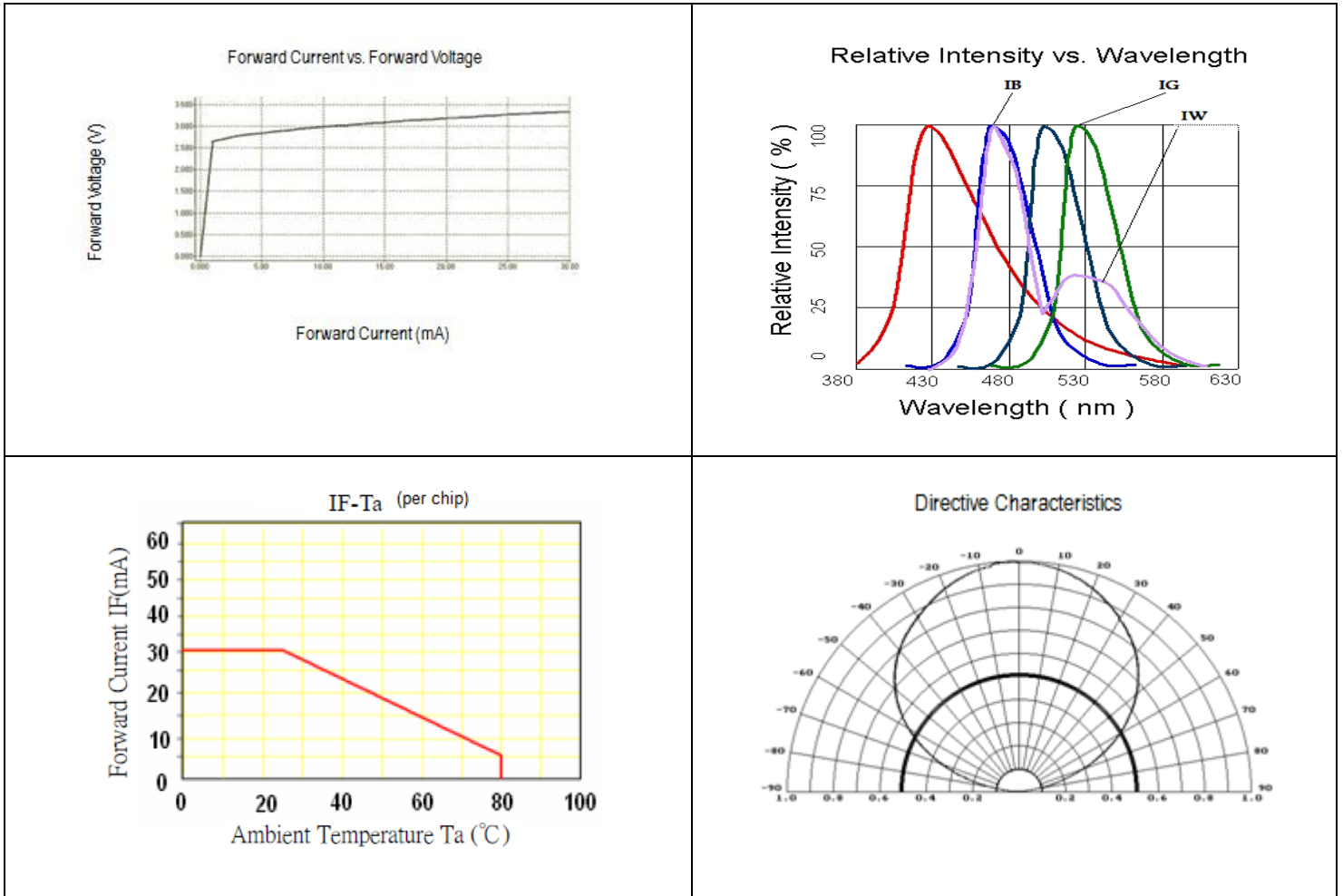
**Luminous Intensity  $I_V$  @  $I_F=60mA$** 

Bin	Min.	Max.	Unit
14	780	1000	mcd
15	1000	1300	
16	1300	1700	
17	1700	2200	
18	2200	2800	
19	2800	3600	
20	3600	4600	
21	4600	6000	

**Note:**Tolerance of measurement of forward voltage:  $\pm 0.05V$ Tolerance of measurement of luminous intensity:  $\pm 15\%$ Tolerance of measurement of dominant wavelength:  $\pm 1nm$ 

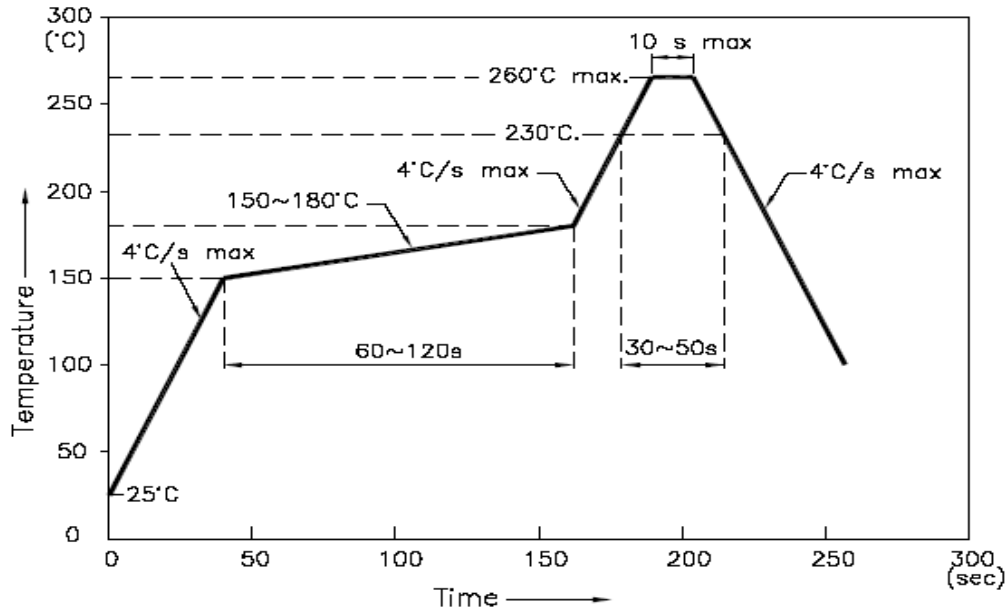
All parameters are measured by QT-BrigtheK instrument

## Characteristic Curves

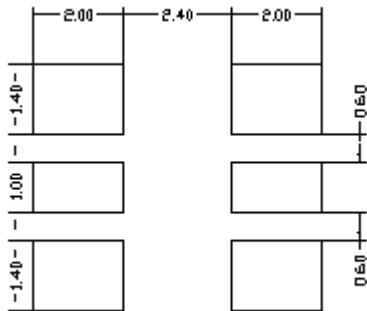


## Solder Profile & Footprint

- 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):



### Recommend Pad Layout

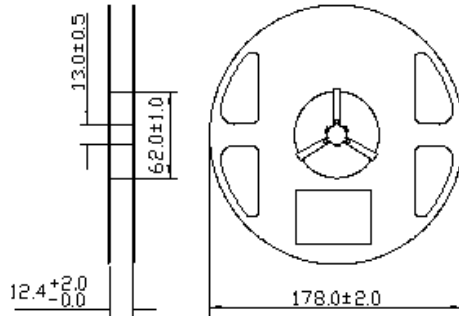


Units: mm

tolerance: +/- 0.2mm

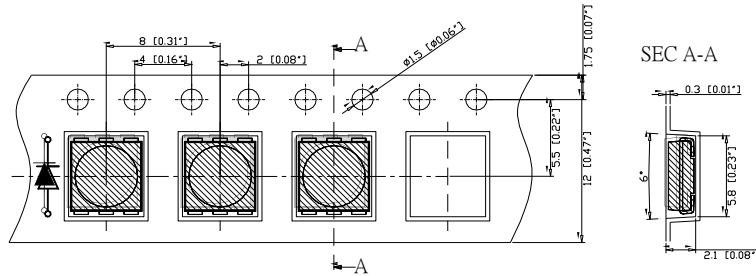
## Packing

Reel Dimension:



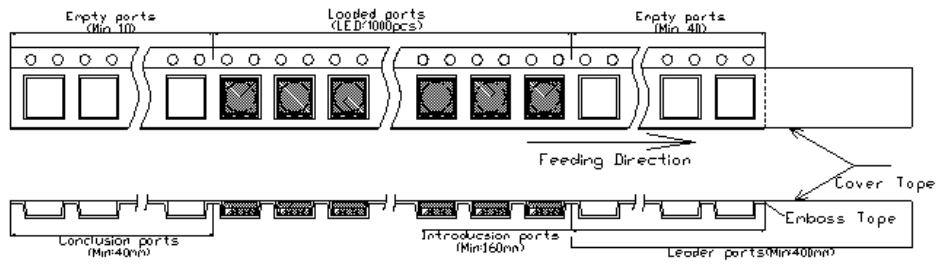
Unit: mm

Tape Dimension:

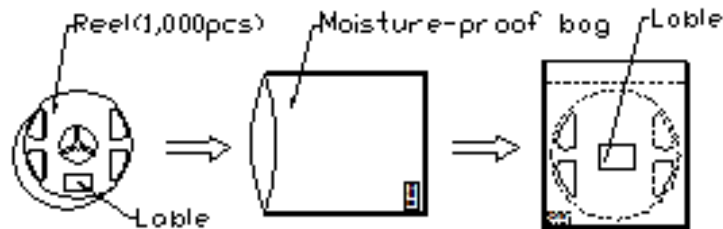


Unit: mm

Arrangement of Tape:



Packaging Specifications:



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**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
QBLP679E-IBK	QBLP679E-IBK	Iv=780mcd min. @ 60mA/ Color=462.5nm to 472.5nm	1,000 units
QBLP679E-IGK	QBLP679E-IGK	Iv=3600mcd min. @ 60mA/ Color=520nm to 535nm	1,000 units

## Revision History

Description:	Revision #	Revision Date
New Release of QBLP679E-XXK_series	V1.0	02/14/2012
New format/ Amend the typical brightness	V1.1	06/25/2013
Update package drawing	V2.0	03/19/2014

## Disclaimer

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
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.