

## **QT-Brightek PLCC Series**

### **Dome Type PLCC4 LED**

**Part No.: QBLP677AD-XXM**

**AD = Common Anode with Dome Lens**

**XX = Color Code**

**M = 30mA Sorting**

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## Introduction

### Feature:

- Water clear lens
- Ultra bright PLCC4 LED
- InGaN technology
- Viewing Angle: 30° typ.
- Common Anode
- MSL 3
- Height profile: 3.6mm

### Application:

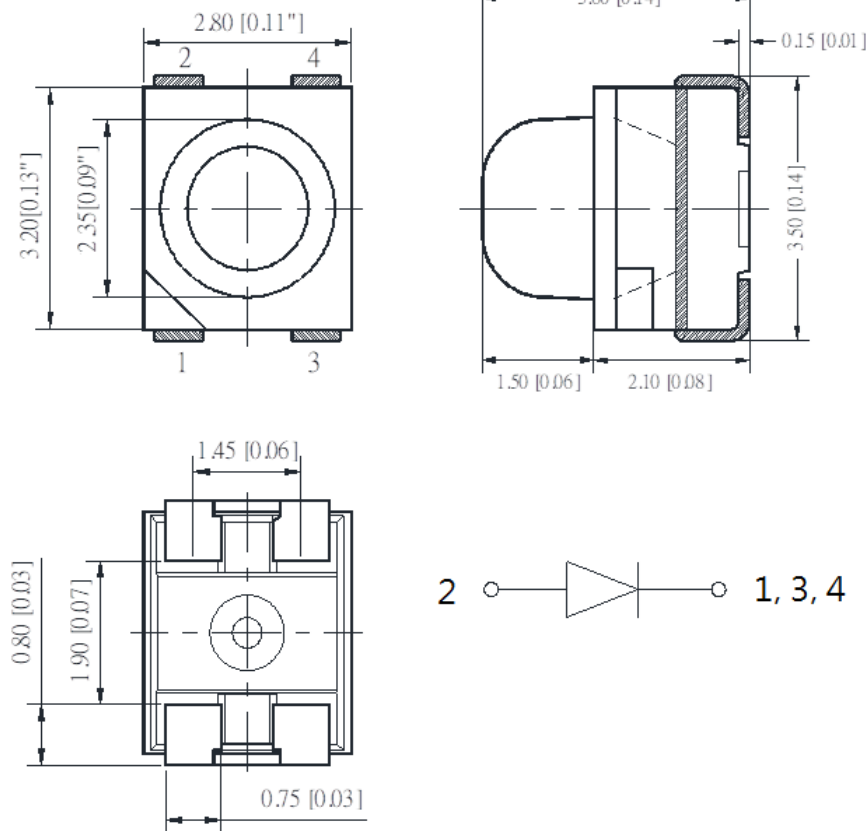
- Status indication
- Industrial equipment backlighting
- Signage
- Display

### Certification & Compliance:

- 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.
QBLP677AD-IGM	True Green	30	3.0	3.7	515	520	530	6800	14000
QBLP677AD-IBM	Blue	30	3.3	3.7	460	465	470	1000	1650

## 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)**
InGaN (IGM)	148	40	125	5	-40 ~ +90	-40 ~ +90	240
InGaN (IBM)	111	30	125	5	-40 ~ +85	-40 ~ +85	240

\*Duty 1/8 @ 1KHz

\*\*IR Reflow for no more than 8 sec @ 240 °C

## Forward Voltage V<sub>F</sub> for True Green (IGM) @ I<sub>F</sub>=30mA

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

## Forward Voltage V<sub>F</sub> for Blue (IBM) @ I<sub>F</sub>=30mA

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

## Luminous Intensity I<sub>V</sub> for Green (IGM) @ I<sub>F</sub>=30mA

Bin	Min.	Max.	Unit
b	6800	8800	mcd
c	8800	11200	
d	11200	14200	
e	14200	18000	
f	18000	22500	

## Luminous Intensity I<sub>V</sub> for Blue (IBM) @ I<sub>F</sub>=30mA

Bin	Min.	Max.	Unit
T	1000	1250	mcd
U	1250	1600	
V	1600	2000	
W	2000	2500	
X	2500	3200	

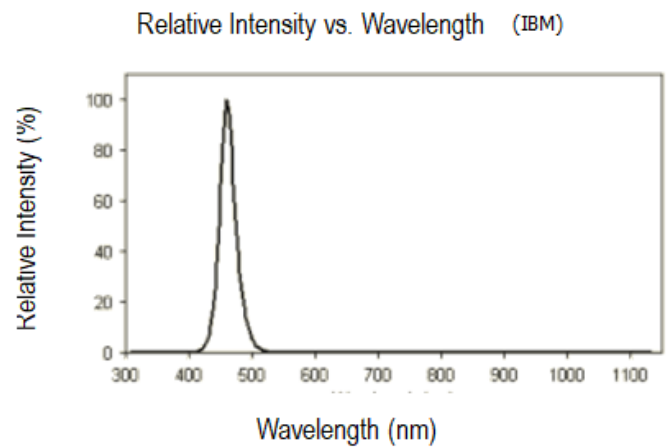
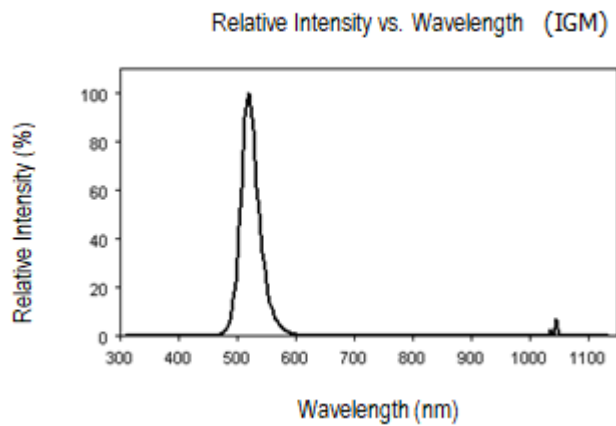
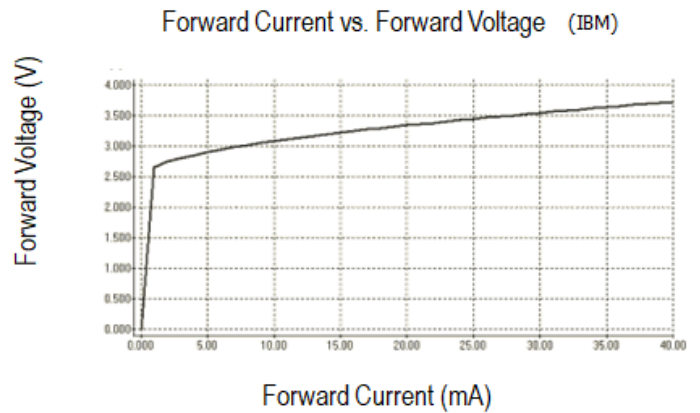
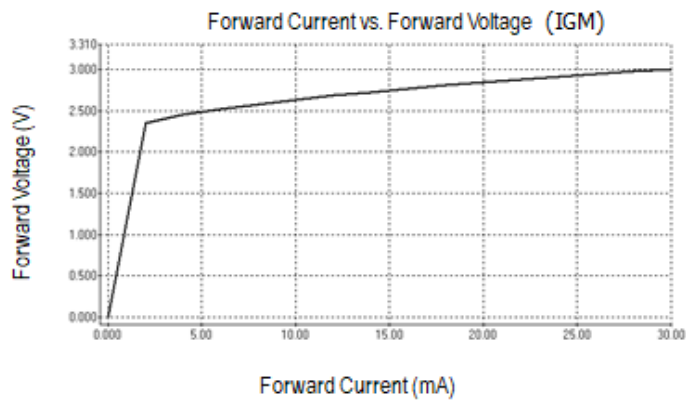
**Dominant Wavelength  $\lambda_D$  for True Green (IGM) @  $I_F=30\text{mA}$** 

Bin	Min.	Max.	Unit
S	515	517.5	nm
T	517.5	520	
U	520	522.5	
V	522.5	525	
W	525	527.5	
X	527.5	530	

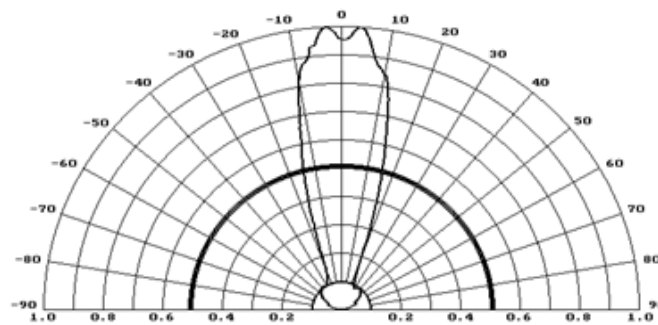
**Dominant Wavelength  $\lambda_D$  for Blue (IBM) @  $I_F=30\text{mA}$** 

Bin	Min.	Max.	Unit
E	460	462.5	nm
F	462.5	465	
G	465	467.5	
H	467.5	470	

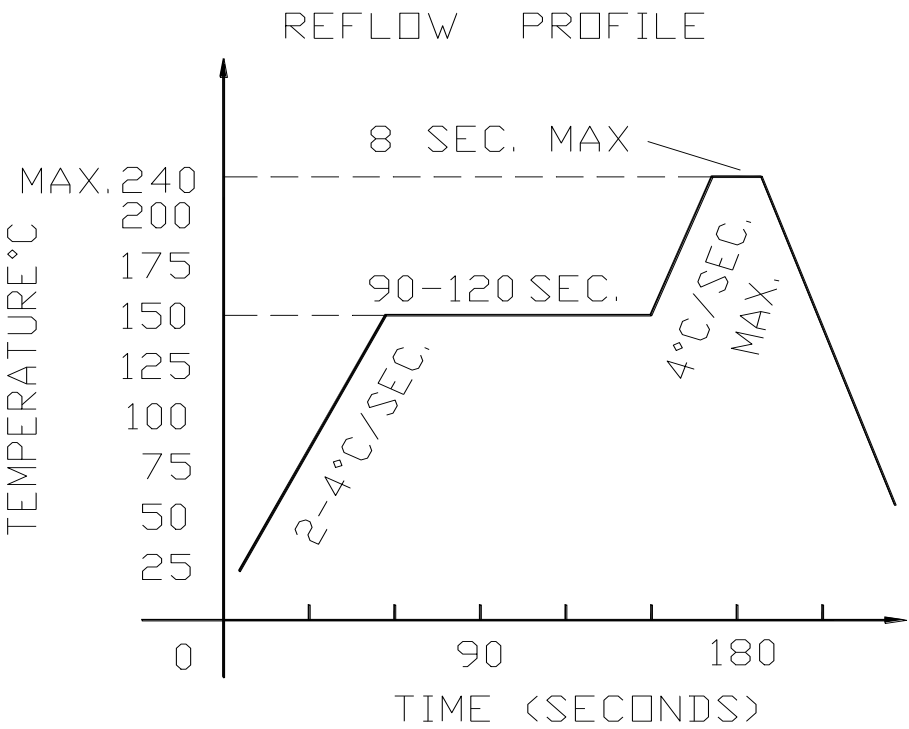
## Characteristic Curves



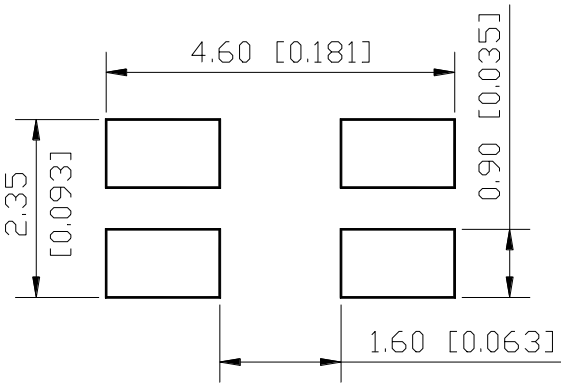
Directive Characteristics



## Solder Profile & Footprint



### Recommend Pad Layout



Units: mm

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## Handling Precautions

1. It is recommended to store the products in sealed and anti-static bags with desiccant inside at the following condition:

- Humidity: <60% RH
- Temperature: 5°C~30°C

2. Shelf life in sealed bag: 12 month at 5°C~30°C and < 60% R.H

3. After the package is opened:

3.1 The products should be used within a week (168 hours)

3.2 Or product should be stored at  $\leq 20\%$  RH and (5°C~30°C) with zip-lock sealed bag

3.3 It is recommended to bake before soldering when the package is unsealed after 72hrs;

3.3.1 Baking condition (Tape and Reel Type):  $60\pm 3^\circ\text{C}$  (24~36 hrs) and < 5% RH

3.4 Products require baking before soldering/mounting if **3.1** or **3.2** is not met. Baking condition refers to **3.3.1**

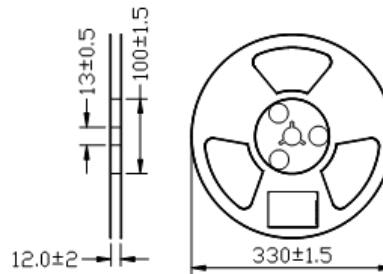
4. If the product is not used within 3 months since manufacturing date, it is recommended to bake for 24 hrs @ 60°C before use.

5. If the product is not used after 3 months since manufacturing date, it is recommended to bake for 36~48 hrs @ 60°C before use.



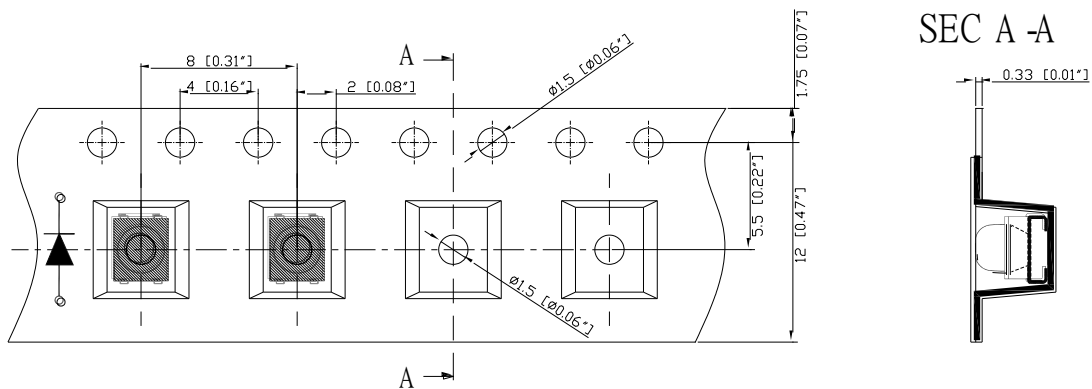
## Packing

### Reel Dimension:



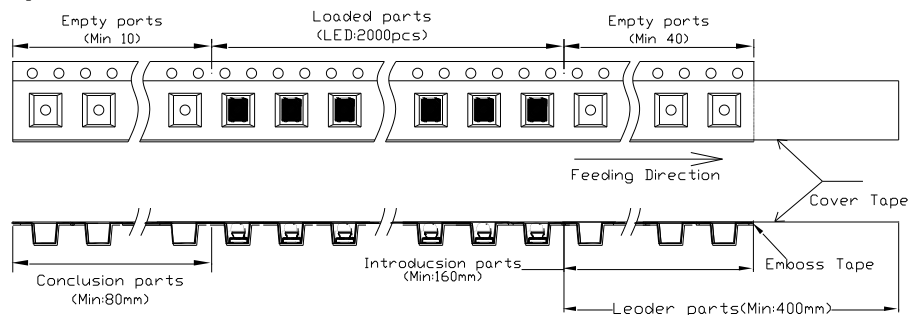
Unit: mm

### Dimensions of Tape:

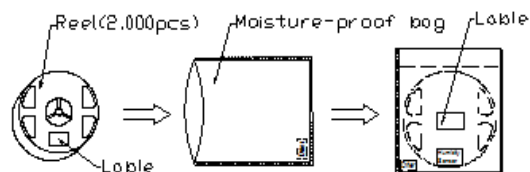


Unit: mm

### Arrangement of Tape:



### Packaging Specifications:



## Labeling


**QT-Brightek**




**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
QBLP677AD-IGM	QBLP677AD-IGM	Iv=14000mcd typ., @ If=30mA, $\lambda_D$ =515nm to 530nm	2000 units
QBLP677AD-IBM	QBLP677AD-IBM	Iv=1650mcd typ., @ If=30mA, $\lambda_D$ =460nm to 470nm	

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## Revision History

Description:	Revision #	Revision Date
New Release of QBLP677AD-XXM	V1.0	10/20/2017
Update brightness for IGM	V1.1	11/22/2021

## 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.