

QT-Brightek PLCC Series

Dome Type PLCC4 LED

Part No.: QBLP677BD-IGD

**BD: Common Cathode with Dome Lens
D: 50mA Testing Current**



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Introduction

Feature:

- Water Clear lens
- Ultra bright PLCC4 LED
- Common cathode
- Viewing Angle: 30° typ.
- MSL 3
- Height profile: 3.6mm

Application:

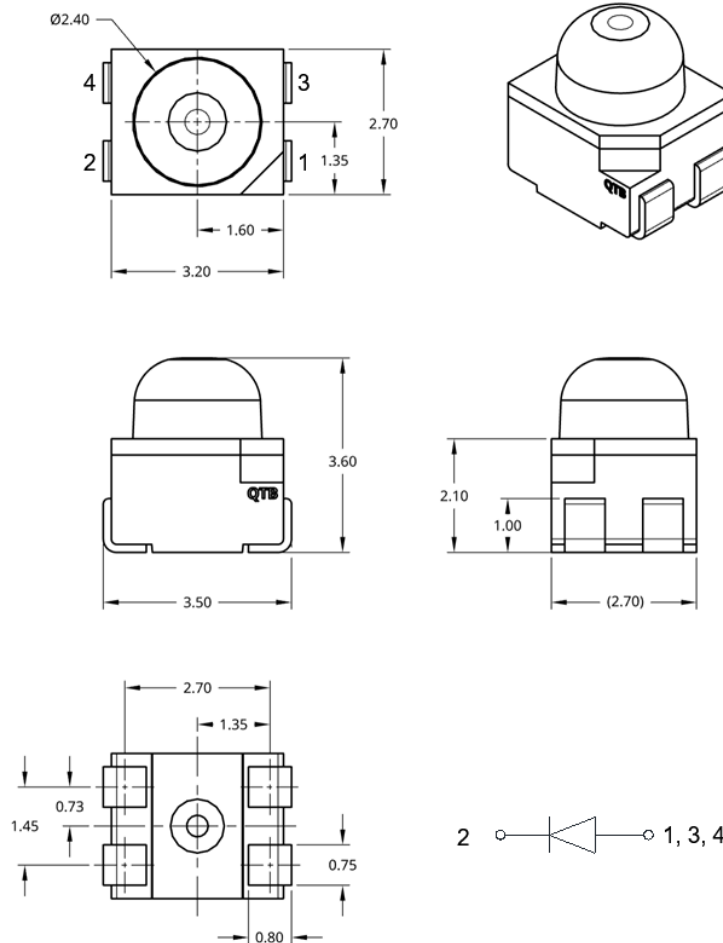
- Warning light
- Emergency light
- Signal Lighting

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)			λ _P (nm)	I _V (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Typ.	Min.	Typ.
QBLP677BD-IGD	Green	50	3.2	3.7	520	525	530	520	16000	32000

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)**
InGaN	185	50	160	5	-40 ~ +85	-40 ~ +90	240

*Duty 1/10 @ 1KHz

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

Forward Voltage V_F @ I_F=50mA

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

Luminous Intensity I_V @ I_F=50mA

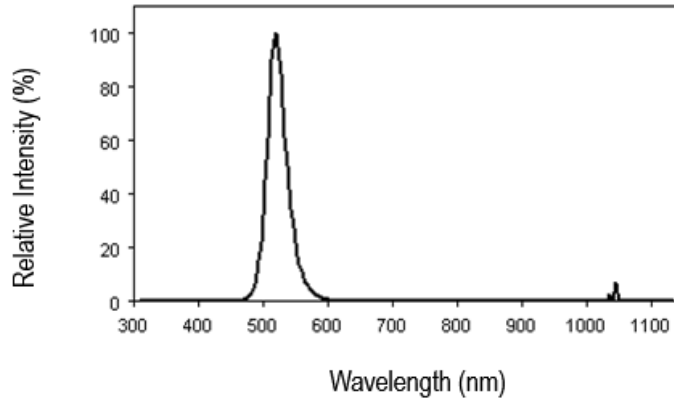
Bin	Min.	Max.	Unit
e	16000	20288	mcd
f	20288	25360	
g	25360	32131	
h	32131	40582	
i	40582	51052	

Dominant Wavelength λ_D @ I_F=50mA

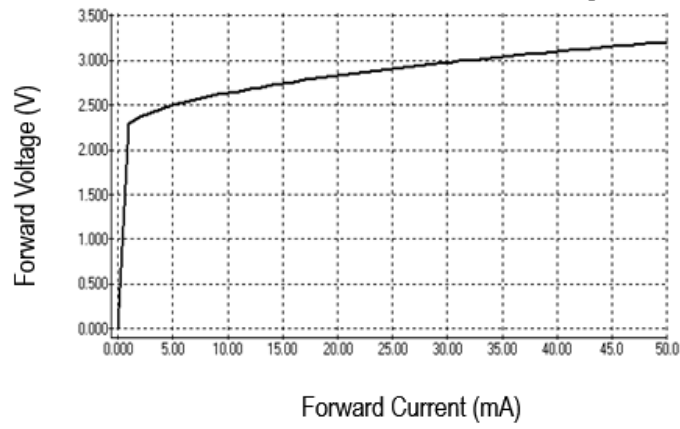
Bin	Min.	Max.	Unit
U	520	522.5	nm
V	522.5	525	
W	525	527.5	
Y	525.7	530	

Characteristic Curves

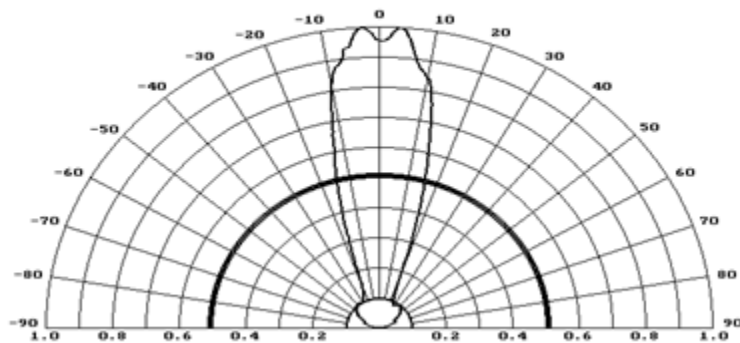
Relative Intensity vs. Wavelength



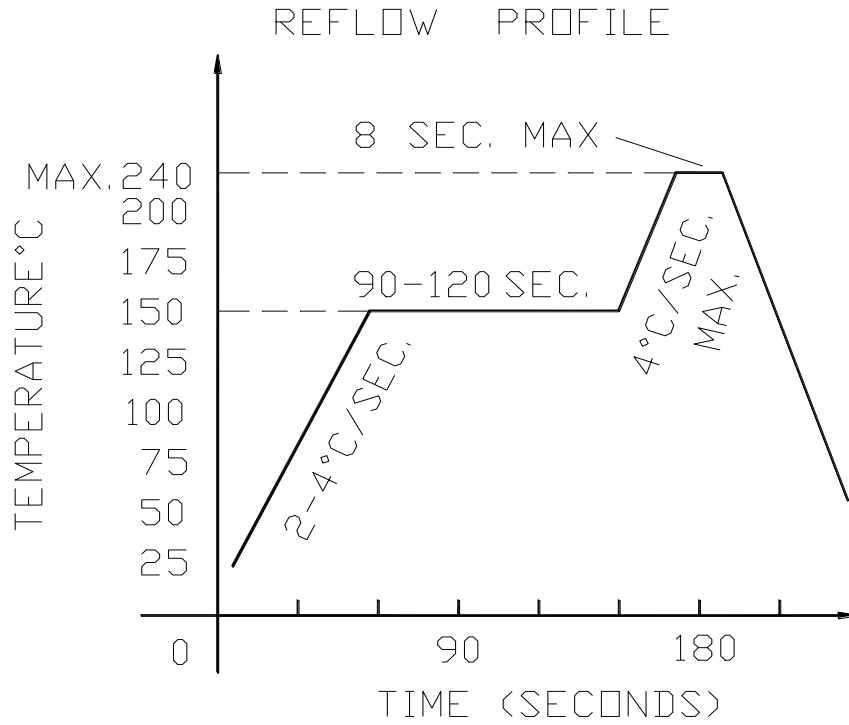
Forward Current vs. Forward Voltage



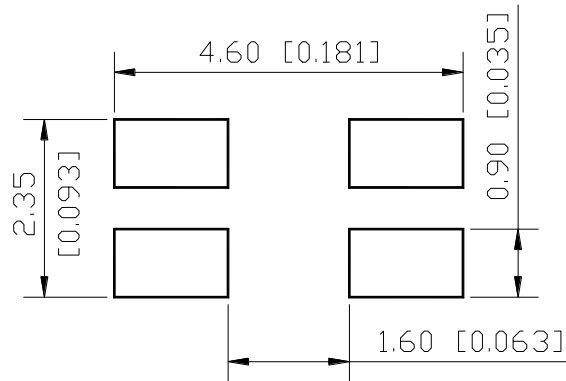
Directive Characteristics



Solder Profile & Footprint



Recommend Pad Layout



Units: mm

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**

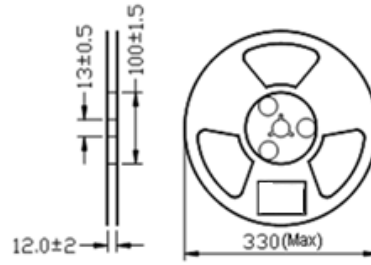
4. If the product is not used within 3 months since manufacturing date, it is recommended to bake for 24 hrs @ 60°C before use.

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.

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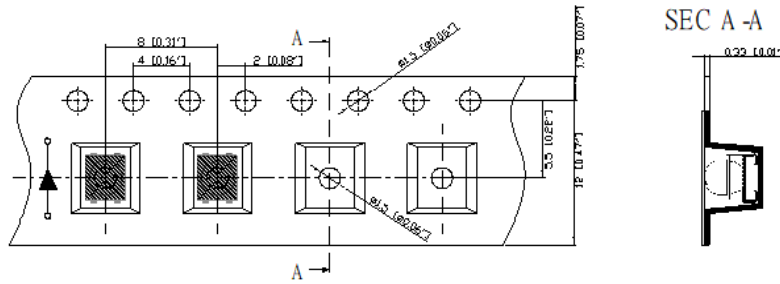
Packing

Reel Dimension:



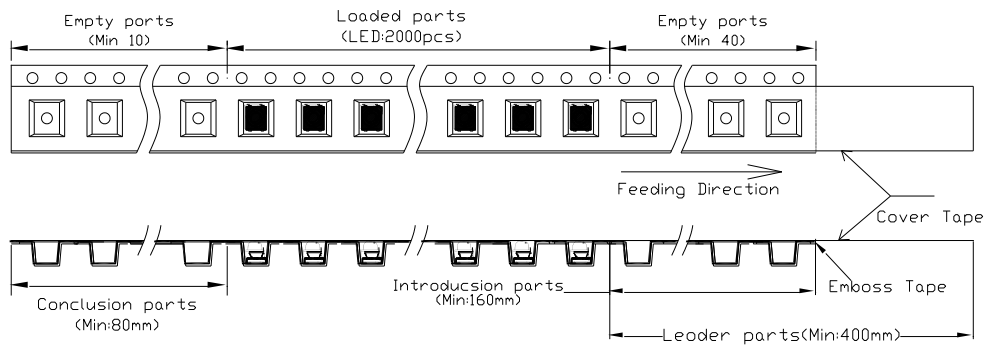
Unit: mm

Dimensions of Tape:

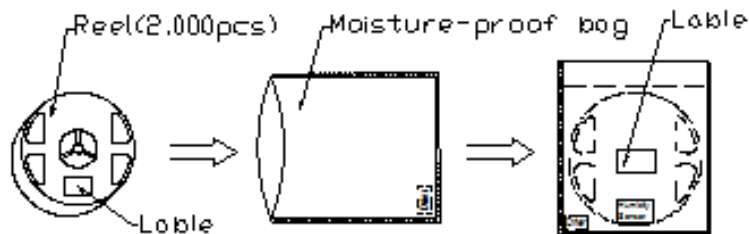


Unit: mm

Arrangement of Tape:



Packaging Specifications:



Labeling



Part No: _____
Customer P/N: _____
Item: _____
Q'ty: _____
Vf: _____
Iv: _____
WI: _____
Date: _____

Made in China

Ordering Information

Orderable Part #	Spec Range	Quantity per Reel
QBLP677BD-IGD	Iv=32000mcd typ., $\lambda_D=520\text{nm to }530\text{nm}$ @ I _F =50mA	2000 units



Revision History

Description:	Revision #	Revision Date
New Release of QBLP677BD-IGD	V1.0	11/26/2025

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.

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