

**QT-Brightek Side View LED Series**

**SMD 0602 Side View Red LED**

**Part No.: QBLP617-R3**

**R3: 625 to 639nm (AlInGaP)**



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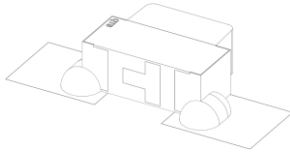
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## Introduction

### Feature:

- Water clear lens
- Package in tape and reel
- AllnGaP technology
- Viewing Angle: 140° typ.
- Side view (right angle) 0602 LED package



### Application:

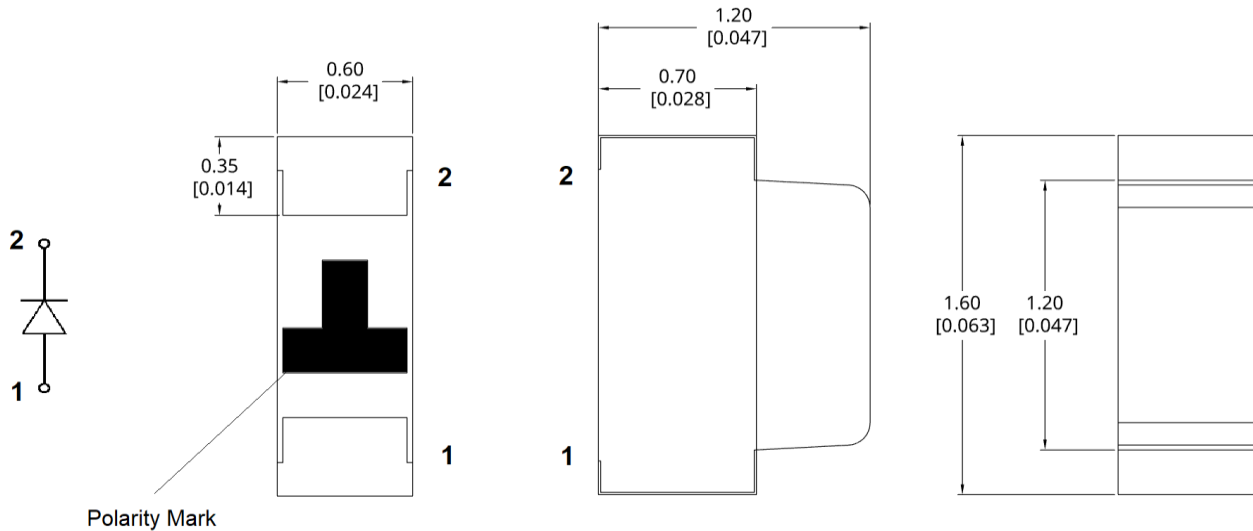
- Status indication
- Back lighting application
- General Use

### Certification & Compliance:

- ISO9001
- RoHS Compliant



### Dimension:



Units: mm / tolerance = +/-0.1mm

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

Product	Color	I <sub>F</sub> (mA)	V <sub>F</sub> (V)		λ <sub>D</sub> (nm)			λ <sub>P</sub> (nm)	I <sub>V</sub> (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Typ.	Min.	Typ.
QBLP617-R3	Red	20	2.0	2.5	625	631	639	639	40	60

## 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)**
AllnGaP	75	30	125	5	-40 to +80	-40 to +85	260

\*Duty 1/8 @ 1kHz

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

## Forward Voltage V<sub>F</sub> @ I<sub>F</sub>=20mA

Bin	Min.	Max.	Unit
□	1.7	2.5	V

## Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=20mA

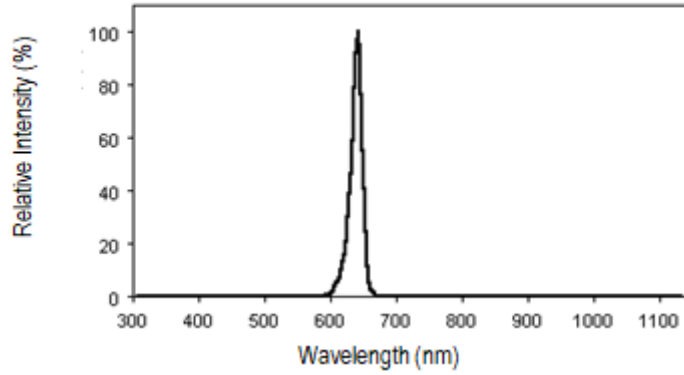
Bin	Min.	Max.	Unit
F	40	50	mcd
G	50	63	
H	63	80	
I	80	100	
J	100	125	

## Dominant Wavelength λ<sub>D</sub> @ I<sub>F</sub>=20mA

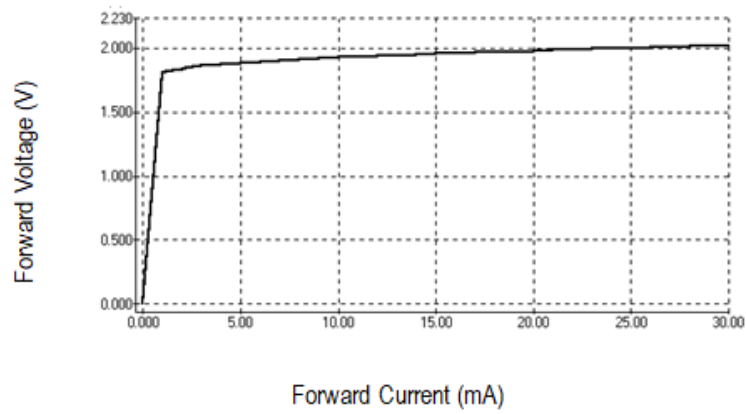
Bin	Min.	Max.	Unit
U	625	630	nm
V	630	635	
W	635	639	

## Characteristic Curves

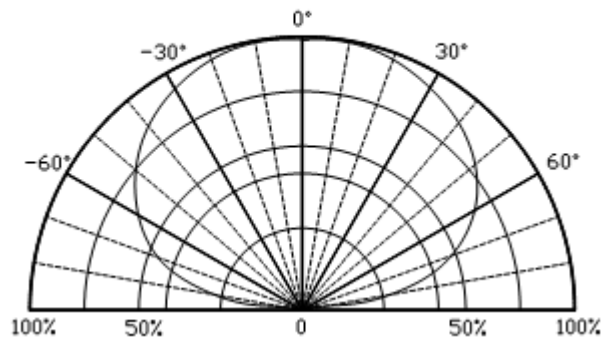
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

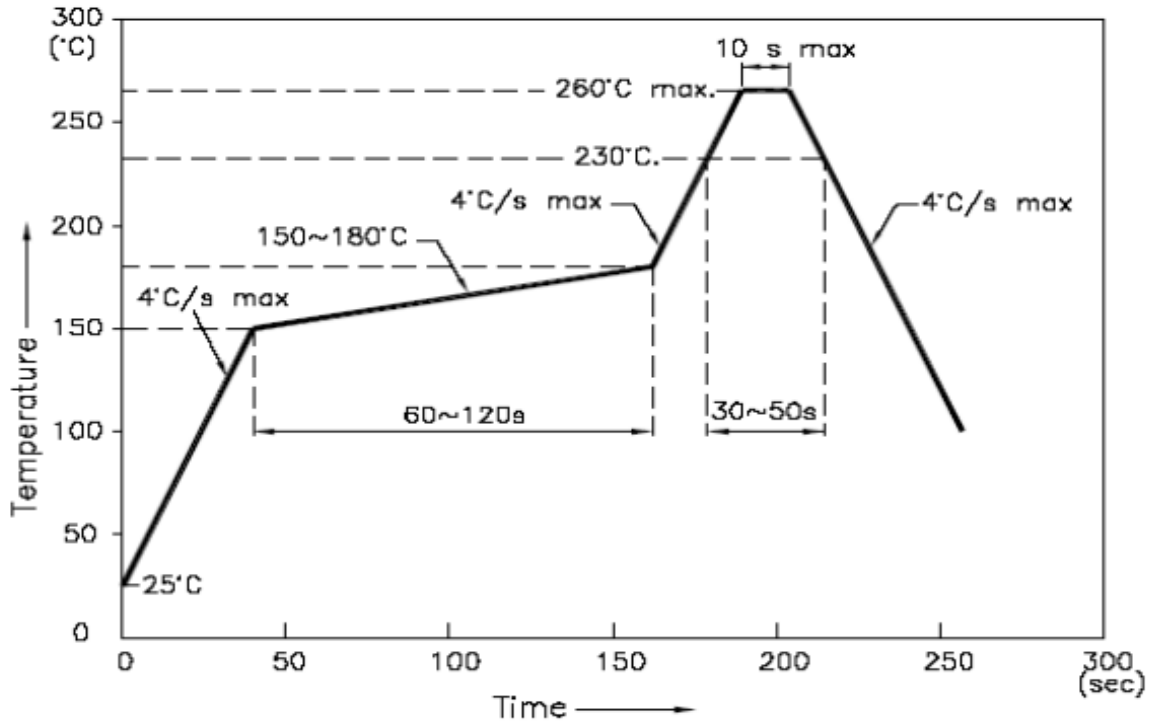


Directive Characteristics

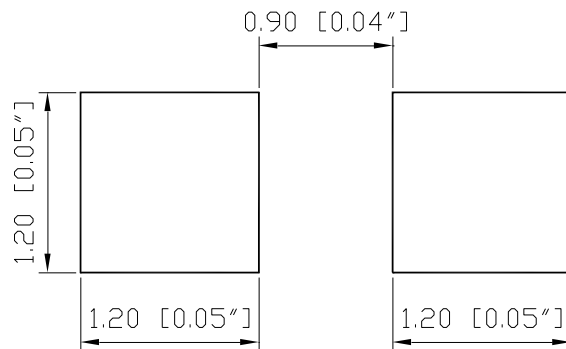


## Solder Profile & Footprint

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



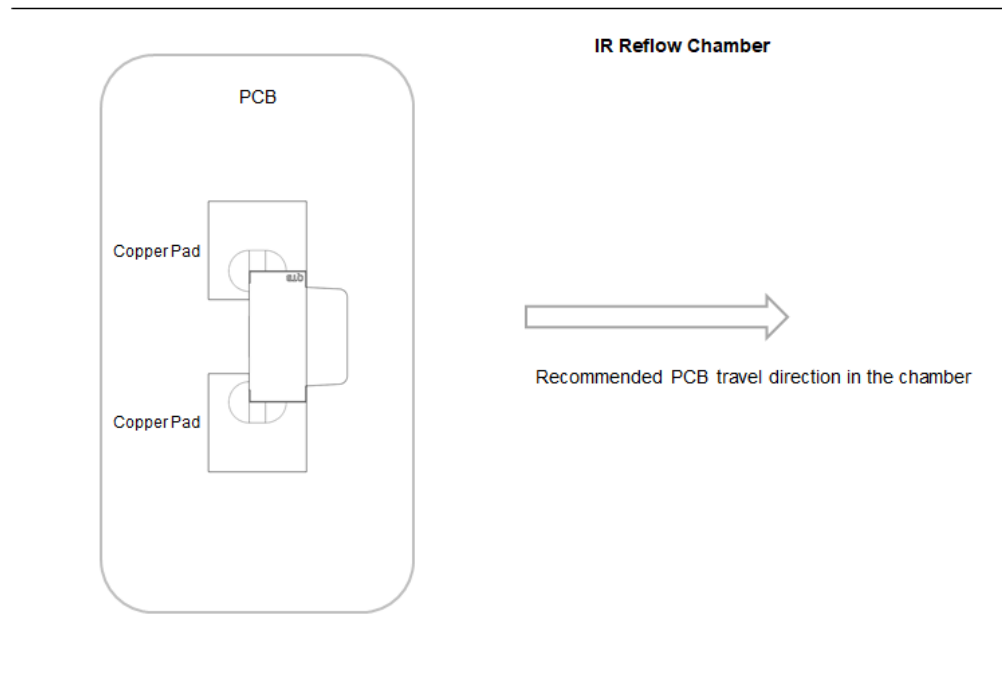
### Recommended Pad Layout



Units: mm

Tolerance:  $\pm 0.1\text{mm}$

- The recommended IR reflow direction for a right angle (side view) SMD led is illustrated below to insure the solder on each lead melts simultaneously during the SMT reflow soldering process.



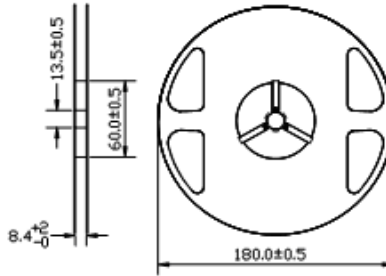
## Mounting the LED on PCB



Note: The amount of solder paste applied as shown in the picture is just for illustration purpose only. When mounting and soldering the LEDs, avoid excess solder paste from overflowing onto or near the epoxy lens.

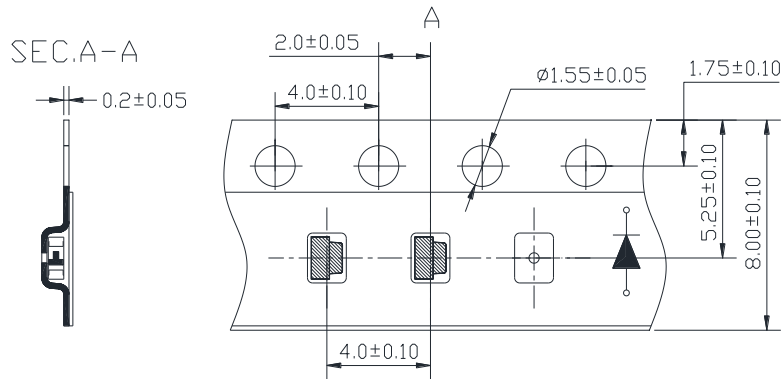
## Packing

### Reel Dimension:



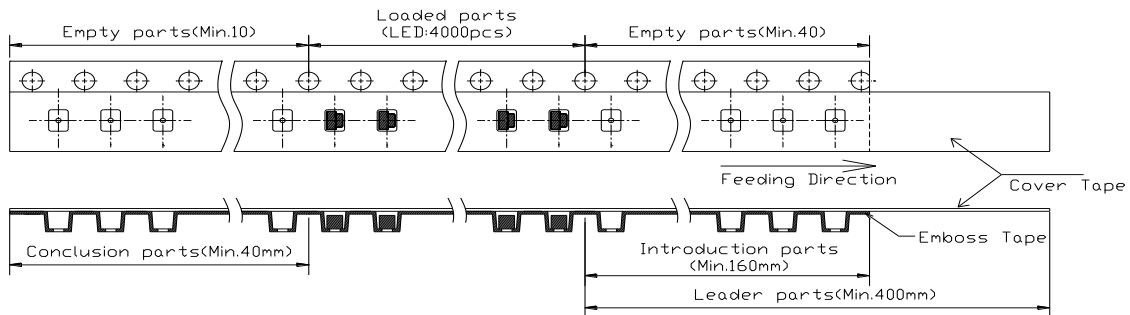
Unit: mm

### Tape Dimension:

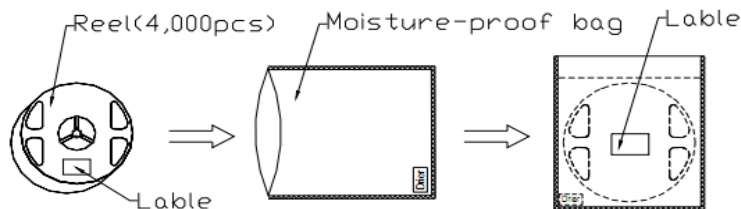


Unit: mm

### 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
QBLP617-R3	Iv=60mcd typ. @ I <sub>F</sub> =20mA, Color=625nm ~ 639nm	4,000 units



## Revision History

Description:	Revision #	Revision Date
New Release of QBLP617-R3	V1.0	08/16/2023

## 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.

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