

# QT-Brightek Chip LED Series

## SMD 0805 LED

**Part No.: QBLP631-S3**

**S3:  $\lambda_P=660\text{nm}$  ( $\lambda_D=642\text{nm}$ )**

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## Introduction

### Feature:

- Clear lens
- Package in tape and reel
- 0805 LED package
- AllInGaP technology
- Viewing Angle: 140 deg typ.

### Description:

These ultra bright 0805 LEDs have a height profile of 0.8mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

### Application:

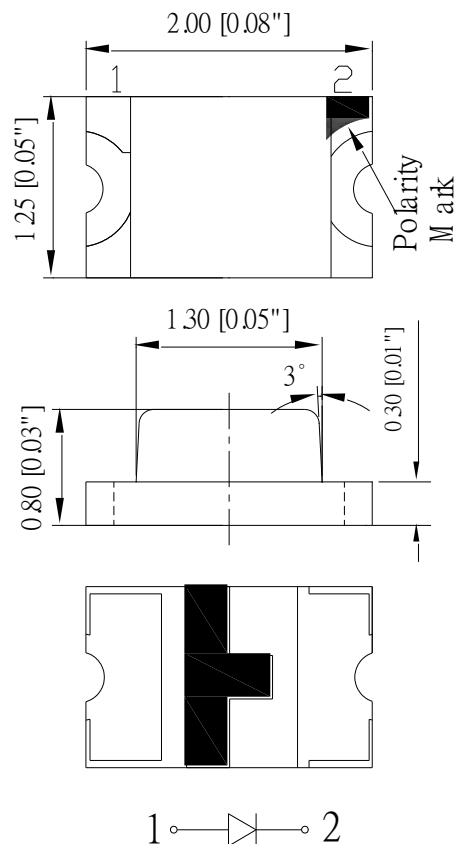
- Status indication
- Back lighting application

### 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)		
			Min.	Typ.	Max.	Typ.	Min.	Typ.	Max.	Min.	Typ.	Max.
QBLP631-S3	Deep Red	20	1.7	1.9	2.5	640	650	660	670	16	25	50

### 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>SOL</sub> (°C)**
AllnGaP	75	30	125	5	-40 ~ +80	-40 ~ +85	260

\*Duty 1/8 @ 1<sub>k</sub>Hz

\*\*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

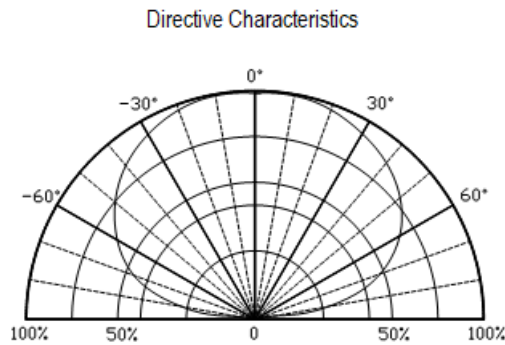
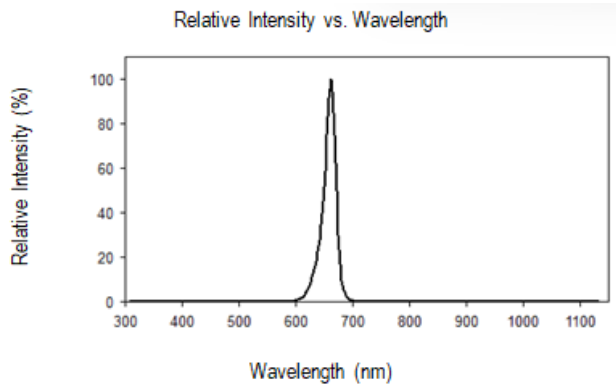
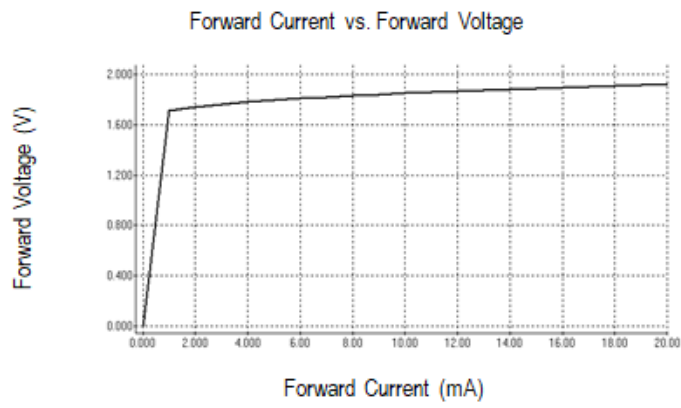
### Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=20mA

Bin	Min.	Max.	Unit
B	16	20	mcd
C	20	25	
D	25	32	
E	32	40	
F	40	50	

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

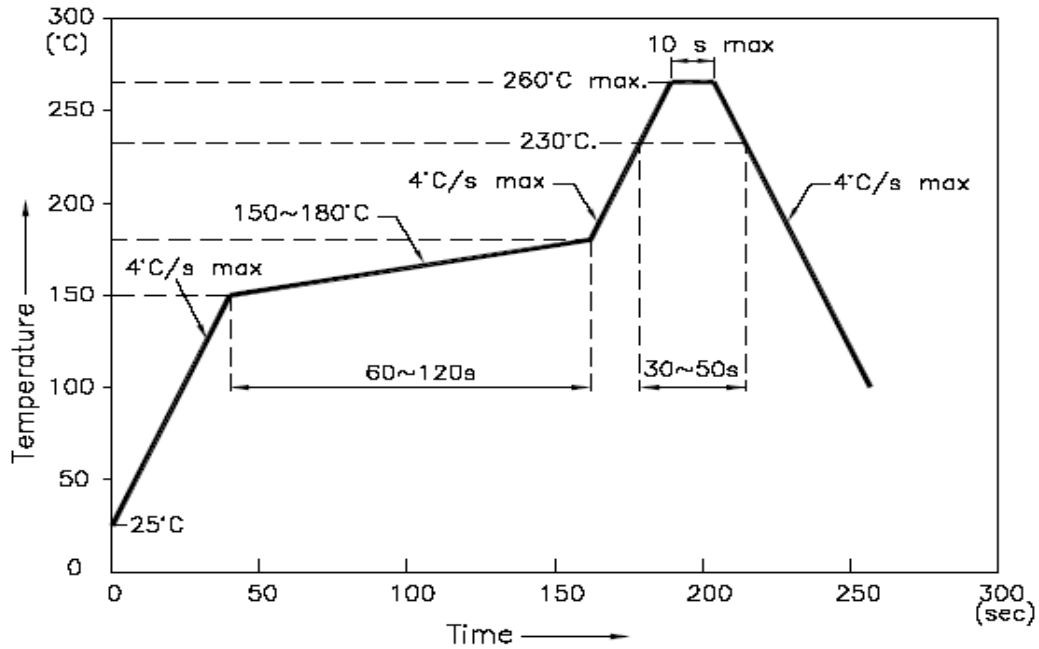
Bin	Min.	Max.	Unit
X	650	660	nm
Y	660	670	

### Characteristic Curves

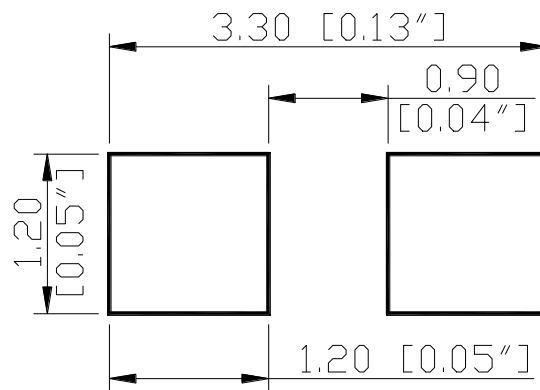


## Solder Profile & Footprint

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



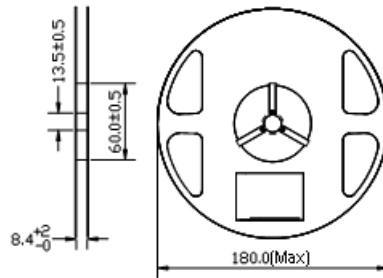
### Recommended Pad Layout



Units: mm

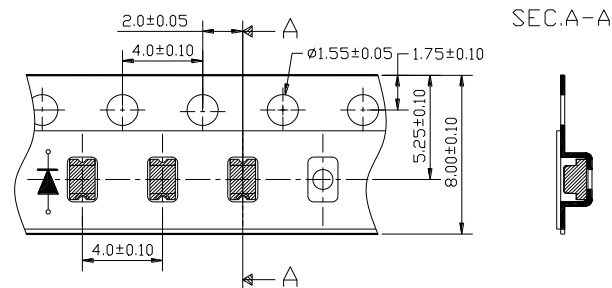
## Packing

Reel Dimension:



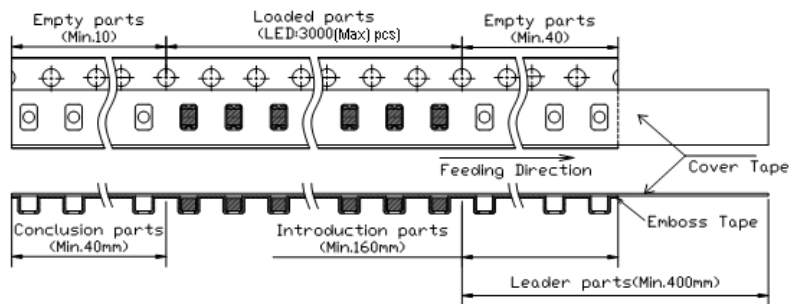
(Unit: mm)

Tape Dimension:

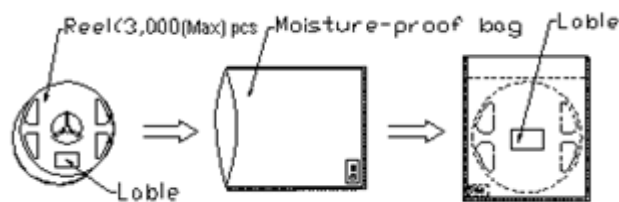


(Unit: mm)

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
QBLP631-S3	Iv=25mcd typ. @ I <sub>F</sub> =20mA / λ <sub>P</sub> =660nm typ., λ <sub>d</sub> =640nm typ.	3,000 units

Product: QBLP631-S3-2943	Date: October 31, 2023	Page 8 of 9
	Version# 1.0	



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## Revision History

Description:	Revision #	Revision Date
New Release of QBLP631-S3	V1.0	10/31/2023



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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.