

**QT-Brightek Chip LED Series**  
**1206 Chip LED with Inner Lens**  
**Part No.: QBLP651-S**

Product: QBLP651-S	Date: May 4, 2022	Page 1 of 9
	Version# 1.0	

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## Introduction

**Feature:**

- Water clear lens
- Tape and reel packaging
- Bright LED package
- AllnGaP technology
- Viewing Angle: 40° typ.

**Description:**

These 1206 LEDs have a height profile of 1.40mm. With a combination of high brightness output and a small footprint, these LEDs are ideal for status indication.

**Application:**

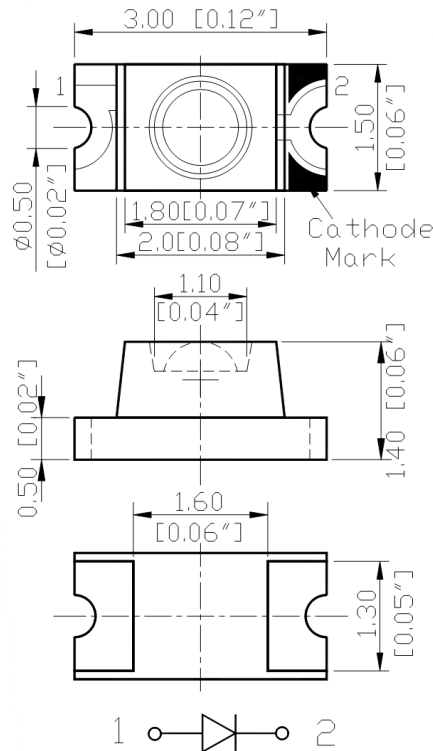
- Status indication
- Back lighting application

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.1mm

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

Product Number	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.	Min.	Typ.	Max.	Typ.	Min.	Typ.
QBLP651-S	Deep Red	20	1.7	2.0	2.5	630	640	650	660	50	87

### 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 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

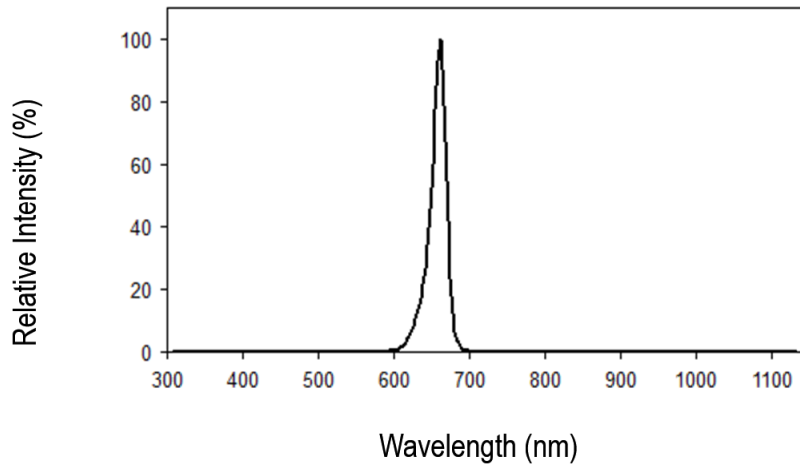
Bin	Min.	Max.	Unit
G	50	63	mcd
H	63	80	
I	80	100	
J	100	125	
K	125	160	

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

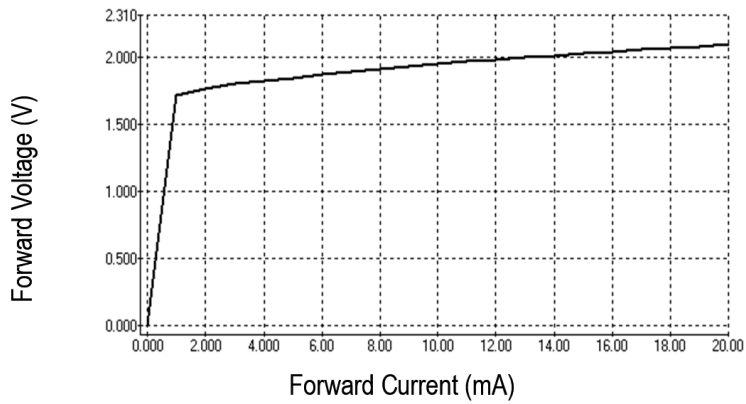
Bin	Min.	Max.	Unit
v	630	635	nm
w	635	650	

## Characteristic Curves

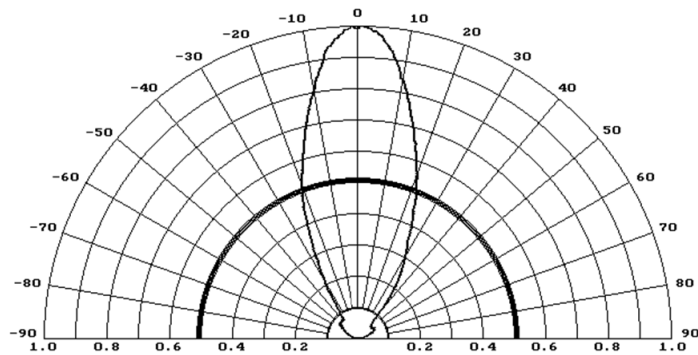
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

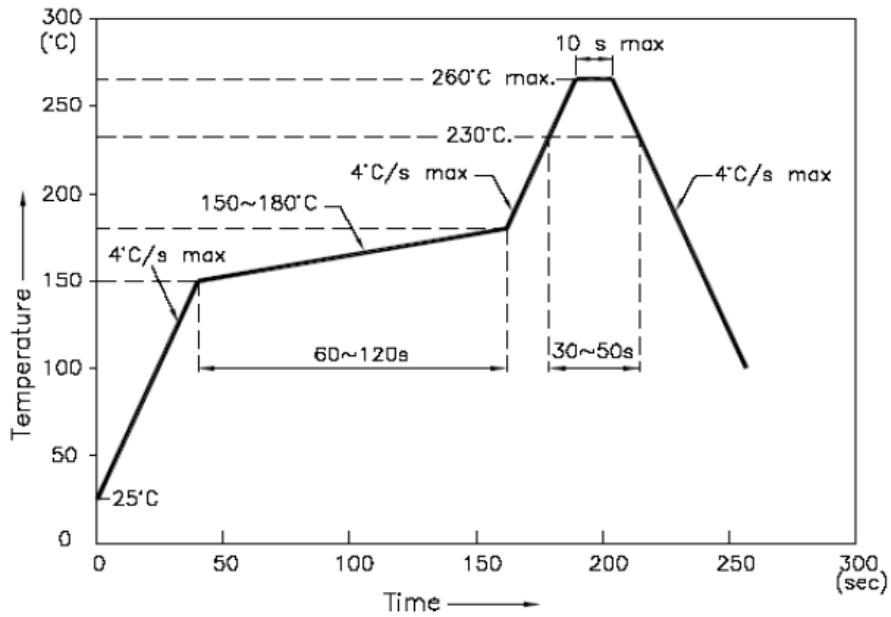


Directive Characteristics

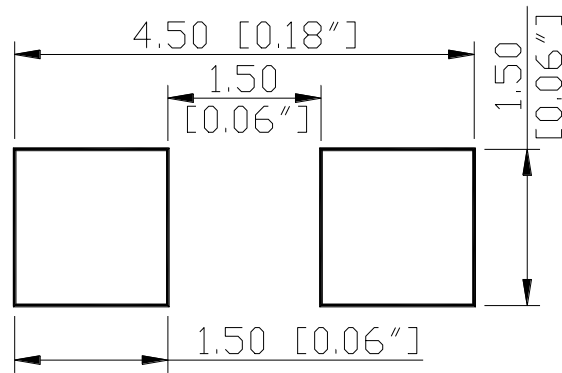


## Solder Profile

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



### Recommended Pad Layout

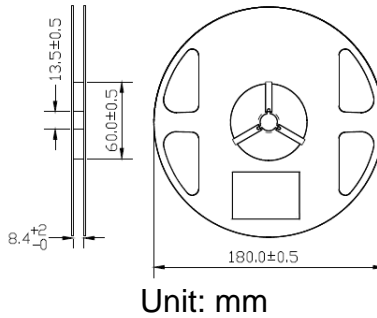


Units: mm

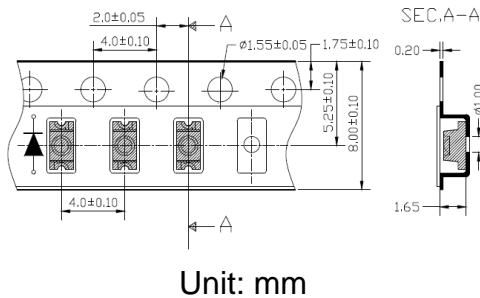
Tolerance: ± 0.1mm

## Packing

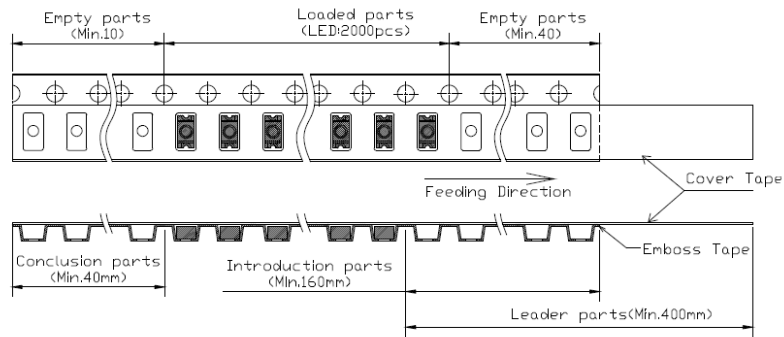
### Reel Dimensions:



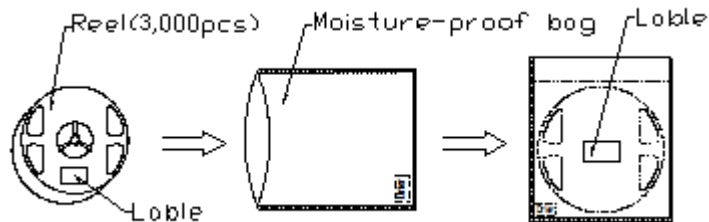
### Tape Dimensions:



### Arrangement of Tape:



### Packing specifications:



## 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
QBLP651-S	QBLP651-S	$I_V=87\text{mcd typ. @ } I_F=20\text{mA, } \lambda_D=630$ to 650nm	3,000 pcs



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## Revision History

Description:	Revision #	Revision Date
New Release of QBLP651-S	V1.0	05/04/2022

## 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.