

**QT-Brightek Chip LED Series**  
**1206 Chip LED with Inner Lens**  
**Part No.: QBLP651-S1**

Product: QBLP651-S1	Date: September 18, 2014	Page 1 of 9
	Version# 1.0	

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## Introduction

**Feature:**

- Water clear lens
- Tape and reel packaging
- Bright LED package
- AlGaAs technology
- 40° Viewing Angle)

**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:**

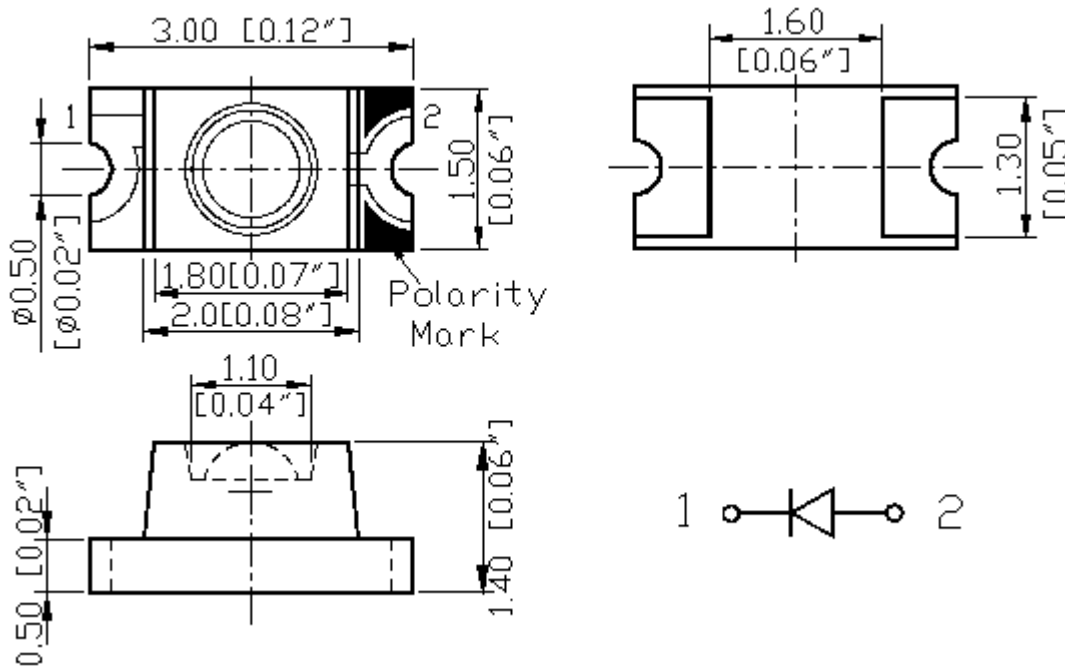
- Status indication
- Back lighting application

**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)			I <sub>V</sub> (mcd)	
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP651-S1	Deep Red	20	1.7	2.0	2.5	630	640	650	20	40

**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)**
AlGaAs	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

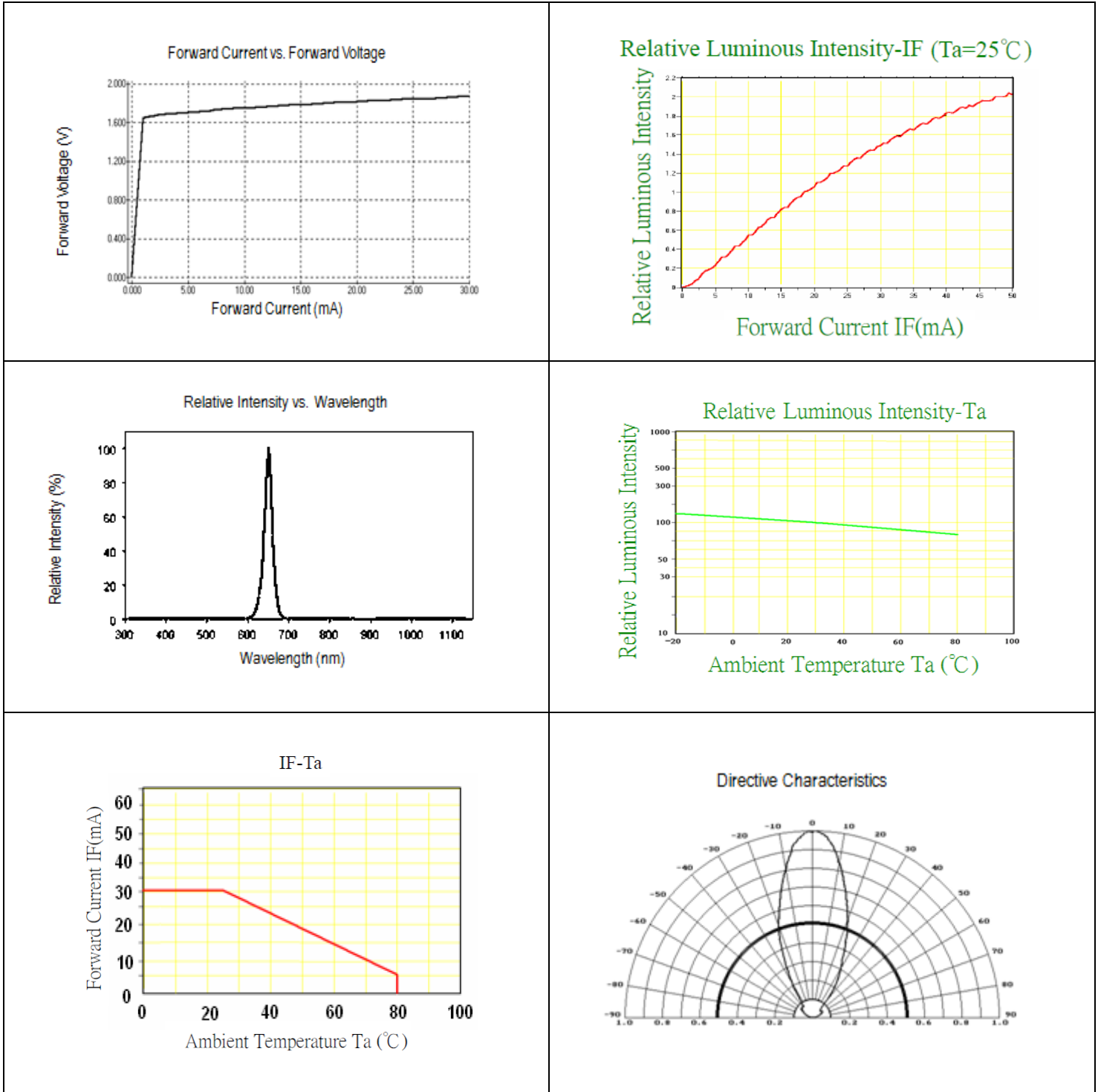
**Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=20mA**

Bin	Min.	Max.	Unit
C	20	25	mcd
D	25	32	
E	32	40	
F	40	50	
G	50	63	

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

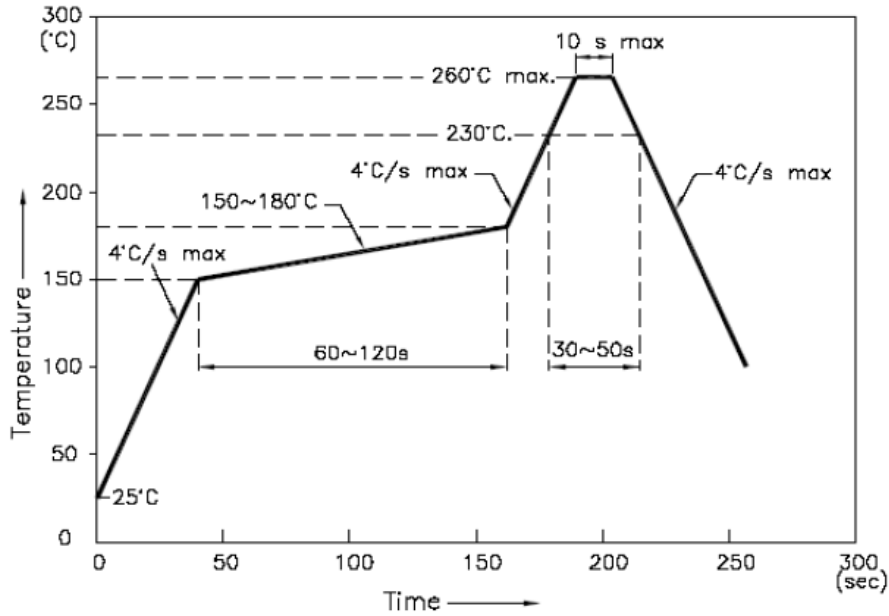
Bin	Min.	Max.	Unit
v	630	635	nm
w	635	650	

## Characteristic Curves

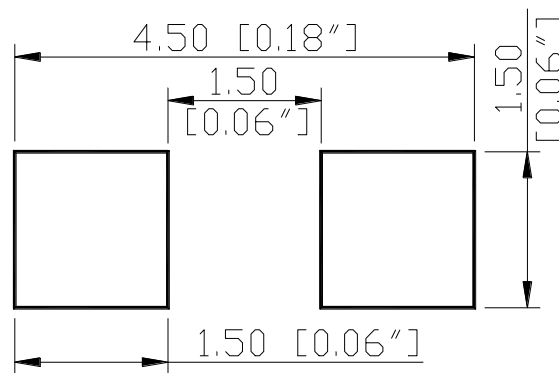


## Solder Profile

- Recommended tin solder specifications: melting temperature in the range of 178~192 °C
- The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



### Recommended Pad Layout

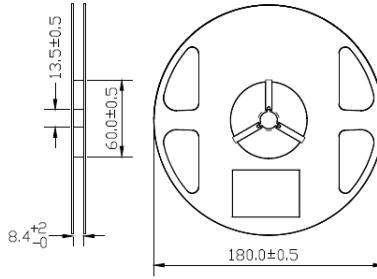


Units: mm

Tolerance: ± 0.1mm

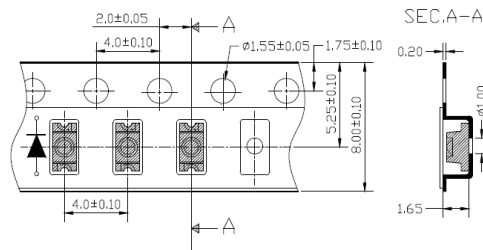
## Packing

### Reel Dimensions:



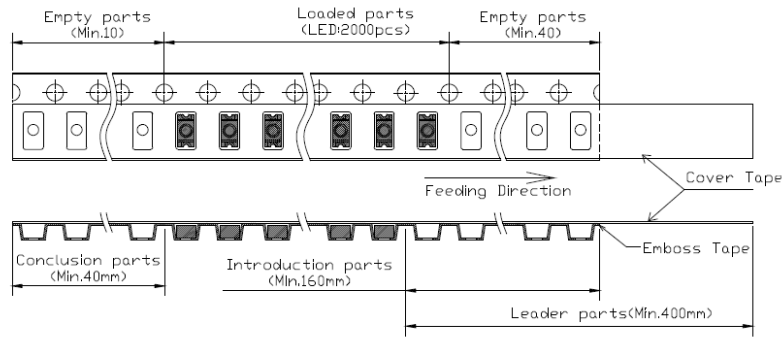
Unit: mm

### Tape Dimensions:

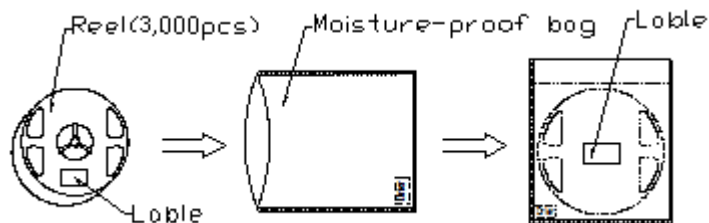


Unit: mm

### 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-S1	QBLP651-S1	$I_V=40\text{mcd typ. @ } I_F=20\text{mA, } \lambda_D=630 \text{ to } 650\text{nm}$	3,000 pcs



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## Revision History

Description:	Revision #	Revision Date
New Release of QBLP651-S1	V1.0	09/18/2014

## 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.