

# **QT-Brightek Chip LED Series**

## **0603 IR LED**

**Part No.: QBLP601-IR3-2897**

**IR3: 850nm**

**2897: High Radiant Intensity Version**

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## Introduction

### Feature:

- Water clear lens
- Package in tape and reel
- 0603 LED package
- AlGaAs technology
- Viewing Angle = 140 deg typ.

### Description:

These ultra bright 0603 LEDs have a height profile of 0.60mm. With higher packing density and smaller footprint, these LEDs are ideal for smaller equipment and miniature application.

### Application:

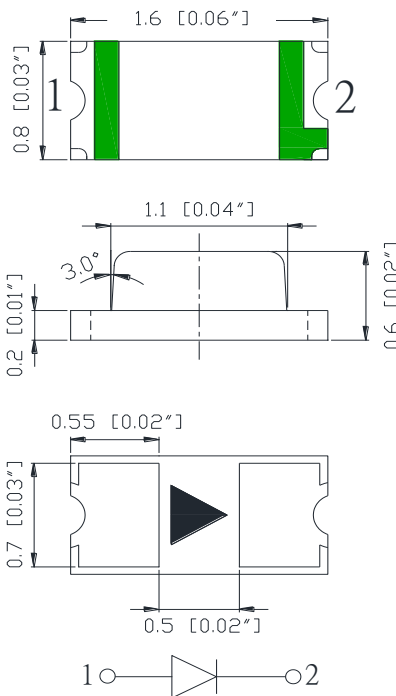
- Infrared Sensor
- Optoelectronic Switch
- Smoke detector
- Drive sensor

### Certification & Compliance:

- ISO9001
- RoHS Compliant



## Dimension:



Units: mm / tolerance = +/-0.1mm

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

Product	Color	I <sub>F</sub> (mA)	V <sub>F</sub> (V)		λ <sub>P</sub> (nm)			I <sub>e</sub> (mW/sr)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP601-IR3-2897	Infrared	20	1.4	1.8	835	850	860	0.3	1.12

**Absolute Maximum Rating**

Material	P <sub>d</sub> (mW)	I <sub>F</sub> (mA)	I <sub>FP</sub> (A)*	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)	T <sub>SO L</sub> (°C)**
AlGaAs	90	50	1	5	-40 ~ +80	-40 ~ +85	260

\*Duty cycle=1%, Pulse width 100μs

\*\*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
□	1.00	1.80	V

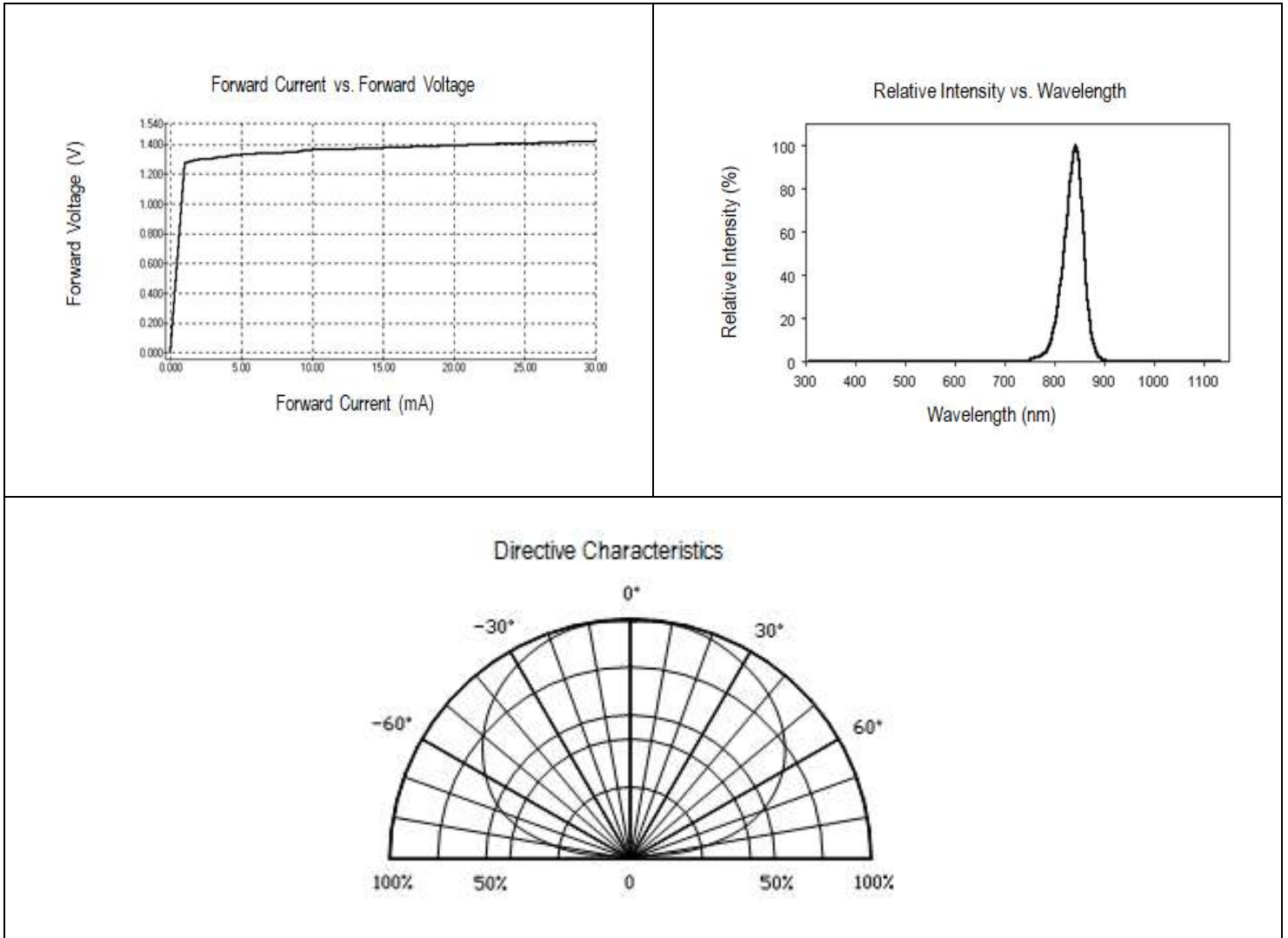
**Peak Wavelength λ<sub>P</sub> @ I<sub>F</sub>=20mA**

Bin	Min.	Max.	Unit
□	835	860	nm

**Radiant Intensity I<sub>E</sub> @ I<sub>F</sub>=20mA**

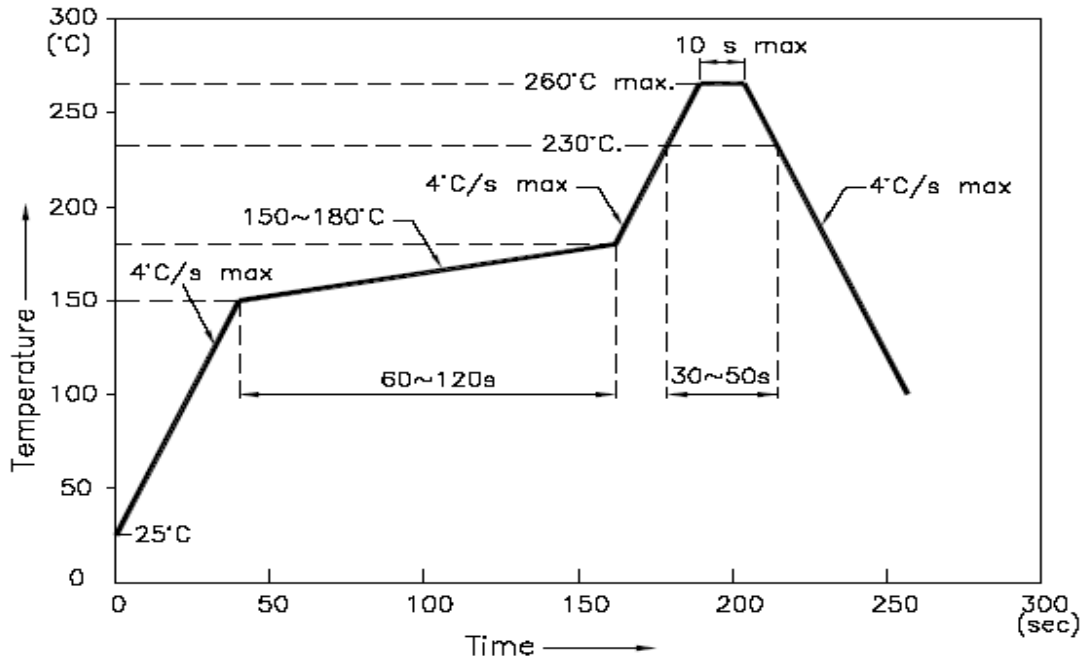
Bin	Min.	Max.	Unit
A	0.30	0.60	mW/sr
B	0.60	1.10	
C	1.10	1.60	
D	1.60	2.10	

## Characteristic Curves

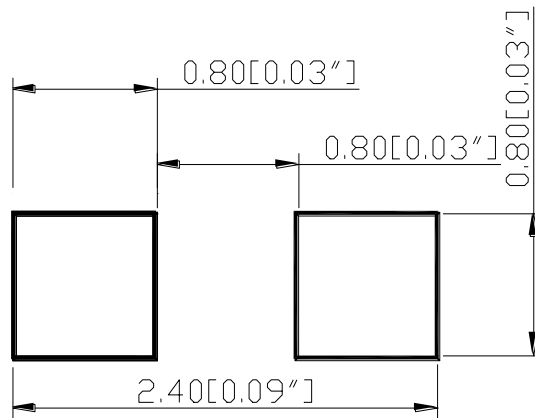


## Solder Profile & Footprint

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



### Recommended Pad Layout



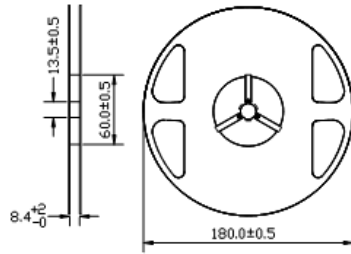
Units: mm

Tolerance: ± 0.1mm

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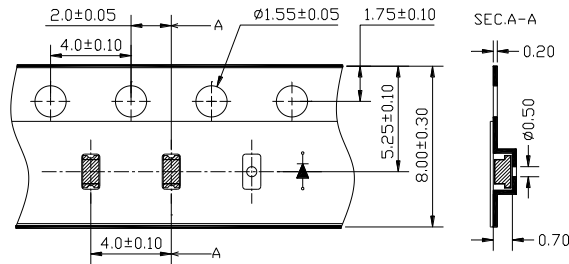
## Packing

### Reel Dimension:



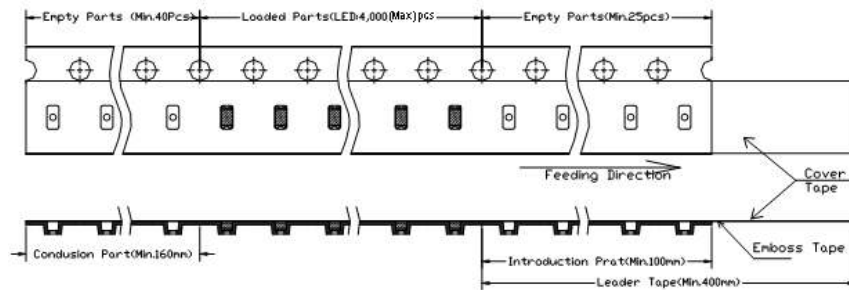
Unit: mm

### Tape Dimension:

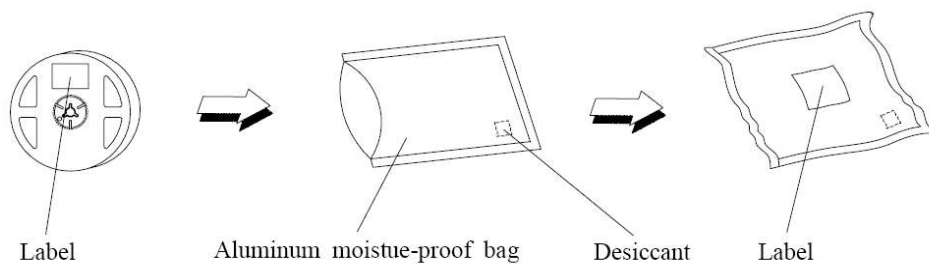


Unit: mm

### Arrangement of Tape:



### Packaging Specification:



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**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
QBLP601-IR3-2897	QBLP601-IR3-2897	le=1.12mW/sr typ. / λ <sub>P</sub> =850nm typ. @ I <sub>F</sub> =20mA	4,000 units

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**Revision History**

Description:	Revision #	Revision Date
New Release of QBLP601-IR3-2897	V1.0	09/07/2021

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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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