

# **QT-Brightek Chip LED Series**

## **SMD 0603 LED**

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

**2897: High Brightness Version**

Product: QBLP601-IW-2897	Date: December 16, 2019	Page 1 of 10
	Version# 1.0	

---

**Table of Contents:**

Introduction .....	3
Electrical / Optical Characteristic (Ta=25 °C) .....	4
Absolute Maximum Rating .....	4
CIE Chromaticity Diagram.....	5
Solder Profile & Footprint.....	7
Packing .....	8
Ordering Information.....	9
Revision History .....	10
Disclaimer .....	10

## Introduction

**Feature:**

- Yellow diffused lens
- Package in tape and reel
- Ultra bright 0603 LED package
- InGaN technology
- Viewing angle: 140° typ.

**Description:**

These ultra bright 0603 LEDs have a height profile of 0.60mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

**Application:**

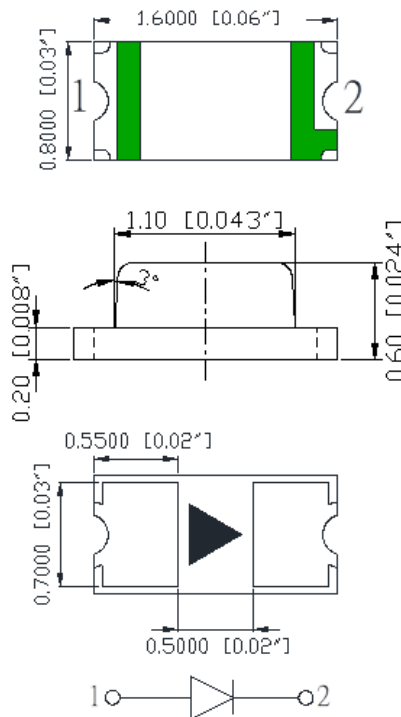
- Status indication
- Back lighting application

**Certification & Compliance:**

- TS16949
- 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)			CIE Coordinate	I <sub>V</sub> (mcd)		
			Min.	Typ.	Max.	Typ.	Min.	Typ.	Max.
QBLP601-IW-2897	White	20	2.8	3.0	3.4	X=0.298 Y=0.305	560	900	1400

### 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)**
InGaN	102	30	125	5	-40 ~ +80	-40 ~ +85	260

\*Duty 1/8 @ 1kHz

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

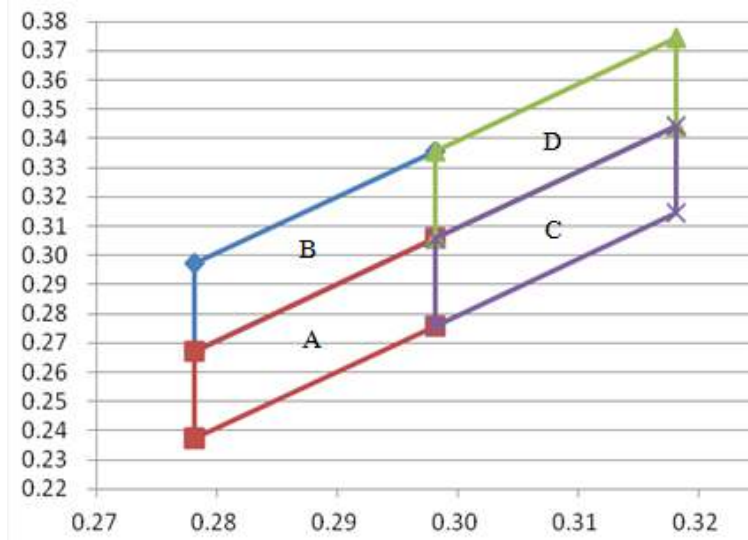
### Forward Voltage V<sub>F</sub> @ I<sub>F</sub>=20mA

Bin	Min.	Max.	Unit
E	2.8	3.0	V
F	3.0	3.2	
G	3.2	3.4	

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

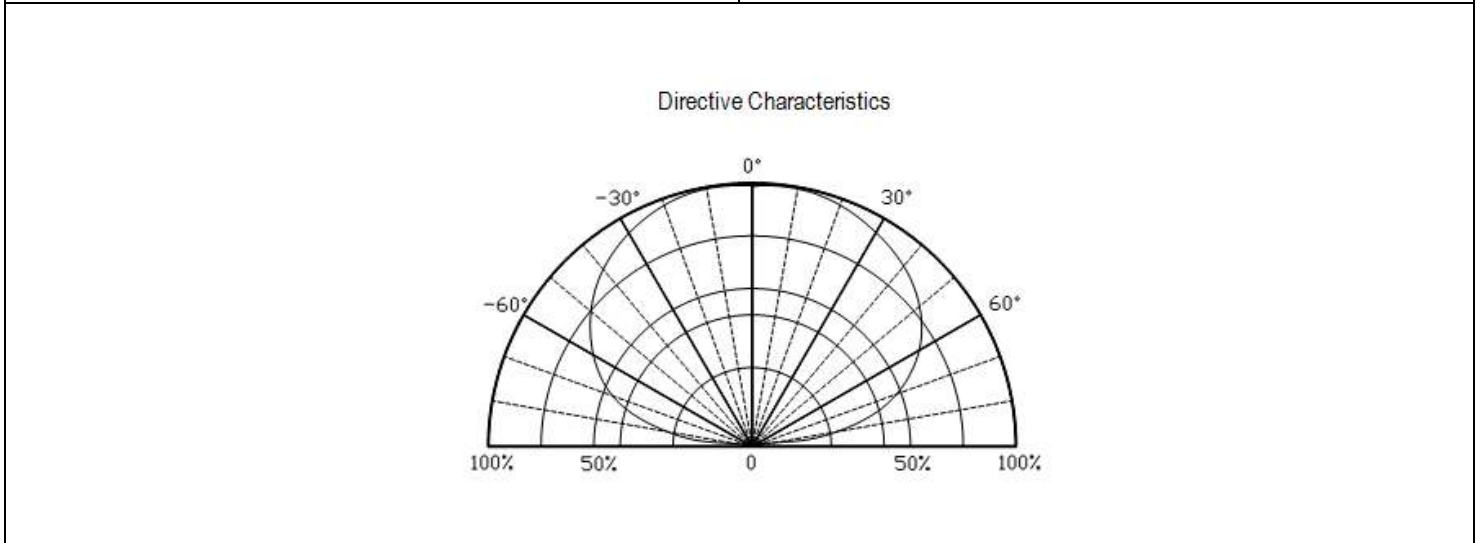
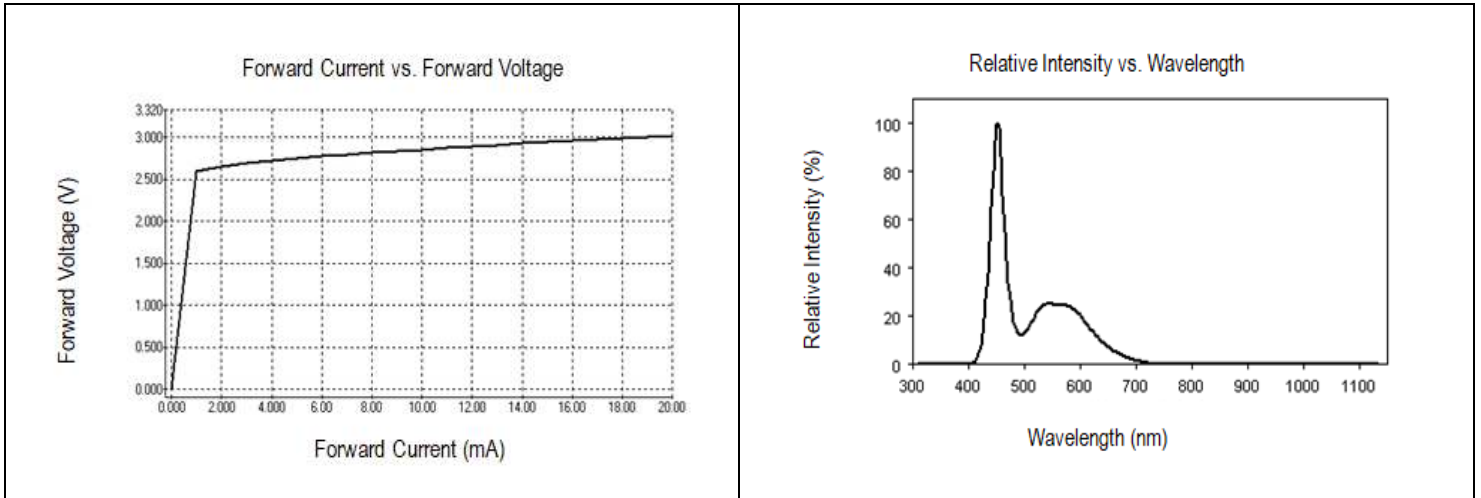
Bin	Min.	Max.	Unit
5	560	710	mcd
6	710	900	
7	900	1120	
8	1120	1400	

**CIE Chromaticity Diagram**



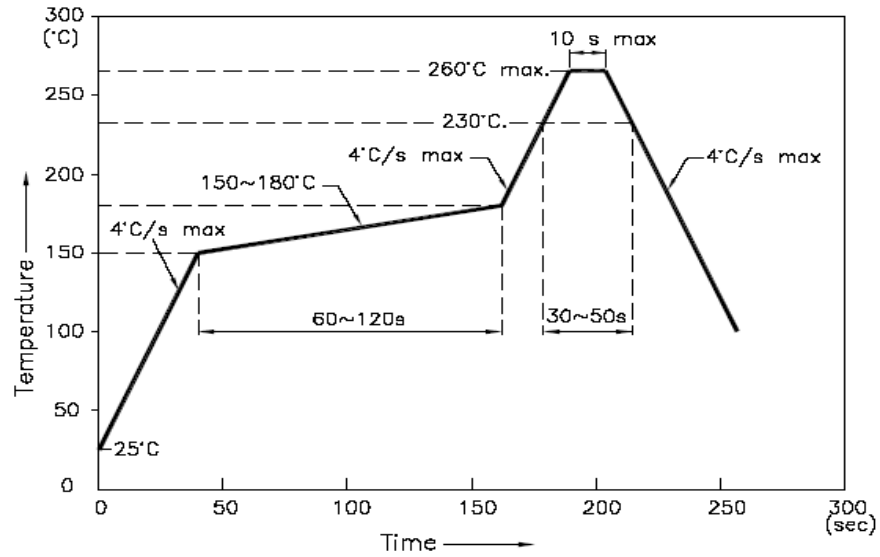
Rank	Chromaticity coordinates				
A	X	0.278	0.278	0.298	0.298
	Y	0.267	0.297	0.336	0.306
B	X	0.278	0.278	0.298	0.298
	Y	0.237	0.267	0.306	0.276
C	X	0.298	0.298	0.318	0.318
	Y	0.306	0.336	0.374	0.344
D	X	0.298	0.298	0.318	0.318
	Y	0.276	0.306	0.344	0.314

## Characteristic Curves

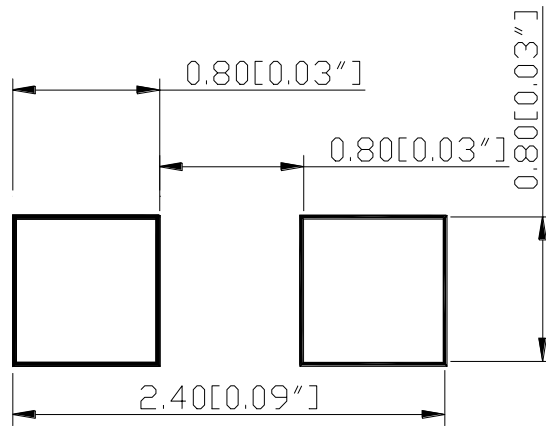


## Solder Profile & Footprint

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



### Recommended Pad Layout

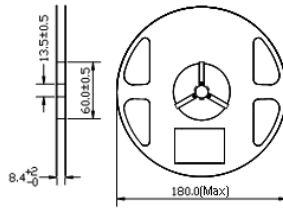


Units: mm

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

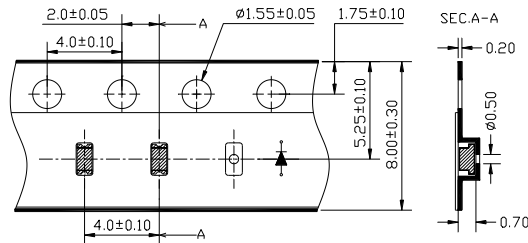
## Packing

### Reel Dimension:



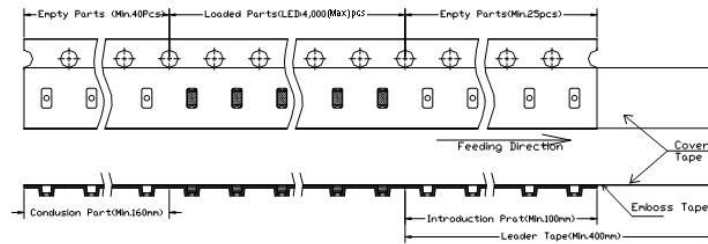
Unit: mm

### Tape Dimension:

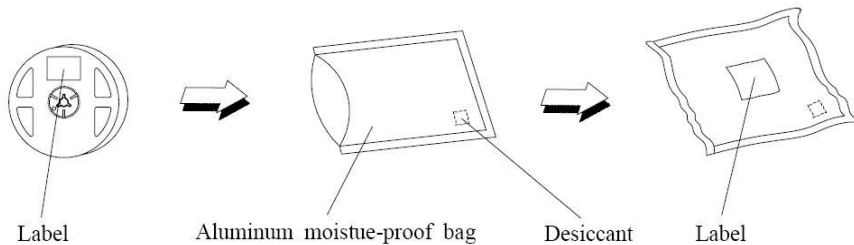


Unit: mm

### Arrangement of Tape:



### Packaging Specifications:







---

### Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP601-IW-2897	QBLP601-IW-2897	Iv=900mcd typ. @ I <sub>F</sub> =20mA / CIE Coordinate: (X=0.298, Y=0.305) typ.	4,000 units

**Revision History**

Description:	Revision #	Revision Date
New Release of QBLP601-IW-2897	V1.0	12/16/2020

**Disclaimer**

QT-BRIGHTTEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. QT-BRIGHTTEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

**Life Support Policy**

QT-BRIGHTTEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of QT-BRIGHTTEK. As used herein:

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.