

# **QT-Brightek Chip LED Series**

## **SMD 0603 Yellow LED**

**Part No.: QBLP601-Y1**

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	Version# 1.1	

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## Introduction

### Feature:

- Water clear lens
- Package in tape and reel
- 0603 LED package
- GaAsP technology
- Height profile: 0.6mm

### Application:

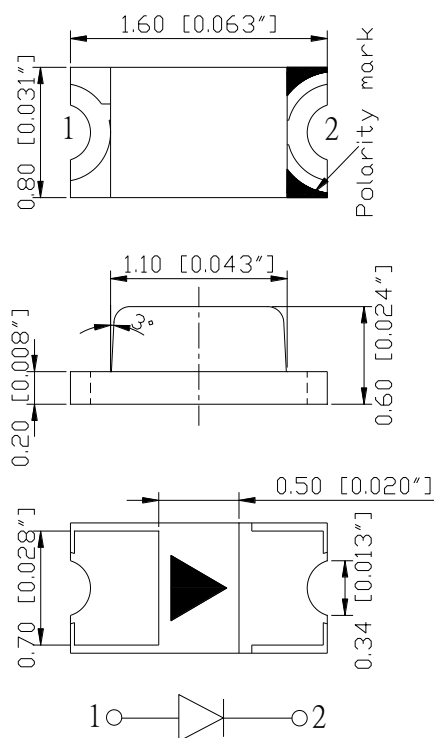
- Status indication
- Back lighting application

### 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.	Min.	Typ.	Max.	Typ.	Min.	Typ.
QBLP601-Y1	Yellow	10	1.6	1.9	2.5	585	590	595	589	-	4
		20	1.6	2.0	2.5					3.2	8

## 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)**
GaAsP	75	30	100	5	-40 ~ +85	-40 ~ +100	260

\*Duty 1/10 @ 10KHz

\*\* 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
b	1.6	1.9	V
c	1.9	2.2	
d	2.2	2.5	

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

Bin	Min.	Max.	Unit
7	3.2	5	mcd
8	5	8	
9	8	12.5	
A	12.5	16	

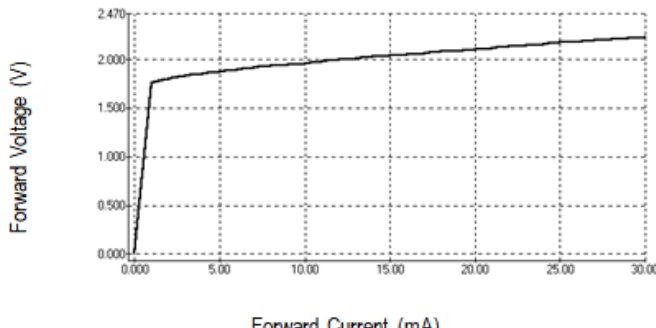
## Dominant Wavelength λ<sub>D</sub> @ I<sub>F</sub>=20mA

Bin	Min.	Max.	Unit
m	585	590	nm
n	590	595	

Characteristic Curves

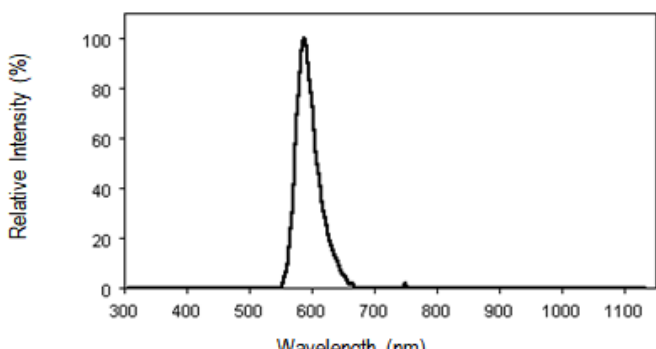
GaAsP

Forward Current vs. Forward Voltage



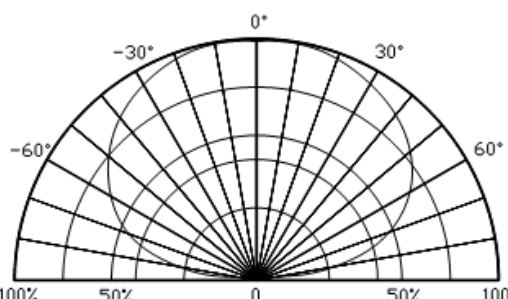
Forward Current (mA)	Forward Voltage (V)
0.00	0.00
1.00	1.60
5.00	1.80
10.00	1.90
15.00	2.00
20.00	2.10
25.00	2.15
30.00	2.20

Relative Intensity vs. Wavelength



Wavelength (nm)	Relative Intensity (%)
550	0
580	10
600	100
620	10
650	0
700	0
750	0
800	0
850	0
900	0
950	0
1000	0
1050	0
1100	0

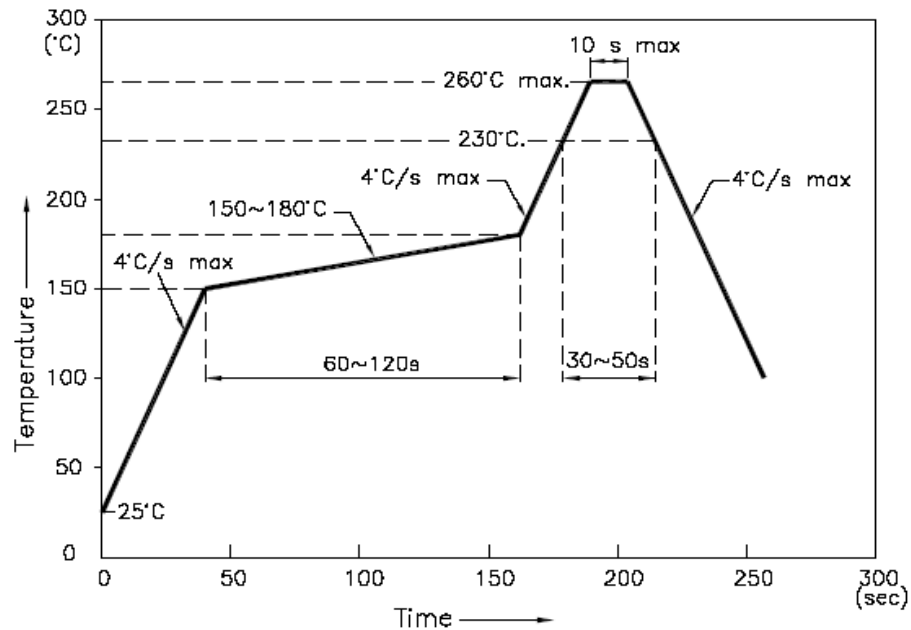
Directive Characteristics



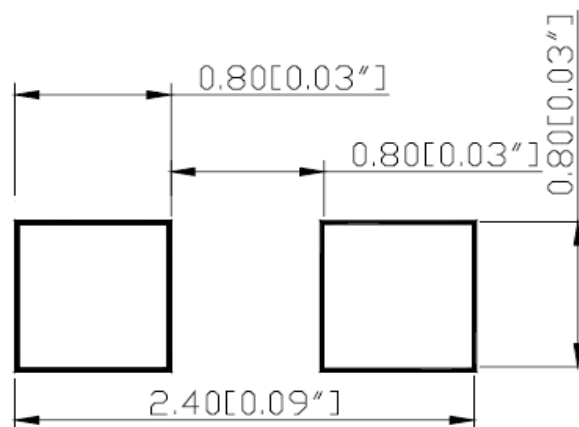
Angle (degrees)	Relative Intensity (%)
-60	0
-30	10
0	100
30	10
60	0

## Solder Profile & Footprint

-Recommended tin solder specifications: melting temperature in the range of 178~192 °C



### RECOMMEND PAD LAYOUT

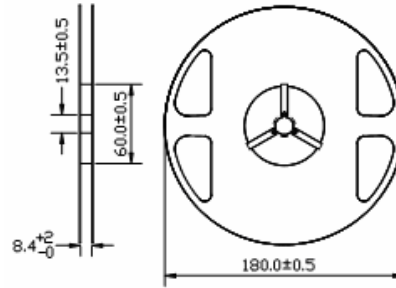


Units: mm

tolerance: +/- 0.1mm

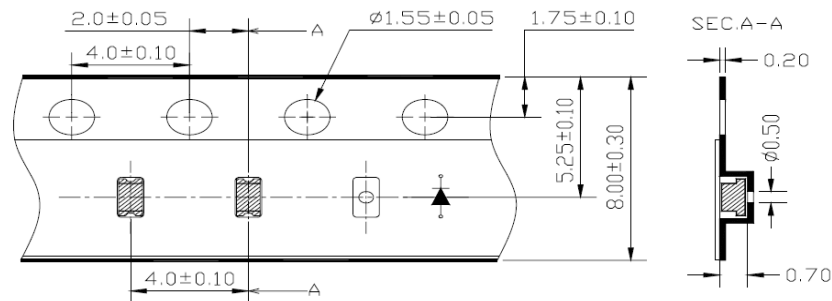
## Packing

### Reel Dimension:



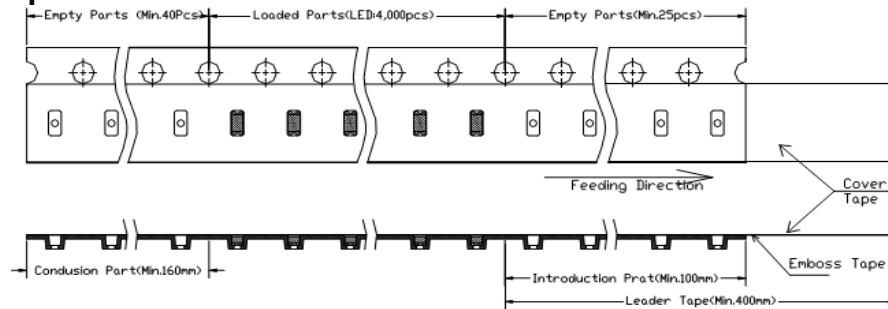
Unit: mm

### Tape Dimension:

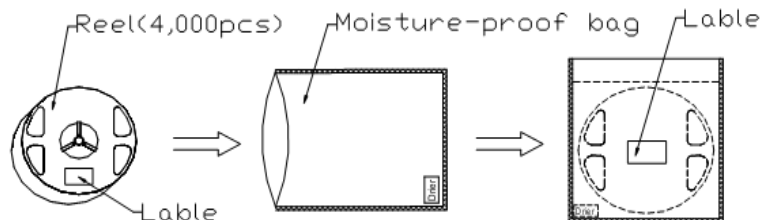


Unit: mm

### Arrangement of Tape:



### Packaging Specification:



## 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
QBLP601-Y1	Iv=8mcd typ. @ I <sub>F</sub> = 20mA / Color = 585-595nm	4,000 units



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## Revision History

Description:	Revision #	Revision Date
New Release of QBLP601-Y1	V1.0	03/28/2014
Update peak wavelength value	V1.1	01/26/2025

## 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.