

QT-Brightek Chip LED Series

SMD 0603 Deep Red LED

Part No.: QBLP601-S3

S3 = Deep Red ($\lambda_D=640\text{nm}$, $\lambda_P=660\text{nm}$, AlInGaP)

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Introduction

Feature:

- Water clear lens
- Package in tape and reel
- Ultra bright 0603 LED package
- AlInGaP technology

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:

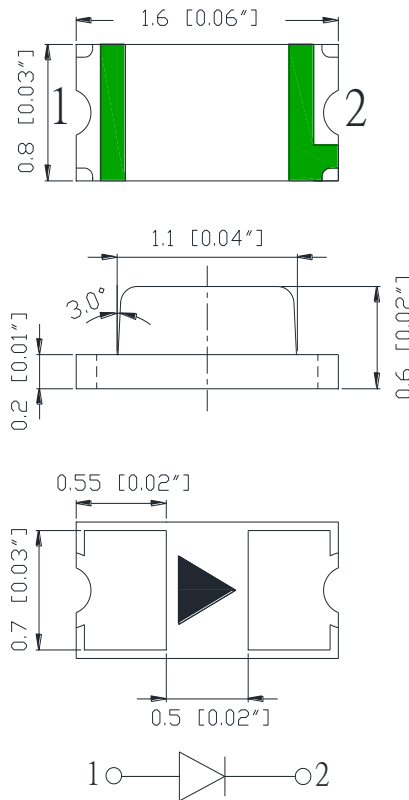
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I _F (mA)	V _F (V)			λ _d (nm)	λ _P (nm)			I _V (mcd)	
			Min.	Typ.	Max.	Typ.	Min.	Typ.	Max.	Min.	Typ.
QBLP601-S3	Deep Red	20	1.6	2.0	2.5	640	650	660	670	12.5	24

Absolute Maximum Rating

Material	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)**
AllnGaP	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_F @ I_F=20mA

Bin	Min.	Max.	Unit
A	1.6	1.9	V
B	1.9	2.2	
C	2.2	2.5	

Luminous Intensity I_V @ I_F=20mA

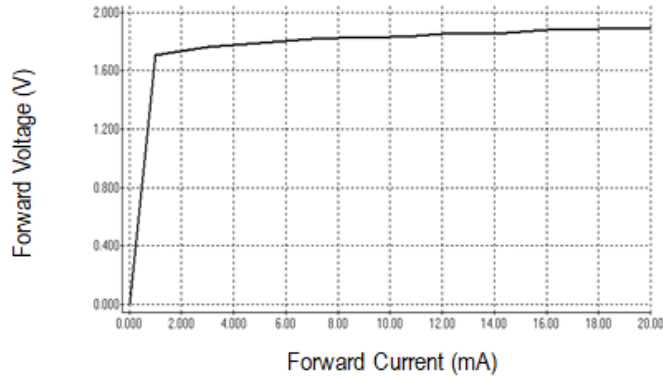
Bin	Min.	Max.	Unit
A	12.5	16	mcd
B	16	20	
C	20	25	
D	25	32	
E	32	40	

Peak Wavelength λ_P @ I_F=20mA

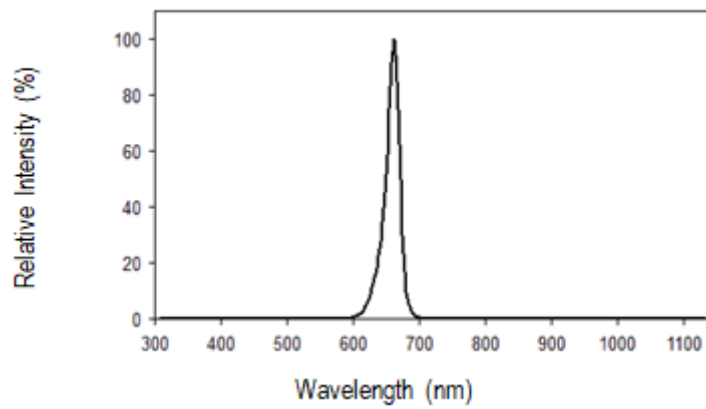
Bin	Min.	Max.	Unit
X	650	660	nm
Y	660	670	

Characteristic Curves

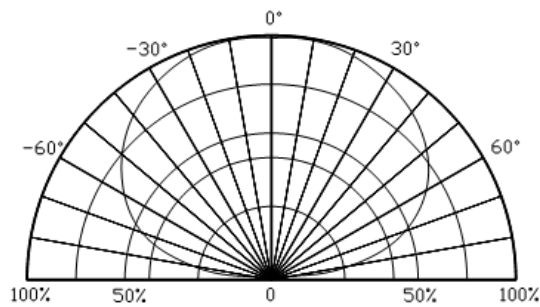
Forward Current vs. Forward Voltage



Relative Intensity vs. Wavelength

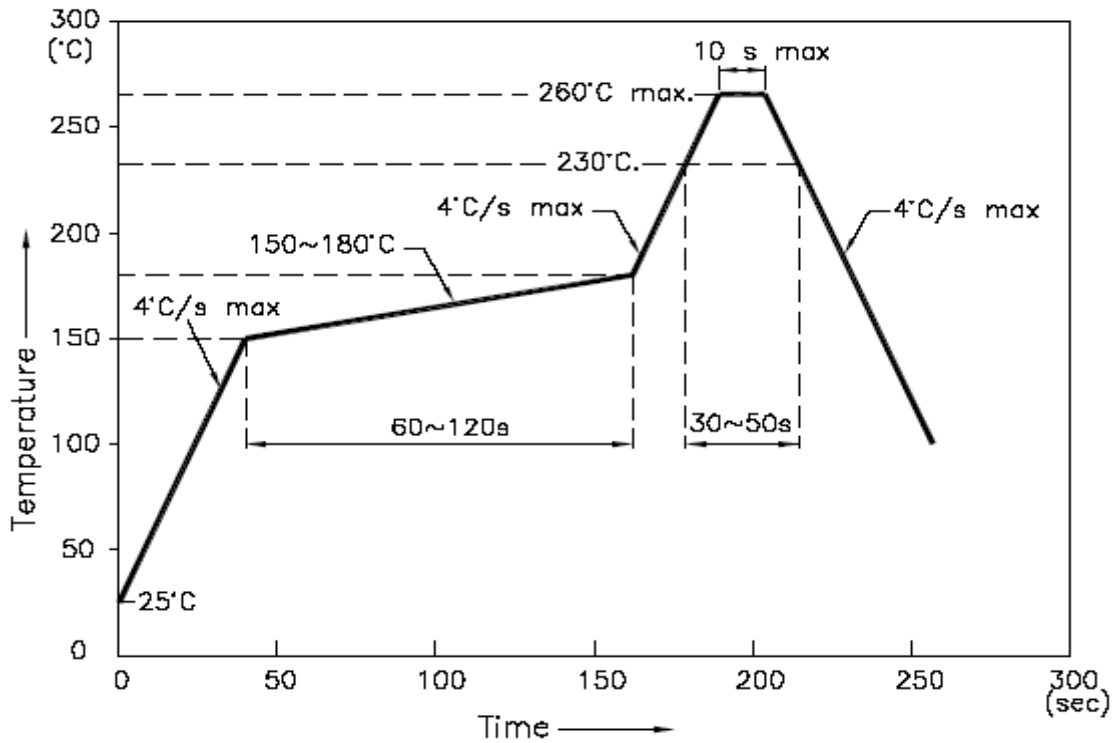


Directive Characteristics

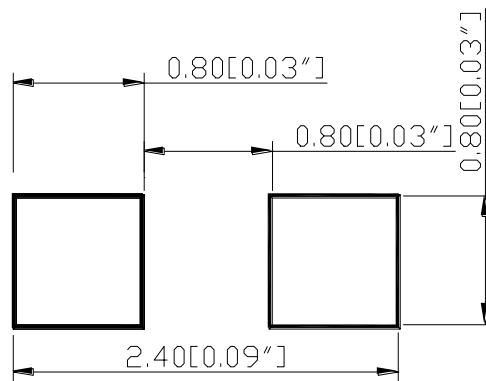


Solder Profile & Footprint

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



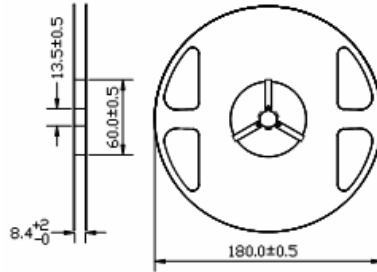
Recommend Pad Layout



Units: mm

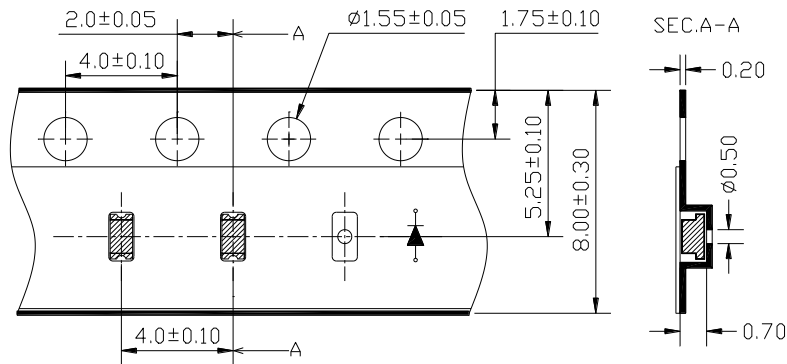
Packing

Reel Dimension:



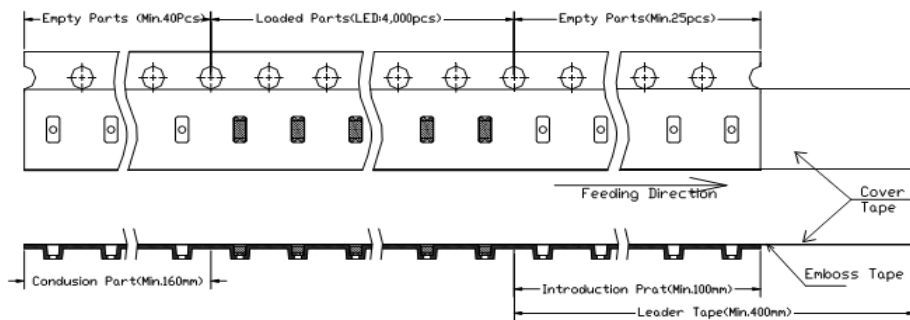
Unit: mm

Tape Dimension:

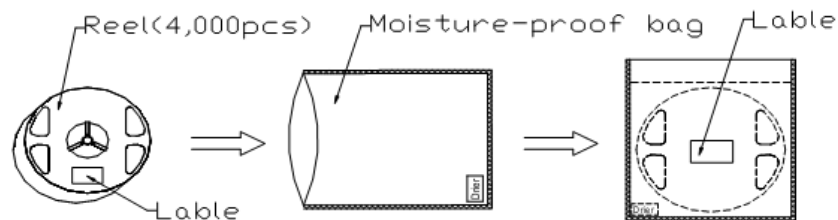


Unit: mm

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-S3	QBLP601-S3	I _v =24mcd typ. @ I _F =20mA / λ _d (nm)=640nm typ. / λ _p (nm) =660nm typ.	4,000 units

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Revision History

Description:	Revision #	Revision Date
New Release of QBLP601-S3	V1.0	03/14/2023

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.

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