

# **QT-Brightek Chip LED Series**

## **SMD 1208 LED**

**Part No.: QBLP653-S**

Product: QBLP653-S	Date: June 10, 2021	Page 1 of 9
	Version# 1.7	

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**Table of Contents:**

Introduction .....	3
Electrical / Optical Characteristic (T=25 °C) .....	4
Absolute Maximum Rating .....	4
Characteristic Curves.....	5
Solder Profile & Footprint.....	6
Packing .....	7
Labeling .....	8
Ordering Information .....	8
Revision History .....	9
Disclaimer .....	9

## Introduction

### Feature:

- Water clear lens
- Package in tap and reel
- Bright 1208 LED package
- AllnGaP technology
- Viewing angle: 15 deg typ.

### Description:

These light weight bright 1208 LEDs have a height profile of 2.5mm. With narrow viewing angle, LED produces high bright light output.

### Application:

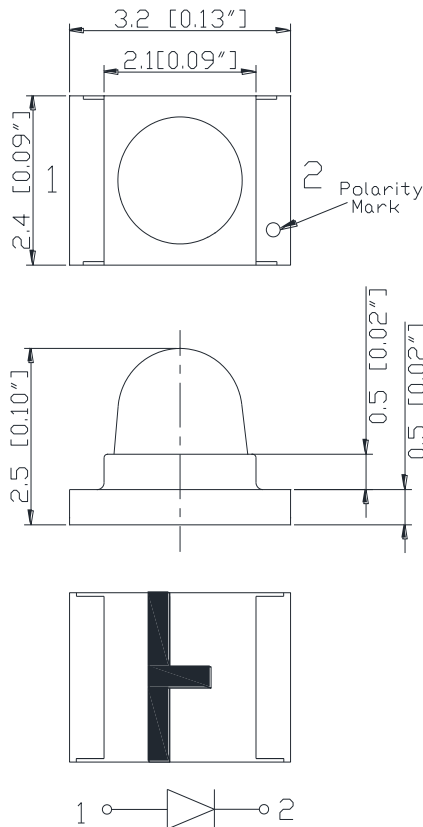
- Status indication
- Back lighting application

### Certification & Compliance:

- ISO9001
- RoHS Compliant



### Dimension:



Units: mm / tolerance = +/-0.15mm

**Electrical / Optical Characteristic (T=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)	
			Typ.	Max.	Min.	Typ.	Max.	Typ.	Min.	Typ.
QBLP653-S	Deep Red	20	2.0	2.5	630	640	650	650nm	500	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>SO L</sub> (°C)**
AllnGaP	75	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> for AllnGaP @ 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**

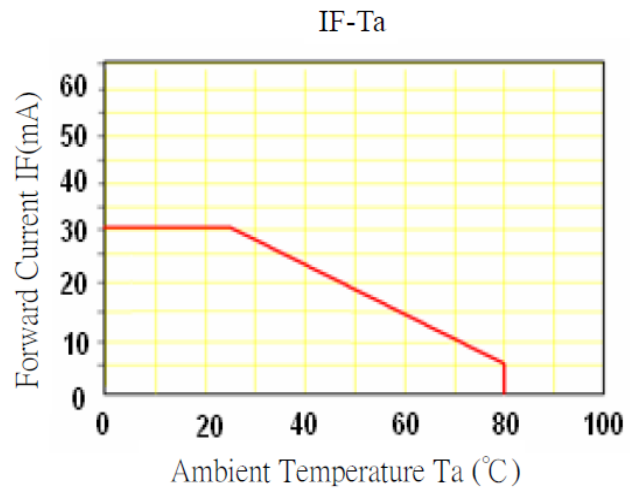
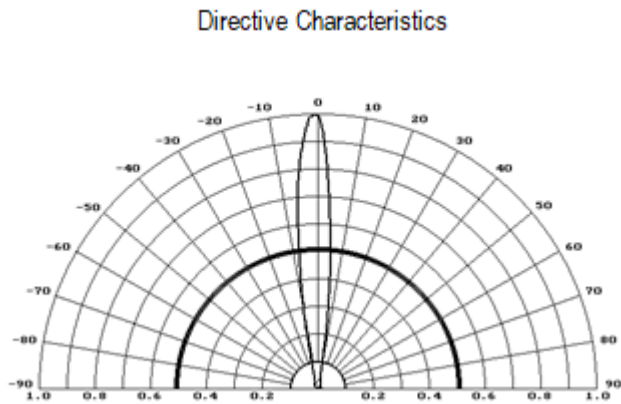
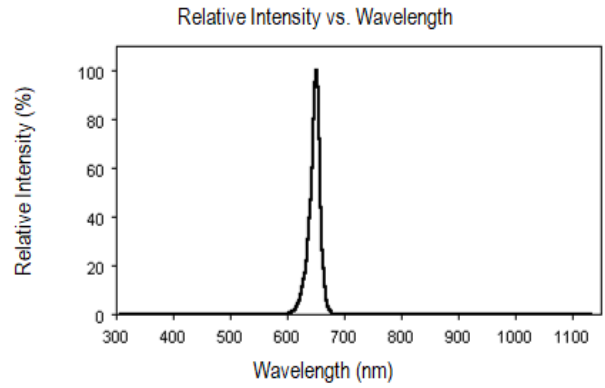
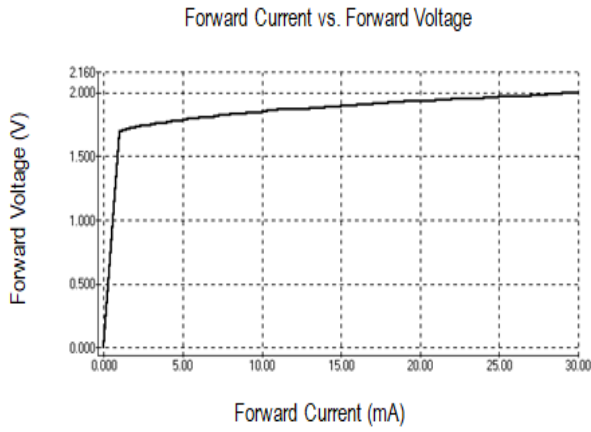
Bin	Min.	Max.	Unit
Q	500	630	mcd
R	630	800	
S	800	1000	
T	1000	1250	
U	1250	1600	
V	1600	2000	
W	2000	2500	

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

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

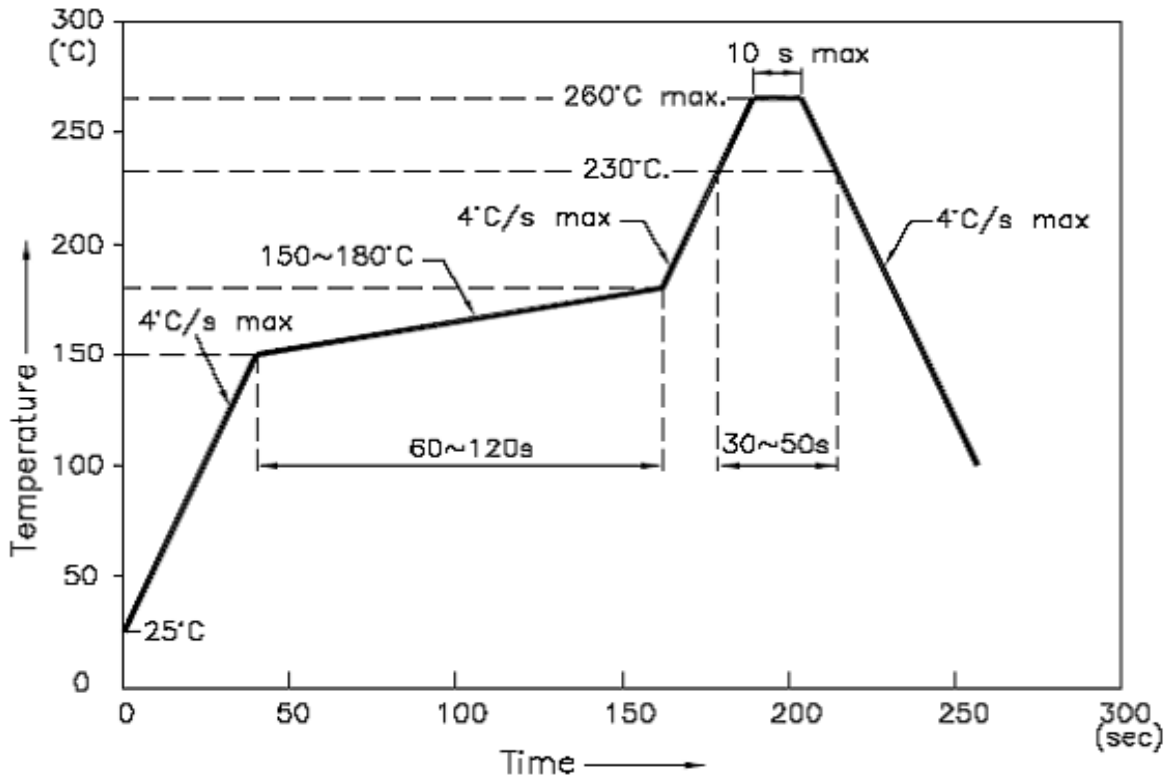
## Characteristic Curves

AllnGaP

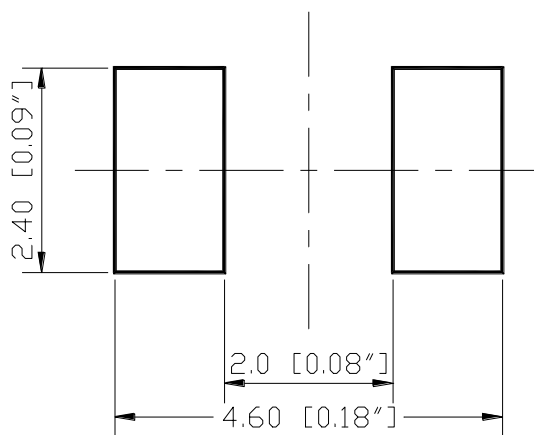


**Solder Profile & Footprint**

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



**Recommended Pad Layout**

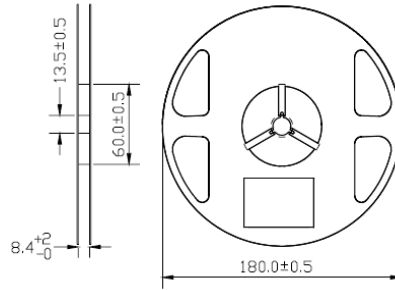


Units: mm

Tolerance: ± 0.1mm

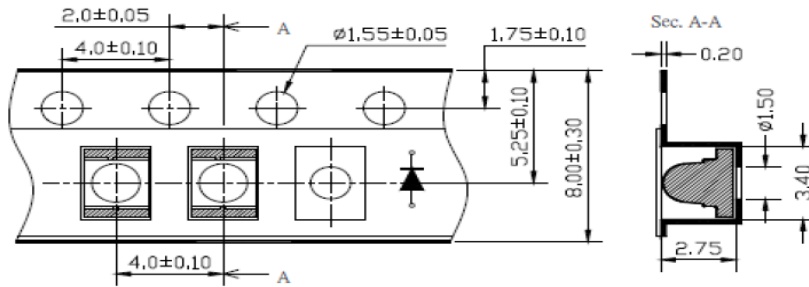
## Packing

### Reel Dimension:



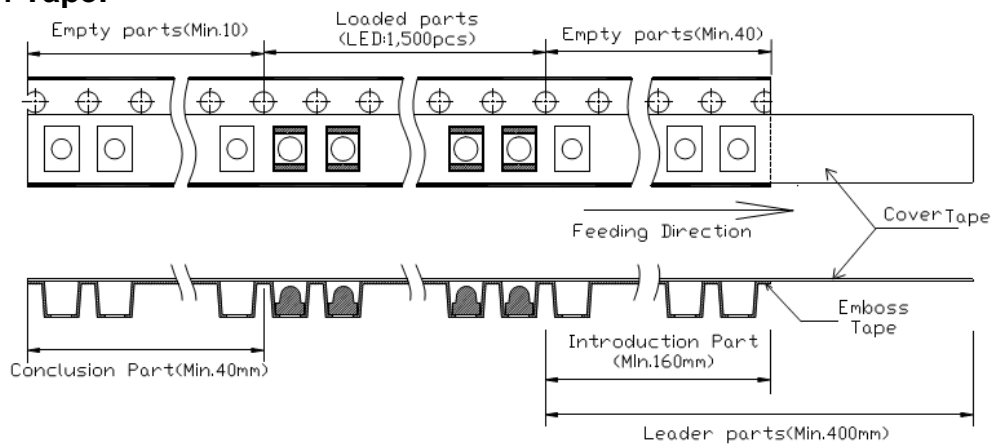
Unit: mm

### Tape Dimension:

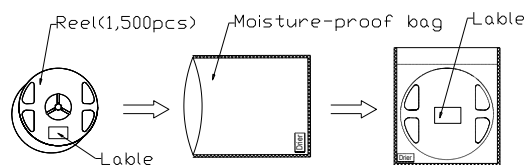


Unit: mm

### Arrangement of Tape:



### Packaging Specification:



Product: QBLP653-S	Date: June 10, 2021	Page 7 of 9
	Version# 1.7	

## 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
QBLP653-S	QBLP653-S	Iv=1400mcd typ. @ I <sub>F</sub> =20mA / Color = 630 to 650nm	1,500 units



**Revision History**

Description:	Revision #	Revision Date
New Release of QBLP653-S	V1.0	01/31/2021
Update to new format	V1.1	08/16/2012
Update drawing / dimension / spec	V2.0	06/10/2021

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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.