

**QT-Brightek Chip LED Series**  
**1208 IR LED with Dome Lens**  
**Part No.: QBLP653-IR1**

Product: QBLP653-IR1	Date: May 11, 2015	Page 1 of 9
	Version# 1.0	

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## Introduction

**Feature:**

- Water clear lens
- Tape and reel packaging
- Bright LED package
- AlGaAs technology for IR
- Viewing Angle = 15 deg

**Description:**

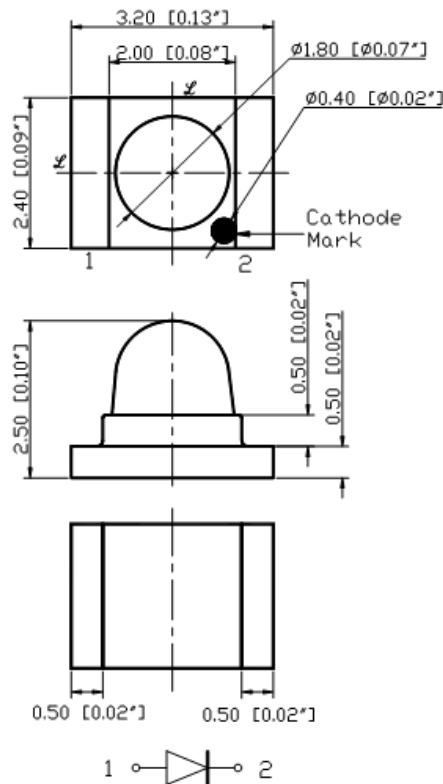
This reversed mount light weight bright 1208 LEDs have a height profile of 2.5mm. With narrow viewing angle, LED produces high intensity output. This device is spectrally matched with phototransistor, photodiode and infrared receiver module.

**Application:**

- Free air transmission system
- Optoelectronic switch
- Infrared applied system
- Smoke Detector

**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)			λ <sub>P</sub> (nm)			I <sub>e</sub> (mW/sr)		
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.
QBLP653-IR1	Infrared	20	0.8	1.3	1.8	930	940	950	1.6	3.2	4.6

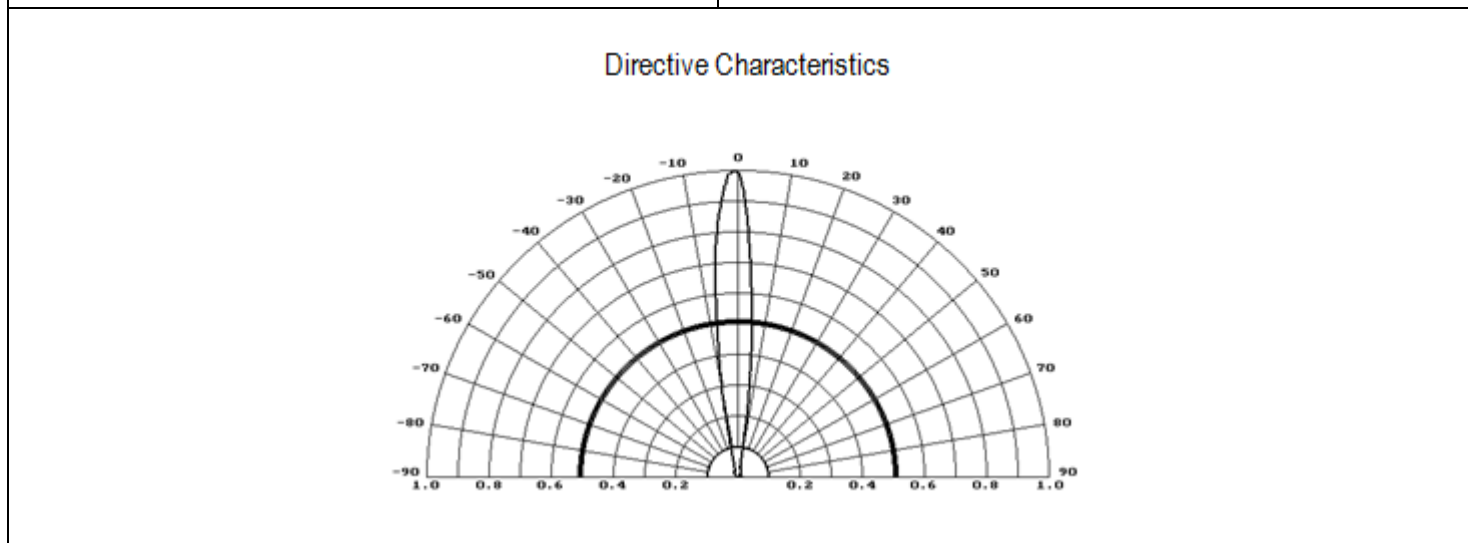
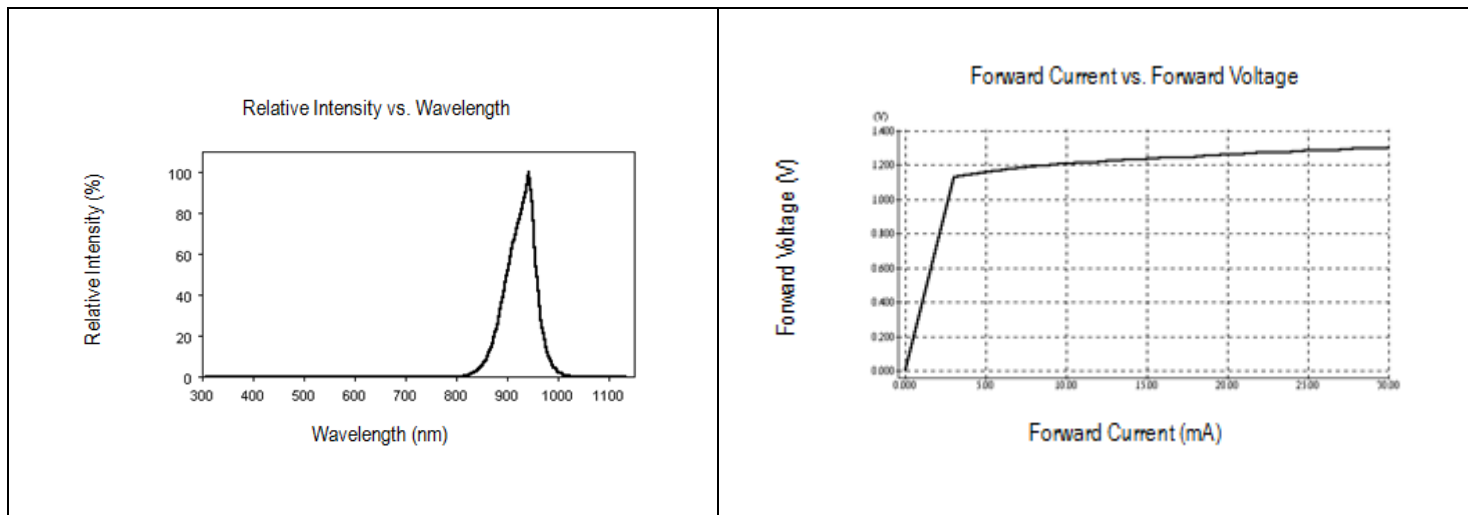
**Absolute Maximum Rating**

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)**
AlGaAs	80	50	1	5	-40 to +80	-40 to +85	260

\*Pulse width 100μs, duty cycle=1%

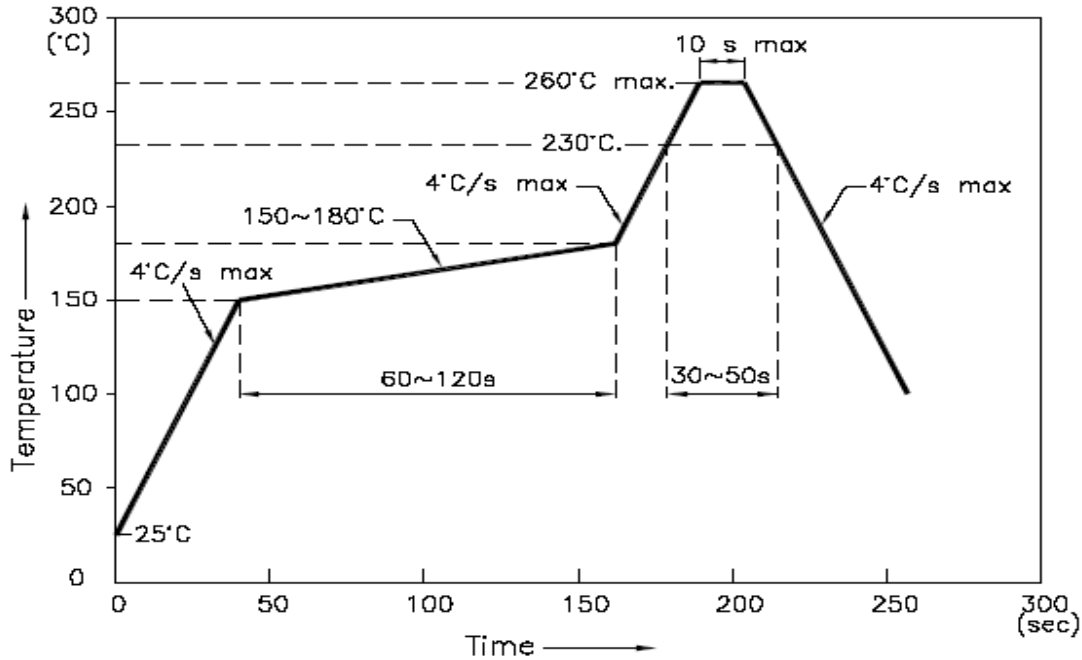
\*\*IR Reflow for no more than 10 sec @ 260 °C

## Characteristic Curves

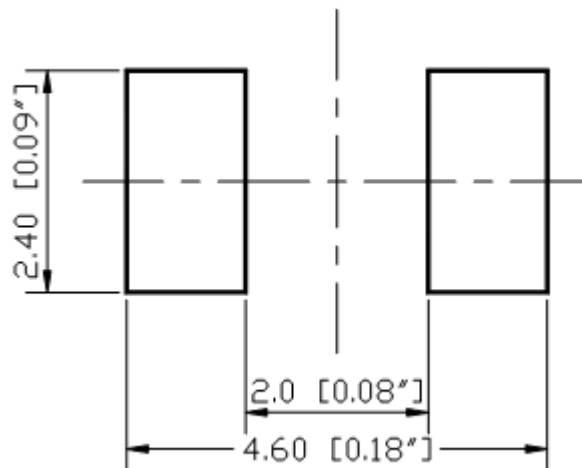


## Soldering Profile & footprint

- Recommended tin solder specifications: melting temperature in the range of 178~192 °C
- The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



### Recommended Pad Layout

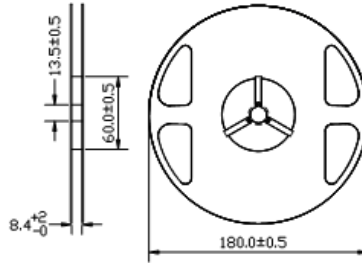


Units: mm

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

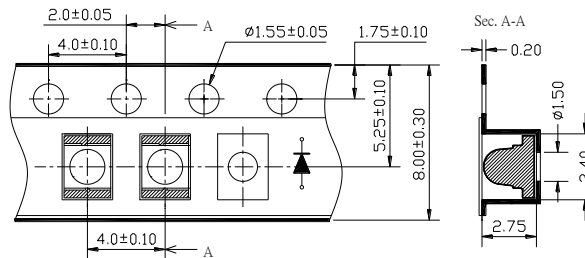
## Packing

### Reel Dimensions:



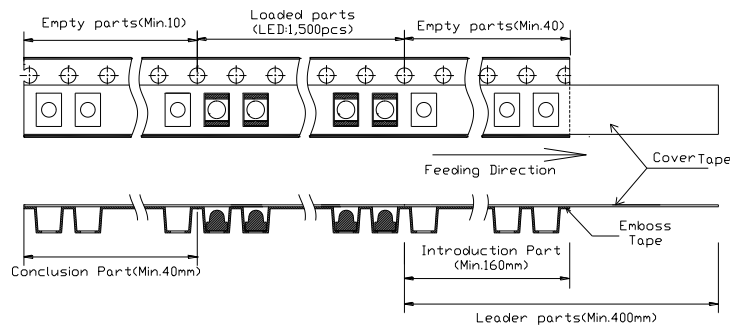
Unit: mm

### Tape Dimensions:

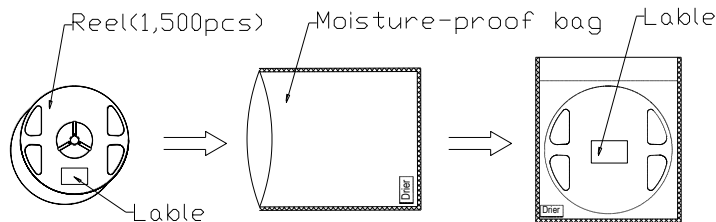


Unit: mm

### Arrangement of Tape:



### Packing specifications



**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-IR1	QBLP653-IR1	I <sub>e</sub> =3.2mW/sr @ 20mA, λ <sub>p</sub> =940nm typ.	1,500 pcs



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## Revision History

Description:	Revision #	Revision Date
New Release of QBLP653-IR1	V1.0	05/11/2015

## 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.