



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**QT-Brightek Chip LED Series**  
**1208 IR LED with Dome Lens**  
**Part No.: QBLP653-IR3**

Product: QBLP653-IR3	Date: May 11, 2015	Page 1 of 9
	Version# 1.0	

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**Table of Contents:**

Introduction .....	3
Electrical / Optical Characteristic (Ta=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
- Tape and reel packaging
- Bright LED package
- AlGaAs technology for IR
- Viewing Angle = 15 deg

**Description:**

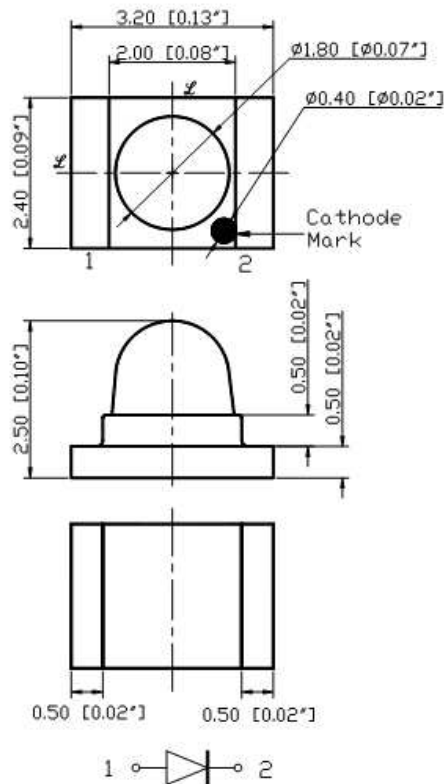
This reversed mount light weight bright 1208 LEDs have a height profile of 2.5mm. With narrow viewing angle, LED produces high intensity output. This device is spectrally matched with phototransistor, photodiode and infrared receiver module.

**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-IR3	Infrared	20	1.0	1.5	1.8	840	850	860	2.1	3.0	6.1

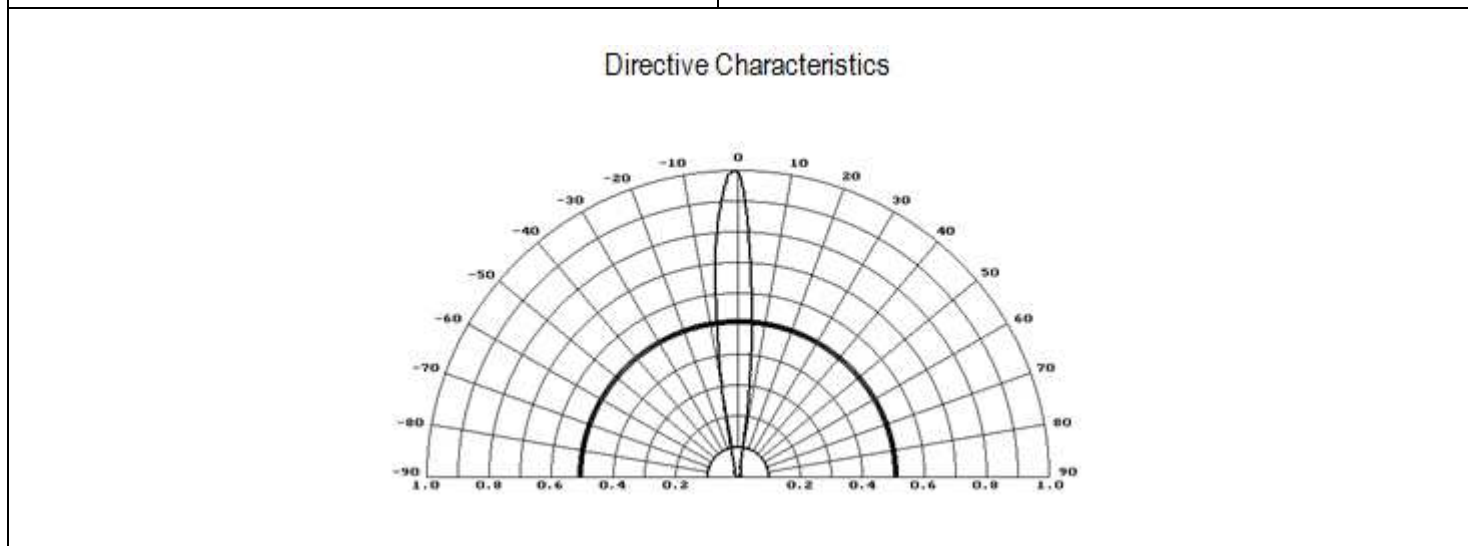
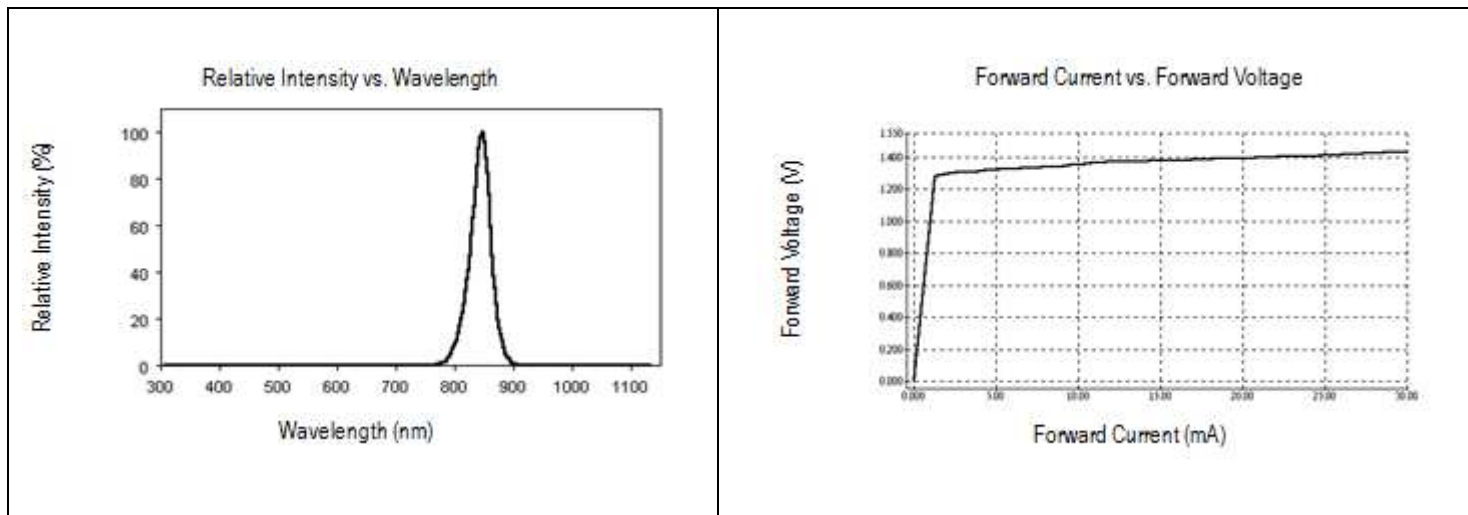
**Absolute Maximum Rating**

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	90	50	1	5	-40 to +80	-40 to +85	260

\*Pulse width 100μs, duty cycle=1%

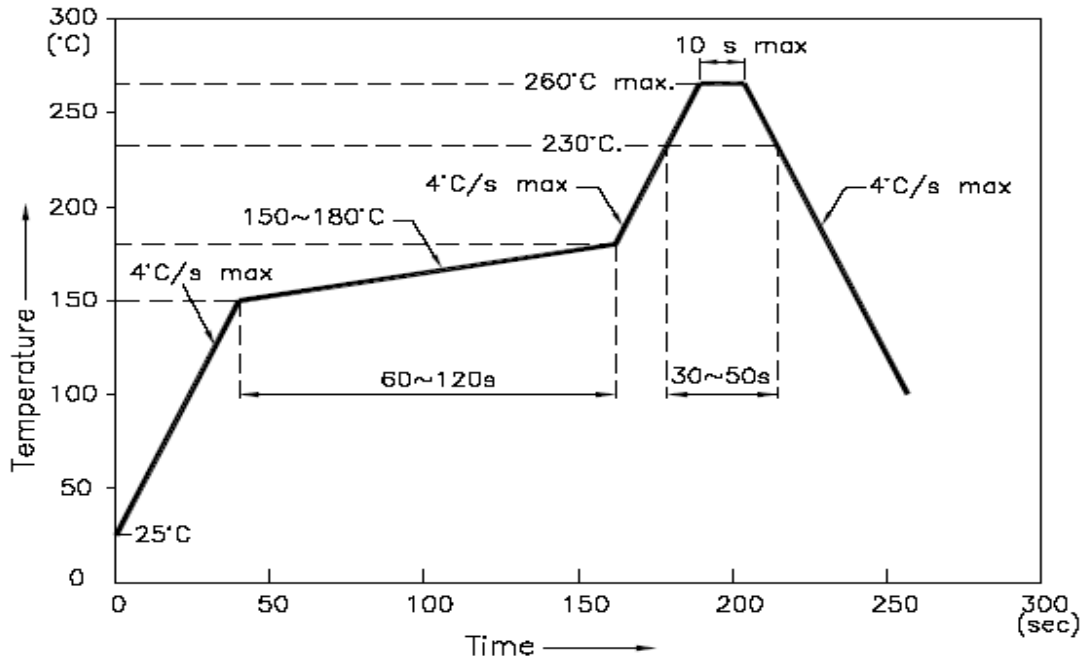
\*\*IR Reflow for no more than 10 sec @ 260 °C

## Characteristic Curves

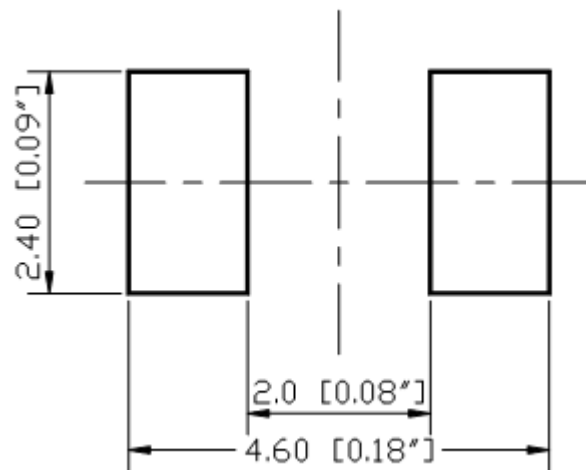


**Solder Profile & Footprint**

- 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**

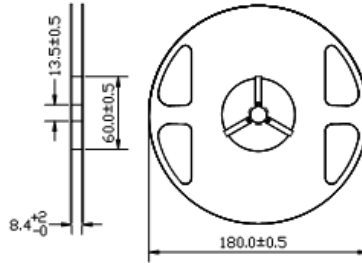


Units: mm

Tolerance: ± 0.1mm

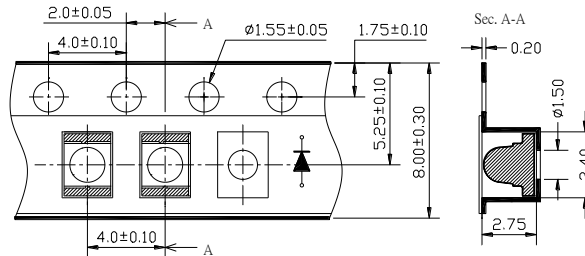
## Packing

### Reel Dimensions:



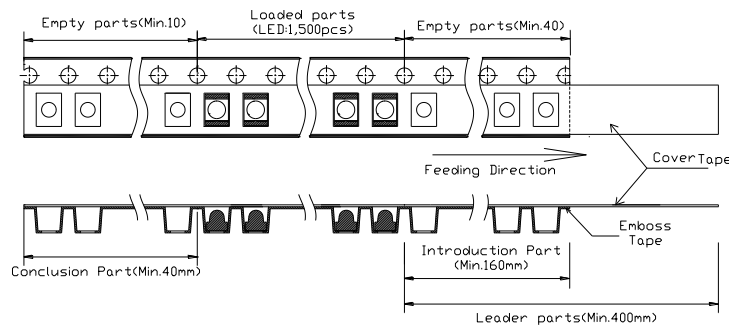
Unit: mm

### Tape Dimensions:

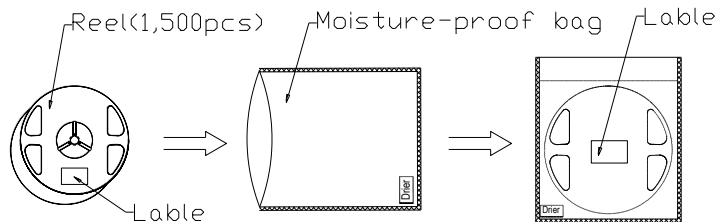


Unit: mm

### 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-IR3	QBLP653-IR3	I <sub>e</sub> =3.0mW/sr @ 20mA, λ <sub>p</sub> =850nm typ.	1,500 pcs

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## Revision History

Description:	Revision #	Revision Date
New Release of QBLP653-IR3	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.