

QT-Brightek Chip LED Series
1208 IR LED with Dome Lens
Part No.: QBLP653B-IR1

Product: QBLP653B-IR1	Date: August 08, 2017	Page 1 of 9
	Version# 1.1	

Table of Contents:

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

Introduction

Feature:

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

Description:

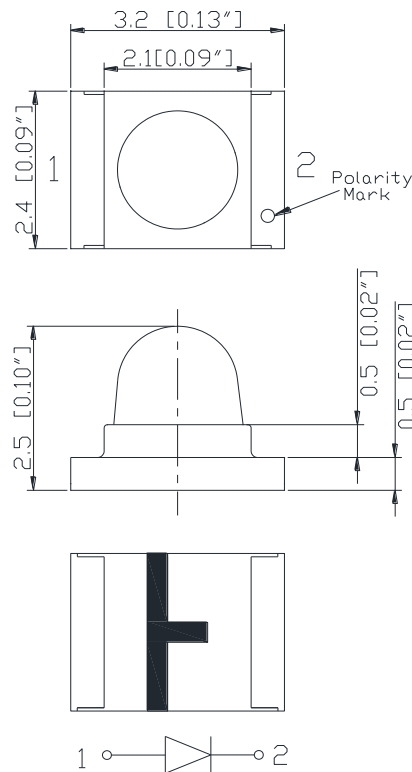
This reversed mount light weight bright 1208 LEDs have a height profile of 2.5mm. With narrow viewing angle, LED produces high intensity output. This device is spectrally matched with phototransistor, photodiode and infrared receiver module.

Application:

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

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant

**Dimension:**

Units: mm / tolerance = +/-0.15mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I _F (mA)	V _F (V)			λ _P (nm)			I _e (mW/sr)		
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.
QBLP653B-IR1	Infrared	20	0.8	1.3	1.8	930	940	950	1.6	2.6	4.1

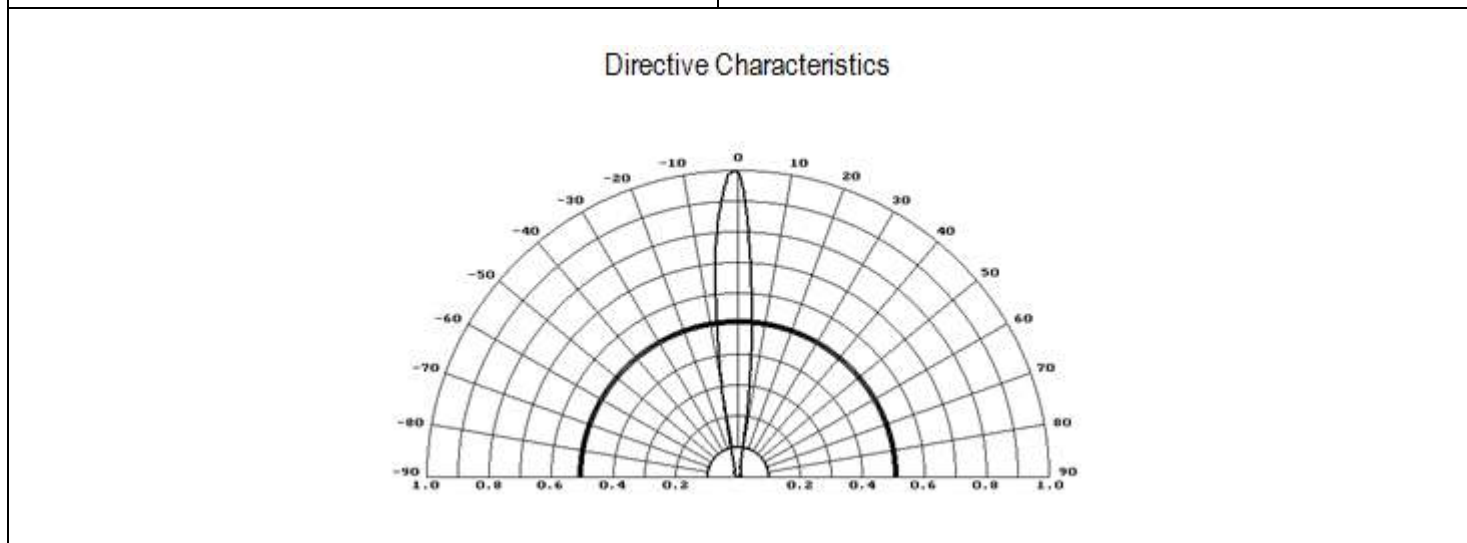
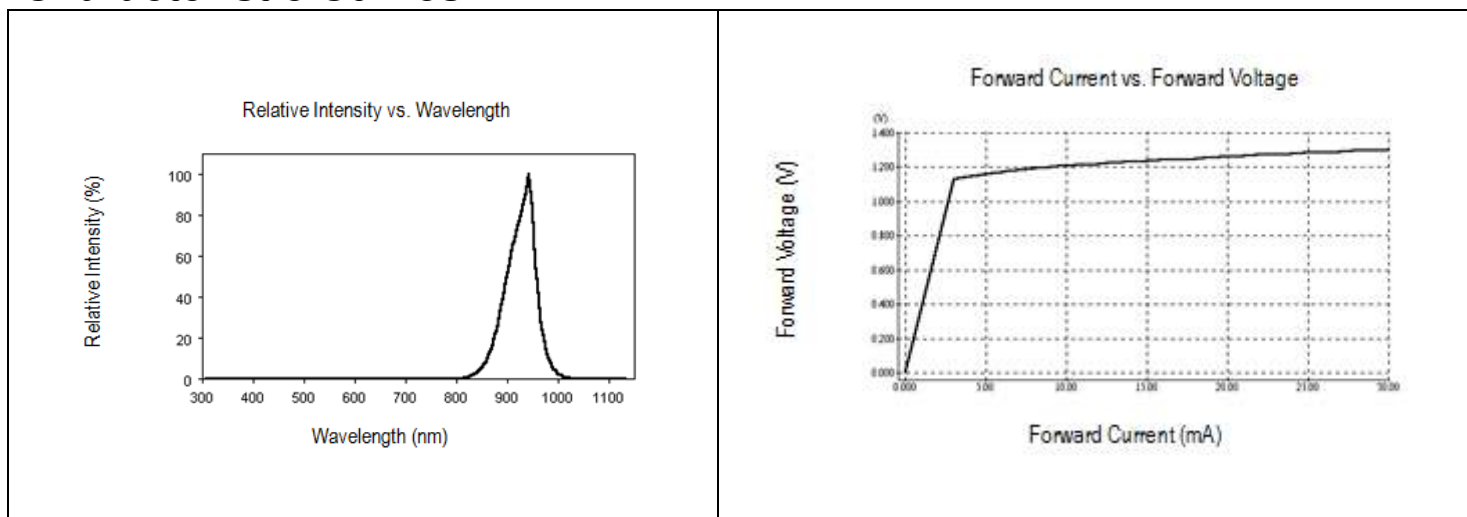
Absolute Maximum Rating

Material	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SO L} (°C)**
AlGaAs	80	50	1	5	-40 to +80	-40 to +85	260

*Pulse width 100μs, duty cycle=1%

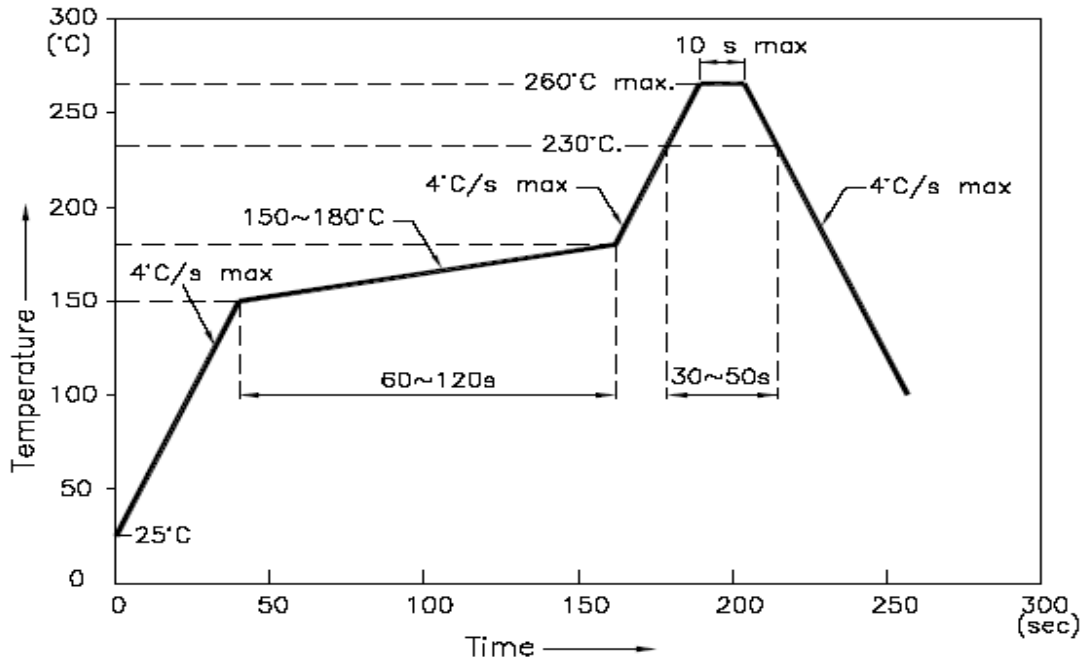
**IR Reflow for no more than 10 sec @ 260 °C

Characteristic Curves

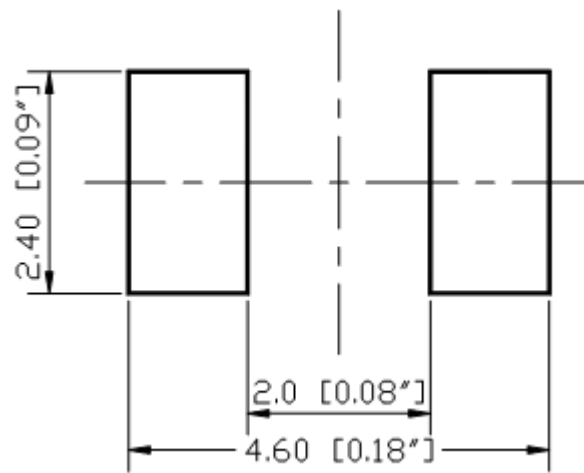


Soldering Profile & footprint

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



Recommended Pad Layout

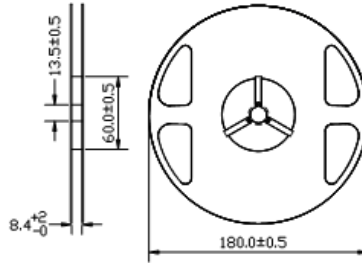


Units: mm

Tolerance: ± 0.1 mm

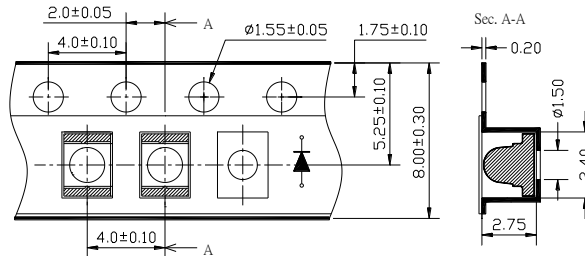
Packing

Reel Dimensions:



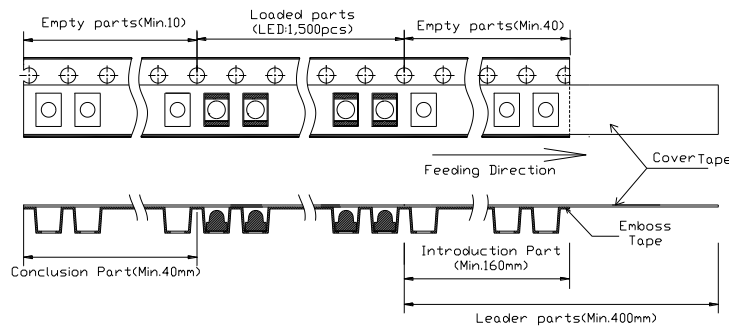
Unit: mm

Tape Dimensions:

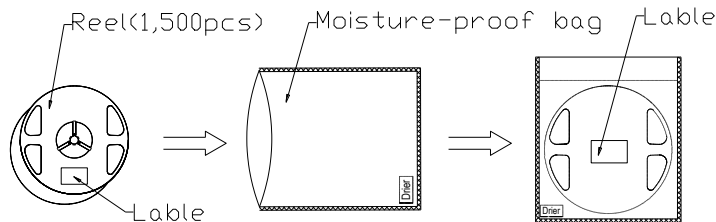


Unit: mm

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
QBLP653B-IR1	QBLP653B-IR1	I _e =3.2mW/sr typ. @ 20mA, λ _p =940nm typ.	1,500 pcs

Revision History

Description:	Revision #	Revision Date
New Release of QBLP653B-IR1	V1.0	05/11/2015
Update drawing dimension	V1.1	08/08/2017

Disclaimer

QT-BRIGHTTEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. QT-BRIGHTTEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

Life Support Policy

QT-BRIGHTTEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of QT-BRIGHTTEK. As used herein:

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.