QT-Brightek Chip LED Series

1206 IR LED

Part No.: QBLP650-IR3

Table of Contents:

Introduction

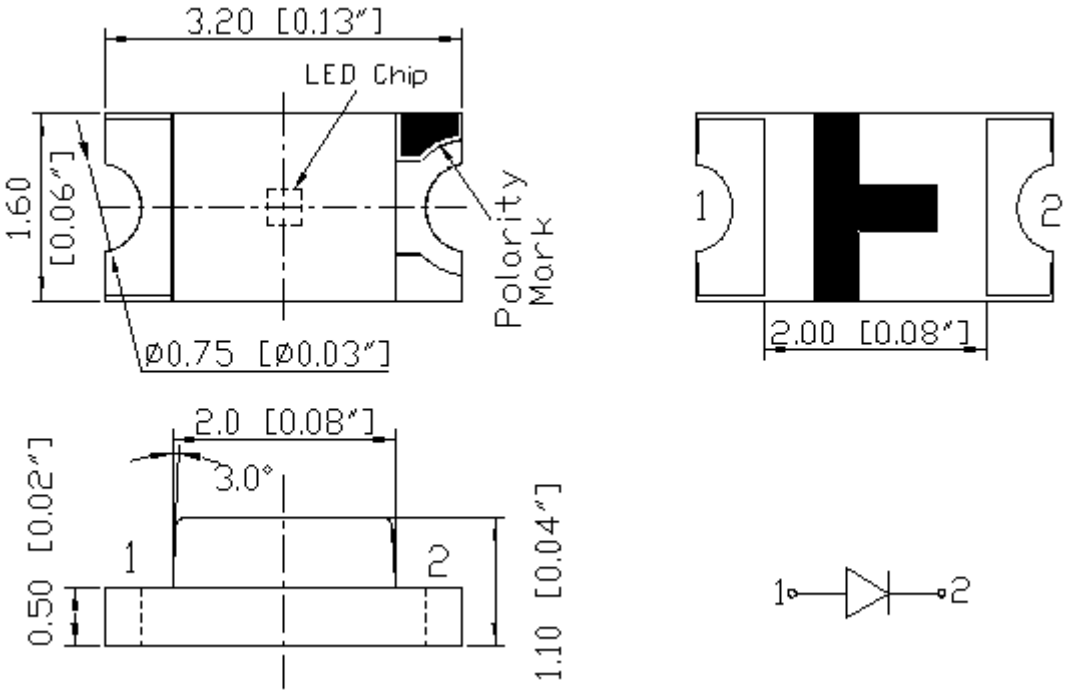
Feature:
- Water clear lens
- Package in tape and reel
- 1206 Package
- AlGaAs technology
- Viewing Angle = 140 deg typ.

Description:
This top mount bright 1206 LEDs have a height profile of 1.1mm, which is ideal in any kind of back lighting application. Also, it is a light weight model that is good for miniature products.

Application:
- Infrared Sensor
- Optoelectronic Switch
- Smoke detector
- Drive sensor

Certification & Compliance:
- ISO9001
- RoHS Compliant

Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I_F (mA)	V_F (V)		λ_P (nm)			Ie (mW/sr)		
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.
QBLP650-IR3	Infrared	20	1.4	1.8	835	850	860	0.3	1.0	2.1

Absolute Maximum Rating

Material	P_d (mW)	I_F (mA)	I_{FP} (A)*	V_R (V)	T_{OP} (°C)	T_{ST} (°C)	T_{SOL} (°C)**
AlGaAs	90	50	1	5	-40 ~ +80	-40 ~ +85	260

*Duty cycle=1%, Pulse width 100μs
**IR Reflow for no more than 10 sec @ 260 °C

Forward Voltage V_F @ I_F=20mA

Bin	Min.	Max.	Unit
☐	1.0	1.8	V

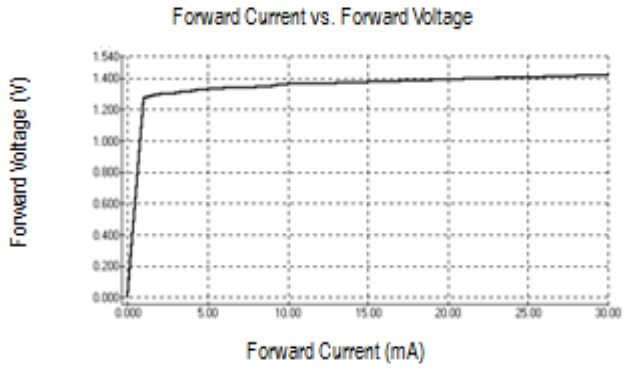
Radiant Intensity I_E @ I_F=20mA

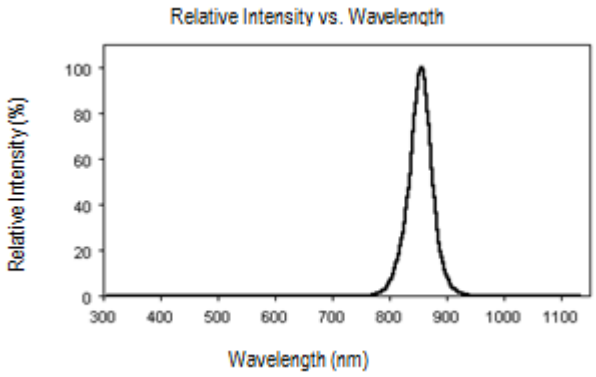
Bin	Min.	Max.	Unit
A	0.30	0.60	mW/sr
B	0.60	1.10	
C	1.10	1.60	
D	1.60	2.10	

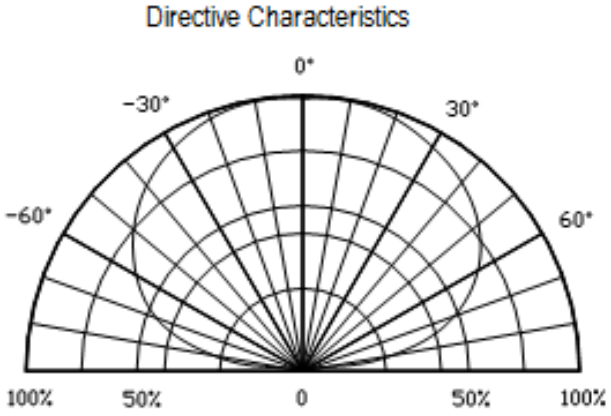
Peak Wavelength λ_P @ I_F=20mA

Bin	Min.	Max.	Unit
☐	835	860	nm

Characteristic Curves

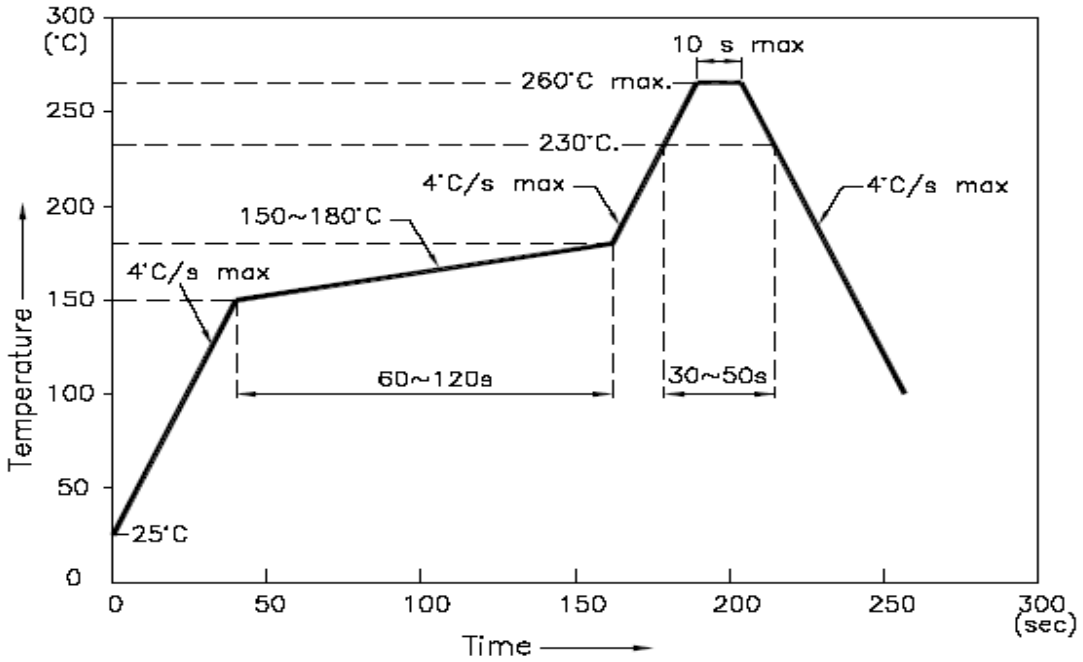




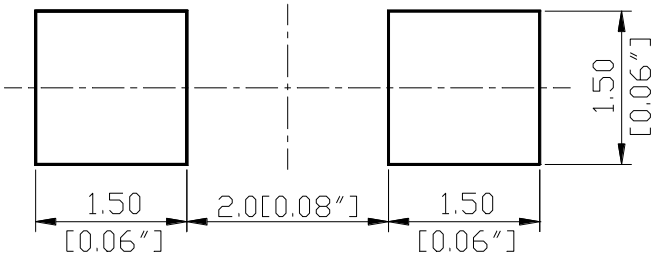


Solder Profile & Footprint

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



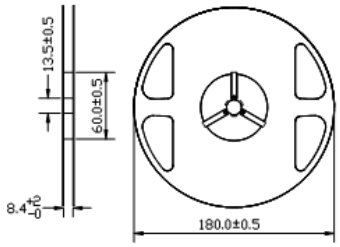
Recommended Pad Layout



Units: mm

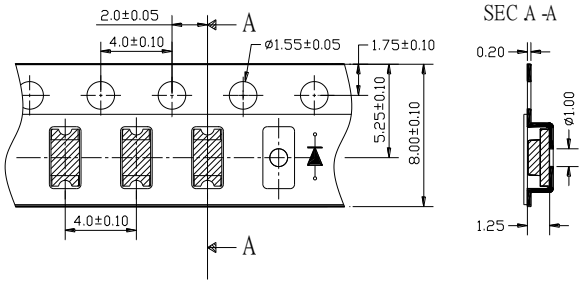
Packing

Reel Dimension:



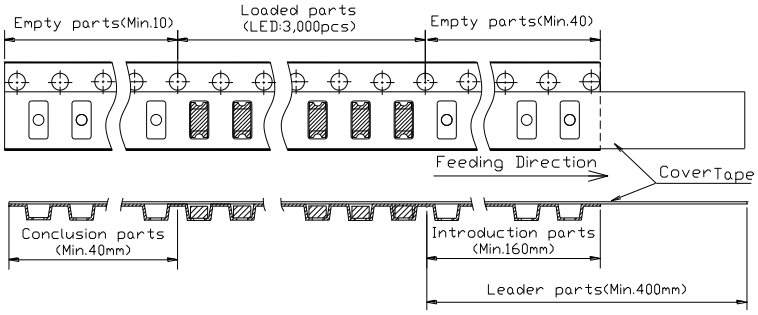
Unit: mm

Tape Dimension:

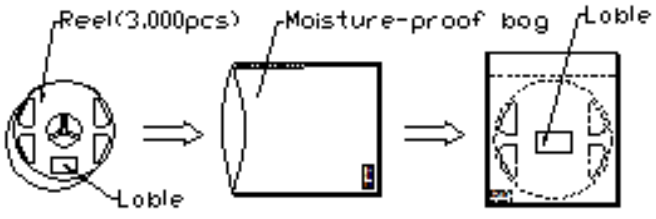


Unit: mm

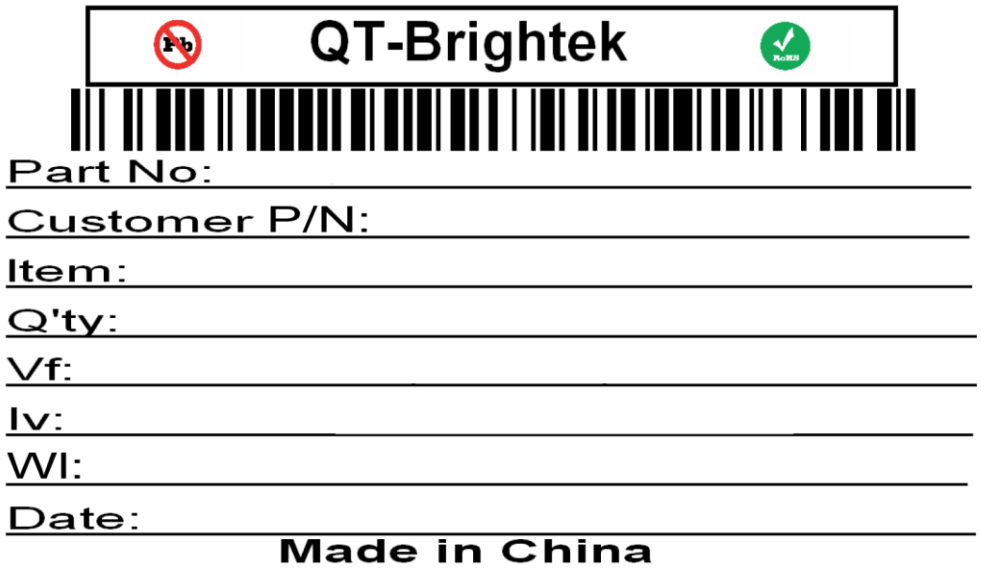
Arrangement of Tape:



Packaging Specification:



Labeling



Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP650-IR3	QBLP650-IR3	Ie=1.0mW/sr typ. / λ_P=850nm typ. @ I_F=20mA	3,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP650-IR3	V1.0	02/05/2015
Update spec (add min. Ie) and bin code	V1.1	05/11/2015

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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.