

QT-Brightek Chip LED Series

SMD 1206 LED

Part No.: QBLP650-S1

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
- Package in tape and reel
- Bright 1206 LED package
- AlGaAs technology

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:

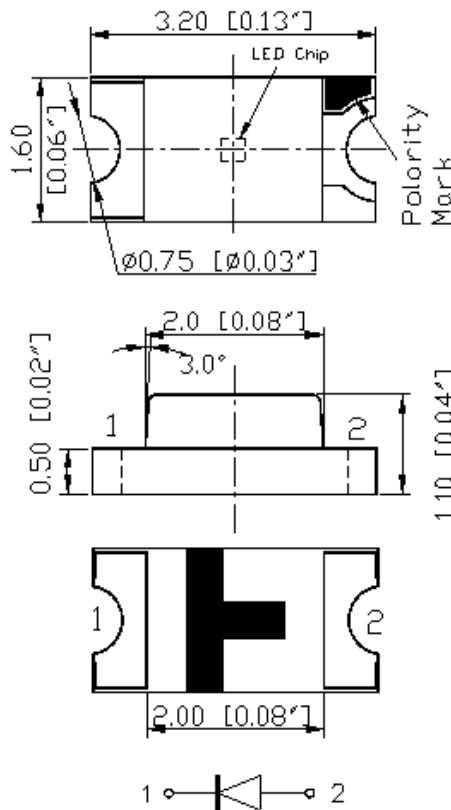
- Automotive dashboard lighting and button lighting
- Telecommunication and storage Back lighting
- Flat panel display back lighting

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I _F (mA)	V _F (V)		λ _D (nm)			I _V (mcd)	
			Typ.	Max.	Min.	Typ.	Max	Min.	Typ.
QBLP650-S1	Deep Red	20	2.0	2.5	630	640	650	3.2	13

Absolute Maximum Rating

Material	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)**
AlGaAs	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_F @ I_F=20mA

Bin	Min.	Max.	Unit
□	1.7	2.5	V

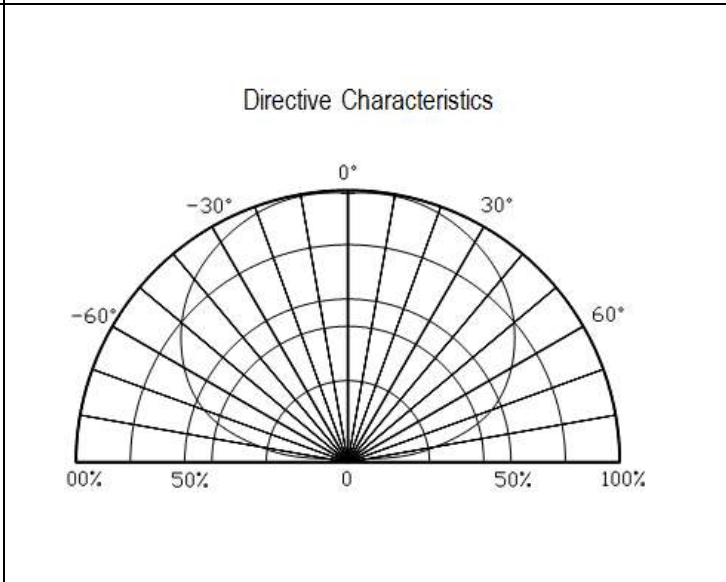
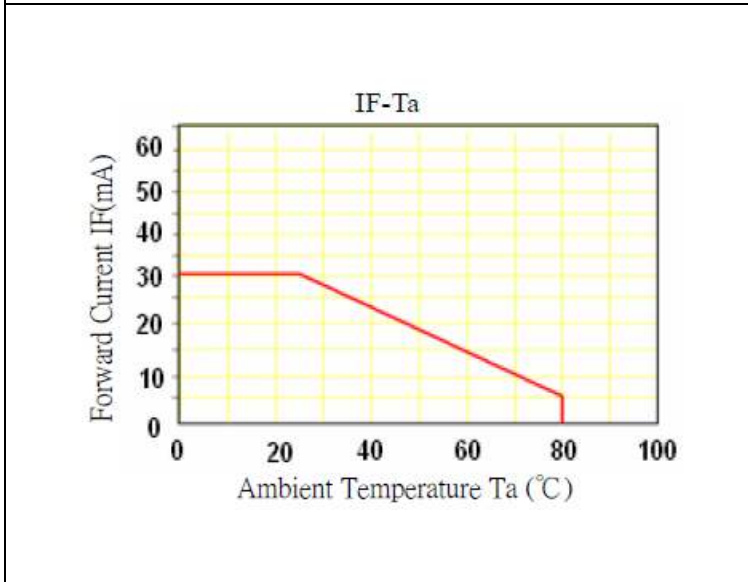
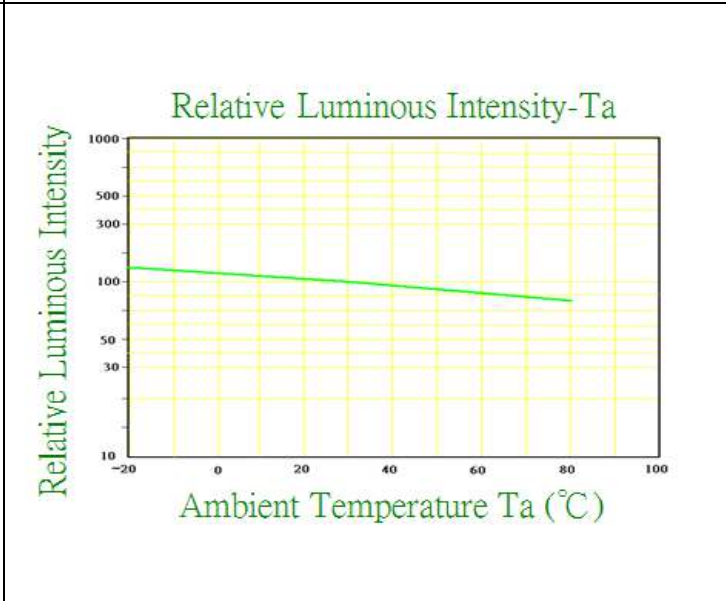
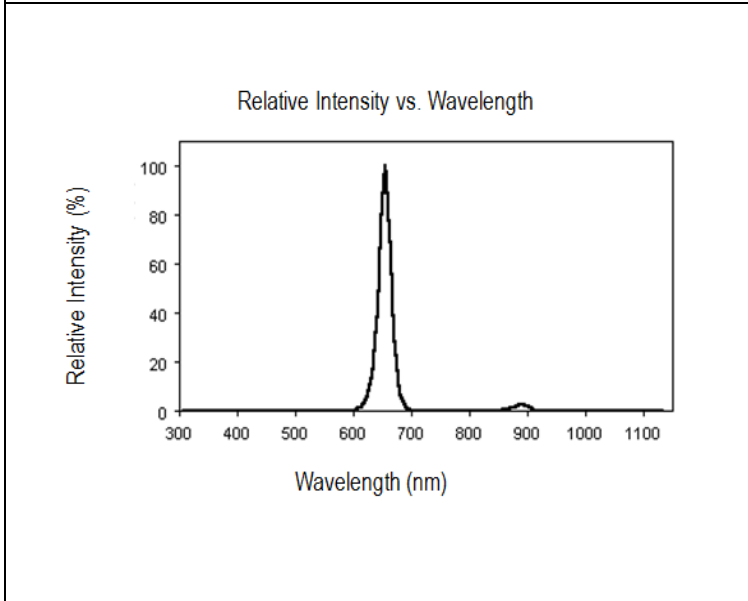
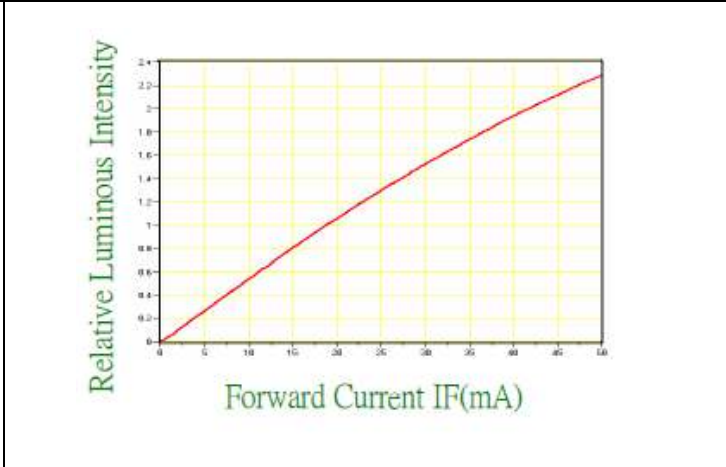
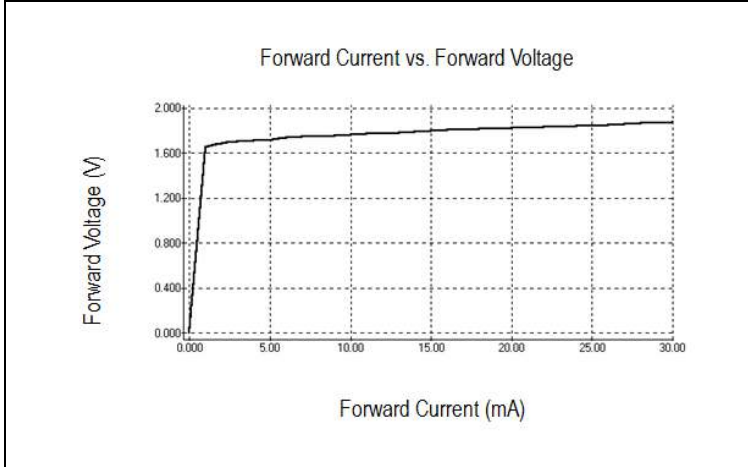
Luminous Intensity I_V @ I_F=20mA

Bin	Min.	Max.	Unit
7	3.2	5.0	mcd
8	5.0	8.0	
9	8.0	12.5	
A	12.5	16	
B	16	20	

Dominant Wavelength λ_D @ I_F=20mA

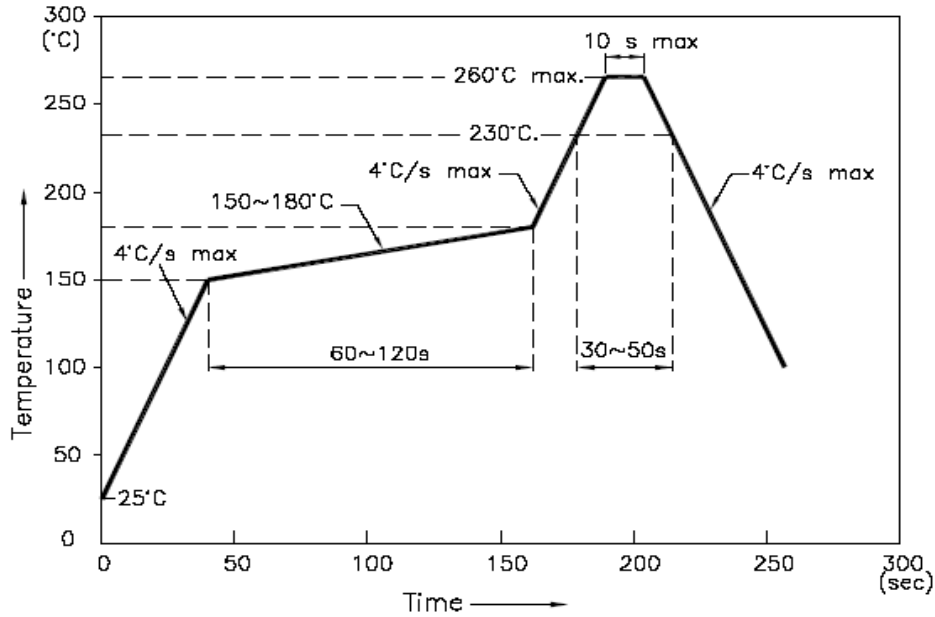
Bin	Min.	Max.	Unit
v	630	635	nm
w	635	650	

Characteristic Curves

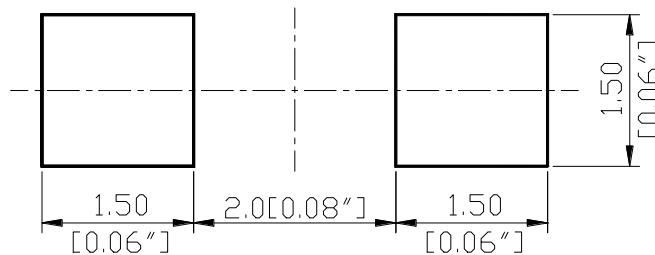


Solder Profile & Footprint

- 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

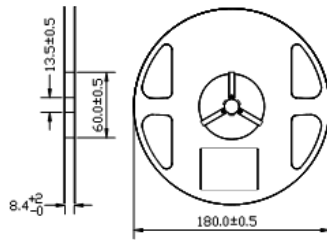


Units: mm

Tolerance: ± 0.1mm

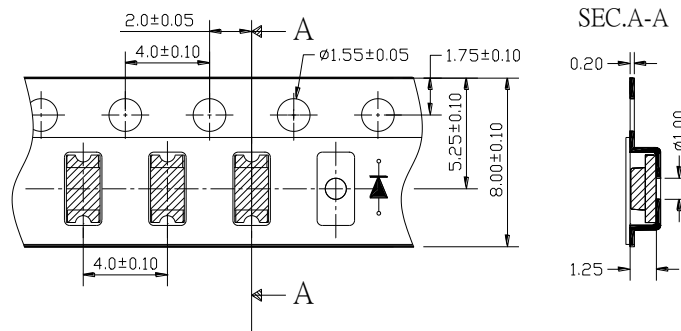
Packing

Reel Dimension:



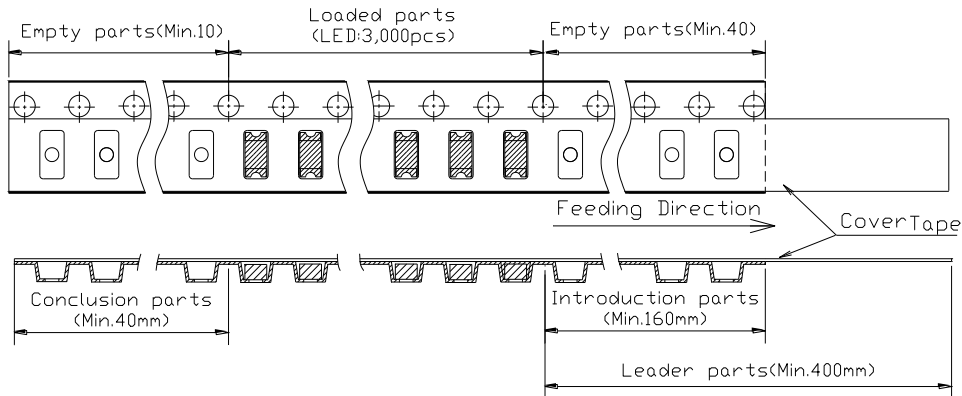
Unit: mm

Tape Dimension:

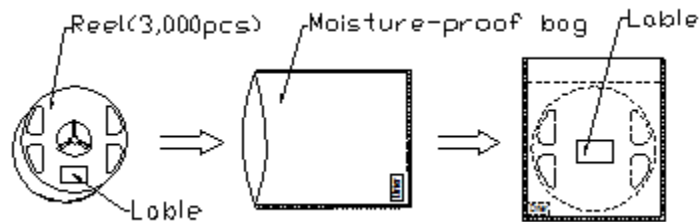


Unit: mm

Arrangement of Tape:



Packaging 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
QBLP650-S1	QBLP650-S1	Iv=13mcd typ. @ I _F =20mA, λ _D =630nm to 650nm	3,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP650-S1	V1.0	09/18/2014

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.