QT-Brightek Chip LED Series

SMD 1205 LED

Part No.: QBLP655-BG

Table of Contents:

Introduction

Feature:

- Diffused lens
- Package in tape and reel
- Ultra bright 1205 package
- InGaN technology
- Viewing angle: 140 degrees

Description:

These ultra-bright 655 LEDs have a height profile of 1.10mm. With a combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

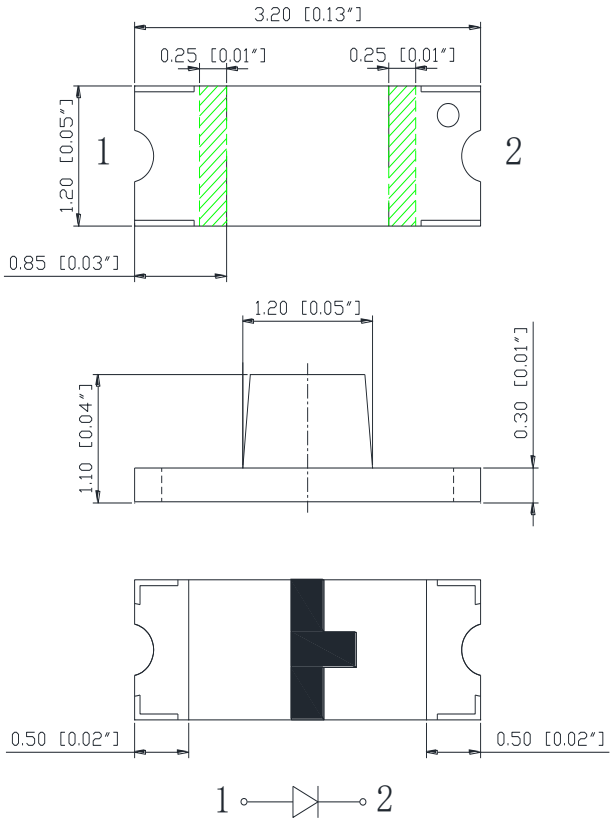
Application:

- Status indication
- Back lighting application

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)		CIE Coordinates			I_V(mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP655-BG	Aqua White	20	3.0	3.4	-	X=0.20 Y=0.34	-	100	180

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)**
InGaN	102	30	125	5	-40 ~ +80	-40 ~ +85	260

*Duty 1/8 @ 1kHz

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

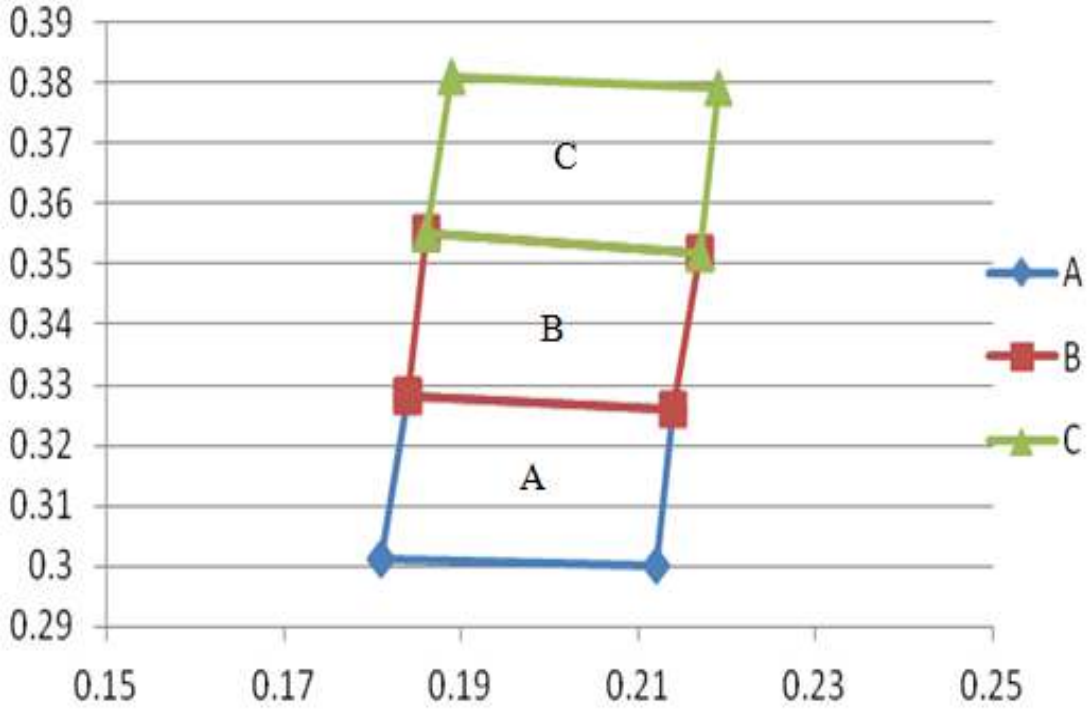
Forward Voltage V_F @ I_F=20mA

Bin	Min.	Max.	Unit
f	2.8	3.1	V
g	3.1	3.4	

Luminous Intensity I_V @ I_F=20mA

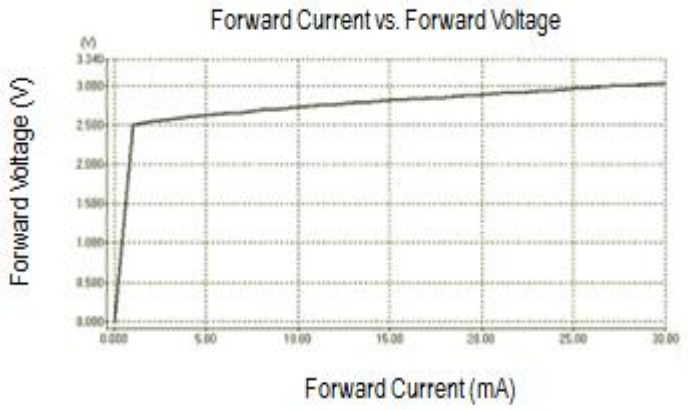
Bin	Min.	Max.	Unit
J	100	125	mcd
K	125	160	
L	160	200	
M	200	250	

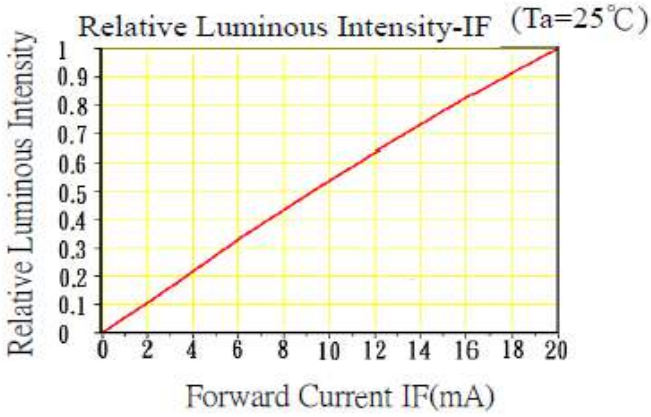
CIE Chromaticity Diagram

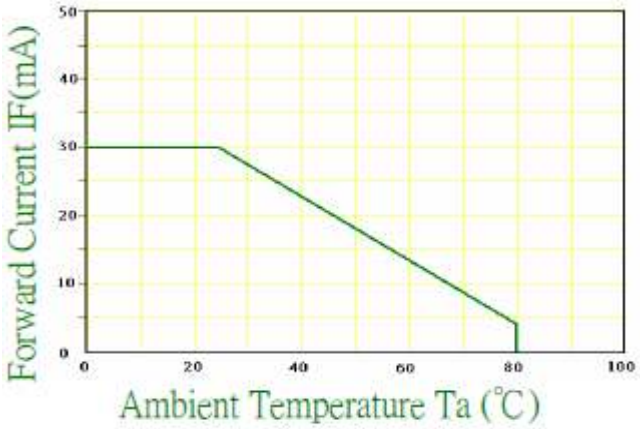


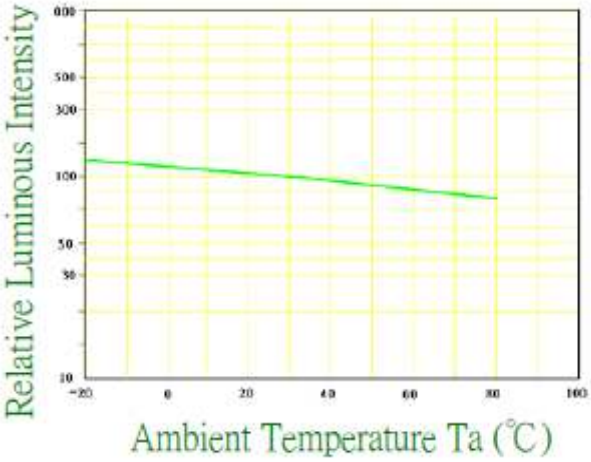
Rank	Chromaticity coordinates				
A	X	0.181	0.184	0.214	0.212
	Y	0.301	0.328	0.326	0.300
B	X	0.184	0.186	0.217	0.214
	Y	0.328	0.355	0.352	0.326
C	X	0.186	0.189	0.219	0.217
	Y	0.355	0.381	0.379	0.352

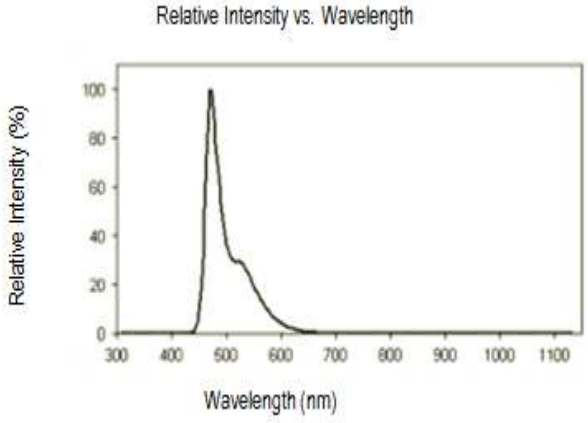
Characteristic Curves

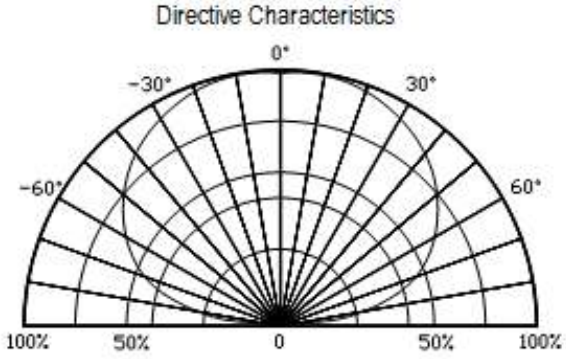






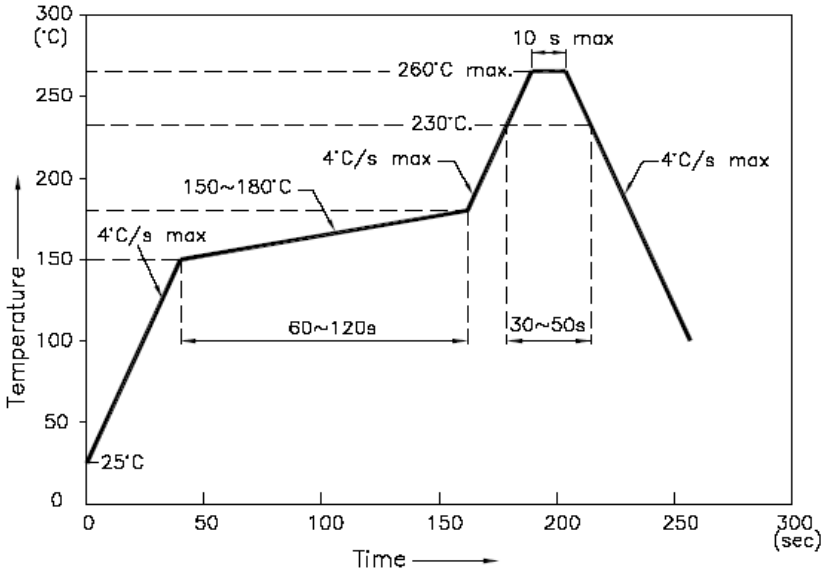




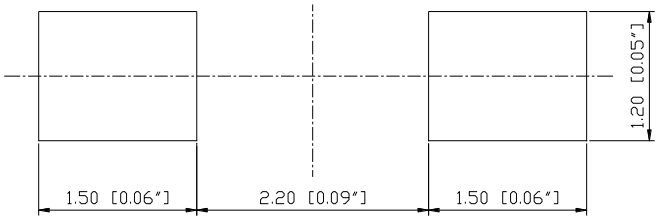


Solder Profile & Footprint

-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):



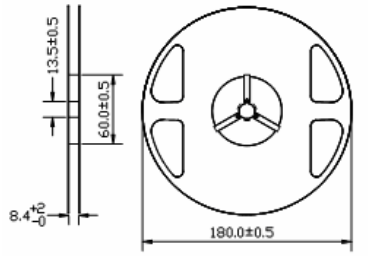
Recommended Pad Layout



Units: mm Tolerance: ± 0.1mm

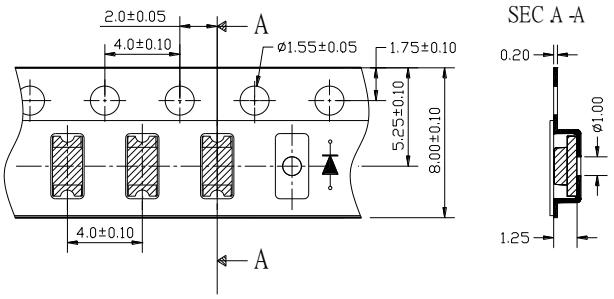
Packing

Reel Dimension:



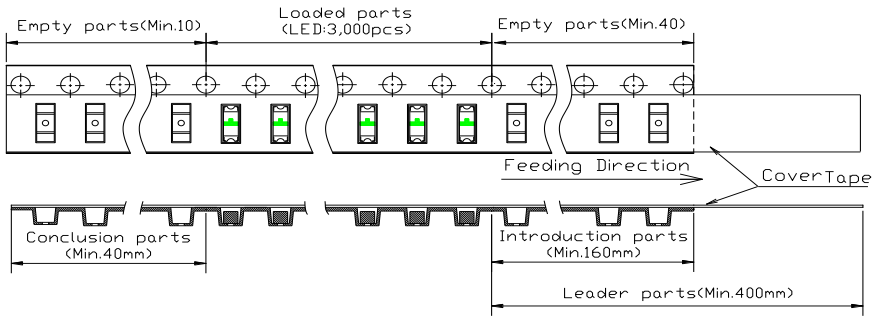
Unit: mm

Tape Dimension:

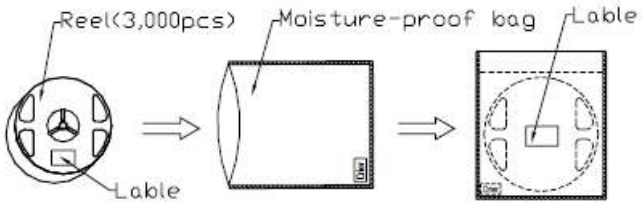


Unit: mm

Arrangement of Tape:



Packaging Specifications:



Labeling

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP655-BG	QBLP655-BG	Iv=180mcd typ. @ I_F=20mA / CIE Coordinate: (X=0.20, Y=0.34) typ.	3,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP655-BG	V1.0	03/27/2014
Update dimension drawing to reflect the new PCB	V2.0	09/27/2016

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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.