

QT-Brightek Chip LED Series

SMD 1205 LED

Part No.: QBLP655ER-IW-2541

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Introduction

Feature:

- Yellow diffused lens
- Package in tape and reel
- Ultra bright 1205 package
- InGaN technology for IW
- Viewing angle: 140 degrees
- Reverse Mountable
- ESD Rating = 2kV Min. (HBM)

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:

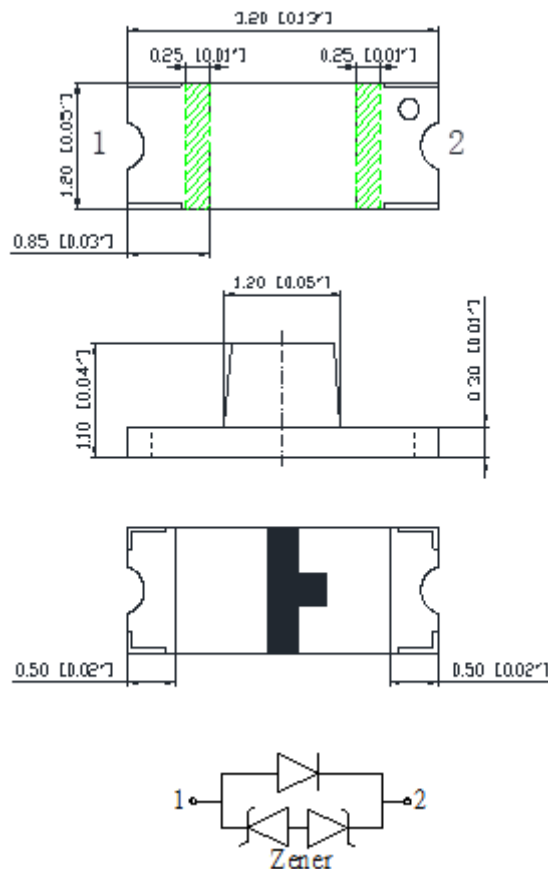
- Status indication
- Back lighting application

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)		λ _D (nm)			I _V (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP655ER-IW-2541	White	20	3.3	3.7	--	X=0.29 Y=0.28	--	100	180

Absolute Maximum Rating

Material	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	I _R (μA) @ V _R =5V	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)**
InGaN	111	30	125	5	10	-40 ~ +80	-40 ~ +85	260

*Duty 1/8 @ 1kHz

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

Zener Diode Electrical Characteristic (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Leakage Current	I _{df}	V=4V, Ee=0mW/cm ²	-	-	100	nA
	I _{dr}		-	-	100	
Zener Voltage	V _z (forward)	I _{zf} =5mA, Ee=0mW/cm ²	5.5	-	7.0	V
	V _z (reverse)	I _{zr} =5mA, Ee=0mW/cm ²	5.3	-	6.8	

Forward Voltage V_F @ I_F=20mA

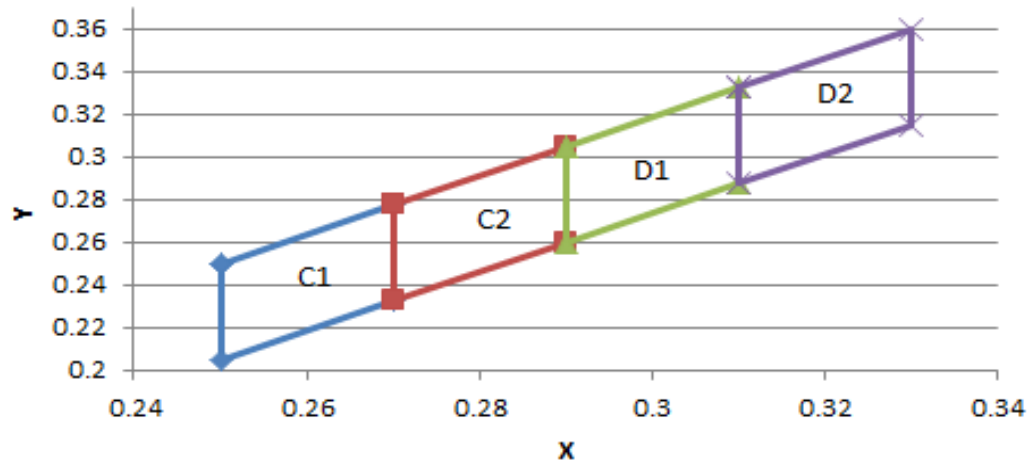
Bin	Min.	Max.	Unit
f	2.8	3.1	V
g	3.1	3.4	
h	3.4	3.7	

Luminous Intensity I_V @ I_F=20mA

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

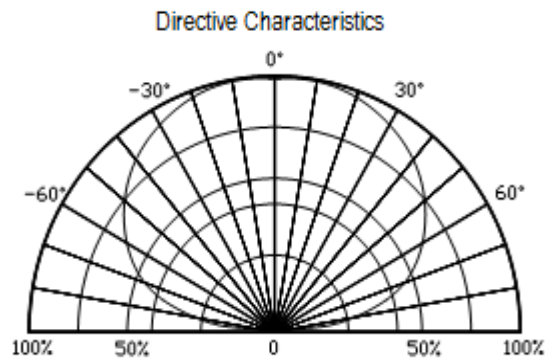
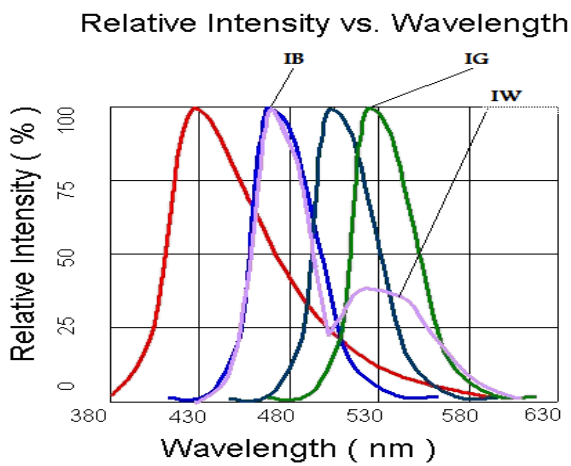
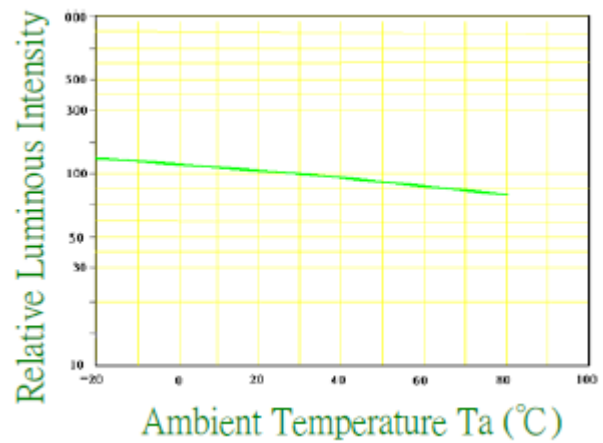
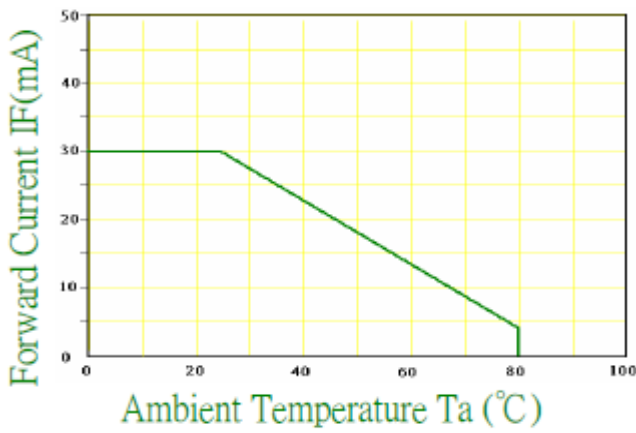
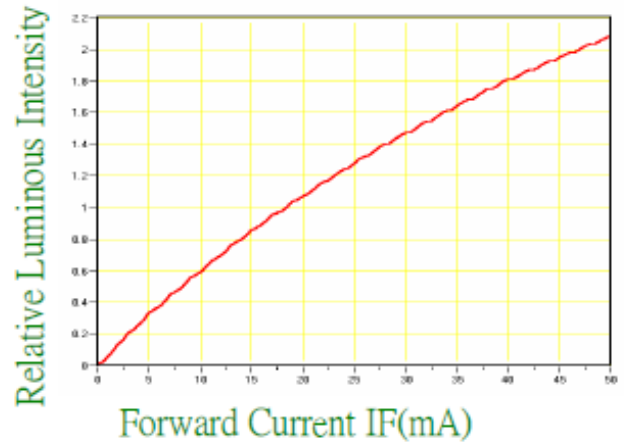
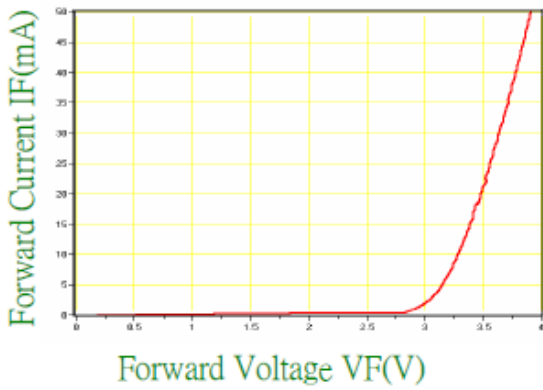
CIE Chromaticity Diagram:

Chromaticity Chart



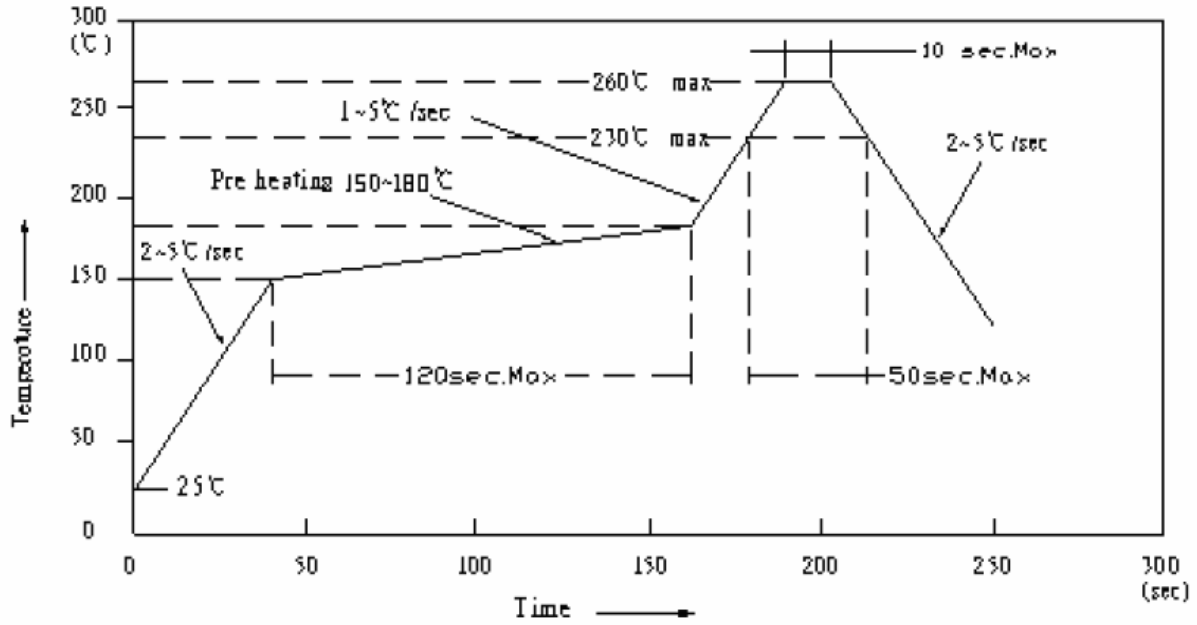
C1		C2		D1		D2	
0.25	0.25	0.27	0.2775	0.29	0.305	0.31	0.3325
0.27	0.2775	0.29	0.305	0.31	0.3325	0.33	0.36
0.27	0.2325	0.29	0.26	0.31	0.2875	0.33	0.315
0.25	0.205	0.27	0.2325	0.29	0.26	0.31	0.2875
0.25	0.25	0.27	0.2775	0.29	0.305	0.31	0.3325

Characteristic Curves

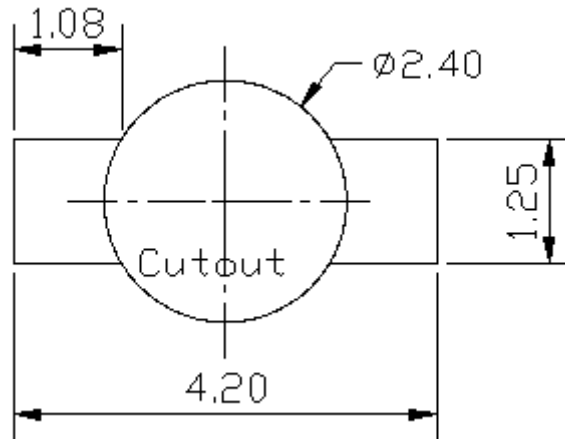


Solder Profile & Footprint

- 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):



RECOMMEND PAD LAYOUT



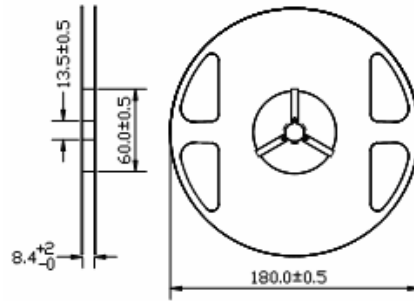
Units: mm

tolerance: +/- 0.1mm

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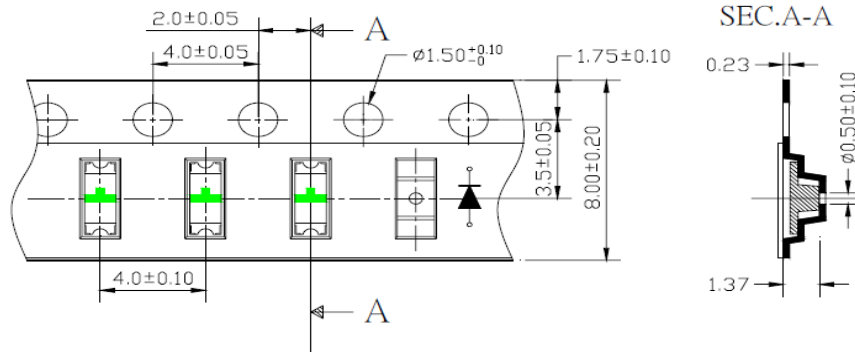
Packing

Reel Dimension:



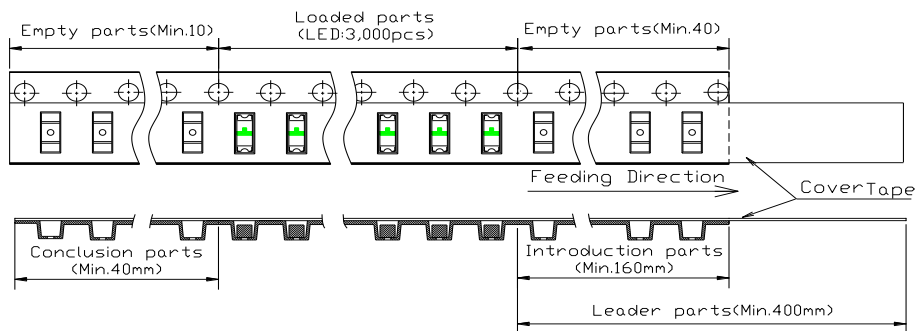
Unit: mm

Tape Dimension:

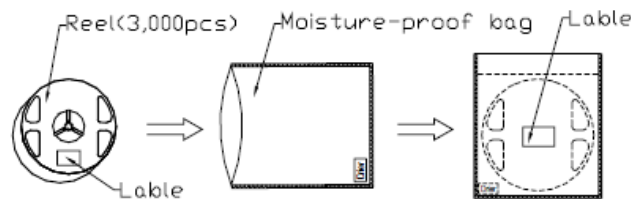


Unit: mm

Arrangement of Tape:



Packaging Specifications:



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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
QBLP655ER-IW-2541	QBLP655ER-IW-2541	Iv=180mcd Typ. @ I _F =20mA / (X,Y)=(0.29,0.28)	3,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP655ER-IW-2541	V1.0	09/25/2013
Add the reverse current spec	V1.1	07/23/2014
Update the dimension drawing (PCB change)	V2.0	03/16/2016

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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.

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