

QT-Brightek Chip LED Series

SMD 1205 Bi-Color LED

Part No.: QBLP655R-OIW

**O: Orange
IW: White**

Product: QBLP655R-OIW	Date: August 02, 2018	Page 1 of 12
	Version# 1.2	

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Introduction

Feature:

- Diffused lens
- Package in tape and reel
- Ultra bright 1205 package
- InGaN technology for IW
- AlInGaP technology for O
- Viewing angle: 140 degrees
- Reverse Mountable

Description:

These ultra-bright 655R 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:

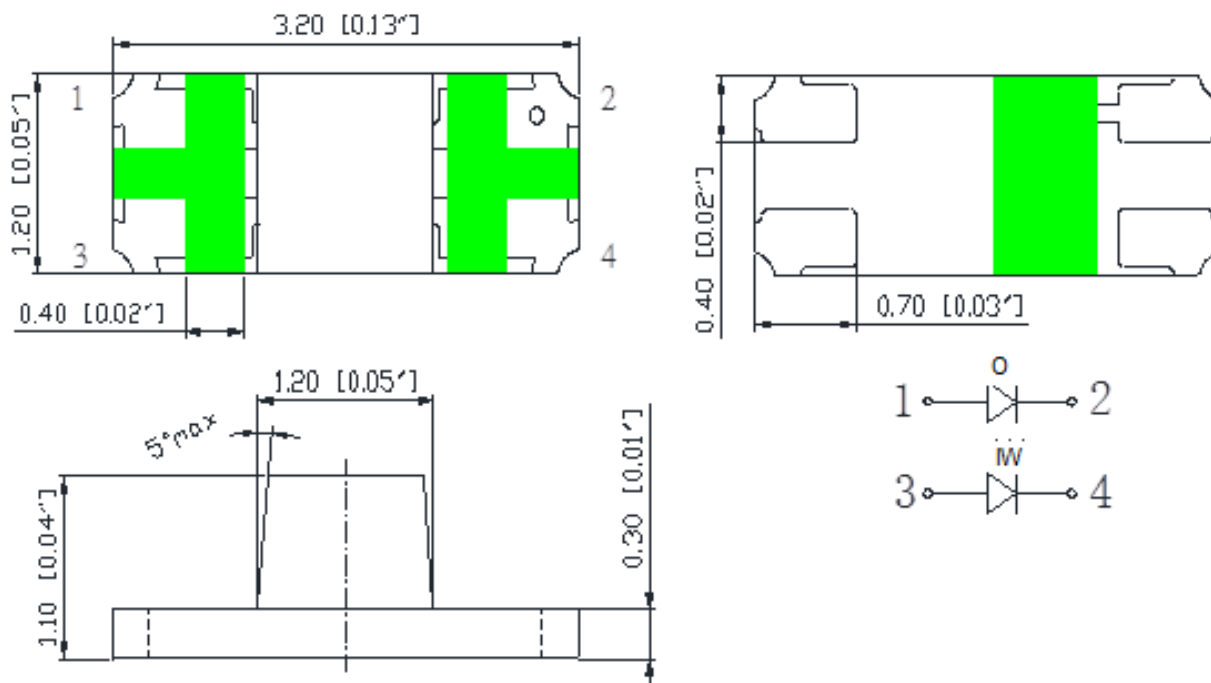
- Status indication
- Back lighting application

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.
QBLP655R-OIW	Orange	20	2.0	2.5	600	605	610	40	66
	White	20	3.1	3.7	-	X=0.29 Y=0.28	-	160	320

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)**
AlInGaP (R/AG/Y/O)	75	30	125	5	-40 ~ +85	-40 ~ +100	260
InGaN (IB/IG/IW)	120	30	125	5	-40 ~ +85	-40 ~ +100	260

*Duty 1/8 @ 1kHz

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

Forward Voltage V_F for AlInGaP @ I_F=20mA

Bin	Min.	Max.	Unit
□	1.7	2.5	V

Forward Voltage V_F for InGaN @ 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
F	40	50	mcd
G	50	63	
H	63	80	
I	80	100	
J	100	125	
K	125	160	
L	160	200	
M	200	250	
N	250	320	
O	320	400	
P	400	500	

Dominant Wavelength λ_D for Orange @ $I_F=20mA$

Bin	Min.	Max.	Unit
p	600	605	nm
q	605	610	

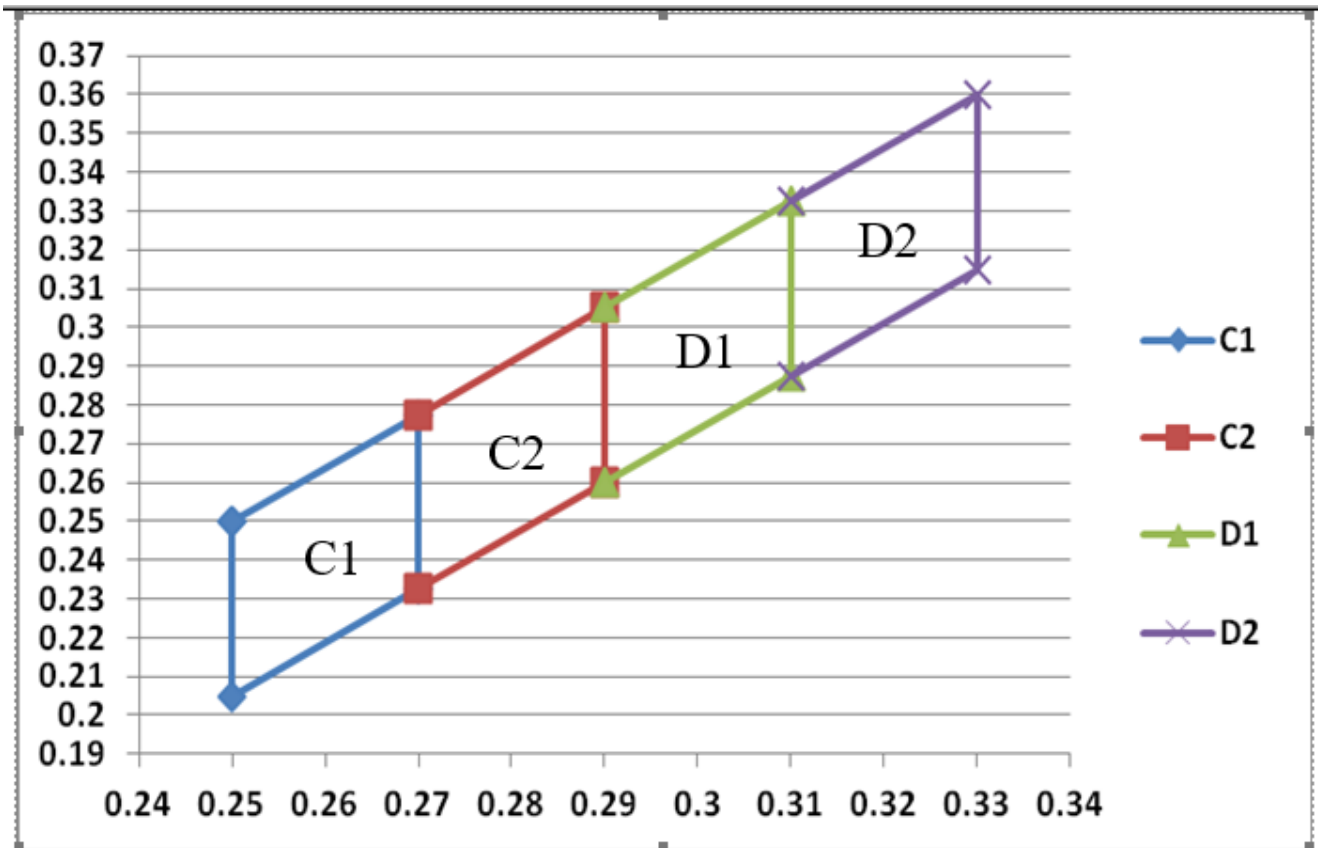
Note:

Tolerance of measurement of forward voltage: $\pm 0.1V$

Tolerance of measurement of luminous intensity: $\pm 15\%$

Tolerance of measurement of dominant wavelength: $\pm 2nm$

Chromaticity Coordinates for White



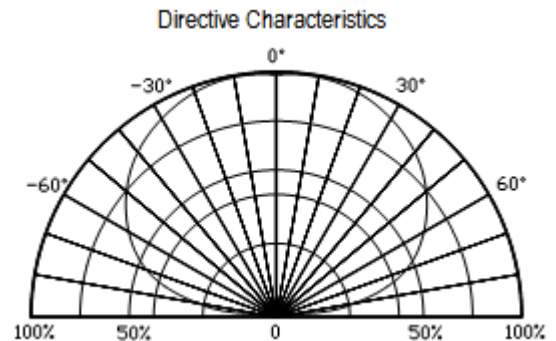
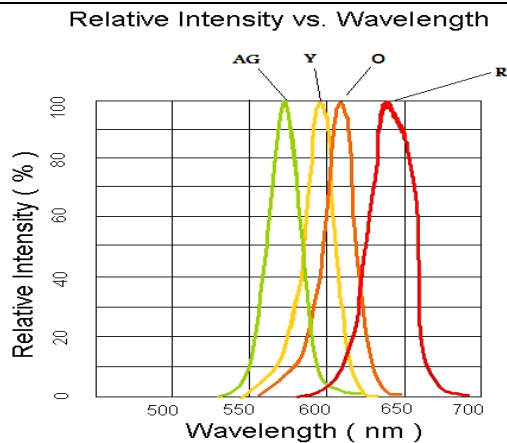
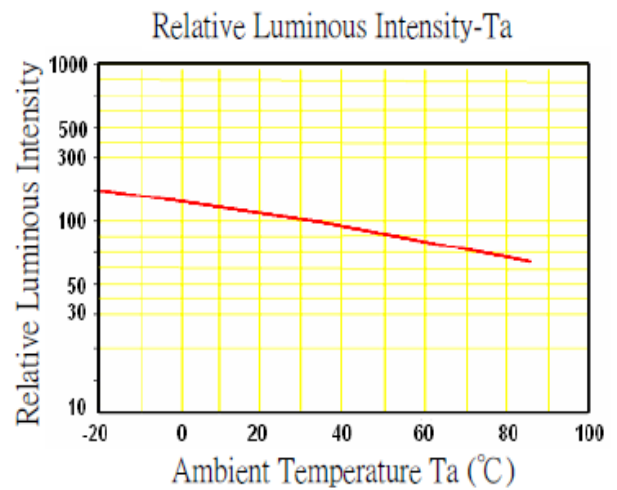
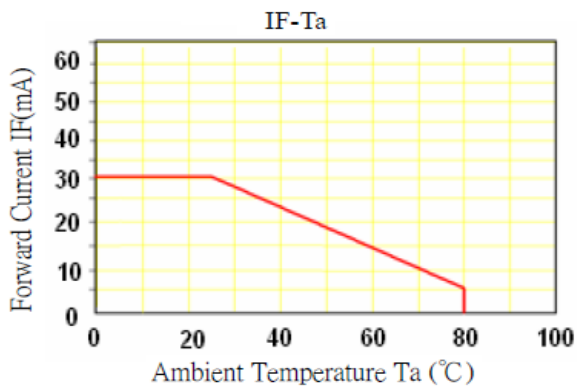
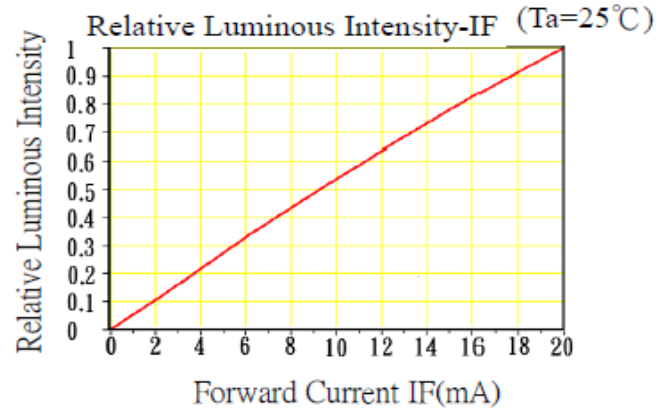
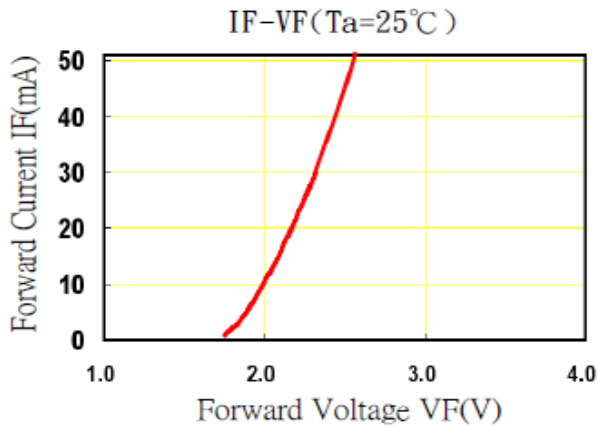
Rank	Chromaticity coordinates				
C1	X	0.2500	0.2700	0.2700	0.2500
	Y	0.2500	0.2775	0.2325	0.2050
C2	X	0.2700	0.2900	0.2900	0.2700
	Y	0.2775	0.3050	0.2600	0.2325
D1	X	0.2900	0.3100	0.3100	0.2900
	Y	0.3050	0.3325	0.2875	0.2600
D2	X	0.3100	0.3300	0.3300	0.3100
	Y	0.3325	0.3600	0.3150	0.2875

Note:

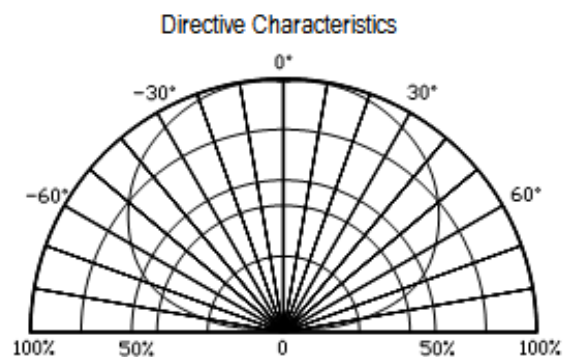
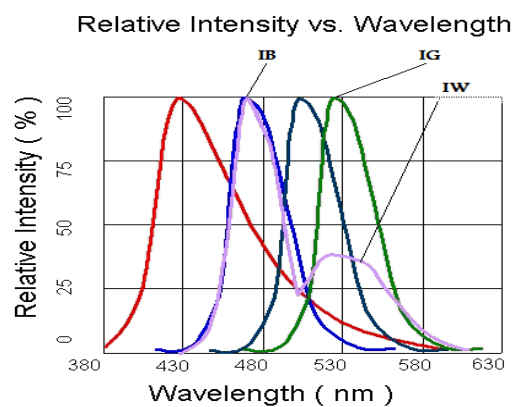
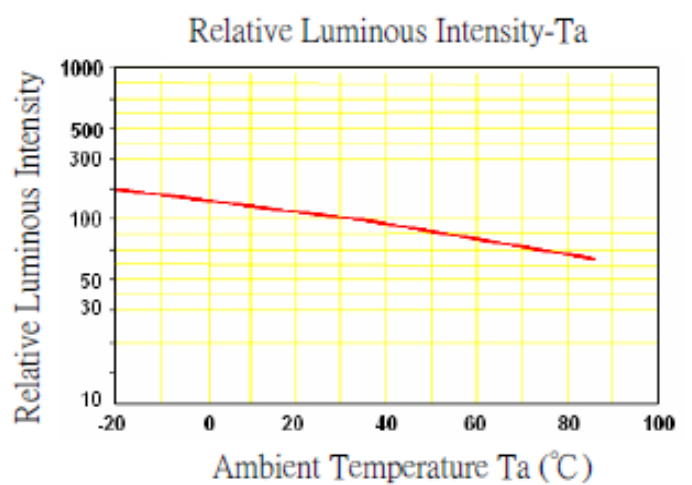
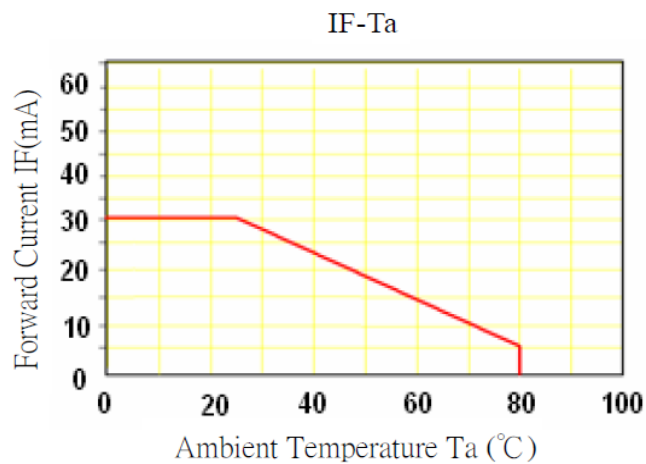
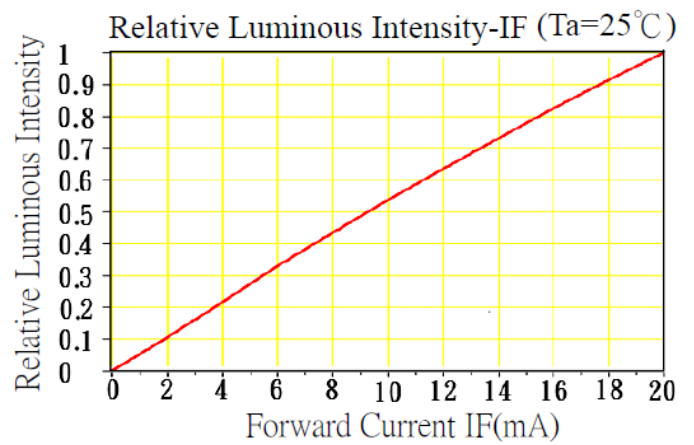
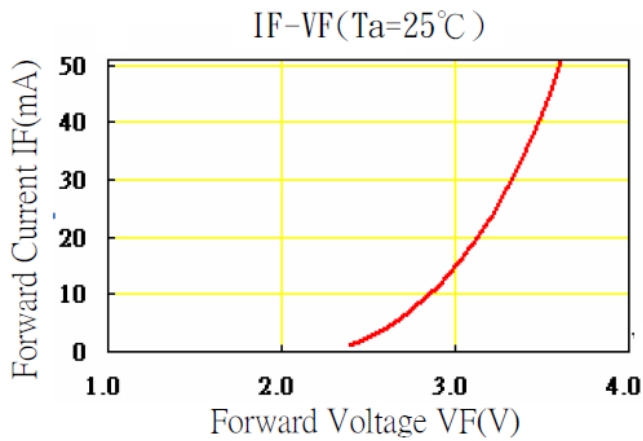
Tolerance of measurement of color coordinates: ± 0.01

Characteristic Curves

AlInGaP (O)

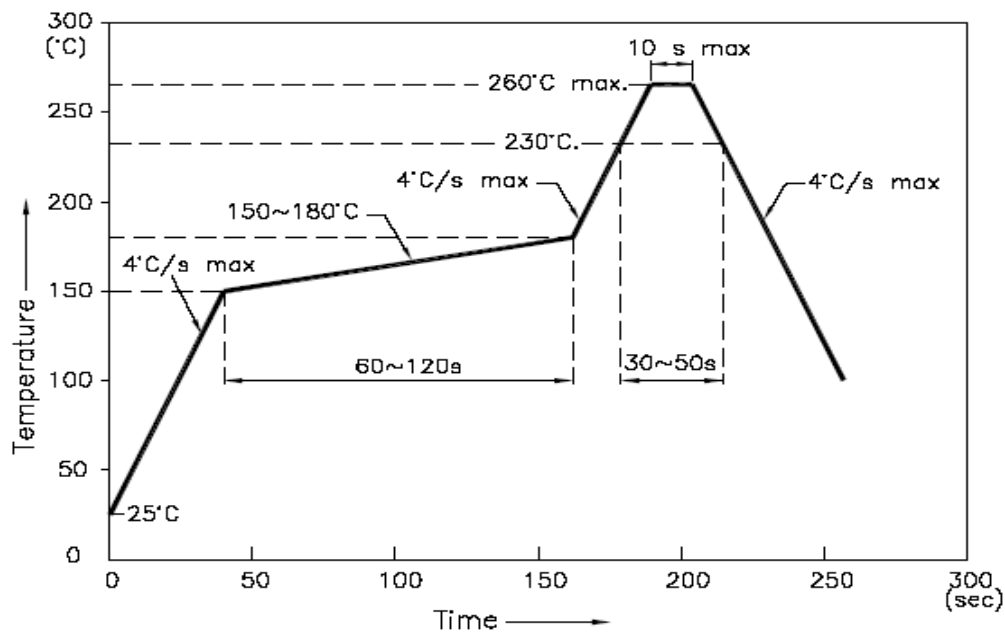


InGaN (IW)

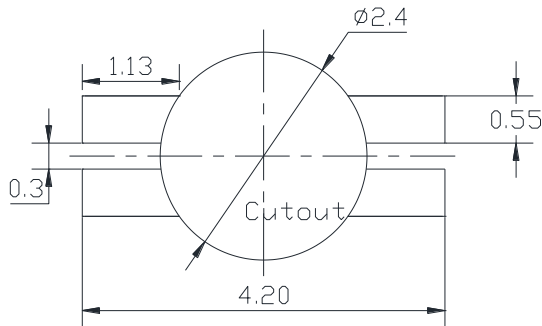


Solder Profile & Footprint

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



Recommended Pad Layout

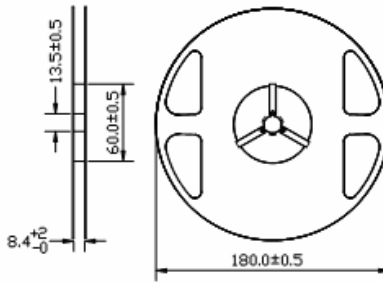


Units: mm

tolerance: +/- 0.1mm

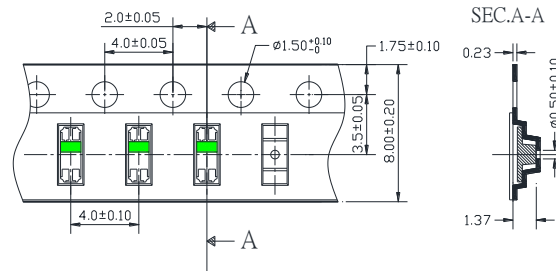
Packing

Reel Dimension:



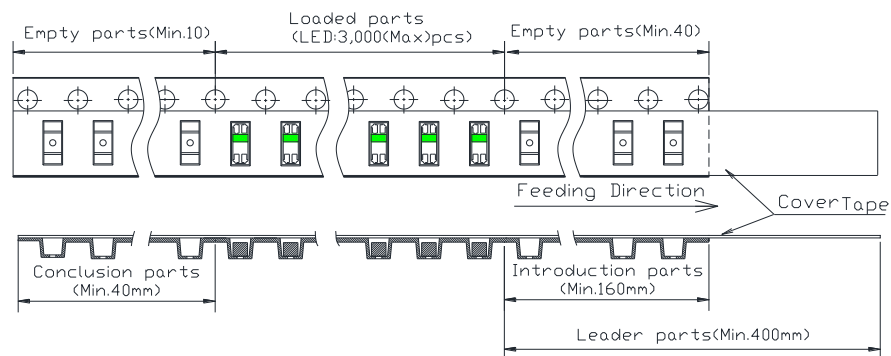
Unit: mm

Tape Dimension:

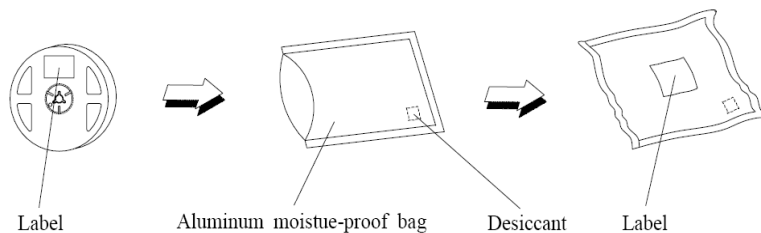


Unit: mm

Arrangement of Tape:



Packaging Specifications:



Labeling


QT-Brightek




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
QBLP655R-OIW	QBLP655R-OIW	Iv=66mcd typ. @ 20mA / λ_D =600-610nm	3,000 units
		Iv=320mcd typ. @ 20mA / CCT Coordinate: (X=0.29, Y=0.28) typ.	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP655R-OIW	V1.0	02/10/2017
Amend the spec	V1.1	06/16/2017
Amend the White Brightness	V1.2	08/02/2018

Disclaimer

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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.