

QT-Brightek Chip LED Series

SMD 1205 Bi-Color LED

Part No.: QBLP655R-RIB

R: Red
IB: Blue

Product: QBLP655R-RIB	Date: June 23, 2017	Page 1 of 11
	Version# 1.0	

Table of Contents:

Introduction	3
Electrical / Optical Characteristic (Ta=25 °C)	4
Absolute Maximum Rating	4
Characteristic Curves.....	6
Solder Profile & Footprint.....	8
Packing	9
Labeling	10
Ordering Information	10
Revision History	11
Disclaimer	11

Product: QBLP655R-RIB	Date: June 23, 2017	Page 2 of 11
	Version# 1.0	

Introduction

Feature:

- Clear lens
- Package in tape and reel
- Ultra bright 1205 package
- InGaN technology for IB
- AlInGaP technology for R
- 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:

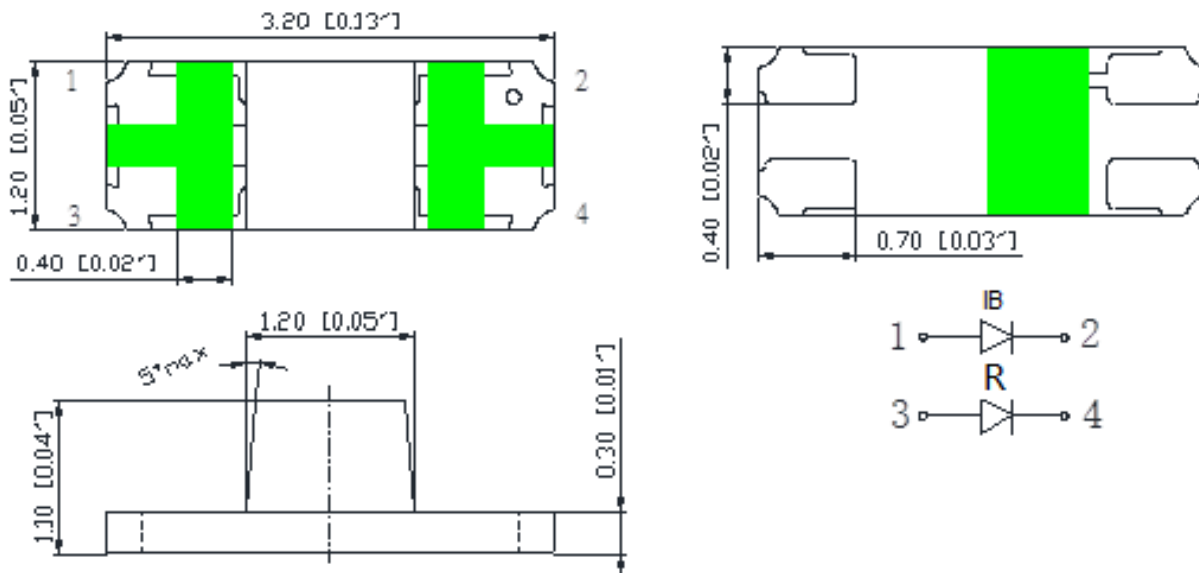
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Product: QBLP655R-RIB	Date: June 23, 2017	Page 3 of 11
	Version# 1.0	

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-RIB	Blue	20	3.1	3.7	465	470	475	32	60
	Red	20	2.0	2.5	615	623	630	50	90

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
E	32	40	mcd
F	40	50	
G	50	63	
H	63	80	
I	80	100	
J	100	125	
K	125	160	
R	630	800	

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

Bin	Min.	Max.	Unit
G	465	467.5	nm
H	467.5	470	
I	470	472.5	
J	472.5	475	

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

Bin	Min.	Max.	Unit
s	615	620	nm
t	620	625	
u	625	630	

Note:

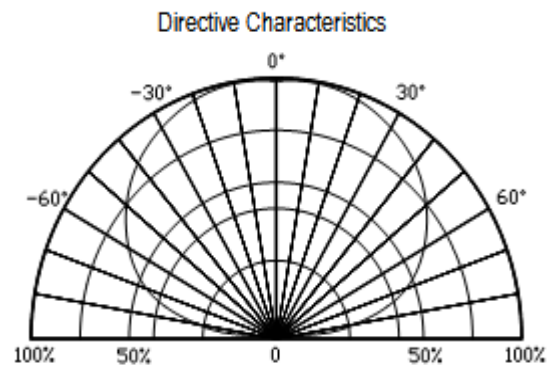
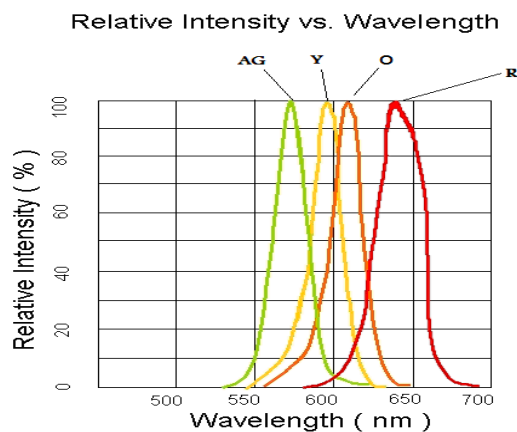
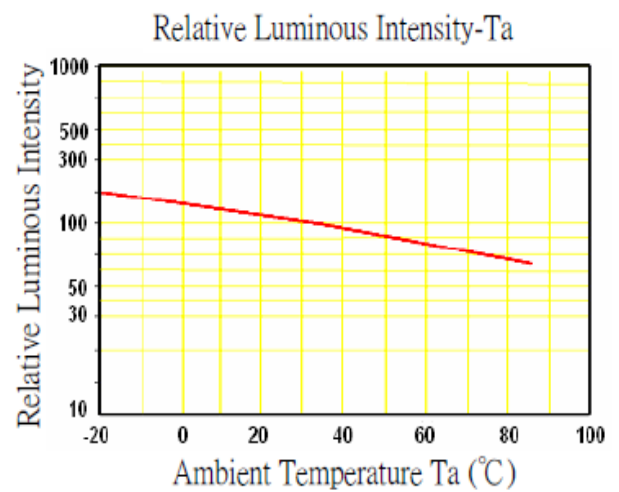
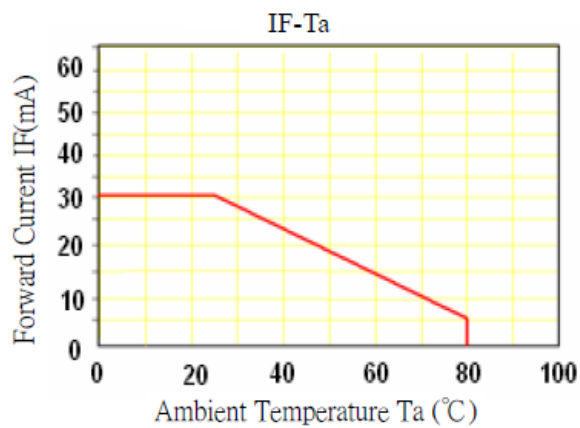
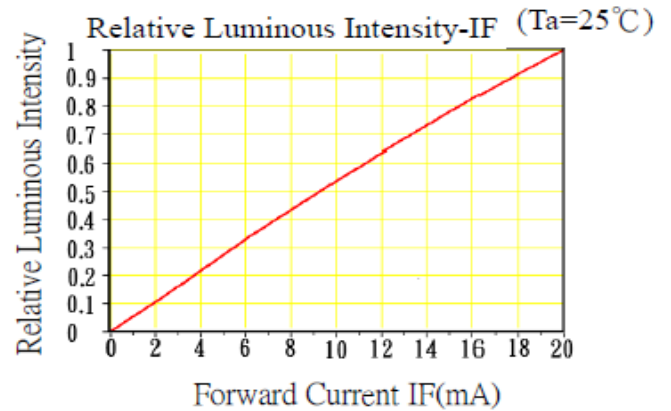
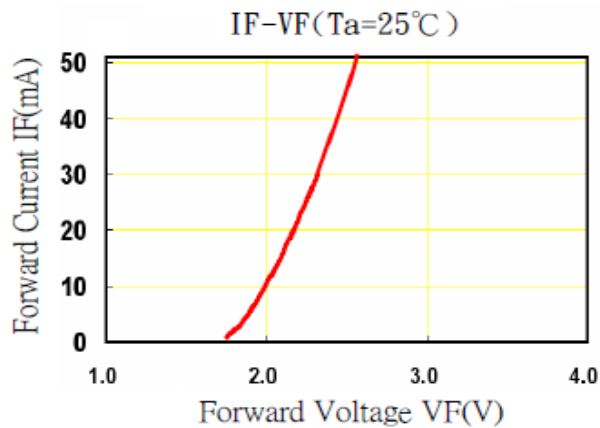
Tolerance of measurement of forward voltage: $\pm 0.1V$

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

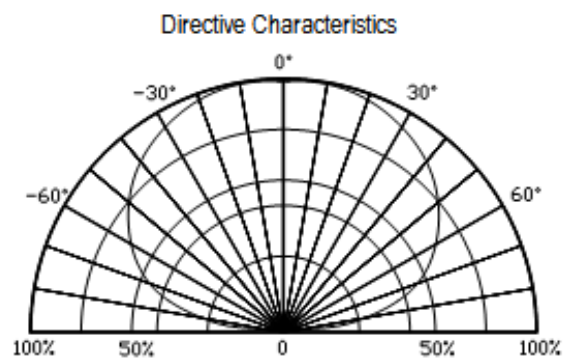
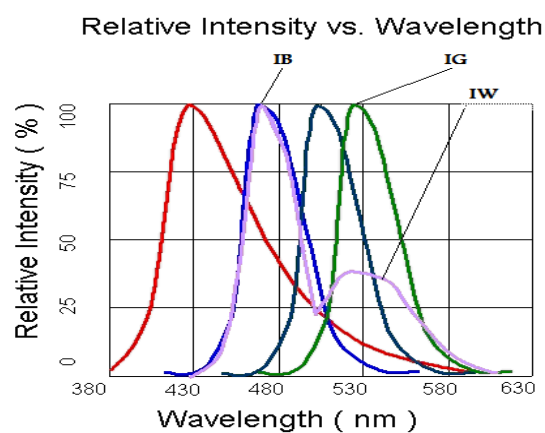
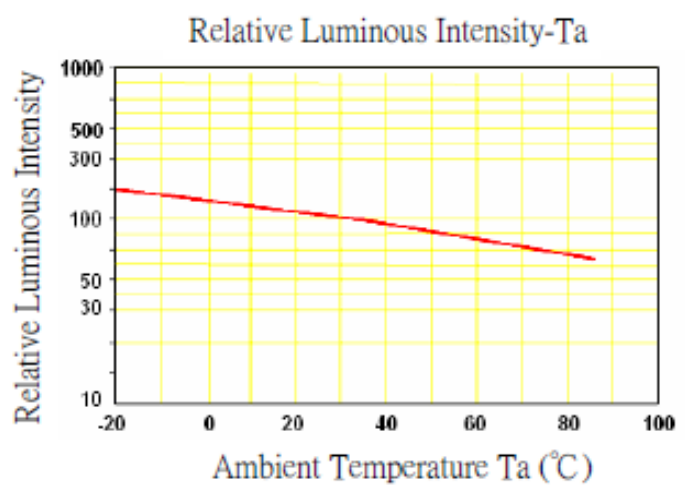
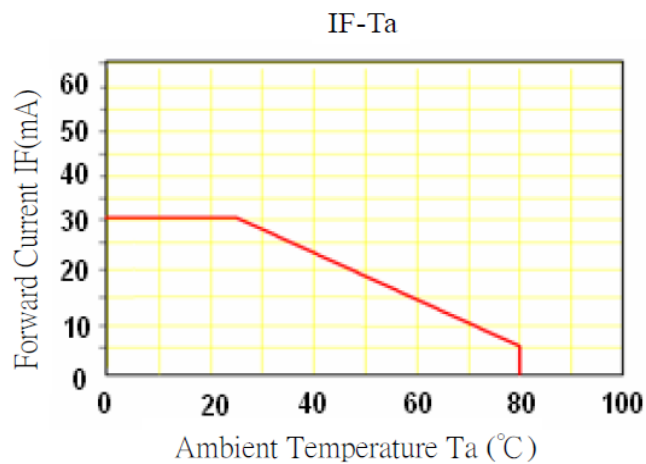
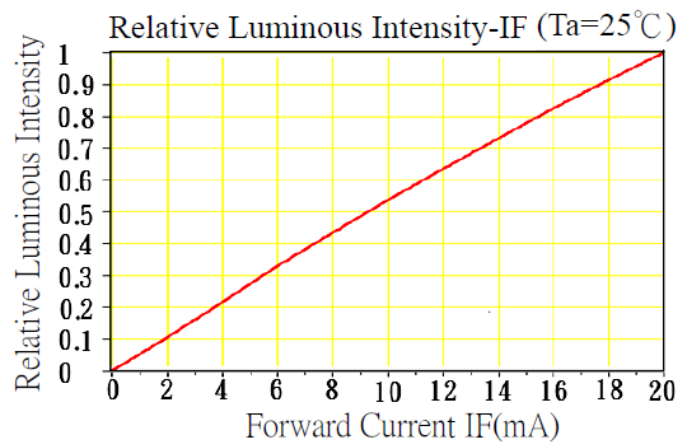
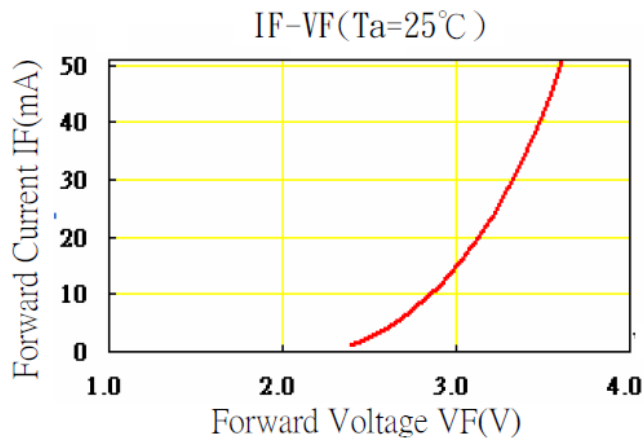
Tolerance of measurement of dominant wavelength: $\pm 2nm$

Characteristic Curves

AlInGaP (R)

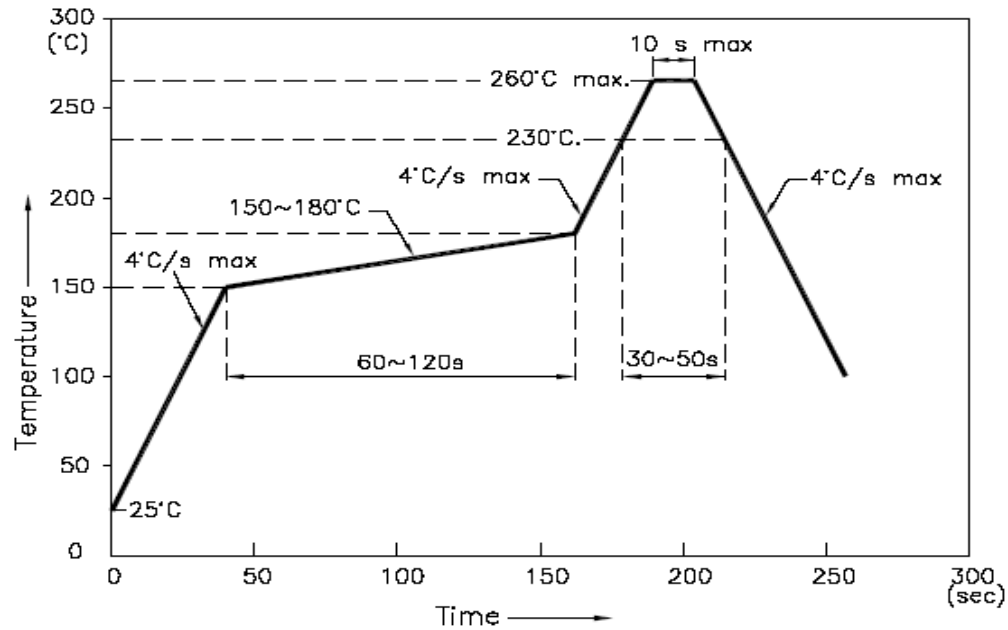


InGaN (IB)

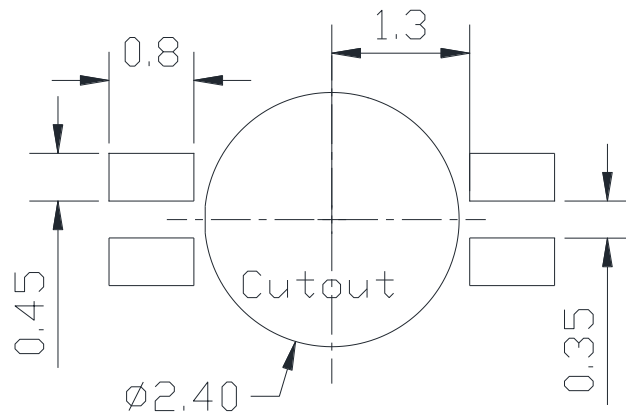


Solder Profile & Footprint

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



Recommended Pad Layout

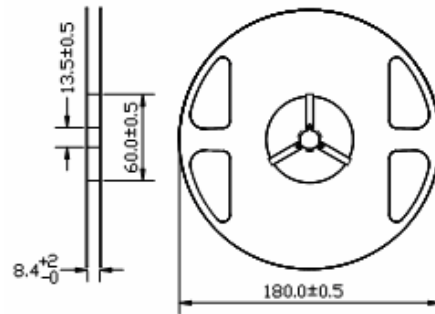


Units: mm

tolerance: +/- 0.1mm

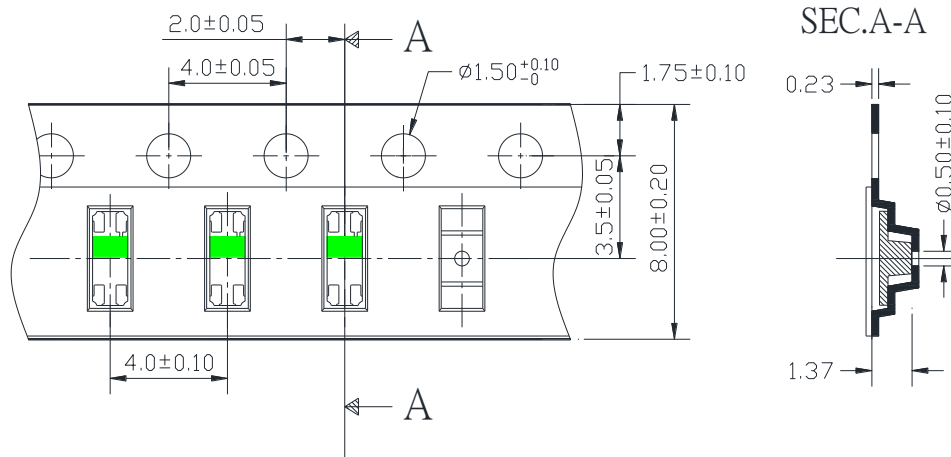
Packing

Reel Dimension:



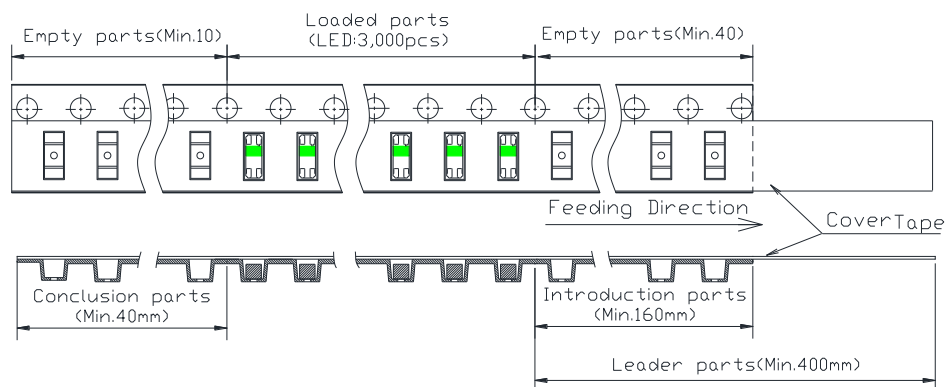
Unit: mm

Tape Dimension:



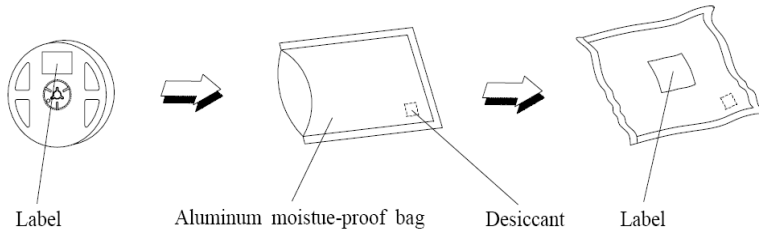
Unit: mm

Arrangement of Tape:



Product: QBLP655R-RIB	Date: June 23, 2017	Page 9 of 11
	Version# 1.0	

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-RIB	QBLP655R-RIB	Iv=60mcd typ. @ 20mA / $\lambda_D=465-475\text{nm}$ Iv=90mcd typ. @ 20mA / $\lambda_D=615-630\text{nm}$	3,000 units

Product: QBLP655R-RIB	Date: June 23, 2017	Page 10 of 11
	Version# 1.0	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP655R-RIB	V1.0	06/23/2017

Disclaimer

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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.

Product: QBLP655R-RIB	Date: June 23, 2017	Page 11 of 11
	Version# 1.0	