

QT-Brightek Chip LED Series

1204 BI-Color LED

Part No.: QBLP613-RIG

Product: QBLP613-RIG	Date: April 21, 2016	Page 1 of 12
	Version# 1.2	

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
Ordering Information	11
Revision History	12
Disclaimer	12

Introduction

Feature:

- Water clear lens
- Package in tape and reel
- Bright side view Bi-color LED
- AllnGaP technology for Red
- InGaN technology for True Green

Description:

This bright Bi-color Red and Yellow Green LED has a height profile of 1.0mm. It is ideal for keypad backlighting and status indication.

Application:

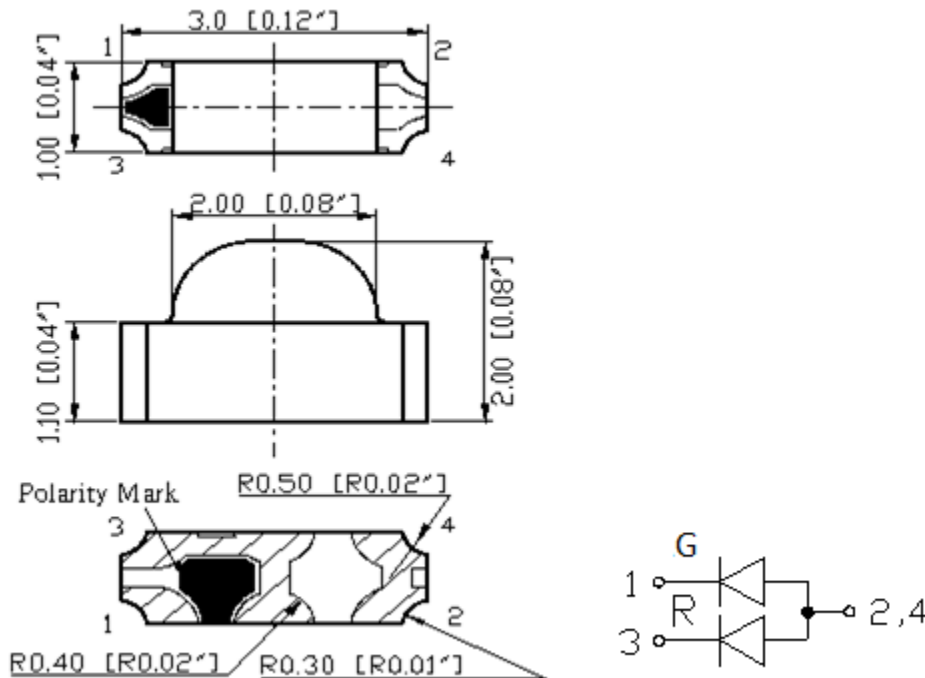
- Status indication
- Back lighting application

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.
QBLP613-RIG	Red	20	2.0	2.5	615	625	630	80	175
	True Green	20	3.1	3.7	525	530	535	200	440

Absolute Maximum Rating

Material	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SO L} (°C)**
AllnGaP (R)	75	30	125	5	-40 ~ +80	-40 ~ +85	260
InGaN (IG)	111	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 for AllnGaP @ 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 for Red @ $I_F=20mA$

Bin	Min.	Max.	Unit
I	80	100	mcd
J	100	125	
K	125	160	
L	160	200	
M	200	250	

Luminous Intensity I_v for True Green @ $I_F=20mA$

Bin	Min.	Max.	Unit
M	200	250	mcd
N	250	320	
O	320	400	
P	400	500	
Q	500	630	
R	630	800	

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

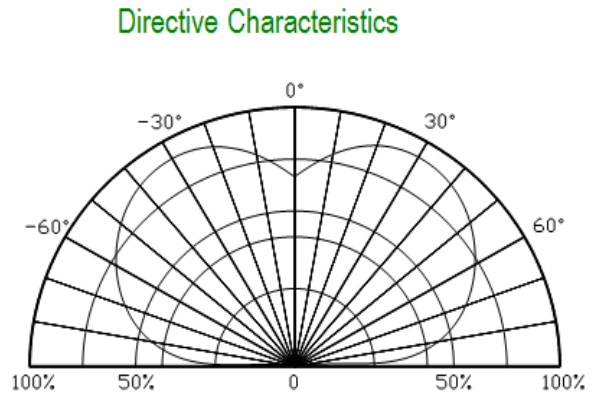
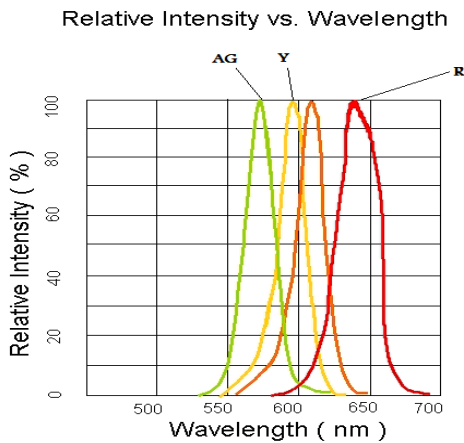
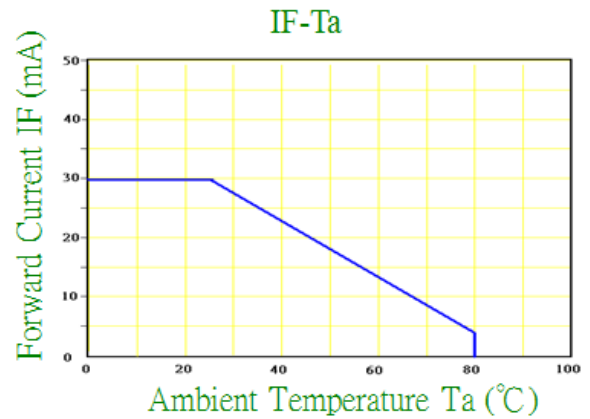
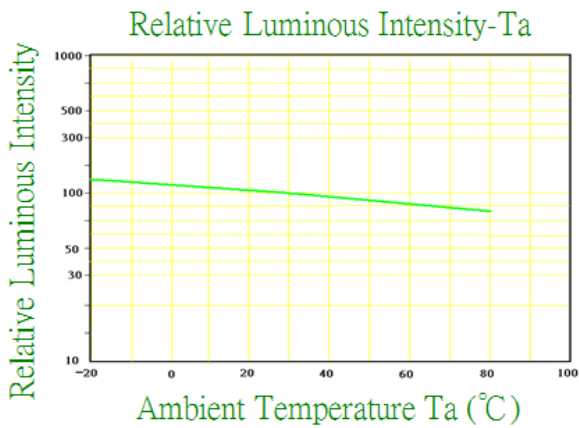
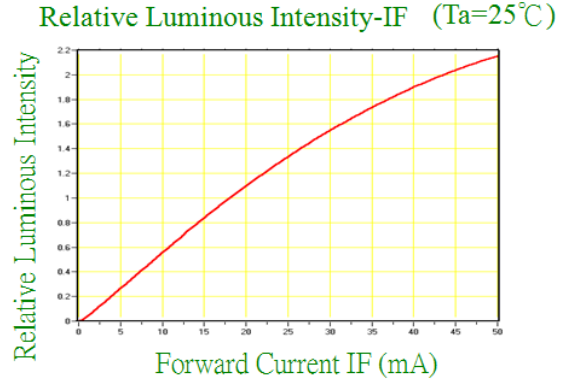
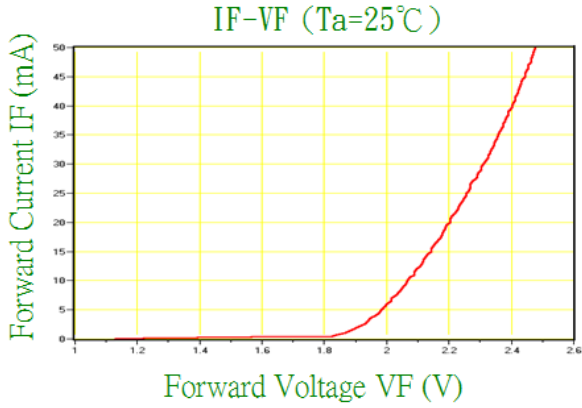
Bin	Min.	Max.	Unit
s	615	620	nm
t	620	625	
u	625	630	

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

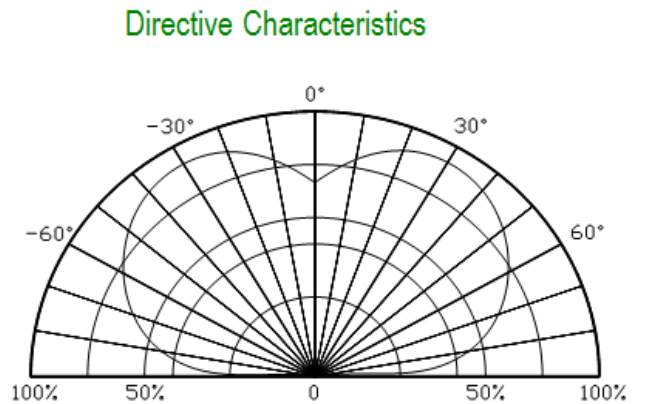
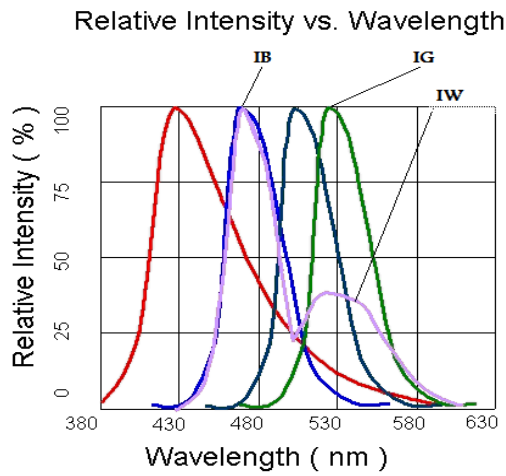
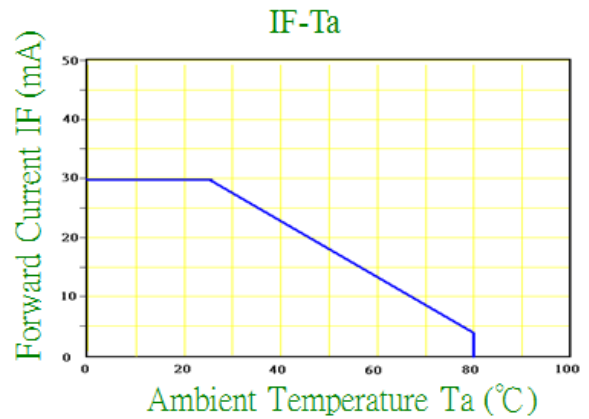
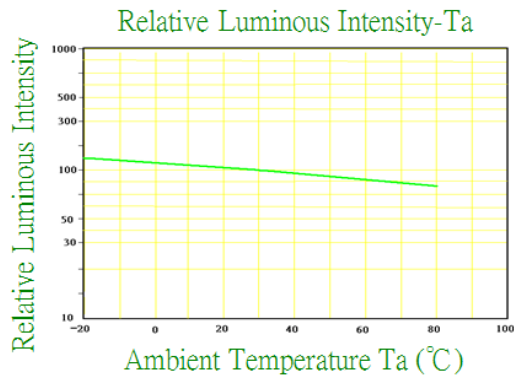
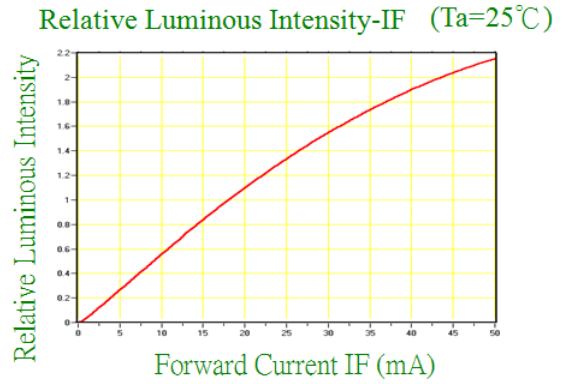
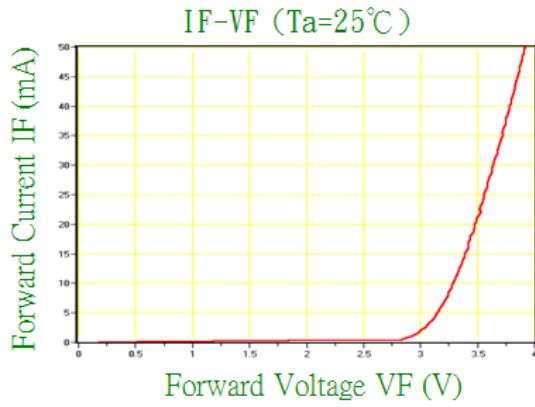
Bin	Min.	Max.	Unit
W	525	527.5	nm
X	527.5	530	
Y	530	532.5	
Z	532.5	535	

Characteristic Curves

AllnGaP

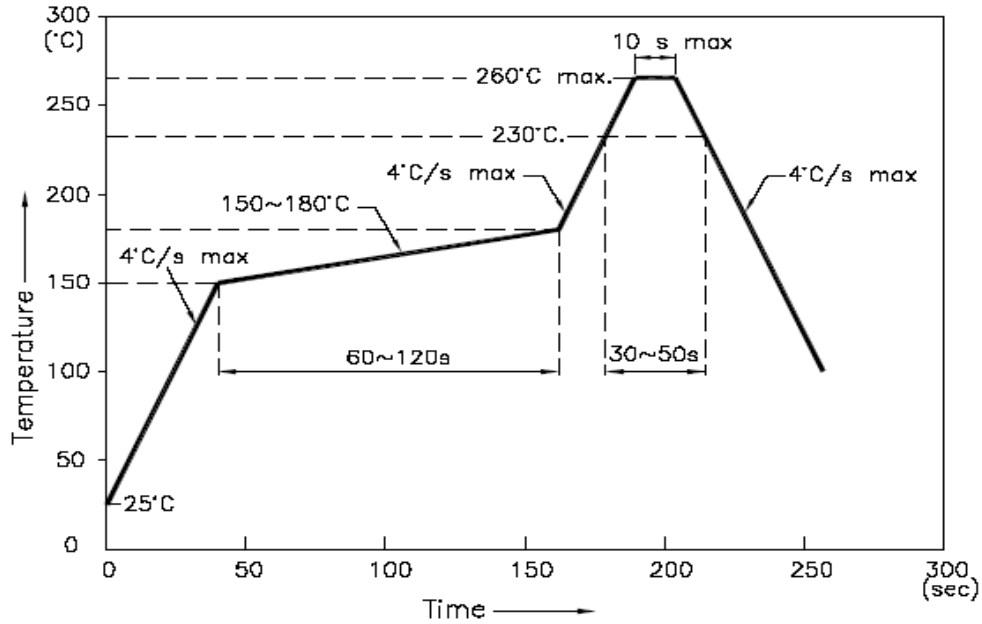


InGaN

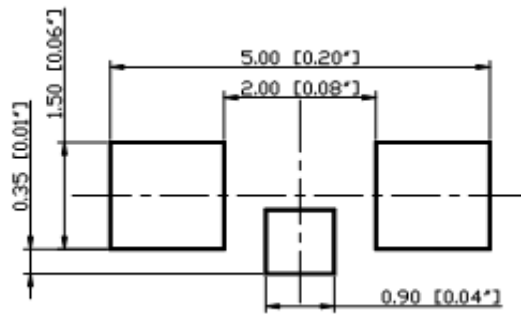


Solder Profile & Footprint

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



Recommended Pad Layout

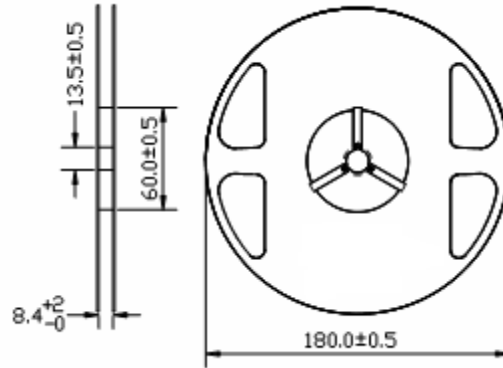


Units: mm

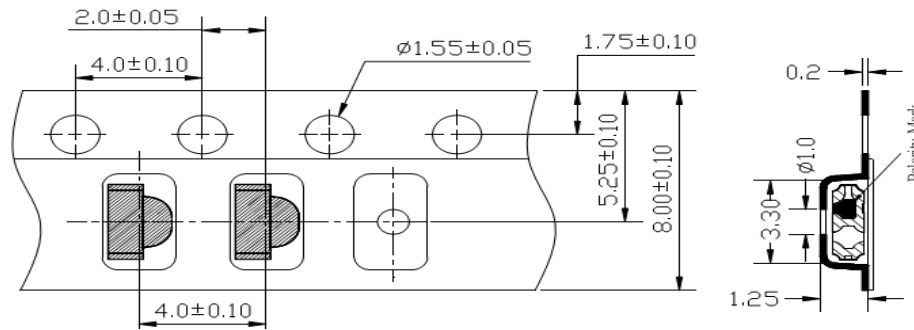
Tolerance: ± 0.1mm

Packing

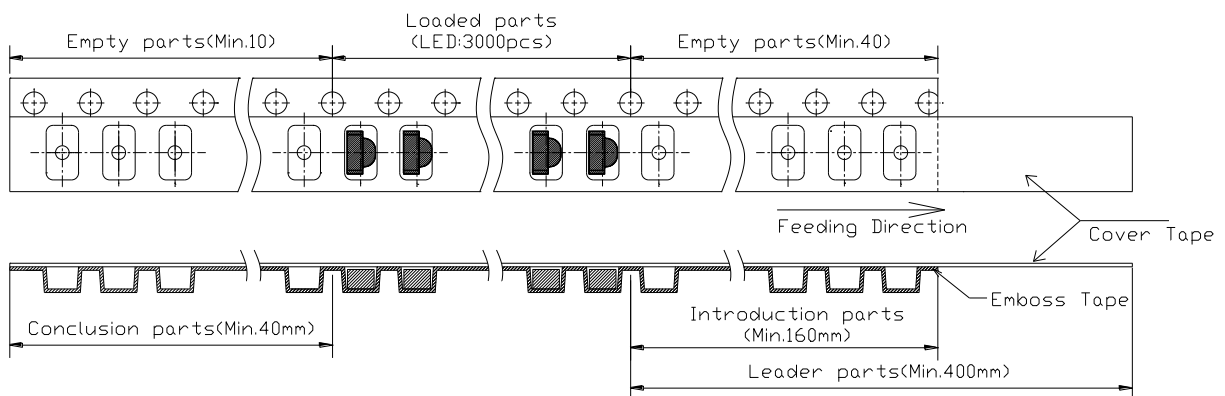
Reel Dimension:



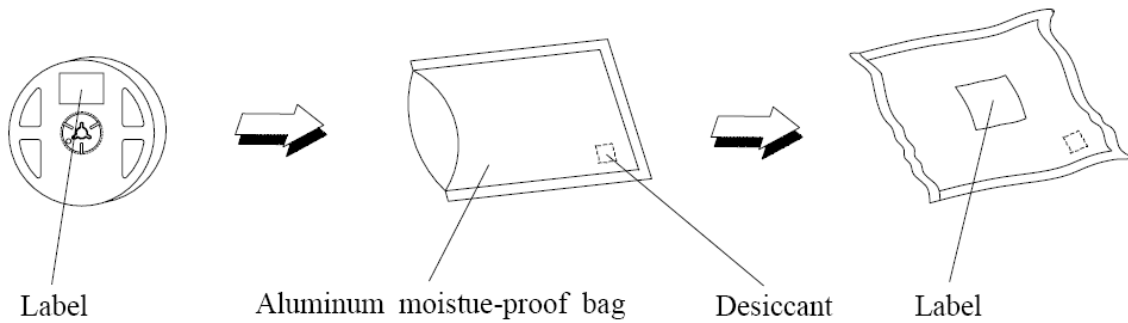
Tape Dimension:



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
QBLP613-RIG	QBLP613-RIG	R: Iv=175mcd typ. @ 20mA / Color=615nm to 630nm	3,000 units
		IG: Iv=440mcd typ. @ 20mA / Color=525nm to 535nm	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP613-RIG	V1.0	04/18/2012
Update Spec	V1.1	11/04/2014
Amend circuitry	V1.2	04/21/2016

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.