

QT-Brightek Chip LED Series

SMD 0606 BI-Color LED

Part No.: QBLP600-RAG

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Introduction

Feature:

- Water clear lens
- Package in tape and reel
- Ultra bright 0606 LED package
- AllInGaP technology for Red/ Yellow Green
- 140° View Angle

Description:

These ultra bright 0606 RAG LEDs have a height profile of 0.80mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting, status indication, and color mixing applications.

Application:

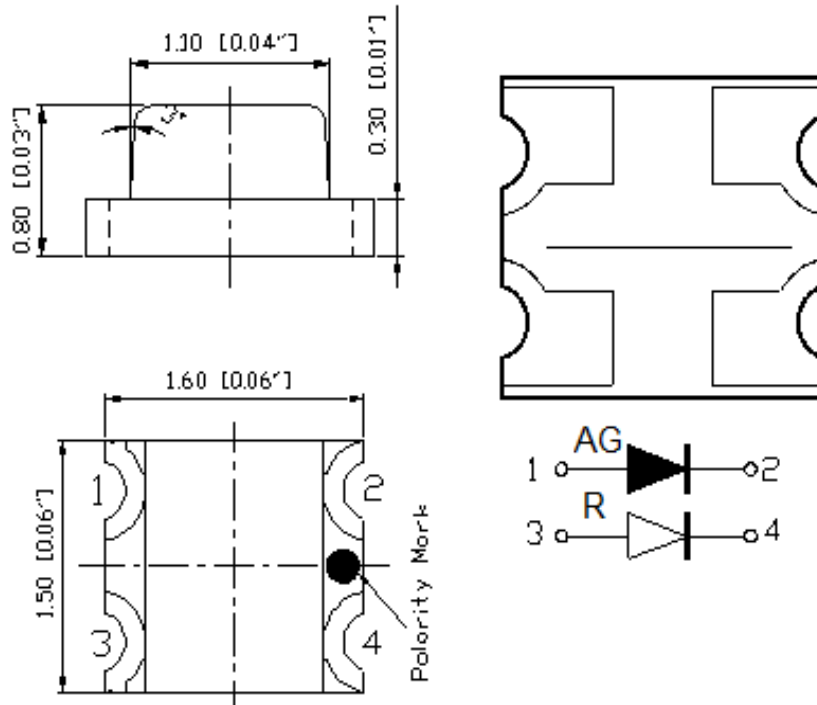
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (T=25 °C)

Product	Color	I _F (mA)	V _F (V)		λ _D (nm)			I _V (mcd)	
			Typ.	Max	Min	Typ.	Max	Min	Typ.
QBLP600-RAG	Red	20	2.0	2.5	615	620	630	80	140
	Yellow-Green	20	2.0	2.5	565	570	576	25	40

Absolute Maximum Rating

Part #	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)**
AllnGaP	75	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
□	1.7	2.5	V

Luminous Intensity I_V @ I_F=20mA

Bin	Min.	Max.	Unit
D	25	32	mcd
E	32	40	
F	40	50	
G	50	63	
H	63	80	
I	80	100	
J	100	125	
K	125	160	
L	160	200	
M	200	250	

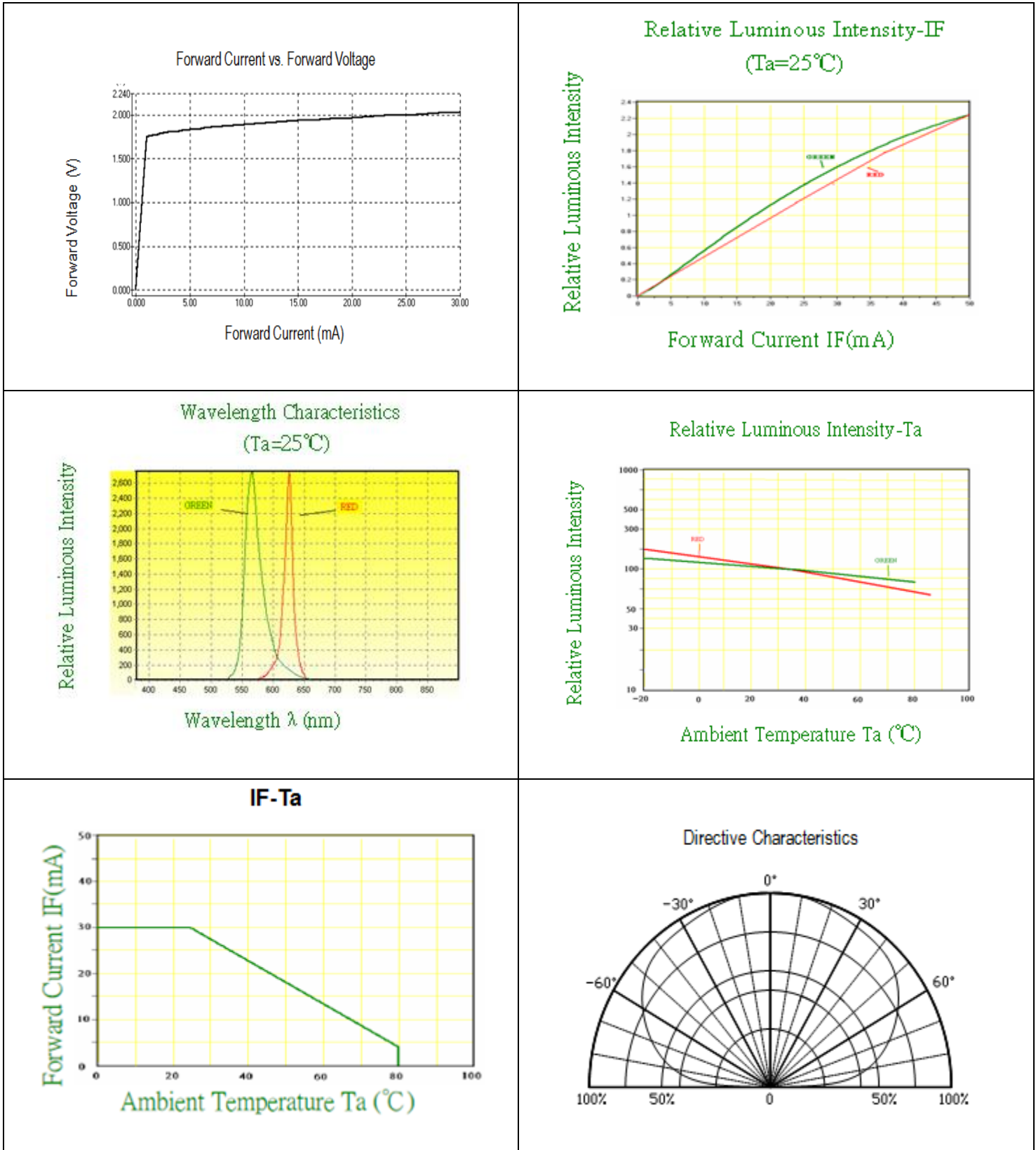
Dominant Wavelength λ_D for Yellow Green @ I_F=20mA

Bin	Min.	Max.	Unit
h	565	568	nm
i	568	572	
j	572	576	

Dominant Wavelength λ_D for Red @ I_F=20mA

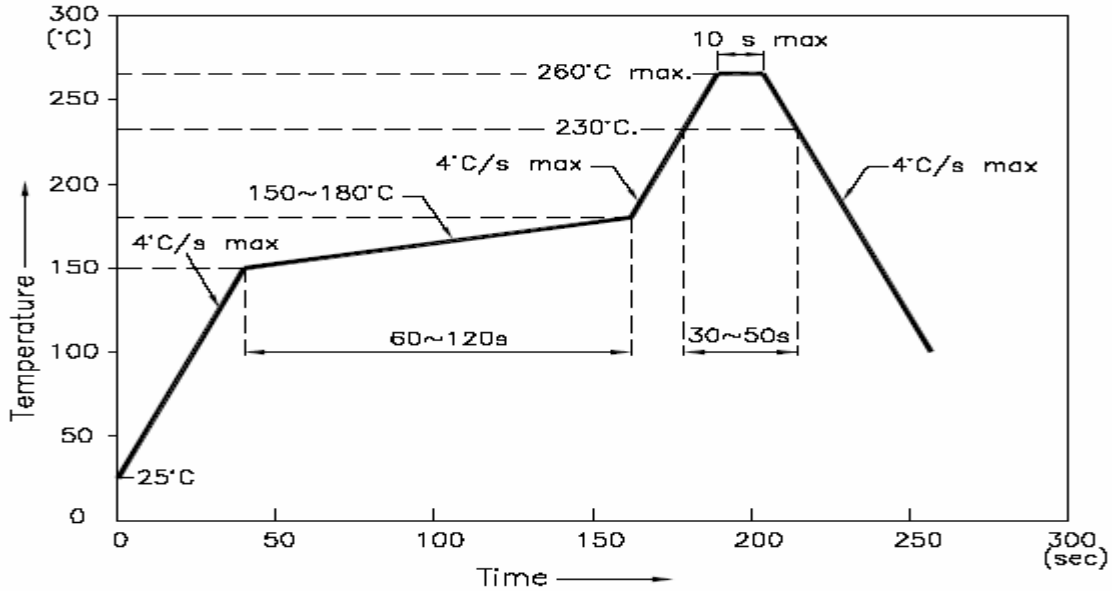
Bin	Min.	Max.	Unit
s	615	620	nm
t	620	625	
u	625	630	

Characteristic Curves

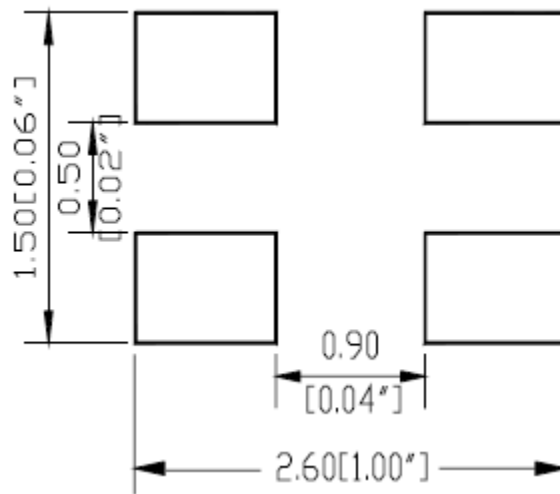


Solder Profile & Footprint

- Recommended tin glue 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

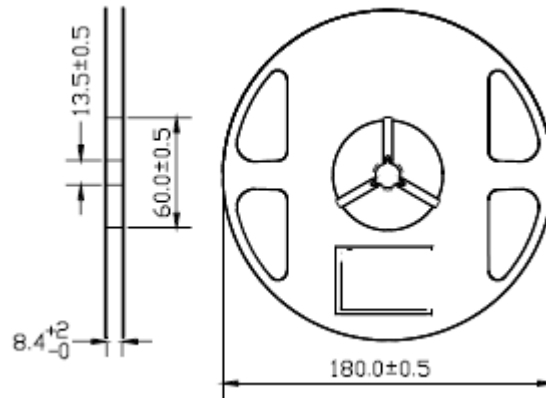


Units: mm

tolerance: +/- 0.1mm

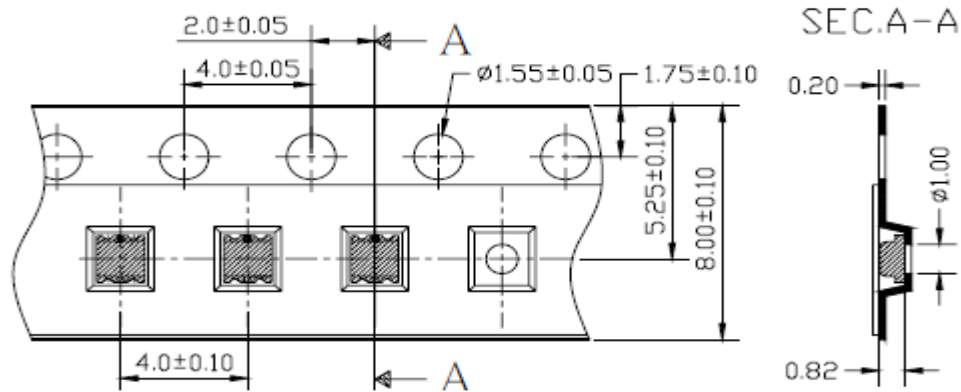
Packing

Reel Dimension:



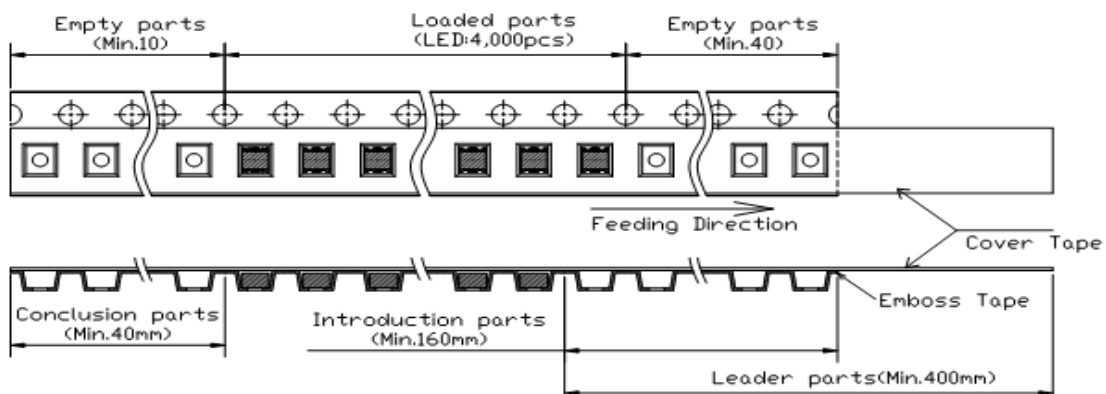
Unit: mm

Tape Dimension:



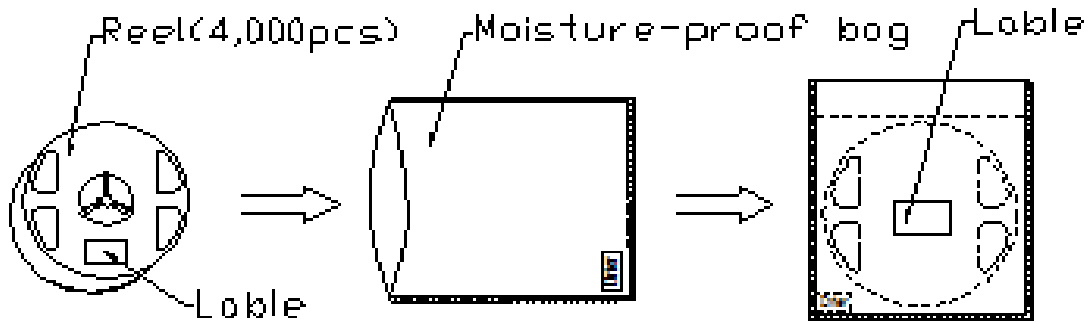
Unit in mm

Arrangement of Tape:



Packaging Specifications:

Product: QBLP600-RAG	Date: June 25, 2012	Page 7 of 9
	Version# 1.5	



Labeling



Part No: _____

Customer P/N: _____

Item: _____

Q'ty: _____

Vf: _____

Iv: _____

VI: _____

Date: _____

Made in China

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP600-RAG	QBLP600-RAG	Red: $I_v=140\text{mcd Typ. @ } 20\text{mA}$ / Wavelength: 615nm to 630nm	4,000 units
		Yellow-Green: $I_v=40\text{mcd Typ. @ } 20\text{mA}$ / Wavelength: 565nm to 576nm	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP600-RAG	V1.0	09/20/2010
Brightness updates	V1.1	06/25/2011
Add Bin code	V1.2	08/29/2011
Amend Dimension	V1.3	11/17/2011
Update Specification	V1.4	12/09/2011
Updat to new format/update information	V1.5	06/25/2012

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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.