

QT-Brightek Chip LED Series

SMD 0606 RGB LED

Part No.: QBLP600-RIG

Product: QBLP600-RIG	Date: May 02, 2016	Page 1 of 10
	Version# 2.0	

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Introduction

Feature:

- Water clear lens
- Package in tape and reel
- Ultra bright 0606 LED package
- AlInGaP technology for R
- InGaN technology for IG

Description:

These ultra bright 0606 RIG 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:

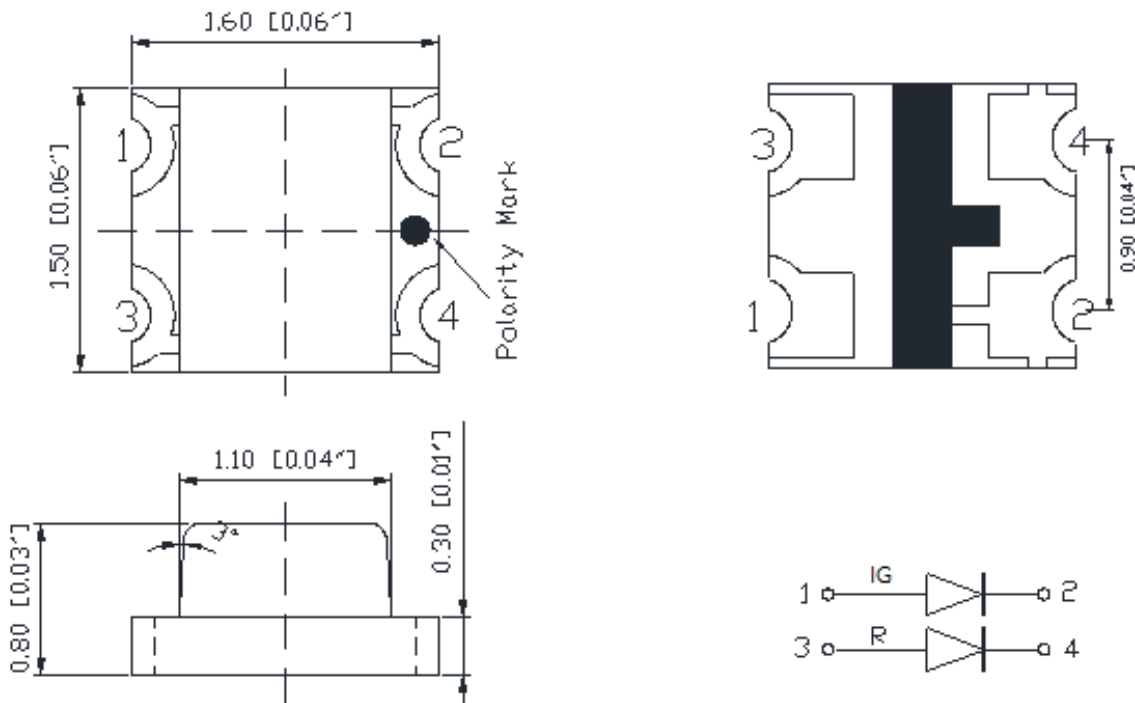
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I _F (mA)	V _F (V)		λ _D (nm)			I _V (mcd)	
			Typ.	Max	Min	Typ.	Max	Min	Typ.
QBLP600-RIG	Red	20	2.0	2.5	630	640	650	40	75
	True Green	20	3.4	3.7	515	520	525	200	380

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 @ $I_F=20mA$

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	
Q	500	630	

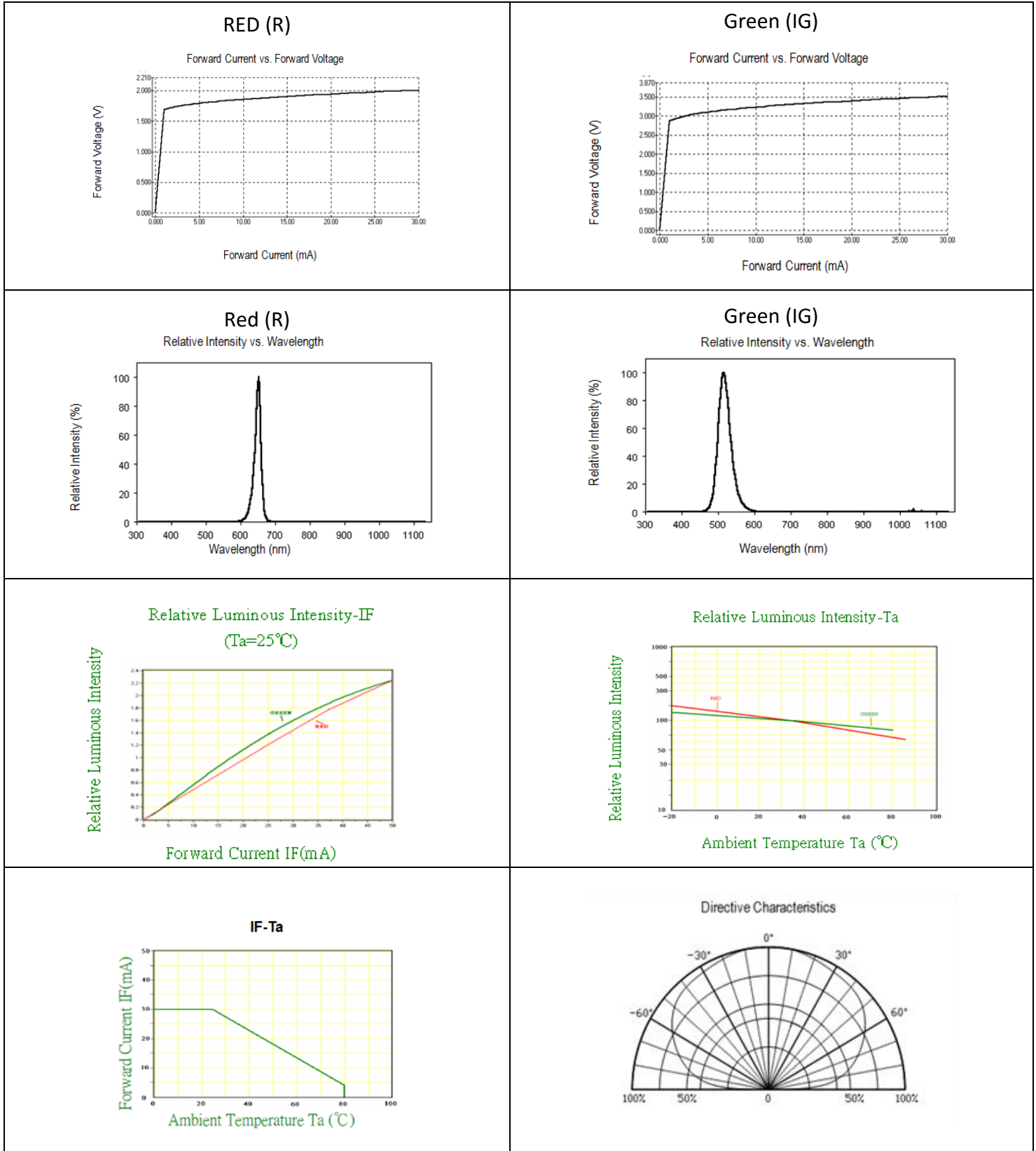
Dominant Wavelength λ_D for Red @ $I_F=20mA$

Bin	Min.	Max.	Unit
v	630	635	nm
w	635	650	

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

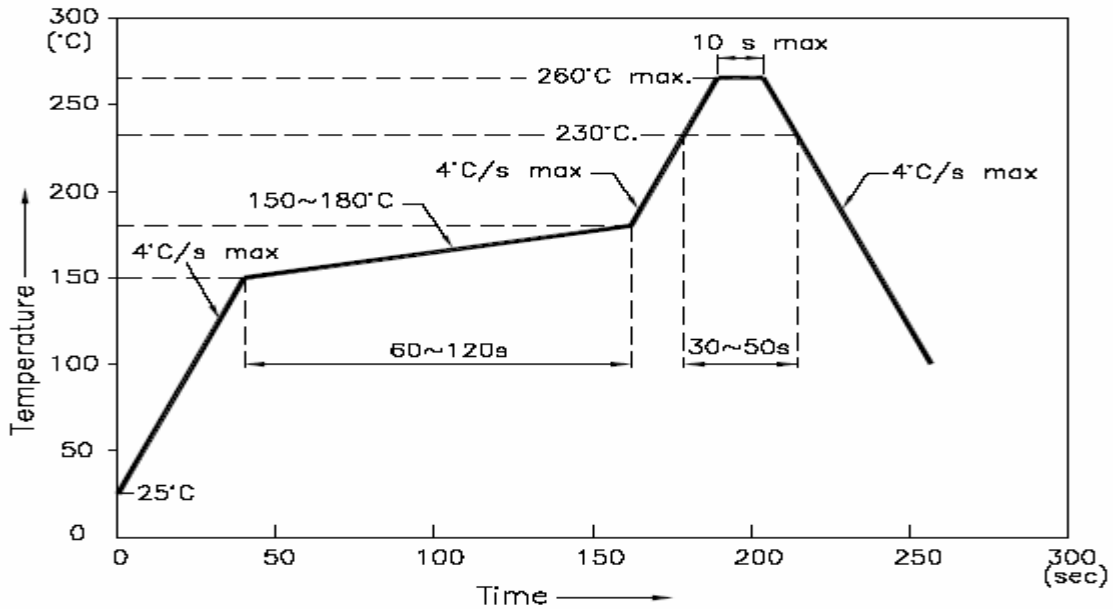
Bin	Min.	Max.	Unit
S	515	517.5	nm
T	517.5	520	
U	520	522.5	
V	522.5	525	

Characteristic Curves

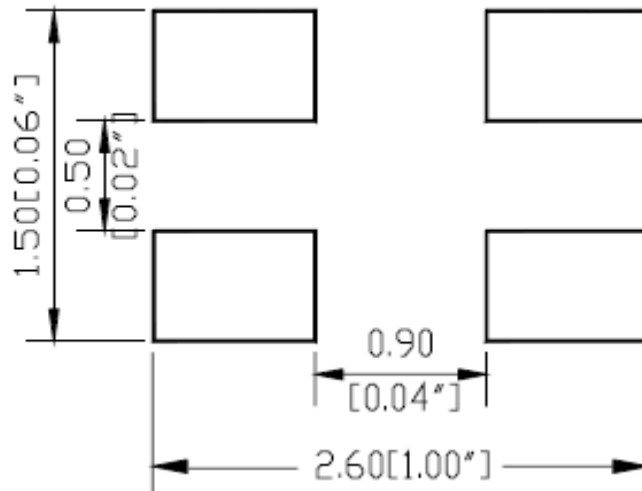


Solder Profile & Footprint

- 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):



Recommended Pad Layout

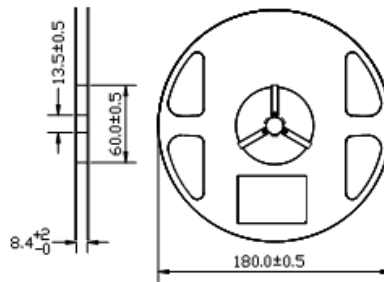


Units: mm

Tolerance: ± 0.1mm

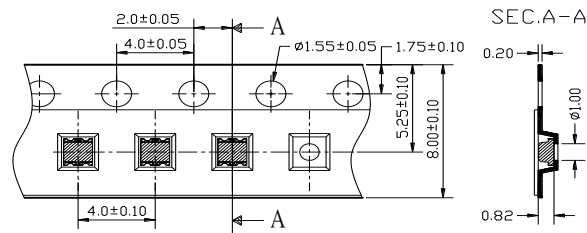
Packing

Reel Dimension:



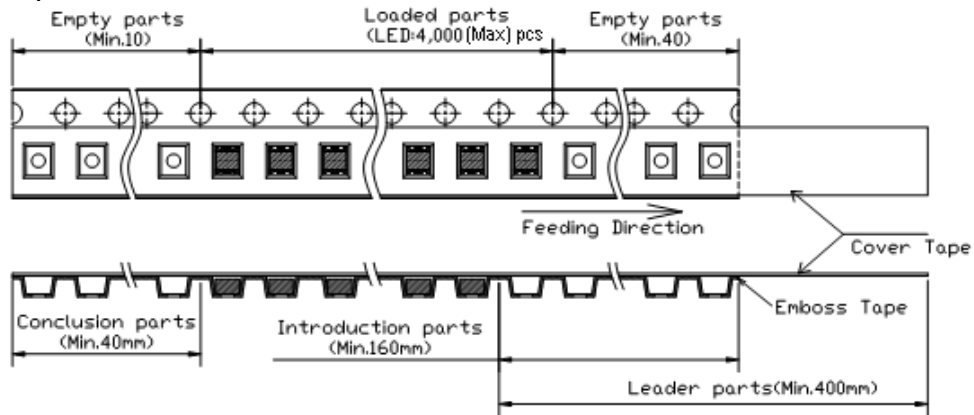
Unit: mm

Tape Dimension:

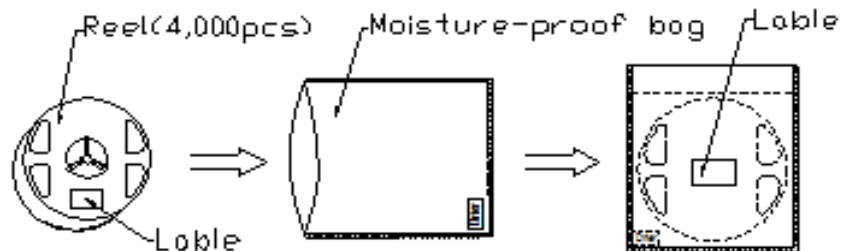


Unit: mm

Arrangement of Tape:



Packaging Specification:



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-RIG	QBLP600-RIG	Red: Iv=75mcd typ. @ I _F =20mA, λ _D =630nm to 650nm	4,000 units
		True Green: Iv=380mcd typ. @ I _F =20mA, λ _D =515nm to 525nm	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP600-RIG	V1.0	06/25/2011
Update Specification	V1.1	12/09/2011
Update to new format / Update PCB drawing	V2.0	05/02/2016

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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.