QT-Brightek Chip LED Series

SMD 0606 RGB LED

Part No.: QBLP600-RIB

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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 IB

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.

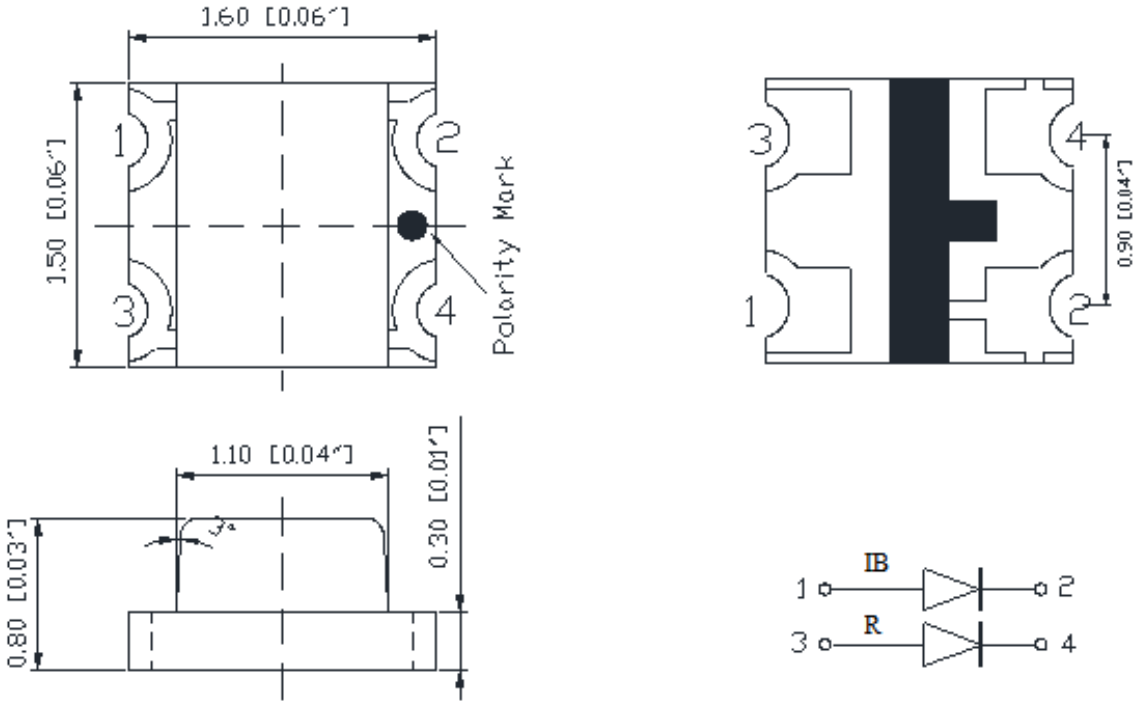
Application:

- 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-RIB	Red	20	2.0	2.5	630	640	650	40	55
	Blue	20	3.1	3.7	465	470	475	80	110

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)	75	30	125	5	-40 ~ + 80	-40 ~ +85	260
InGaN (IB)	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 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	

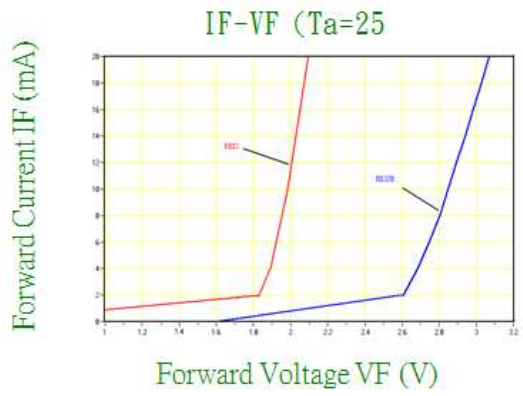
Dominant Wavelength λ_D for Red @ I_F=20mA

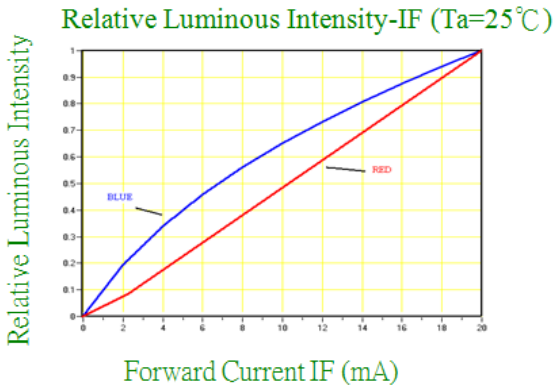
Bin	Min.	Max.	Unit
v	630	635	nm
w	635	650	

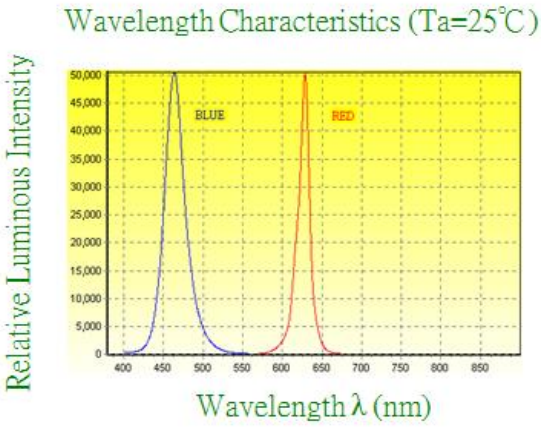
Dominant Wavelength λ_D for Blue @ I_F=20mA

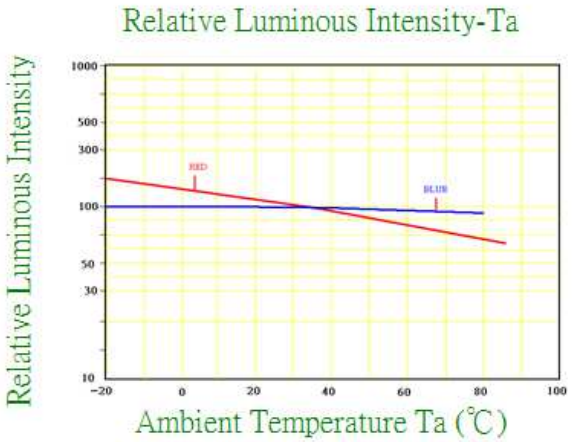
Bin	Min.	Max.	Unit
G	465	467.5	nm
H	467.5	470	
I	470	472.5	
J	472.5	475	

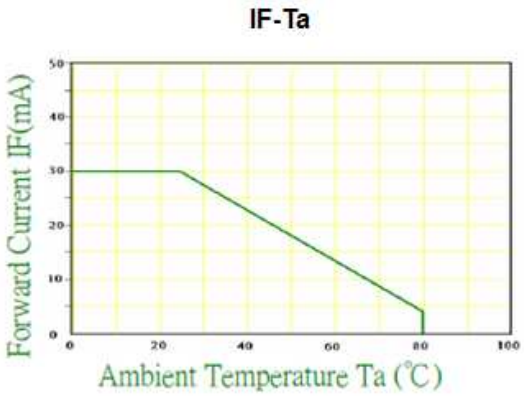
Characteristic Curves

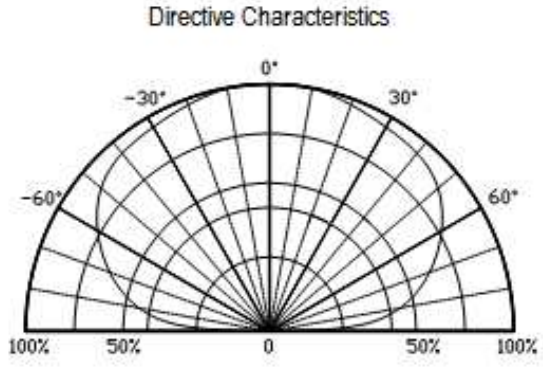






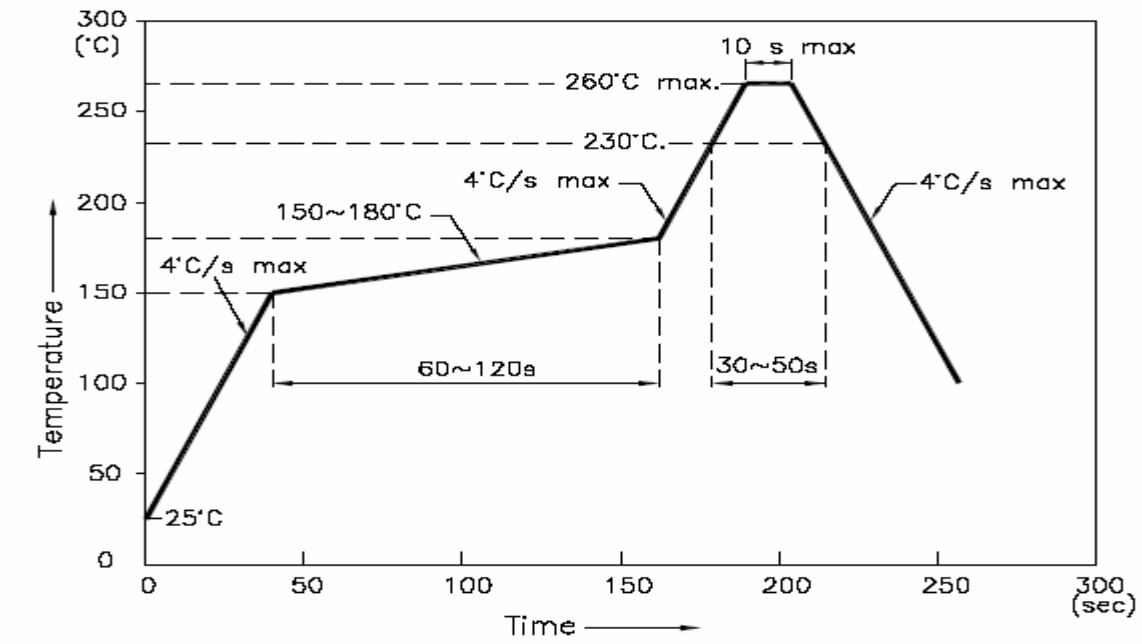




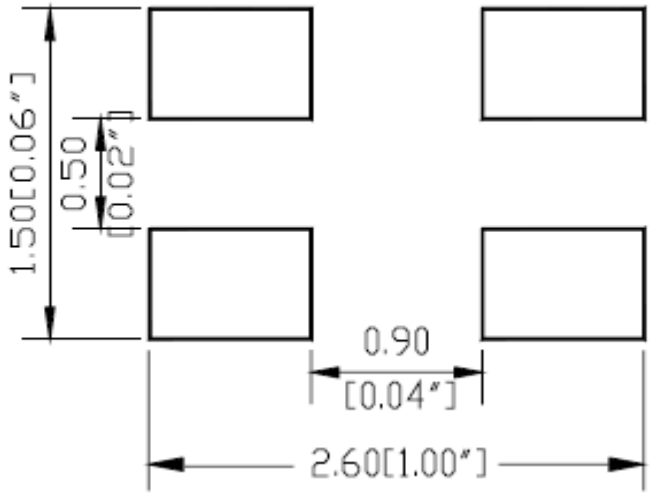


Solder Profile & Footprint

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



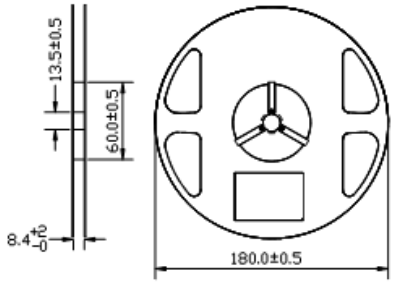
Recommended Pad Layout



Units: mm Tolerance: ± 0.1mm

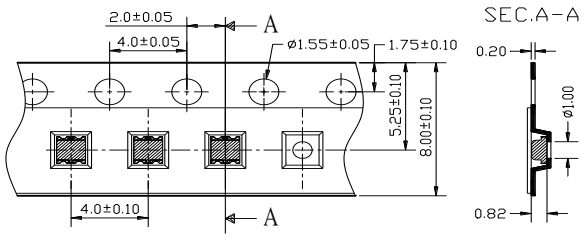
Packing

Reel Dimension:



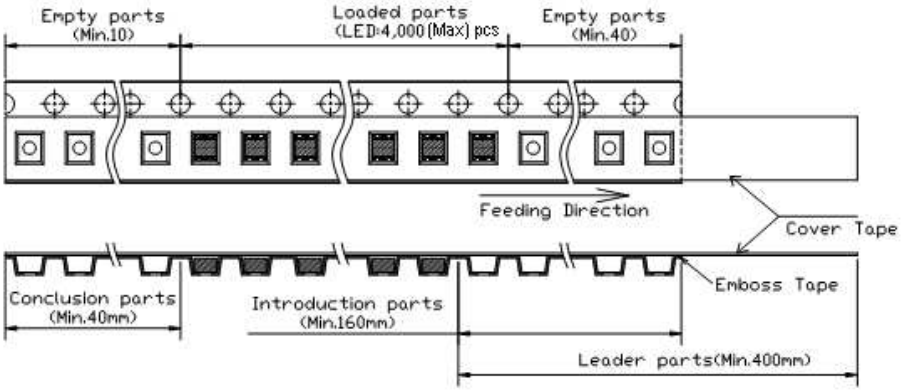
Unit: mm

Tape Dimension:

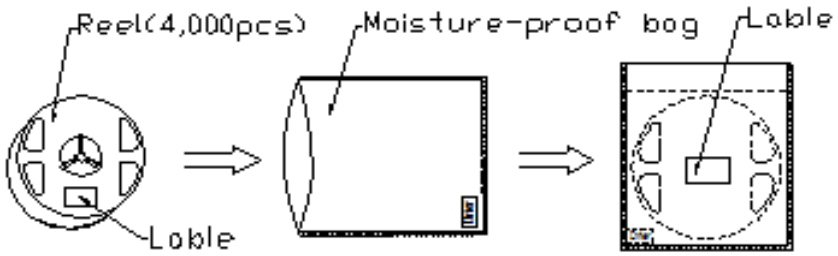


Unit: mm

Arrangement of Tape:



Packaging Specification:



Labeling



Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP600-RIB	QBLP600-RIB	Red: Iv=55mcd typ. @ I_F=20mA, λ_D=630nm to 650nm	4,000 units
		Blue: Iv=110mcd typ. @ I_F=20mA, λ_D=465nm to 475nm	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP600-RIB	V1.0	06/25/2011
Update Spec	V1.1	12/09/2011
Update to new format / Update drawing	V2.0	06/20/2016

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.