

QT-Brightek Chip LED Series

SMD 0606 RGB LED

Part No.: QBLP600-RGB-2897

2897: High Brightness Version

Product: QBLP600-RGB-2897	Date: July 13, 2018	Page 1 of 10
	Version# 1.0	

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Introduction

Feature:

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

Description:

These ultra bright 0606 RGB 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:

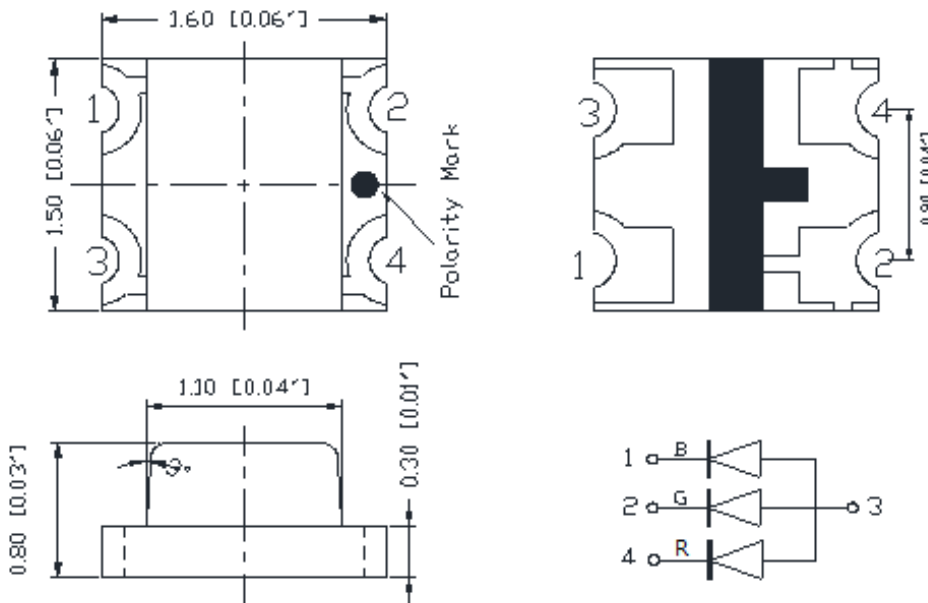
- Status indication
- Back lighting application

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-RGB-2897	Red	20	2.0	2.5	615	620	630	100	180
	True Green	20	3.2	3.7	520	525	530	400	700
	Blue	20	3.1	3.7	460	465	470	63	115

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)**
InGaN (IB/IG)	111	30	125	5	-40 ~ + 80	-40 ~ +85	260
AllnGaP (R)	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 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
H	63	80	mcd
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	
R	630	800	
S	800	1000	
T	1000	1250	

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

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

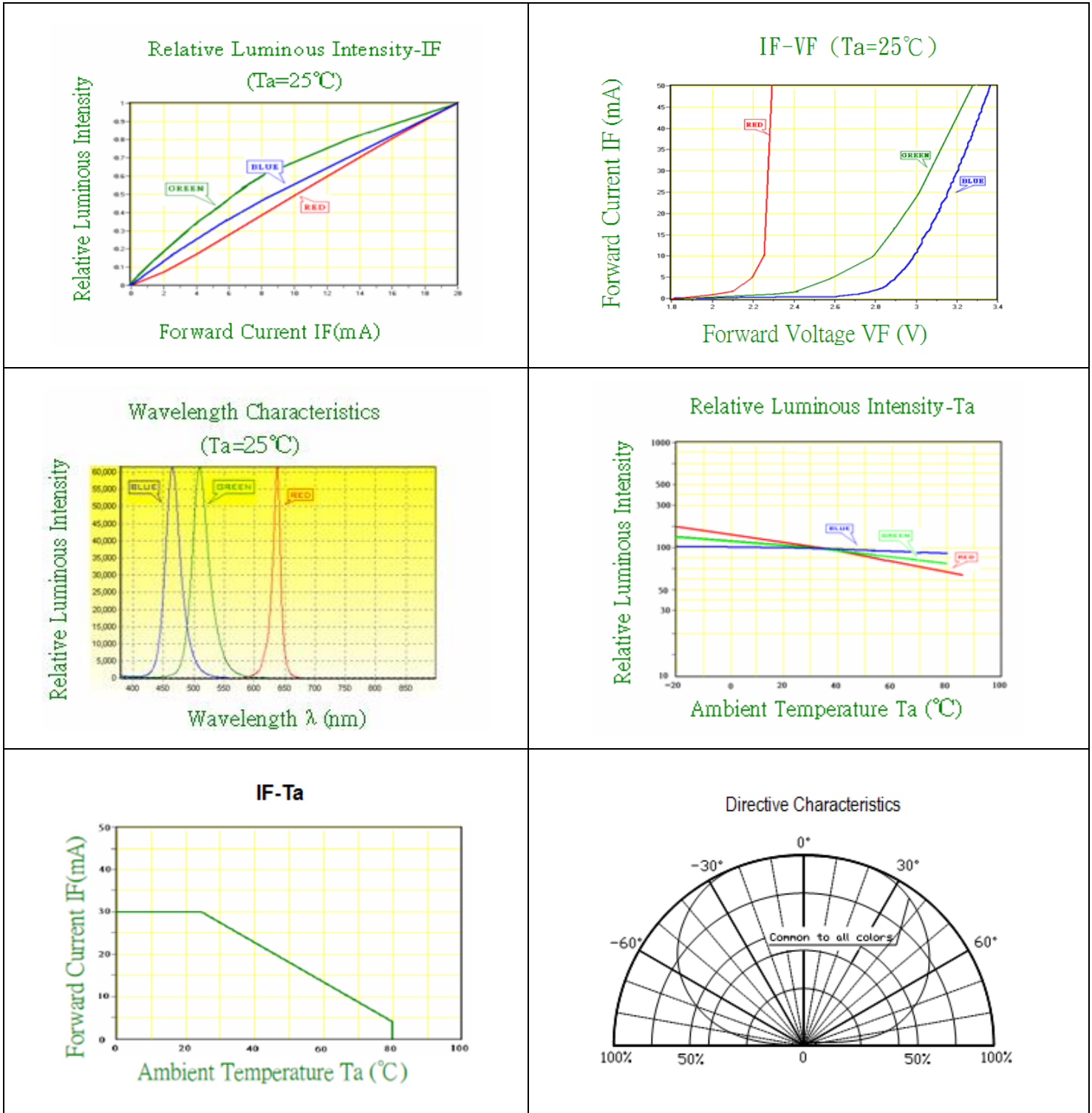
Dominant Wavelength λ_D for Green @ $I_F=20mA$

Bin	Min.	Max.	Unit
U	520	522.5	nm
V	522.5	525	
W	525	527.5	
X	527.5	530	

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

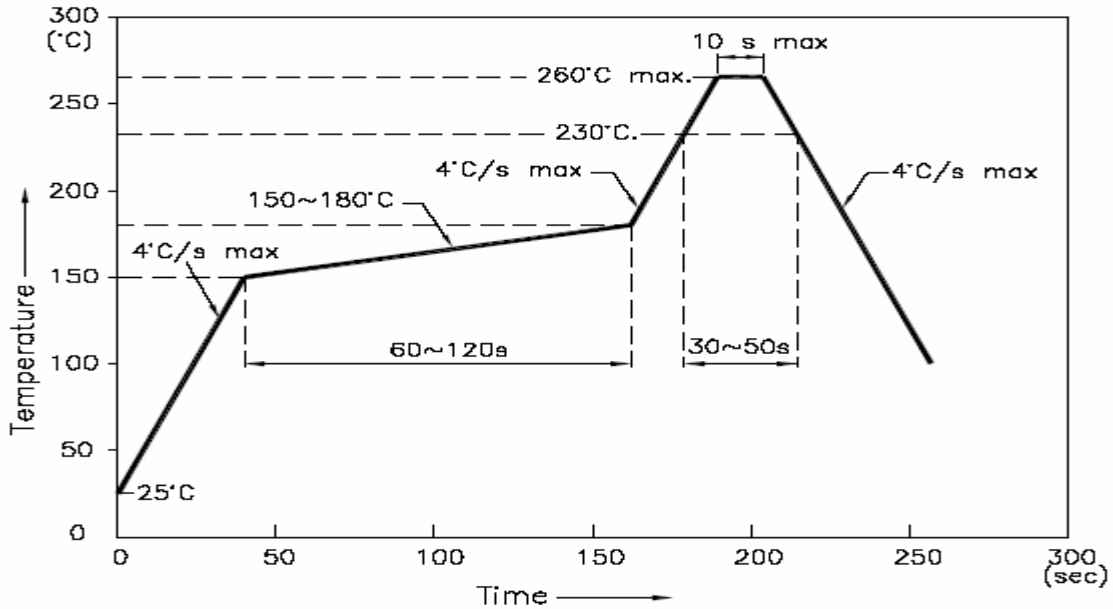
Bin	Min.	Max.	Unit
E	460	462.5	nm
F	462.5	465	
G	465	467.5	
H	467.5	470	

Characteristic Curves

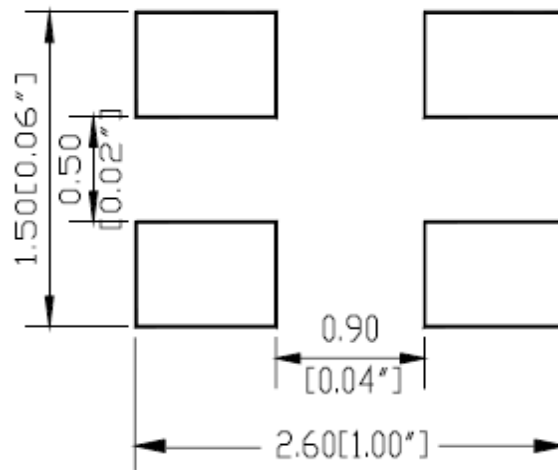


Solder Profile & Footprint

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



Recommended Pad Layout

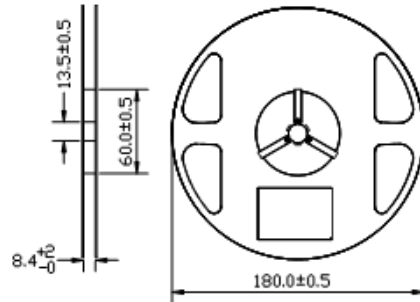


Units: mm

Tolerance: ± 0.1mm

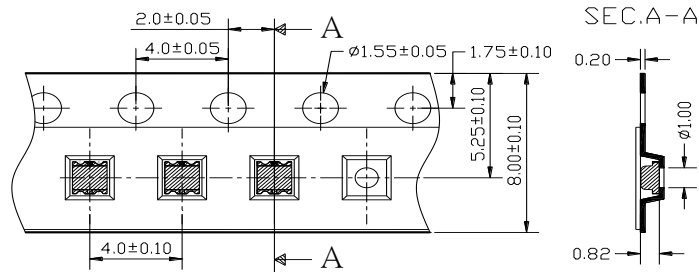
Packing

Reel Dimension:



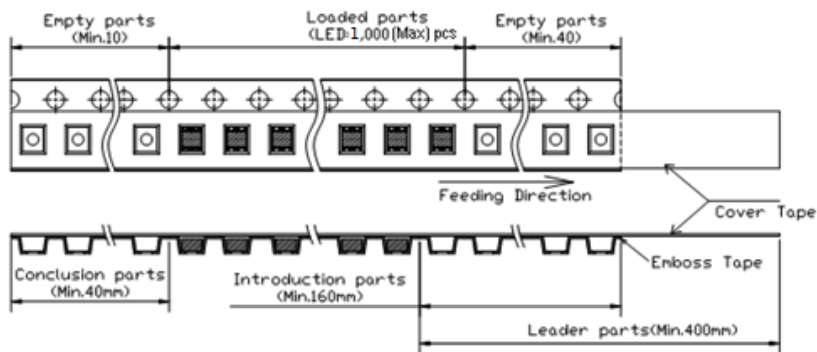
Unit: mm

Tape Dimension:

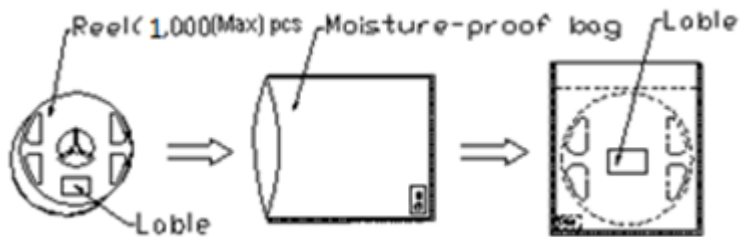


Unit: mm

Arrangement of Tape:



Packaging Specification:



Labeling**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
QBLP600-RGB-2897	QBLP600-RGB-2897	Red: $I_v=160\text{mcd typ. @ } I_F=20\text{mA}$, $\lambda_D=615\text{nm to } 630\text{nm}$	1,000 units
		True Green: $I_v=690\text{mcd typ. @ } I_F=20\text{mA}$, $\lambda_D=520\text{nm to } 530\text{nm}$	
		Blue: $I_v=115\text{mcd typ. @ } I_F=20\text{mA}$, $\lambda_D=460\text{nm to } 470\text{nm}$	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP600-RGB-2897	V1.0	07/13/2018

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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.