Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

QT-Brightek Chip LED Series

SMD 0606 RGB LED

Part No.: QBLP600-RIG

Table of Contents:

Introduction

Feature:	**Application:**

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.
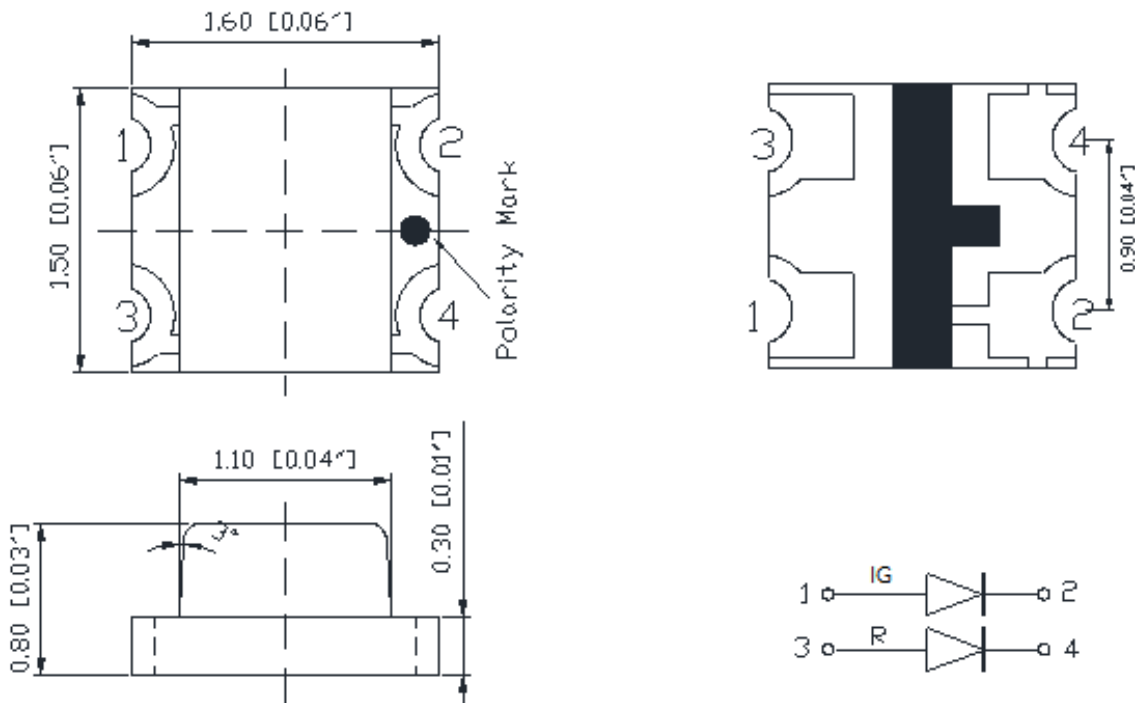
Application:

- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant

Dimension:

Units: mm / tolerance = +/-0.1mm

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Electrical / Optical Characteristic (Ta=25 ^{o}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$_{OP}$ (^{o}C)	T$_{ST}$ (^{o}C)	T$_{SOL}$ (^{o}C)**
AlInGaP (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 ^{o}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	
g	3.1	3.4	V
h	3.4	3.7	

Luminous Intensity I_V @ I_F=20mA

Bin	Min.	Max.	Unit
F	40	50	
G	50	63	
H	63	80	
I	80	100	
J	100	125	
K	125	160	
L	160	200	mcd
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	
w	635	650	nm

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

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

Characteristic Curves

RED (R) Forward Current vs. Forward Voltage 	**Green (IG)** Forward Current vs. Forward Voltage
Red (R) Relative Intensity vs. Wavelength 	**Green (IG)** Relative Intensity vs. Wavelength
Relative Luminous Intensity-IF (Ta=25℃) 	Relative Luminous Intensity-Ta
IF-Ta 	Directive Characteristics

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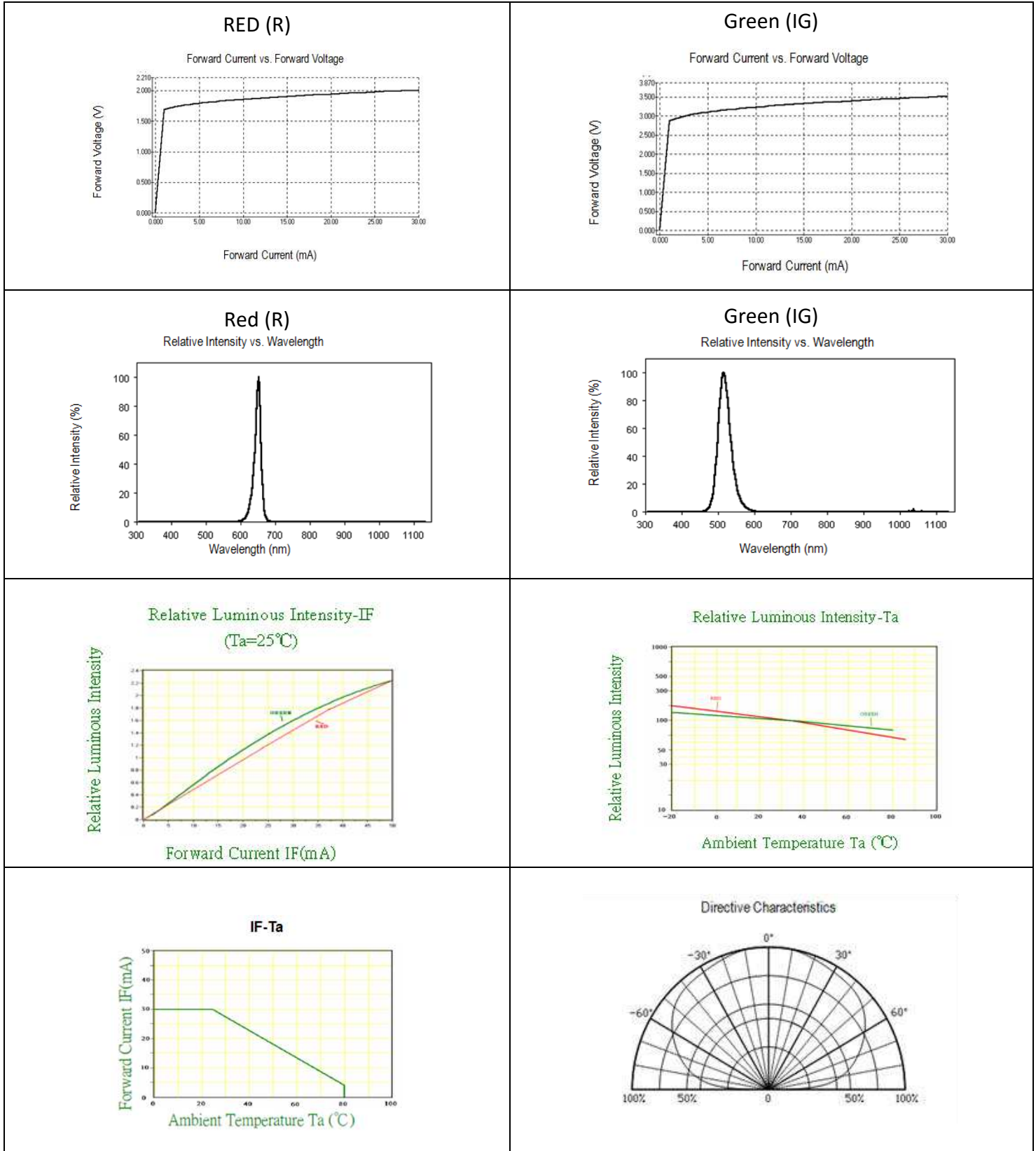
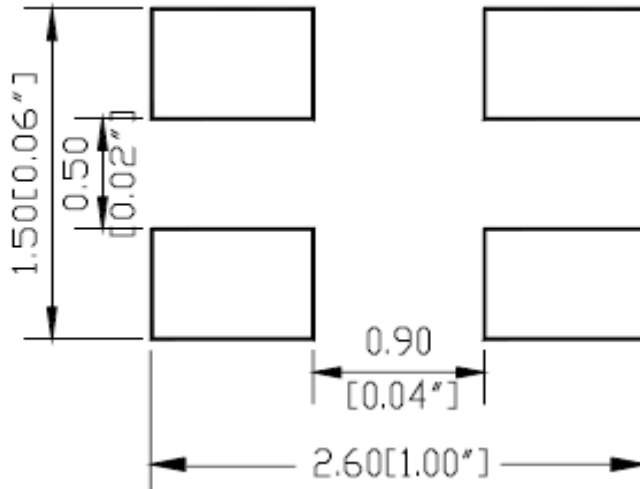# Solder Profile & Footprint

-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):
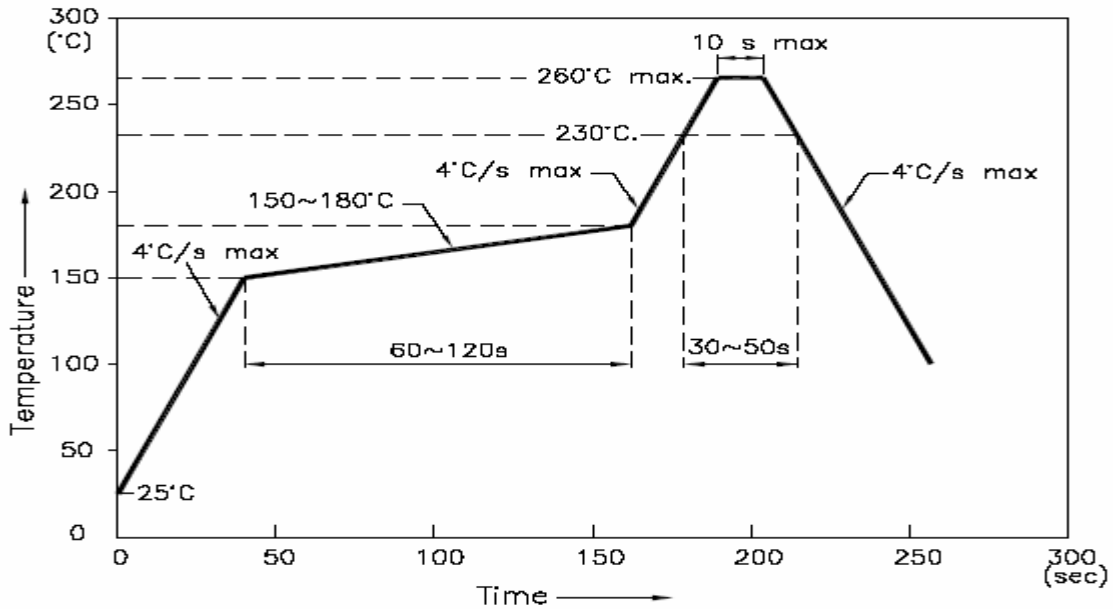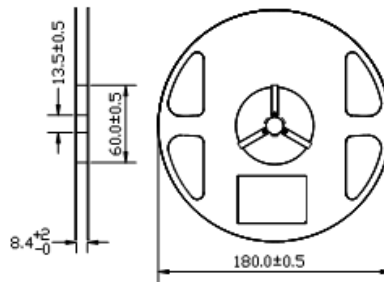

Recommended Pad Layout		

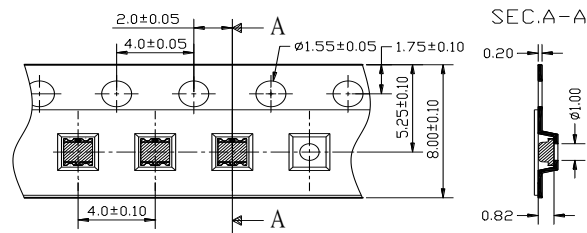| Units: mm	Tolerance: ± 0.1mm

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Packing

Reel Dimension:

Unit: mm

Tape Dimension:

Unit: mm

Arrangement of Tape:
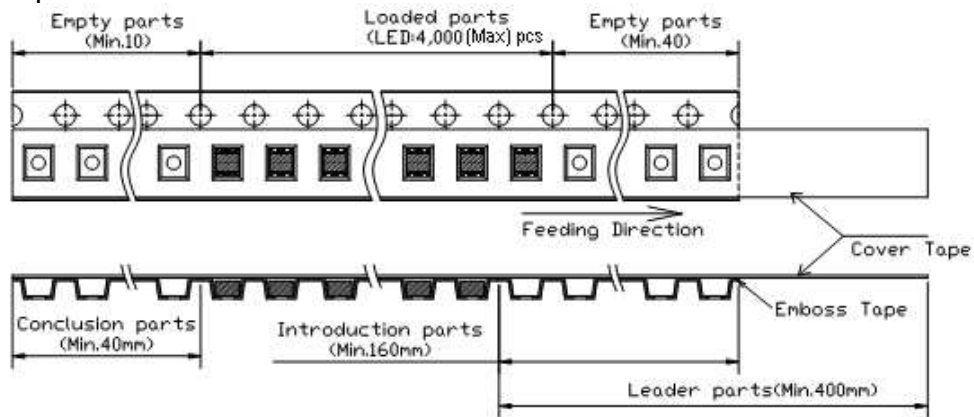
Packaging Specification:

Labeling

QT-Brightek
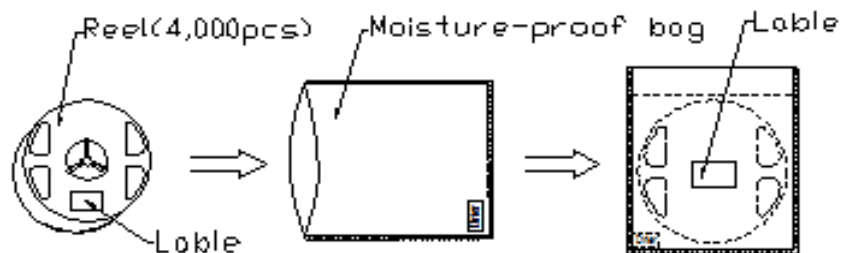
Part No: _____

Customer P/N: _____

Item: _____

Q'ty: _____

Vf: _____

Iv: _____

Wl: _____

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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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.