



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

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



QT-Brightek PLCC Series

PLCC4 RGB Reverse Mount LED

Part No.: QBLP677R-RGB

Product: QBLP677R-RGB	Date: May 23, 2018	Page 1 of 10
	Version# 1.1	



Table of Contents:

Introduction3

Electrical / Optical Characteristic (T_A=25 °C).....4

Absolute Maximum Rating4

Solder Profile & Footprint.....7

Packing8

Labeling9

Ordering Information9

Revision History10

Disclaimer10

Product: QBLP677R-RGB	Date: May 23, 2018	Page 2 of 10
	Version# 1.1	

Introduction

Feature:

- White Diffused lens
- Package in tape and reel
- Ultra bright PLCC4 RGB LED
- White face
- Common Anode
- InGaN technology for IB/IG
- AlInGaP technology for R
- Triangle die placement
- 120 degree viewing angle
- Reverse mountable

Description:

This PLCC4 RGB LEDs have a height profile of 1.76mm. Combination of high brightness output and robust package, this LED is ideal for architecture lighting, status indication, and color mixing applications.

Application:

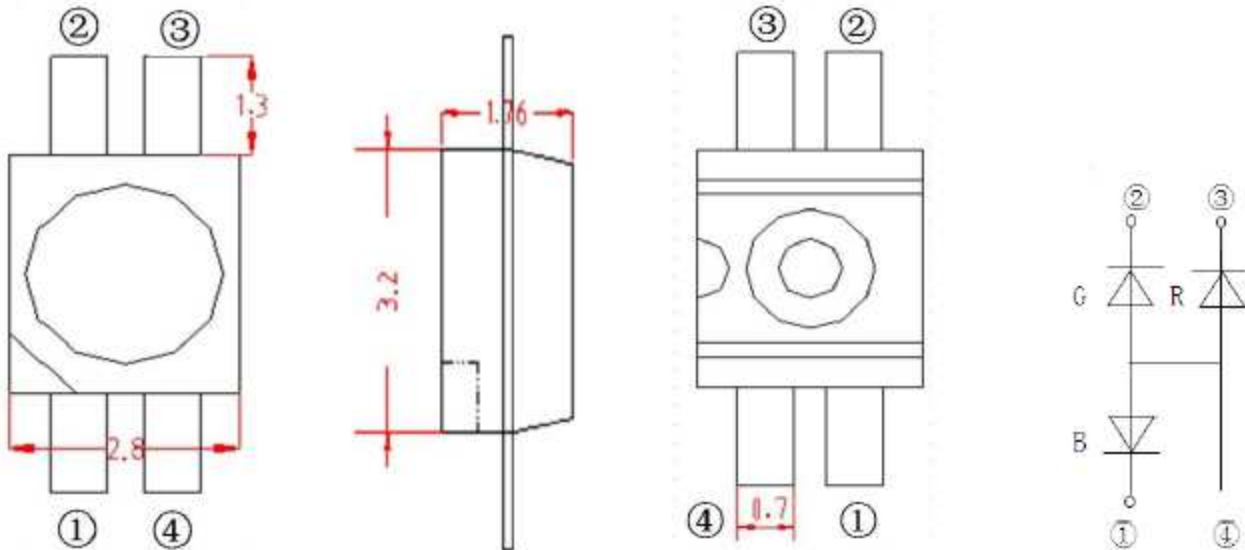
- Status indication
- Back lighting application
- Architecture lighting

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.2mm

Electrical / Optical Characteristic (T_A=25 °C)

Product	Color	I _F (mA)	V _F (V)		λ _D (nm)			I _V (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP677R-RGB	Red	20	2.0	2.5	615	620	630	490	700
	True Green	20	3.1	3.7	515	525	530	1400	2300
	Blue	20	3.1	3.7	460	470	475	290	460

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)**
AllInGaP (R)	75	30	100	5	-40 to +80	-40 to +85	260
InGaN (IB/IG)	111	30	100	5	-40 to +80	-40 to +85	260

*Duty 1/10 @ 10kHz

**IR Reflow for no more than 10 sec @ 260 °C

Luminous Intensity I_V for Red @ I_F=20mA

Bin	Min.	Max.	Unit
25	490	640	mcd
26	640	830	
27	830	1080	

Luminous Intensity I_V for True Green @ I_F=20mA

Bin	Min.	Max.	Unit
29	1400	1800	mcd
30	1800	2300	
31	2300	3000	
32	3000	3900	

Luminous Intensity I_V for Blue @ I_F=20mA

Bin	Min.	Max.	Unit
23	290	380	mcd
24	380	490	
25	490	640	
26	640	830	

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

Bin	Min.	Max.	Unit
A5	615	620	nm
R1	620	625	
R2	625	630	

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

Bin	Min.	Max.	Unit
TG1	515	520	nm
TG2	520	525	
TG3	525	530	

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

Bin	Min.	Max.	Unit
B5	460	465	nm
B6	465	470	
B7	470	475	

Note:

Tolerance of measurement of forward voltage: $\pm 0.1V$ Tolerance of measurement of luminous intensity: $\pm 15\%$ Tolerance of measurement of dominant wavelength: $\pm 2nm$

Characteristic Curves

Figure 1. Relative Luminous Flux vs. Forward Current

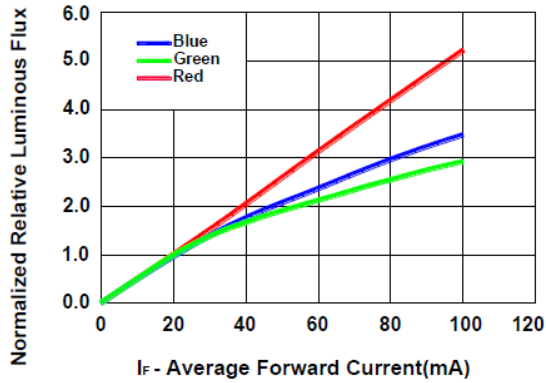


Figure 2. Forward Current VS. Forward Voltage

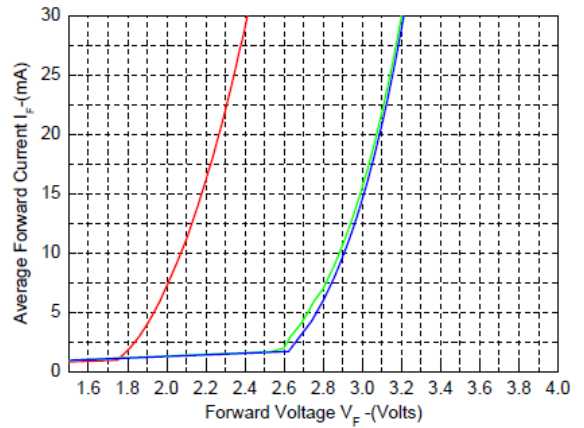
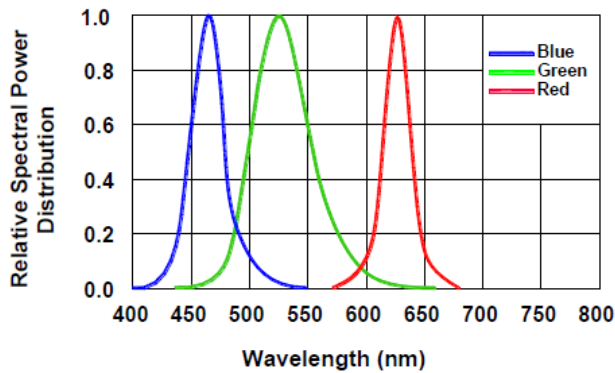
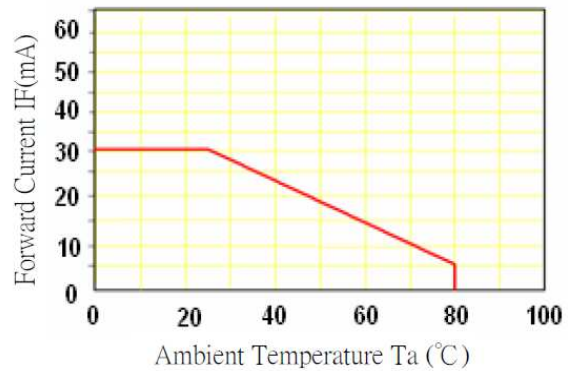


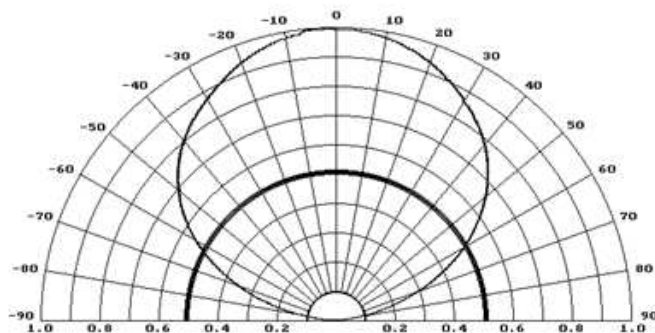
Figure 4. Relative Spectral Power Distribution vs. Wavelength



IF-Ta

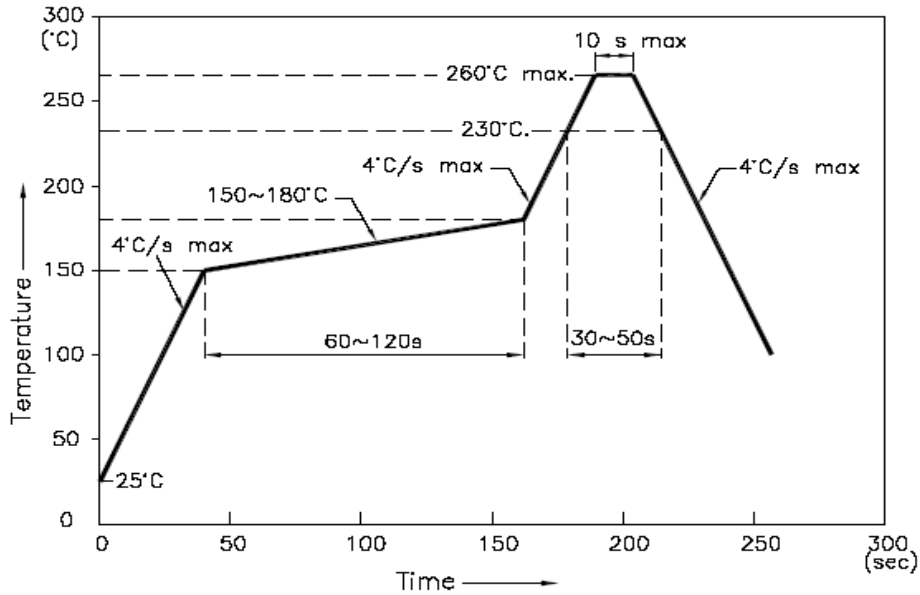


Directive Characteristics

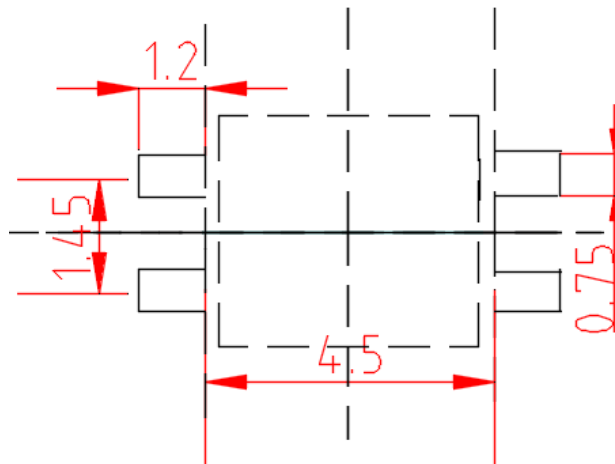


Solder Profile & Footprint

- 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

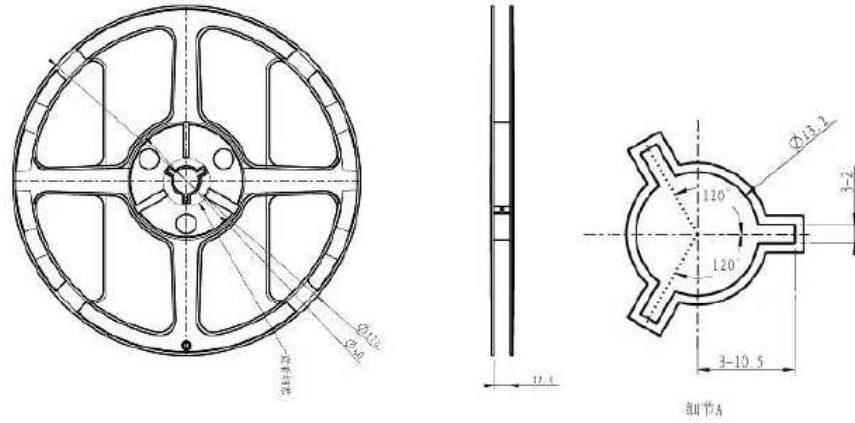


Units: mm

Tolerance: ± 0.2mm

Packing

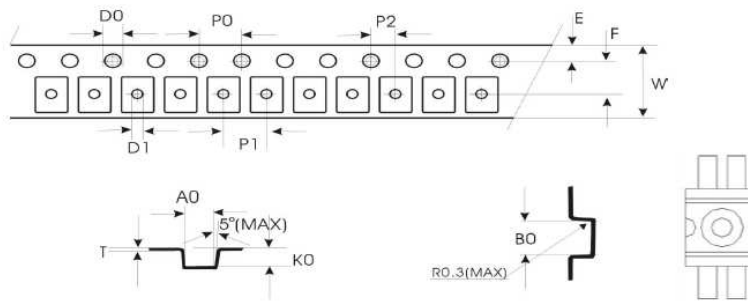
Reel Dimension:



Unit: mm

Tape Dimension:

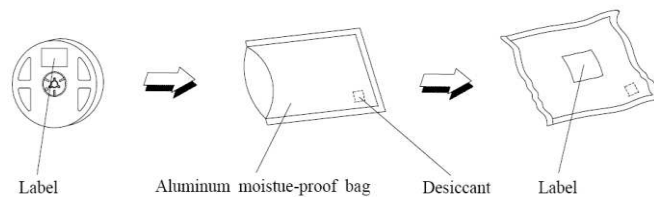
Tape Dimension



Symbol	A0	B0	K0	P0	P1	P2	T
Spec	3.10±0.1	6.45±0.05	2.15±0.05	4.0±0.1	4.0±0.1	2.00±0.05	0.23±0.03
Symbol	E	F	D0	D1	W	10P0	
Spec	1.75±0.10	5.5±0.05	1.5±0.1	1.5±0.1	12±0.1	40.0±0.2	

Unit: mm

Packaging Specifications:



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
QBLP677R-RGB	QBLP677R-RGB	-	2,000 units



Revision History

Description:	Revision #	Revision Date
New Release of QBLP677R-RGB	V1.0	06/09/2017
Correction on the Tape width	V1.1	05/23/2018

Disclaimer

QT-BRIGHTTEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. QT-BRIGHTTEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

Life Support Policy

QT-BRIGHTTEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of QT-BRIGHTTEK. As used herein:

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.