

**QT-Brightek Lamp Series**  
**5mm RGB Tri-Color Round Lamp**  
**Part No.: QBL8RGB25C0**

Product: QBL8RGB25C0	Date: February 19, 2019	Page 1 of 9
	Version# 1.0	



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## Introduction

### Feature:

- Clear lens
- Tri-Color (RGB)
- Common anode
- Package in bulk pack
- Super bright 5mm round lamp
- InGaN technology for IB/IG
- AllnGaP technology for R
- 25° viewing angle
- 0: Common Anode

### Description:

These super bright 5mm round type lamps with 8.65mm lens height are suitable for all applications requiring higher brightness.

### Application:

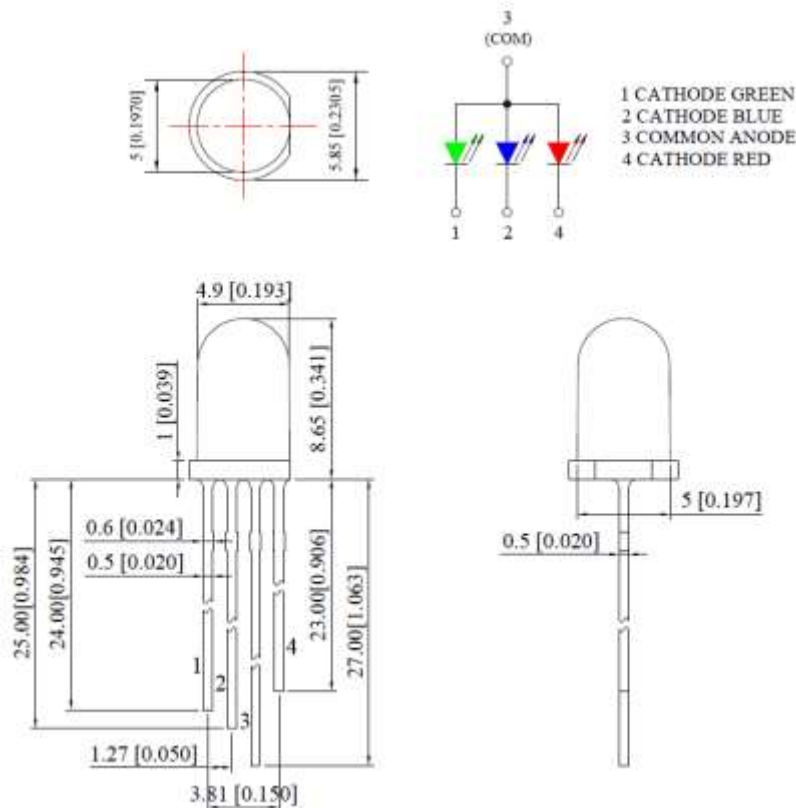
- General purpose indicator application
- Electronic signs and electronics board
- LED lighting

### Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



### Dimension:



Units: mm / Unidentified tolerance = +/-0.2mm

**Electrical / Optical Characteristic (T=25°C)**

Product	Color	I <sub>F</sub> (mA)	V <sub>F</sub> (V)		λ <sub>D</sub> (nm)			I <sub>V</sub> (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBL8RGB25C0	Red	20	2.0	2.5	-	624	-	800	1300
	Green		3.2	3.6	-	525	-	2000	4000
	Blue		3.2	3.6	-	470	-	400	700

**Absolute Maximum Rating**

Material	P <sub>d</sub> (mW)	I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)*	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)	T <sub>SO L</sub> (°C)**
AllnGaP (R)	60	25	100	5	-25 to + 80	-40 to +85	260
InGaN (IB/IG)	90	25	100	5	-25 to + 80	-40 to +85	260

\*Duty 1/10 @ 1KHz

\*\*Wave soldering for no more than 5 sec @ 260 °C

Note:

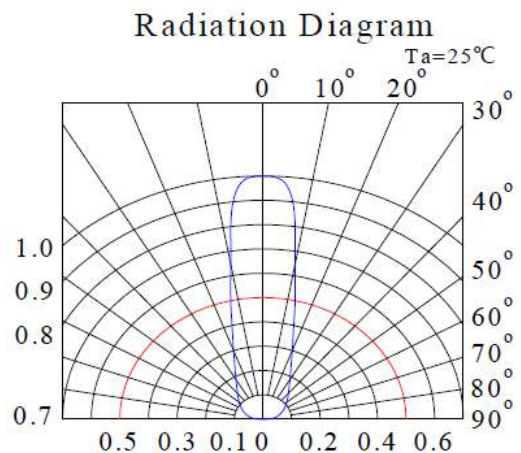
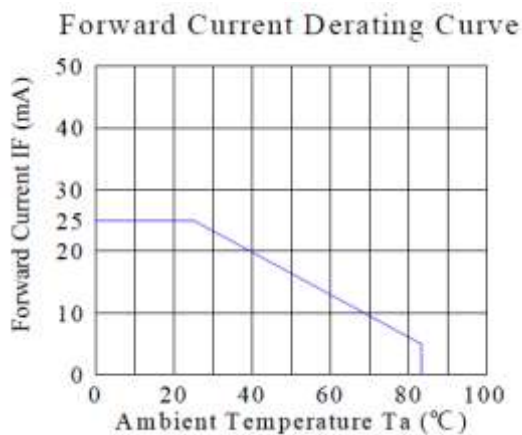
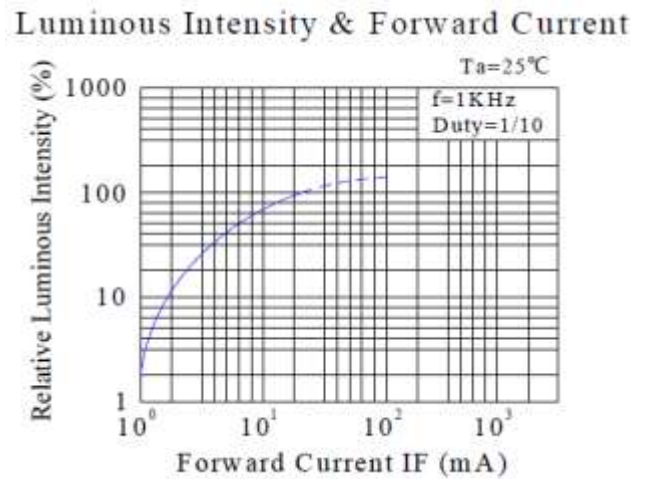
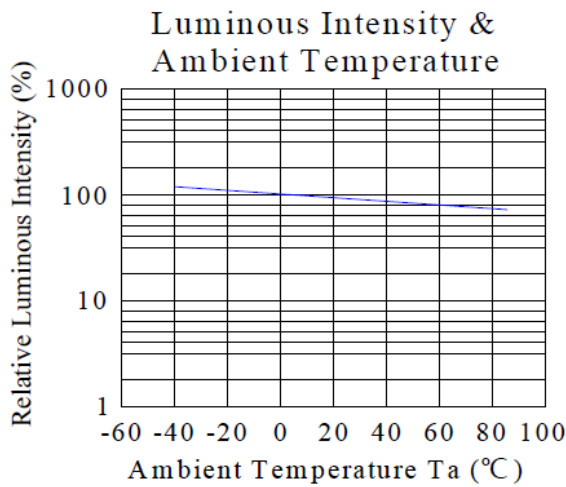
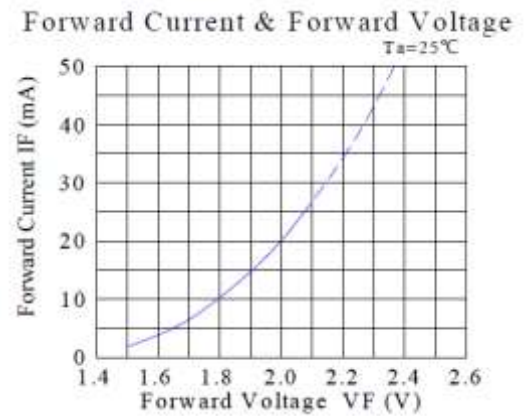
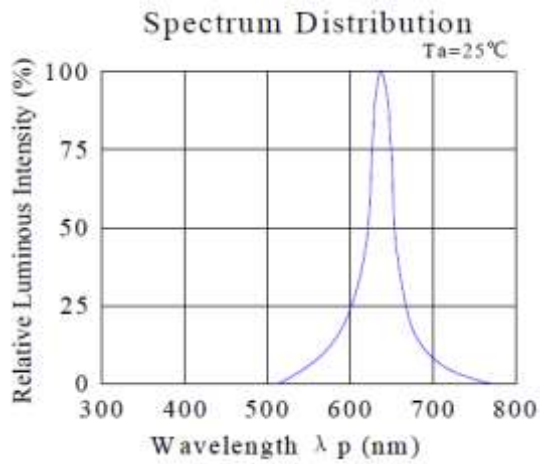
Tolerance of measurement of forward voltage: ±0.1V

Tolerance of measurement of luminous intensity: ±15%

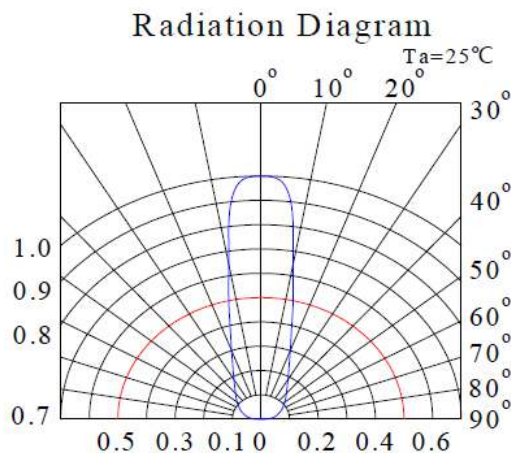
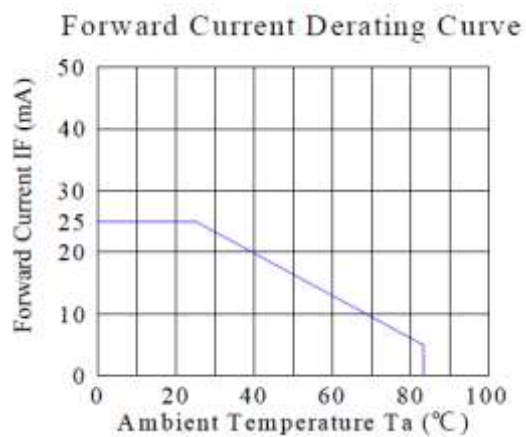
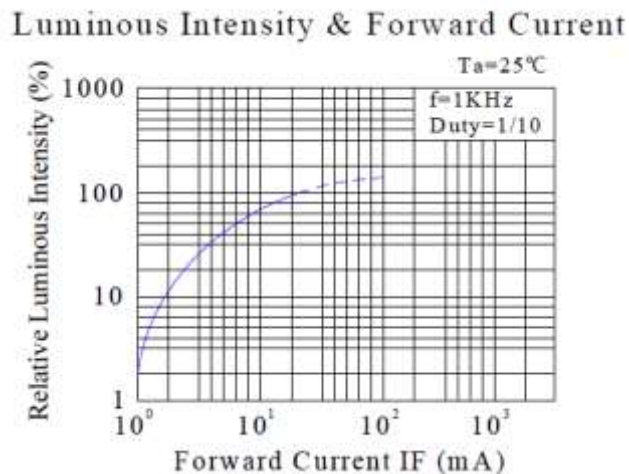
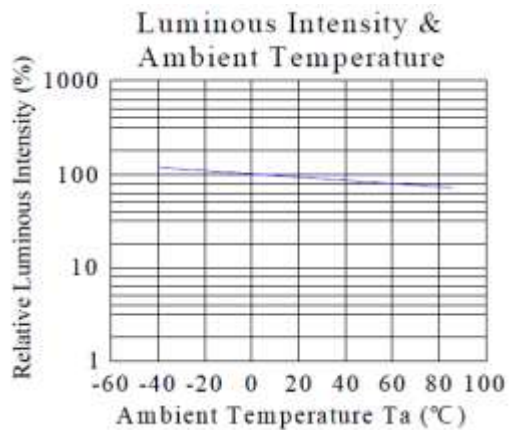
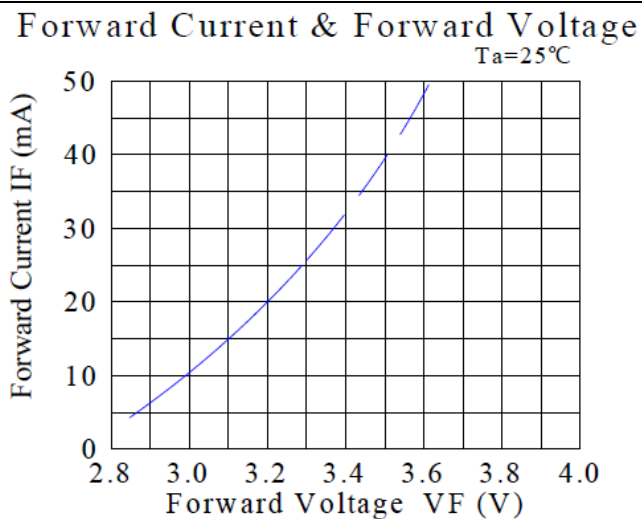
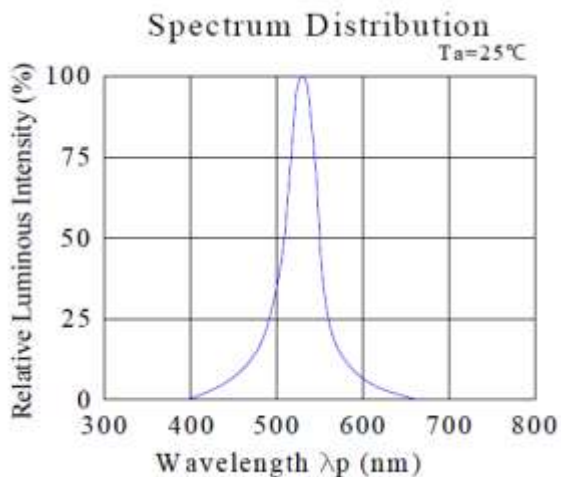
Tolerance of measurement of dominant wavelength: ±2nm

## Characteristic Curves

Red



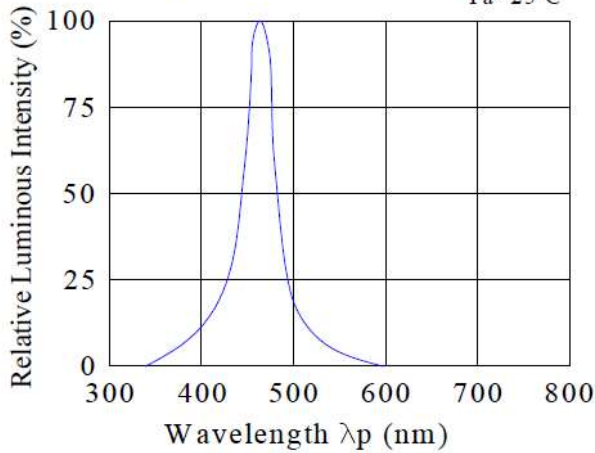
Green



Blue

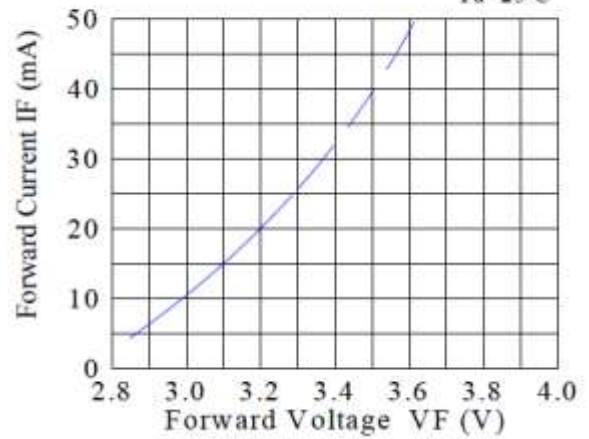
Spectrum Distribution

Ta=25°C

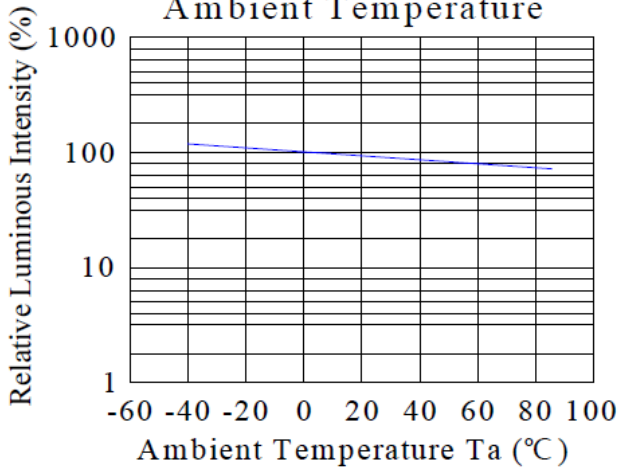


Forward Current & Forward Voltage

Ta=25°C



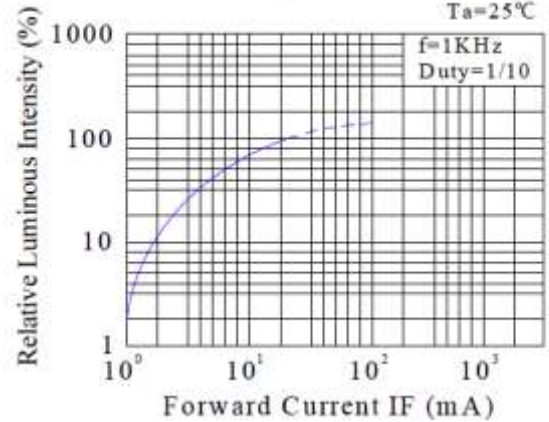
Luminous Intensity & Ambient Temperature



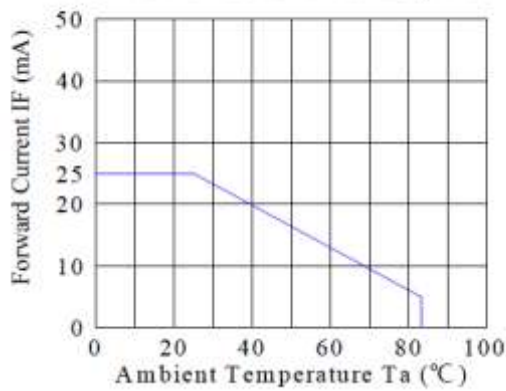
Luminous Intensity & Forward Current

Ta=25°C

f=1KHz  
Duty=1/10

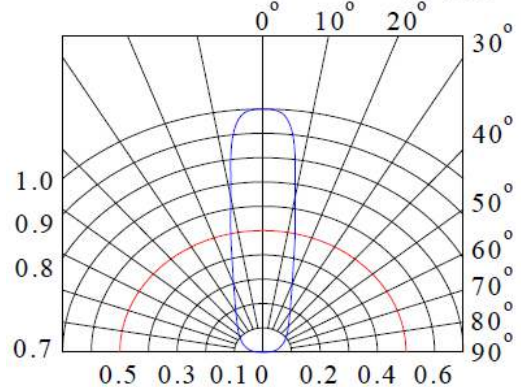


Forward Current Derating Curve

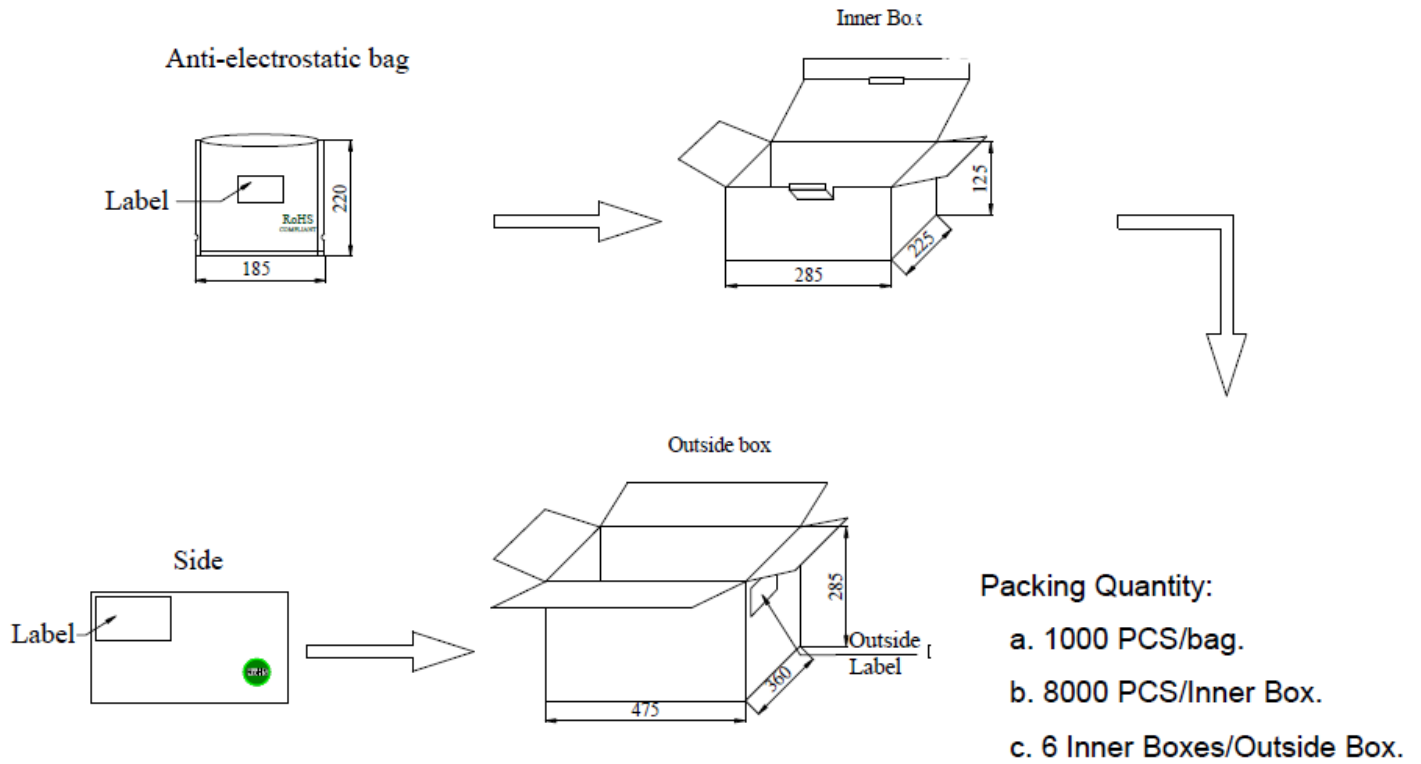


Radiation Diagram

Ta=25°C



## Packing



## Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per bag
QBL8RGB25C0	QBL8RGB25C0	Red: $I_v=1300\text{mcd typ. @ } I_F=20\text{mA}$ , $\lambda_D=624\text{nm}$	1000pcs
		Green: $I_v=4000\text{mcd typ. @ } I_F=20\text{mA}$ , $\lambda_D=525\text{nm}$	
		Blue: $I_v=700\text{mcd typ. @ } I_F=20\text{mA}$ , $\lambda_D=470\text{nm}$	





### Revision History

Description:	Revision #	Revision Date
New Release of QBL8RGB25C0	V1.0	02/19/2019

### 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.