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.

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QT-Brightek Lamp Series

5mm Round LED

Part No.: QBL8XX15C_series

XX: Color Code

Table of Contents:

Introduction

| **Feature:**	**Application:**
• Clear lens • Package in bulk pack • 5mm round lamp • AllnGaP technology for R/Y/O/AG • InGaN technology for IG/IB • Viewing angle: 15º typ. **Description:** These bright 5mm round type lamps are suitable for all indicator applications such as electronic signs and electronics board indicator	• General purpose indicator application • Electronic signs and electronics board **Certification & Compliance:** • TS16949 • ISO9001 • RoHS Compliant

Dimension:
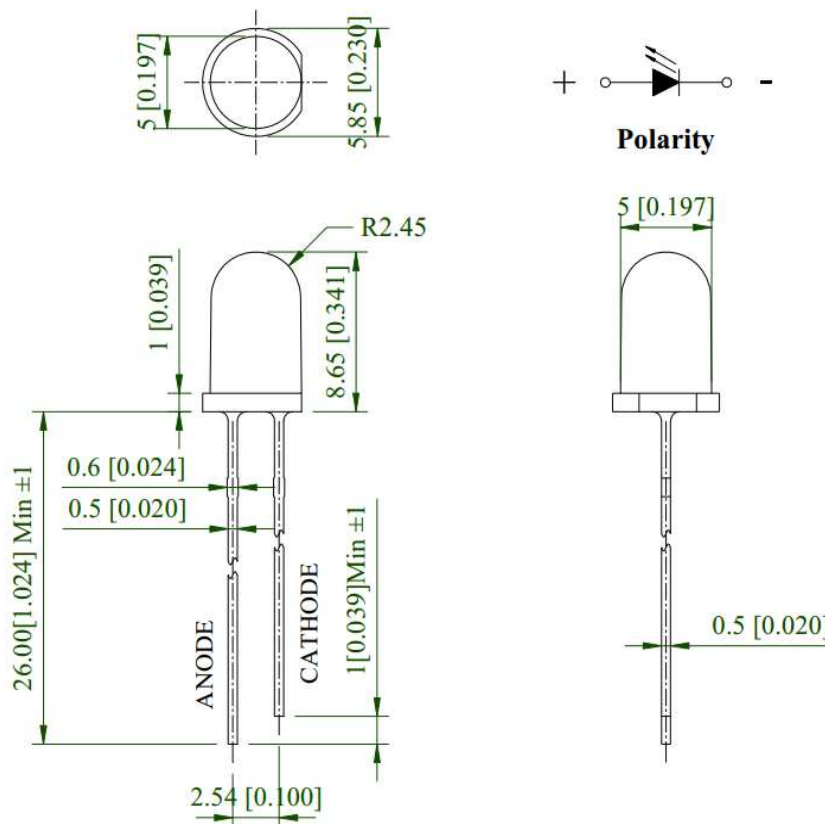
Units: mm / tolerance = +/-0.25mm unless otherwise specified

Electrical / Optical Characteristic (Ta=25°C)

Product	Color	I_F (mA)	V_F (V)		λ_D (nm)	I_V (mcd)	
			Typ.	Max.	Typ.	Min.	Typ.
QBL8R15C	Red	20	2.0	2.6	624	2900	5000
QBL8O15C	Orange	20	2.0	2.6	605	3800	6500
QBL8Y15C	Yellow	20	2.0	2.6	590	2900	5000
QBL8AG15C	Yellow Green	20	2.0	2.6	573	1000	1700
QBL8IG15C	True Green	20	3.2	3.6	525	30000	39000
QBL8IB15C	Blue	20	3.2	3.6	470	6500	11000

Absolute Maximum Rating

Material	P_d (mW)	I_F (mA)	I_{FP} (mA)*	V_R (V)	T_{OP} (^{o}C)	T_{ST} (^{o}C)
AlInGaP	65	25	100	5	-40 ~ +85	-40 ~ +100
InGaN	95	25	100	5	-40 ~ +85	-40 ~ +100

*1/10 Duty Cycle, 0.1ms Pulse Width

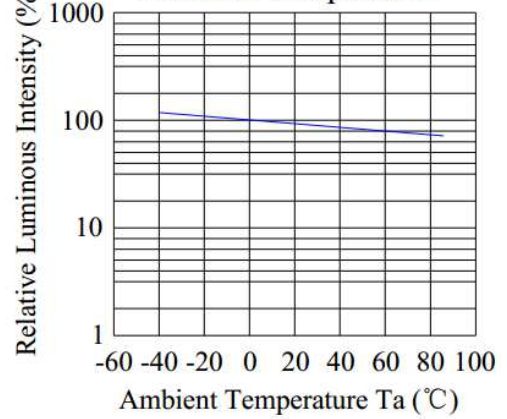
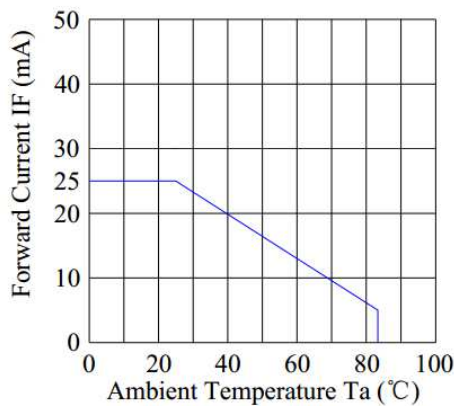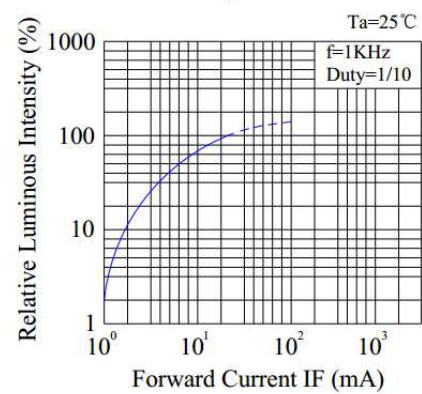# Characteristic Curves

AlInGaP

Forward Current & Forward Voltage
Ta=25℃
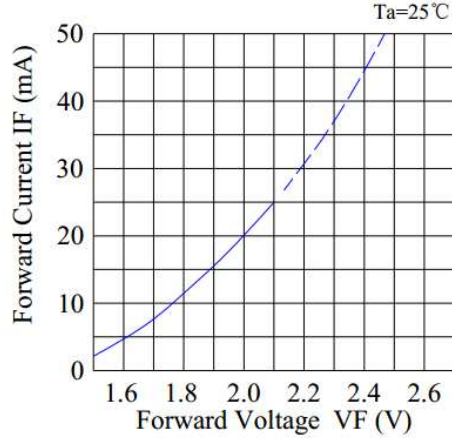
Luminous Intensity & Ambient Temperature

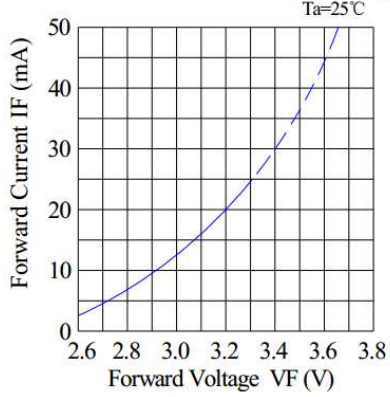Forward Current Derating Curve

Luminous Intensity & Forward Current
Ta=25℃
f=1KHz
Duty=1/10

Relative Intensity vs. Wavelength
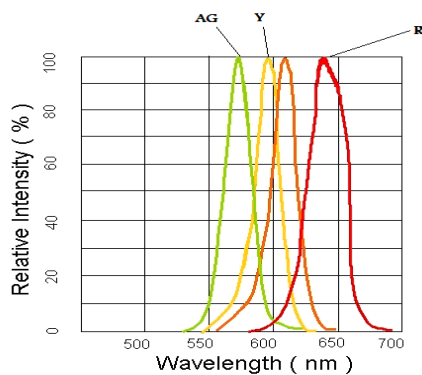
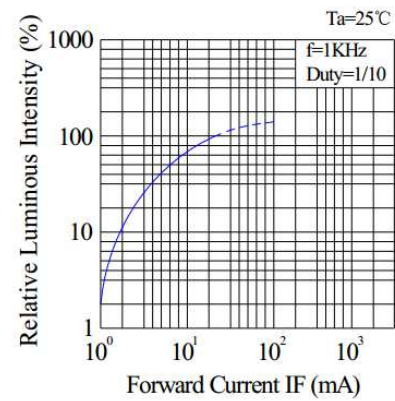

Radiation Diagram
Ta=25℃
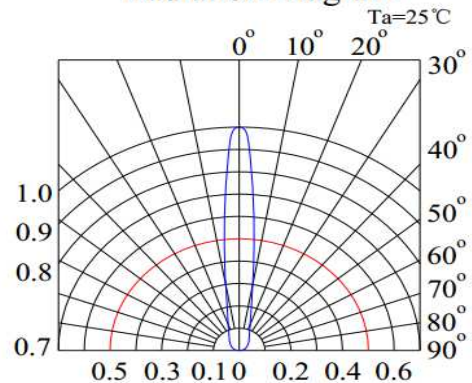
InGaN

Forward Current & Forward Voltage

Ta=25℃

Luminous Intensity & Forward Current
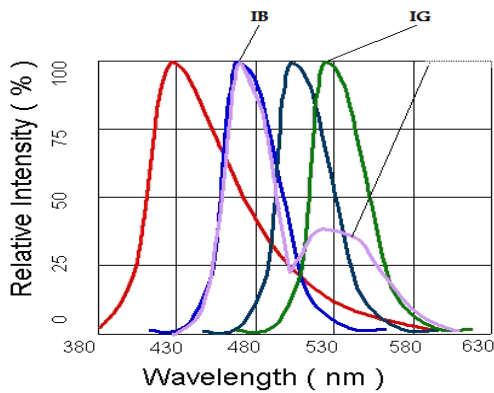
Ta=25℃
f=1KHz
Duty=1/10

Luminous Intensity & Ambient Temperature
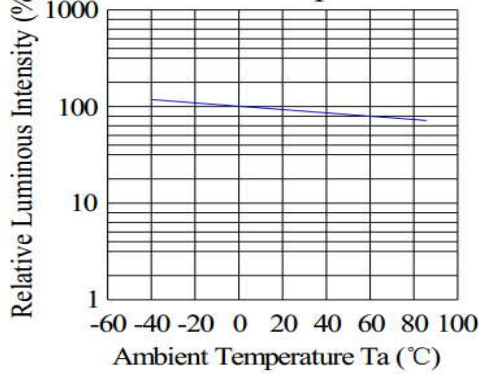
Forward Current Derating Curve

Relative Intensity vs. Wavelength

IB   IG

Radiation Diagram

Ta=25℃
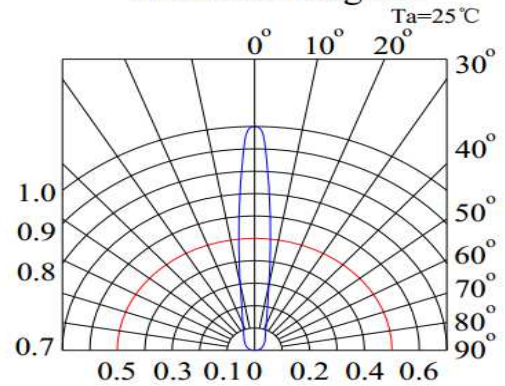
Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per bag
QBL8R15C	QBL8R15C	lv=5000mcd typ. @ 20mA, λ_D=624nm typ.	500pcs
QBL8O15C	QBL8O15C	lv=6500mcd typ. @ 20mA, λ_D=605nm typ.	500pcs
QBL8Y15C	QBL8Y15C	lv=5000mcd typ. @ 20mA, λ_D=590nm typ.	500pcs
QBL8AG15C	QBL8AG15C	lv=1700mcd typ. @ 20mA, λ_D=573nm typ.	500pcs
QBL8IG15C	QBL8IG15C	lv=39000mcd typ. @ 20mA, λ_D=525nm typ.	500pcs
QBL8IB15C	QBL8IB15C	lv=11000mcd typ. @ 20mA, λ_D=470nm typ.	500pcs

QTB

Revision History

Description:	Revision #	Revision Date
New Release of QBL8XX15C_series	V1.0	06/25/2011
Update format	V1.1	08/21/2012
Amend spec	V1.2	11/12/2012
Update spec, dimension drawing and binning	V2.0	01/13/2016
Update spec and dimension drawing	V3.0	01/22/2018

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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.