

# QT-Brightek Lamp Series

## 3mm Round Lamp

**Part No.: QBL7XX60D**

**XX: Color Code**

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**Table of Contents:**

Introduction .....	3
Electrical / Optical Characteristic (Ta=25 °C) .....	4
Absolute Maximum Rating .....	4
Characteristic Curves.....	5
Ordering Information .....	7
Revision History .....	8
Disclaimer .....	8

## Introduction

### Feature:

- Color diffused lens
- Packed in bulk
- 3mm round lamp
- AlInGaP technology for R/O/Y/AG
- InGaN technology for IG/IB
- Viewing angle: 60° typ.

### Description:

These bright 3mm round type lamps are suitable for all indicator applications such as electronic signs and electronic board indicator.

### Application:

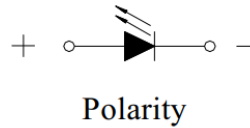
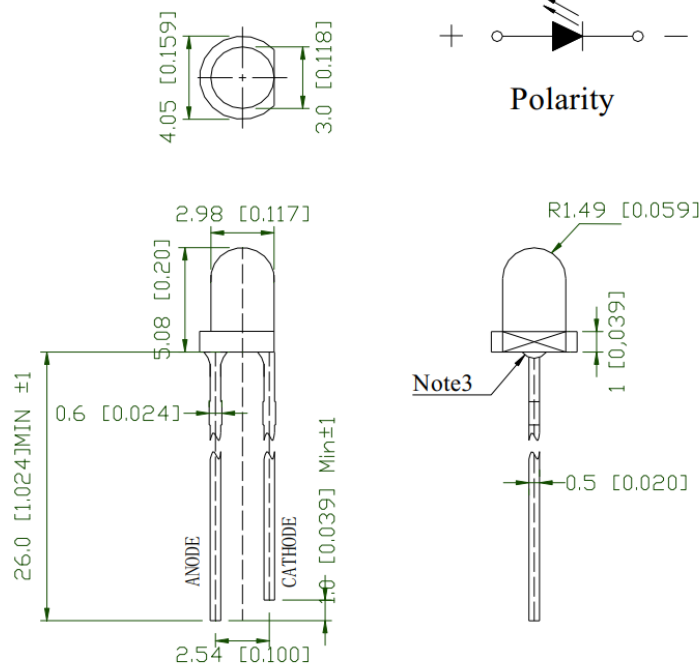
- General purpose indicator application
- Electronic signs and electronics board
- LED lighting

### Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



## Dimension:



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

**Electrical / Optical Characteristic (Ta=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.	Typ.	Min.	Typ.
QBL7R60D	Red	20	2.0	2.6	624	210	350
QBL7O60D	Orange	20	2.0	2.6	605	90	160
QBL7Y60D	Yellow	20	2.0	2.6	590	210	350
QBL7AG60D	Yellow Green	20	2.0	2.6	573	70	120
QBL7IG60D	True Green	20	3.2	3.6	525	2900	5000
QBL7IB60D	Blue	20	3.2	3.6	470	780	1300

**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>SOL</sub> (°C)**
AllnGaP	65	25	100	5	-40 to +85	-40 to +100	260
InGaN	90	25	100	5	-40 to +85	-40 to +100	260

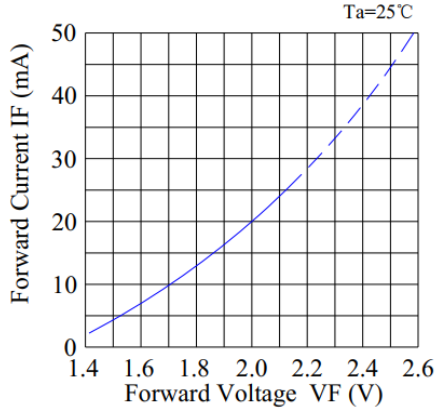
\*1/10 Duty Cycle, 0.1ms Pulse Width

\*\*Wave Soldering for no more than 3 sec @ 260 °C

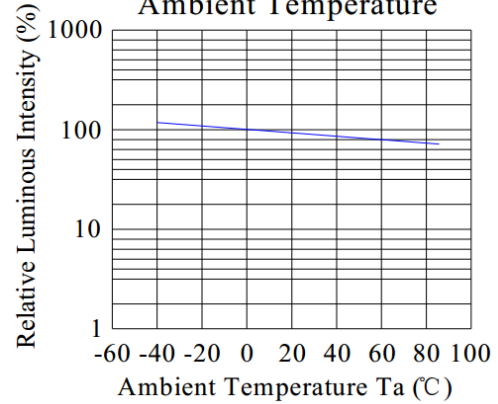
## Characteristic Curves

AllnGaP (R/O/Y/AG)

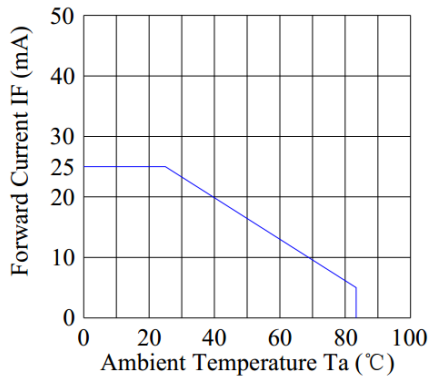
Forward Current & Forward Voltage



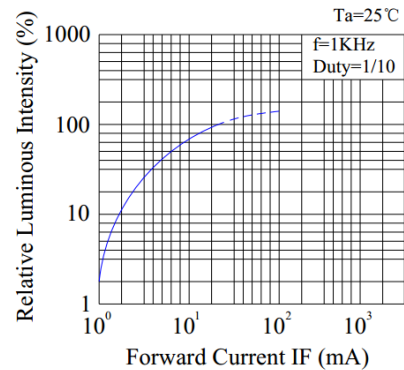
Luminous Intensity & Ambient Temperature



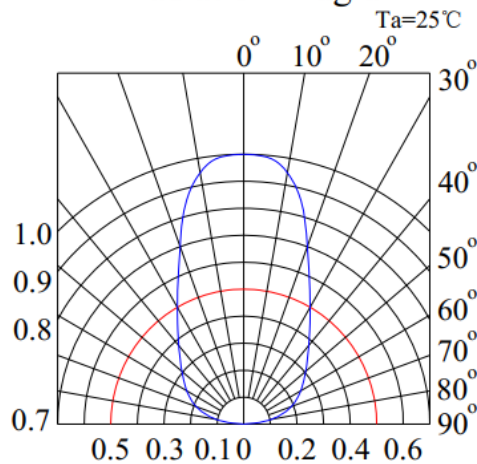
Forward Current Derating Curve



Luminous Intensity & Forward Current

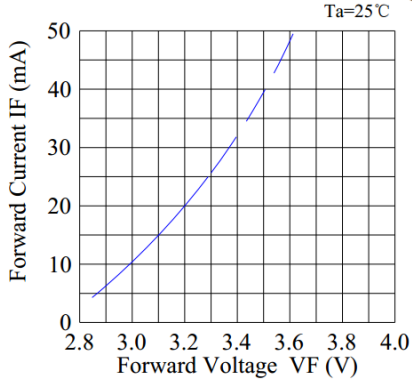


Radiation Diagram

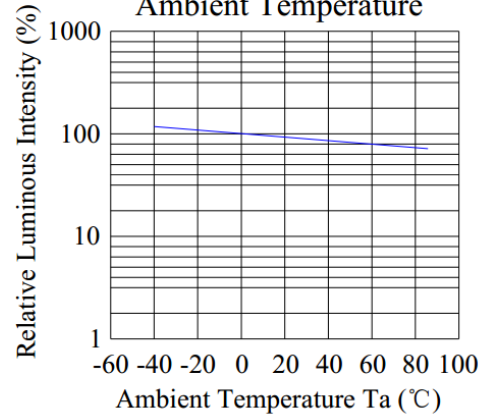


InGaN (IG/IB)

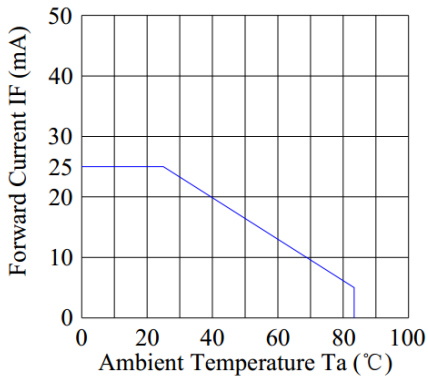
Forward Current & Forward Voltage



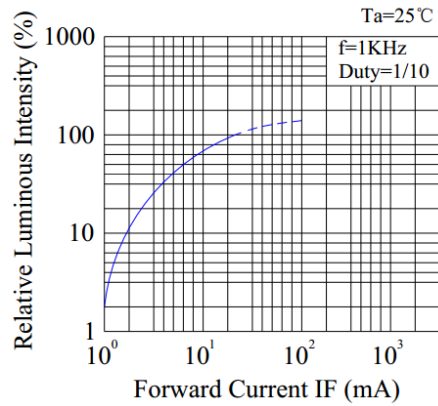
Luminous Intensity & Ambient Temperature



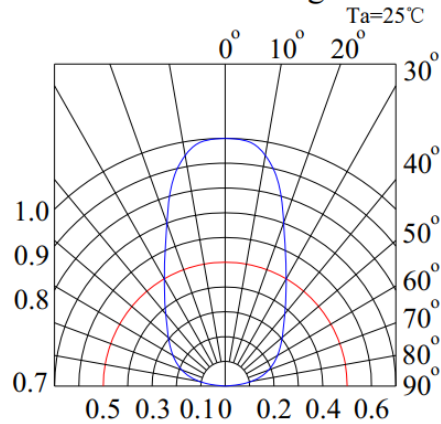
Forward Current Derating Curve



Luminous Intensity & Forward Current



Radiation Diagram



**Ordering Information**

Part #	Orderable Part #	Spec Range	Quantity per bag
QBL7R60D	QBL7R60D	Iv=350mcd typ. @ 20mA, $\lambda_D$ =624nm typ.	500pcs
QBL7O60D	QBL7O60D	Iv=160mcd typ. @ 20mA, $\lambda_D$ =605nm typ.	500pcs
QBL7Y60D	QBL7Y60D	Iv=350mcd typ. @ 20mA, $\lambda_D$ =590nm typ.	500pcs
QBL7AG60D	QBL7AG60D	Iv=120mcd typ. @ 20mA, $\lambda_D$ =573nm typ.	500pcs
QBL7IG60D	QBL7IG60D	Iv=5000mcd typ. @ 20mA, $\lambda_D$ =525nm typ.	500pcs
QBL7IB60D	QBL7IB60D	Iv=1300mcd typ. @ 20mA, $\lambda_D$ =470nm typ.	500pcs

**Revision History**

Description:	Revision #	Revision Date
New Release of QBL7XX60D_Series	V1.0	09/20/2010
Update spec and drawing dimension	V2.0	03/02/2018

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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.