

# **QT-Brightek Lamp Series**

## **10mm Round Lamp**

**Part No.: QBL13IW20C-XX**

**XX (Color Code) = WW/NW/CW**

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## Introduction

**Feature:**

- Clear lens
- Packed in bulk
- 10mm round lamp
- InGaN technology
- Viewing angle: 20° typ.

**Description:**

These bright 10mm round type lamps are suitable for all indicator applications such as electronic signs and electronic board indicator.

**Application:**

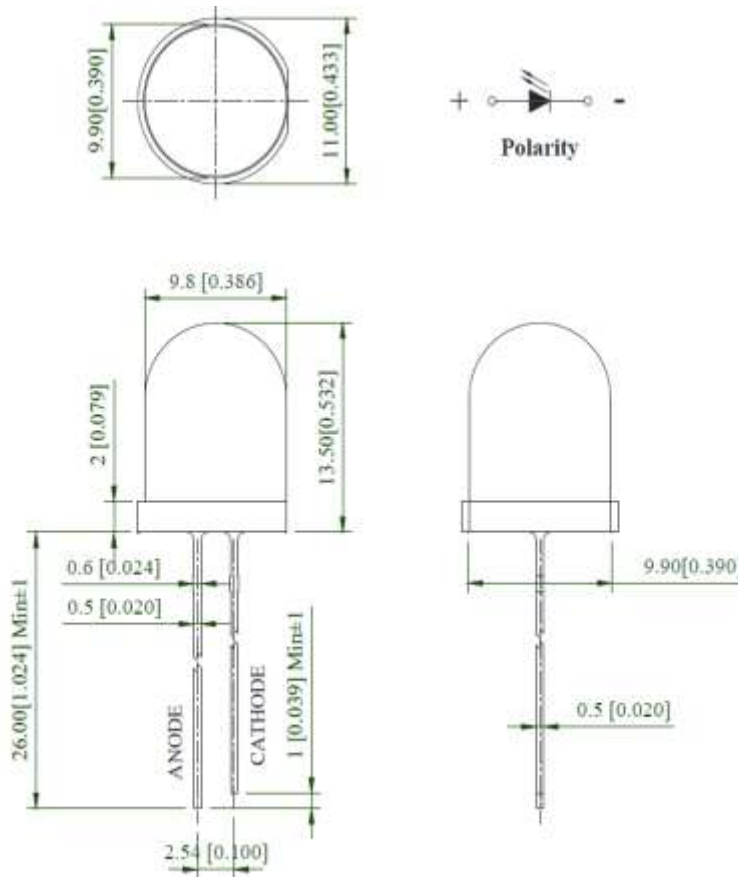
- General purpose indicator application
- Electronic signs and electronics board
- Indicator

**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)		Chromaticity Coordinate			I <sub>V</sub> (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBL13IW20C-WW	Warm White	20	3.1	3.6	-	X=0.43 Y=0.395	-	14000	23000
QBL13IW20C-NW	Natural White	20	3.1	3.6	-	X=0.335 Y=0.325	-	14000	23000
QBL13IW20C-CW	Cool White	20	3.1	3.6	-	X=0.28 Y=0.28	-	14000	23000

### Absolute Maximum Rating

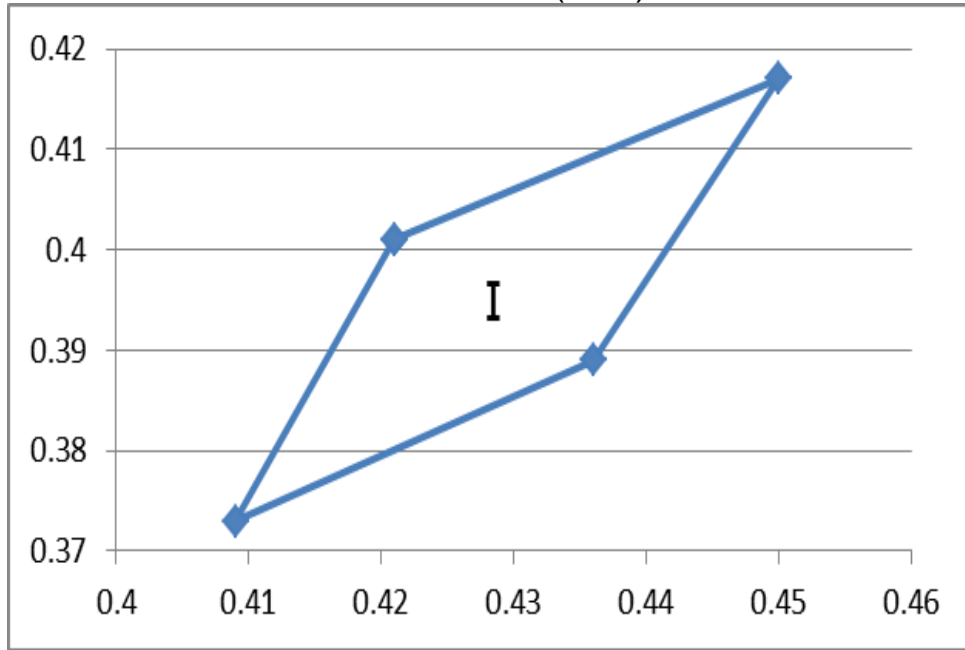
Material	P <sub>d</sub> (mW)	I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)*	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)	T <sub>SOL</sub> (°C)**
InGaN	90	25	100	5	-40 to +85	-40 to +100	260

\*Pulse width 0.1msec, duty 1/10

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

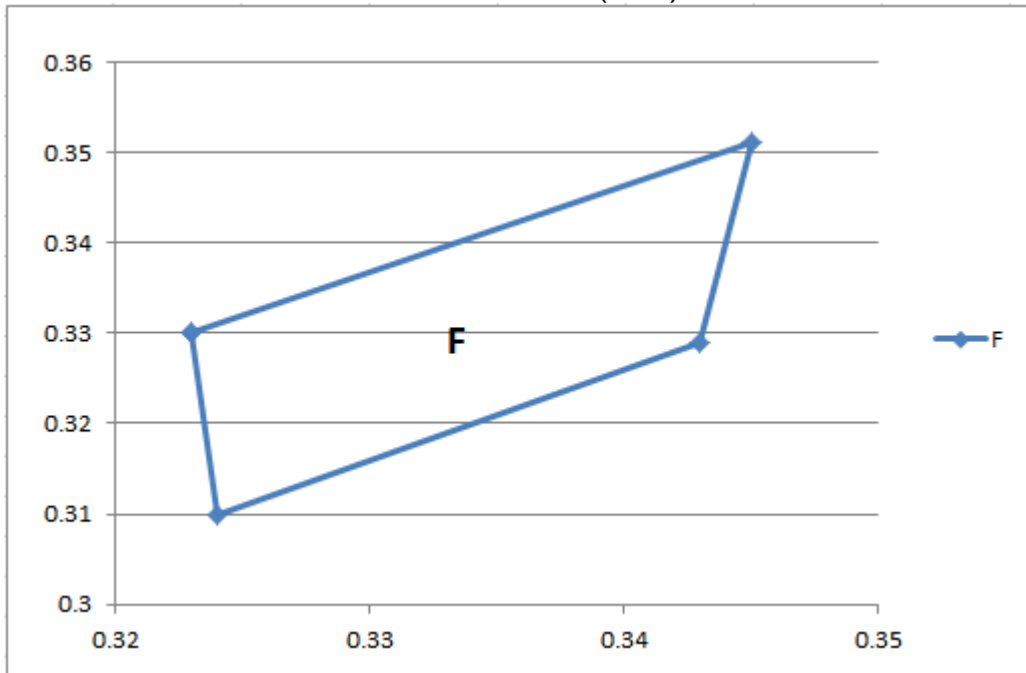
**CIE Chromaticity Diagram**

Warm White (WW)



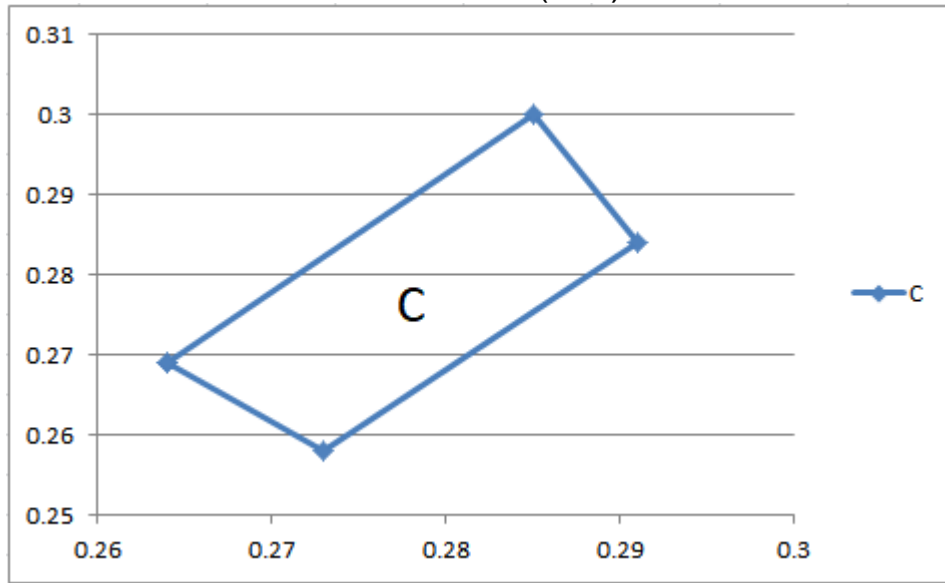
I	
X	Y
0.421	0.401
0.45	0.417
0.436	0.389
0.409	0.373
0.421	0.401

Natural White (NW)



F	
X	Y
0.323	0.33
0.345	0.351
0.343	0.329
0.324	0.31
0.323	0.33

Cool White (CW)

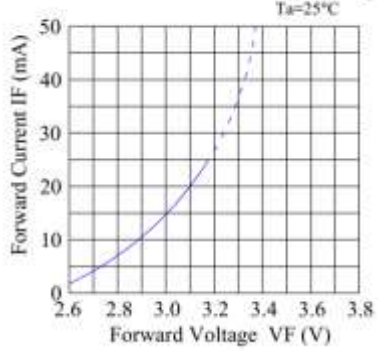


C	
X	Y
0.264	0.269
0.273	0.258
0.291	0.284
0.285	0.3
0.264	0.269

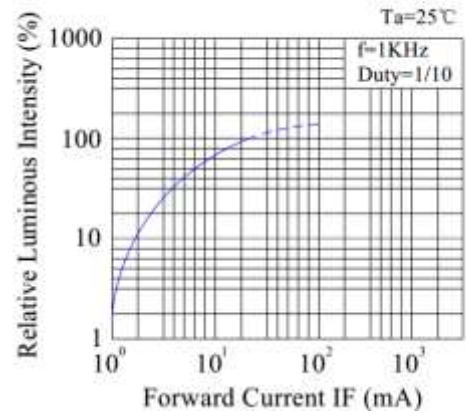
Tolerance of measurement of color coordinates:  $\pm 0.01$

## Characteristic Curves

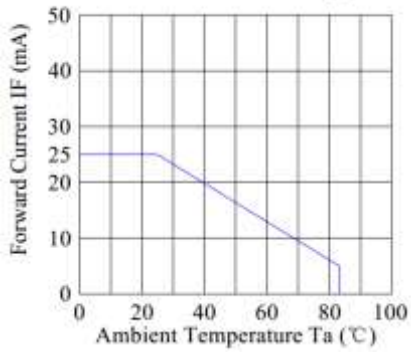
Forward Current & Forward Voltage



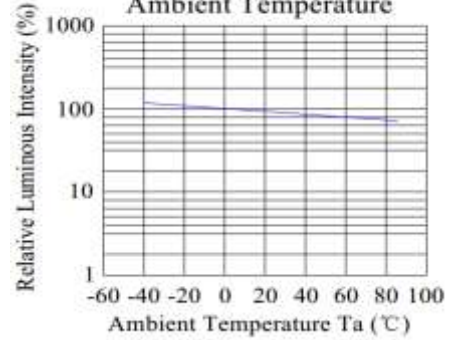
Luminous Intensity & Forward Current



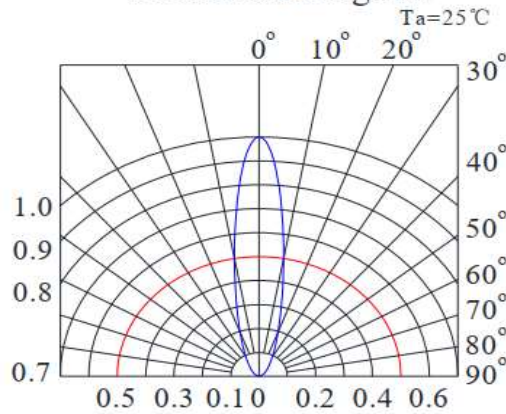
Forward Current Derating Curve



Luminous Intensity & Ambient Temperature



Radiation Diagram





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**Ordering Information**

Part #	Orderable Part #	Spec Range	Quantity per bag
QBL13IW20C-WW	QBL13IW20C-WW	Iv=23000mcd typ. @ 20mA, CCT Coordinate : (0.43, 0.395) typ.	300pcs
QBL13IW20C-NW	QBL13IW20C-NW	Iv=23000mcd typ. @ 20mA, CCT Coordinate : (0.335, 0.325) typ.	300pcs
QBL13IW20C-CW	QBL13IW20C-CW	Iv=23000mcd typ. @ 20mA, CCT Coordinate : (0.28, 0.28) typ.	300pcs

**Revision History**

Description:	Revision #	Revision Date
New Release of QBL13IW20C-XX	V1.0	10/15/2019

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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.