

QT-Brightek Lamp Series

5mm IR Lamp LED

Part No.: QBED8160

1: 940nm

60: 60 Deg Viewing Angle

Product: QBED8160	Date: March 30, 2018	Page 1 of 7
	Version# 2.0	

Table of Contents:

Introduction	3
Electrical / Optical Characteristic (Ta=25 °C)	4
Absolute Maximum Rating	4
Characteristic Curves.....	5
Packing	6
Labeling	6
Ordering Information	6
Revision History	7
Disclaimer	7

Introduction

Feature:

- Water clear lens
- Package in bulk
- High radiant intensity
- Peak wavelength $\lambda_p=940\text{nm}$
- Viewing angle: 60 degree typ.

Description:

This device is spectrally match with phototransistor, photodiode, and infrared receiver module

Application:

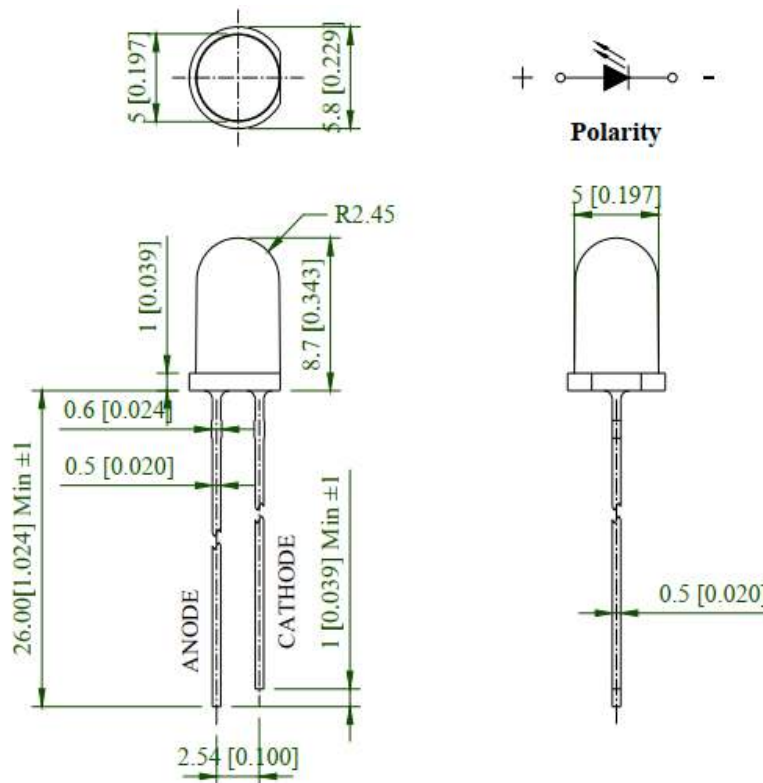
- Free air transmission system
- Optoelectronic switch
- Infrared applied system
- Smoke Detector

Certification & Compliance:

- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.25mm

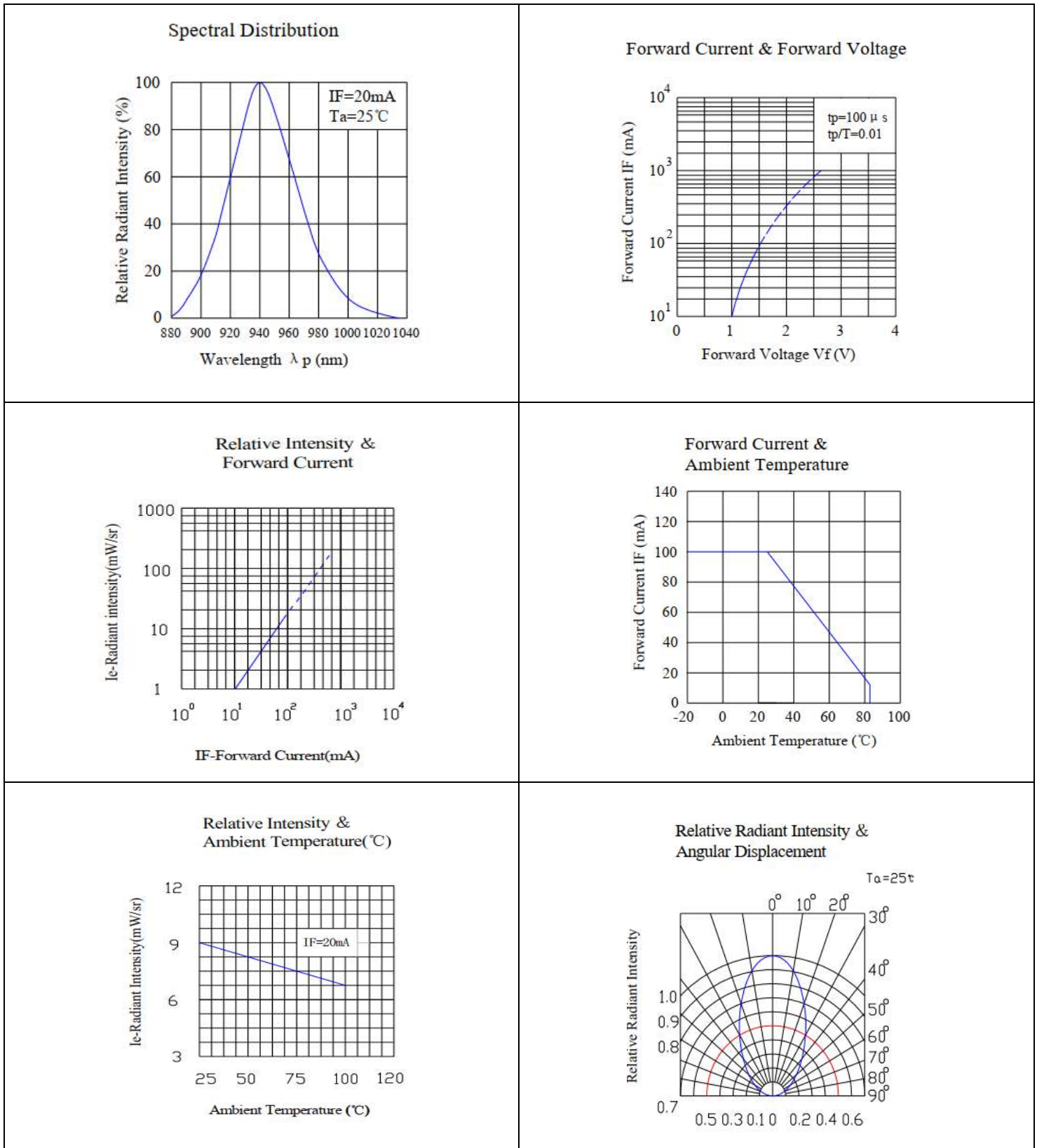
Electrical / Optical Characteristic (Ta=25 °C)

Parameter	Symbol	Test Condition	Output			Units
			Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	-	1.2	1.50	V
		I _F =50mA	-	1.35	1.50	
		I _F =100mA		1.40	1.60	
Reverse Current	I _R	V _R =5V	-	-	10	μA
Radiant Intensity	I _E	I _F =20mA	-	9	-	mW/sr
		I _F =50mA	10	18	-	
		I _F =100mA	20	35	-	
Peak Radiation Wavelength	λ _P	I _F =20mA	-	940	-	nm
Half Spectrum Width	Δλ	I _F =20mA	-	50	-	nm
Viewing Angle	2Θ _{1/2}	I _F =20mA	-	60	-	deg
Switch Time	t _r /t _f	I _{FP} =100mA ,f=1KHz, tp/T=1%	-	1/1	-	μs

Absolute Maximum Rating

Parameter	Symbol	Rating	Units
Continuous Forward Current	I _F	100	mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I _{FP}	900	mA
Reverse Voltage	V _R	5	V
Power Dissipation at (or below) 25 °C Free Air Temperature	P _d	100	mW
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C

Characteristic Curves



Packing

Bulk: 500pcs per bag

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 bag
QBED8160	QBED8160	I _e =18mW mW/sr. @ I _F =50mA, λ _P =940nm typ.	500pcs

Revision History

Description:	Revision #	Revision Date
New Release of QBED8160	V1.0	03/27/2014
Fix typo at ordering information	V1.1	06/30/2015
Update spec description and logo	V2.0	03/30/2018

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.