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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



**QT-Brighttek Lamp Series**

**5mm IR Lamp LED**

**Part No.: QBED8160**

Product: QBED8160	Date: June 30, 2015	Page 1 of 7
	Version# 1.1	

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## Introduction

**Feature:**

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

**Description:**

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

**Application:**

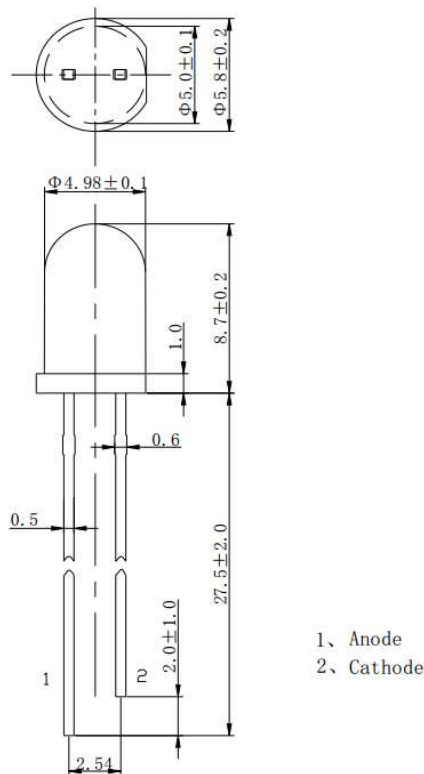
- Free air transmission system
- Optoelectronic switch
- Infrared applied system
- Smoke Detector

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.2mm

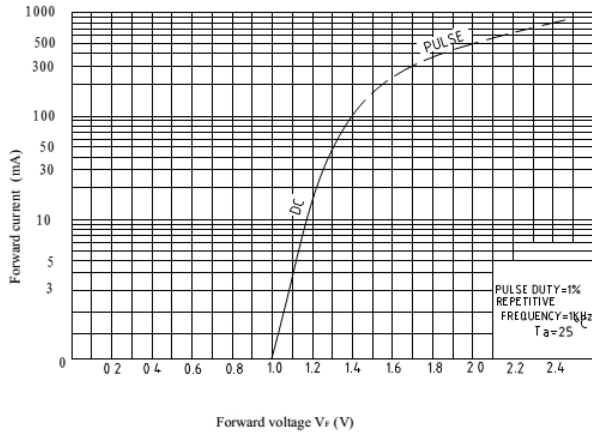
**Electrical / Optical Characteristic (Ta=25 °C)**

Parameter	Symbol	Test Condition	Output			Units
			Min.	Typ.	Max.	
Forward Voltage	$V_F$	$I_F=50\text{mA}$	-	1.35	1.50	V
Pulse Forward Voltage	$V_{FP}$	$I_{FP}=400\text{mA}, t_p=20\text{ms}$	-	-	2.40	
Reverse Current	$I_R$	$V_R=5\text{V}$	-	-	10	$\mu\text{A}$
Radiant Intensity	$I_E$	$I_F=50\text{mA}$	10	18	-	mW/sr
		$I_F=100\text{mA}, t=20\text{ms}$	20	35	-	
Peak Radiation Wavelength	$\lambda_P$	$I_F=50\text{mA}$	-	940	-	nm
Half Spectrum Width	$\Delta\lambda$	$I_F=50\text{mA}$	-	50	-	nm
Viewing Angle	$2\Theta_{1/2}$	$I_F=50\text{mA}$	-	60	-	deg
Switch Time	$t_r/t_f$	$I_{FP}=100\text{mA}, f=1\text{KHz}, t_p/T=1\%$	-	1/1	-	$\mu\text{s}$

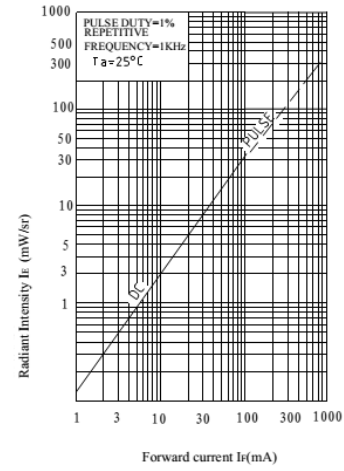
**Absolute Maximum Rating**

Parameter	Symbol	Rating	Units
Continuous Forward Current	$I_F$	100	mA
Peak Forward Current	$I_{FP}$	800	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation at (or below) 25 °C Free Air Temperature	$P_d$	120	mW
Operating Temperature	$T_{opr}$	-25 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C

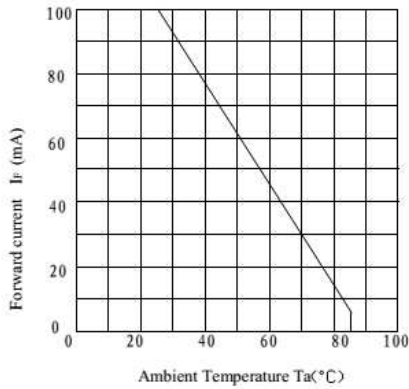
**Characteristic Curves**



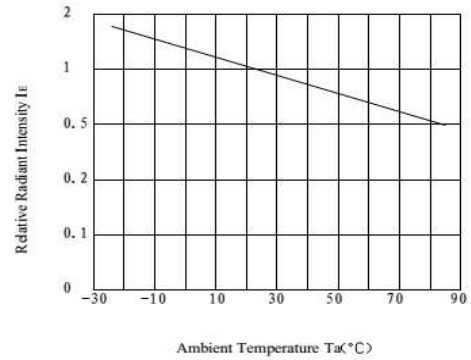
**Fig.1 Forward Current vs. Forward Voltage**



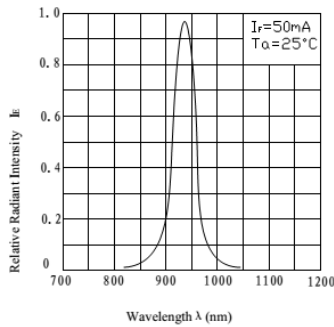
**Fig.2 Radiant Intensity vs. Forward Current**



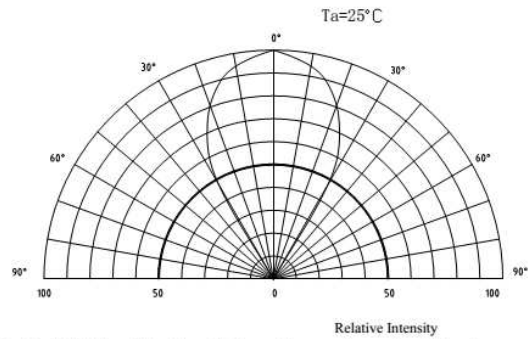
**Fig.3 Forward Current vs. Ambient Temperature**



**Fig.4 Relative Radiant Intensity vs. Ambient Temperature**



**Fig.5 Relative Radiant Intensity vs. Wavelength**



**Fig.6 Relative Radiant Intensity vs. Angular Displacement**

**Packing**

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 <sub>e</sub> =35mW mW/sr. @ I <sub>F</sub> =100mA, t=20ms / λ <sub>P</sub> =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

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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.