

QT-Brightek IR emitter Series

5mm lamp LED

Part No.: QBED8240

Product: QBED8240	Date: September 15, 2014	Page 1 of 7
	Version# 1.0	

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Introduction

Feature:

- Clear transparent lens
- High radiant intensity
- 5mm round type TH lamp
- 2.54mm Lead spacing
- Peak wavelength $\lambda_p = 890\text{nm}$
- 40 °viewing angle
- AlGaAs technology

Description:

High intensity diode, molded in a clear transparent plastic package. This device is spectrally matched with phototransistor, photodiode and infrared receiver module.

Application:

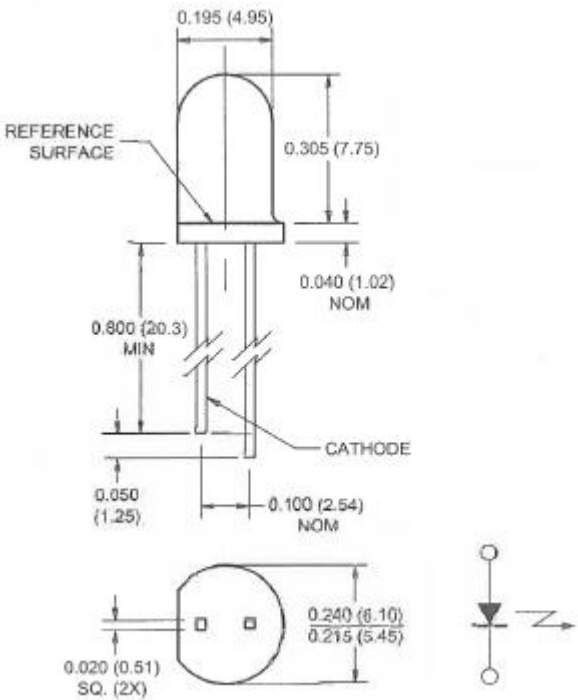
- Free air transmission system
- Optoelectronic switch
- Infrared applied system
- Smoke Detector

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.25mm

Electrical / Optical Characteristic (T=25 °C)

Parameter	Symbol	Output			Units	Test Conditions
		Min	Typ	Max		
Radiant Intensity	I _e	7.5	-	14.5	mW/sr	I _F =20mA
		25	-	-		I _F =100mA, t _p =20ms
Peak Wavelength	λ _p	-	880	-	nm	I _F =20mA
Reverse Current	I _R	-	-	10	μA	V _R =5V
Viewing Angle	VA	-	40	-	deg	I _F =20mA
Forward Voltage	V _F	1.0	-	1.7	V	I _F =100mA, t _p =20ms

Absolute Maximum Rating

Parameter	Symbol	Rating	Units
Continuous Forward Current	I _F	100	mA
Peak Forward Current	I _{FP}	1.5	A
Reverse Voltage	V _R	5	V
Operating Temperature	T _{opr}	-40 ~ +100	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature	T _{sol}	260	°C
Power Dissipation at (or below) 25 °C	P _d	200	mW

** IR Reflow for no more than 10 sec @ 260 °C

Characteristic Curves

AlGaAs

Figure 2. Peak Wavelength vs. Ambient Temperature

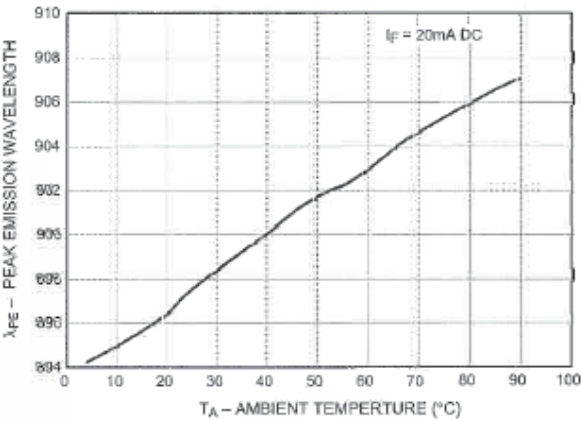
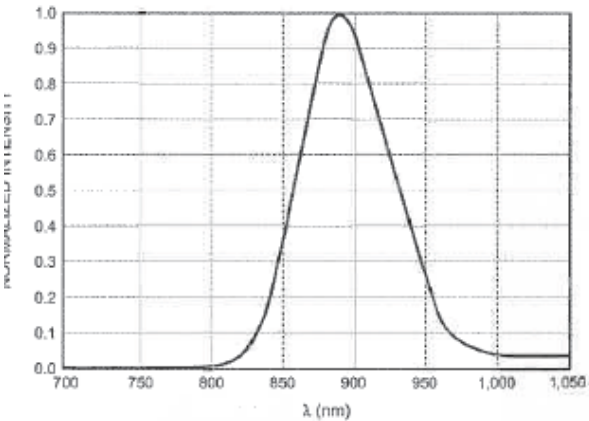
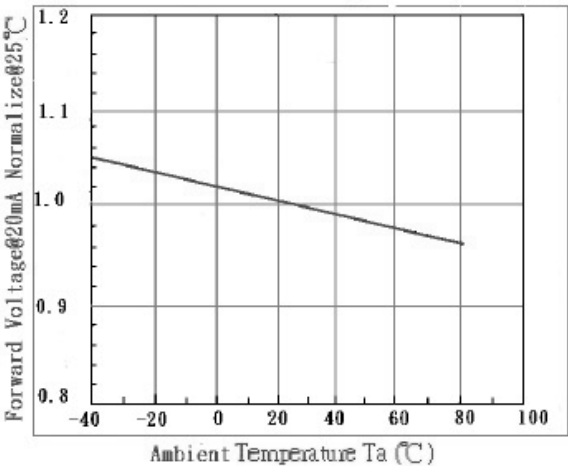


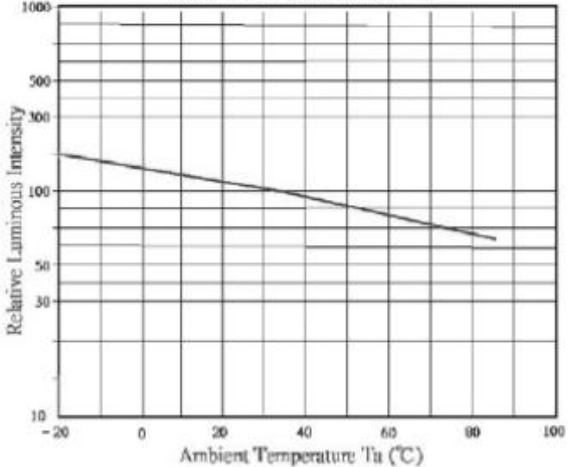
Figure 1. Normalized Intensity vs. Wavelength



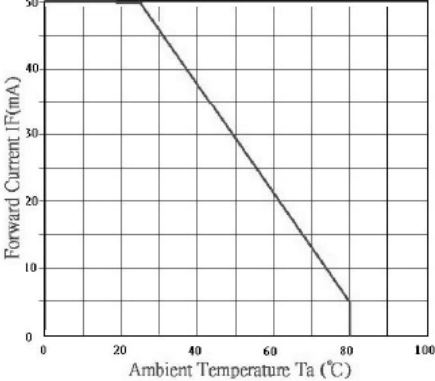
Forward Voltage- T_a



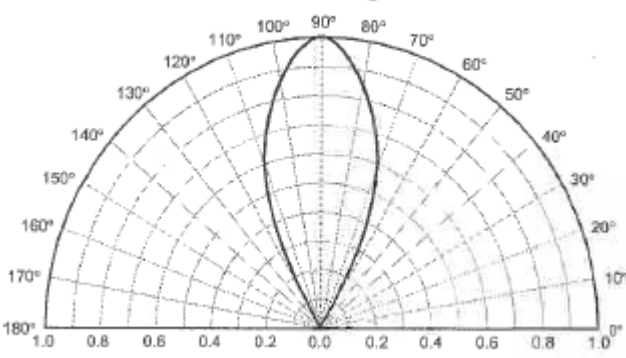
Relative Luminous Intensity- T_a



I_F - T_a



Radiation Diagram



Packing

Bulk pack 500pcs

Labeling



Part No: _____

Customer Lot No: _____

Item: _____

Q'ty: _____

Vf: _____

Iv: _____

Date: _____

ROHS PASS

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per bag
QBED8240	QBED8240	Radiant Intensity = 7.5 mW/sr @ 20mA, Peak Wavelength = 880nm	500 units

Revision History

Description:	Revision #	Revision Date
New Release of QBED8240	V1.0	09/15/2014

Disclaimer

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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.