

**Feature:**

- Water transparent
- Package in bulk and tape and reel
- High radiant intensity
- Peak wavelength 880nm
- AlGaAs technology
- 20deg emitting angle

**Description:**

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

**Application:**

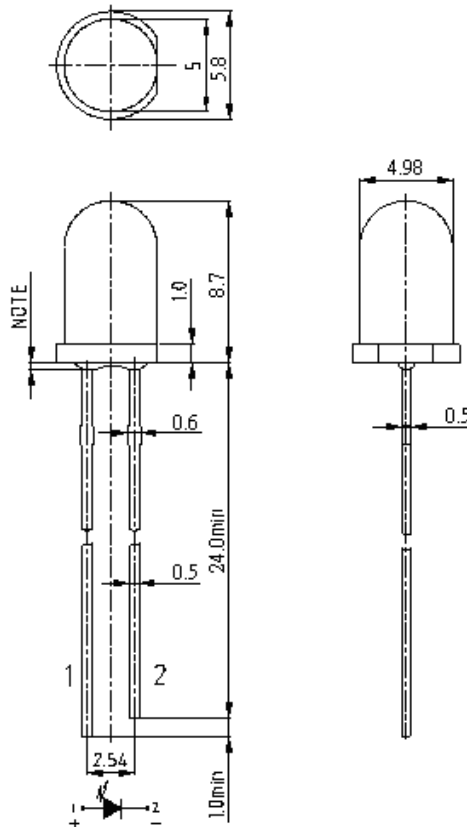
- Free air transmission system
- Optoelectronic switch
- Infrared applied system
- Smoke Detector

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.1mm

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

Product	I <sub>F</sub> (mA)	V <sub>F</sub> (V)		λ <sub>P</sub> (nm)			I <sub>e</sub> (mW/sr)	
		Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBED8220	50	1.6	2.2	850	880	900	7	12

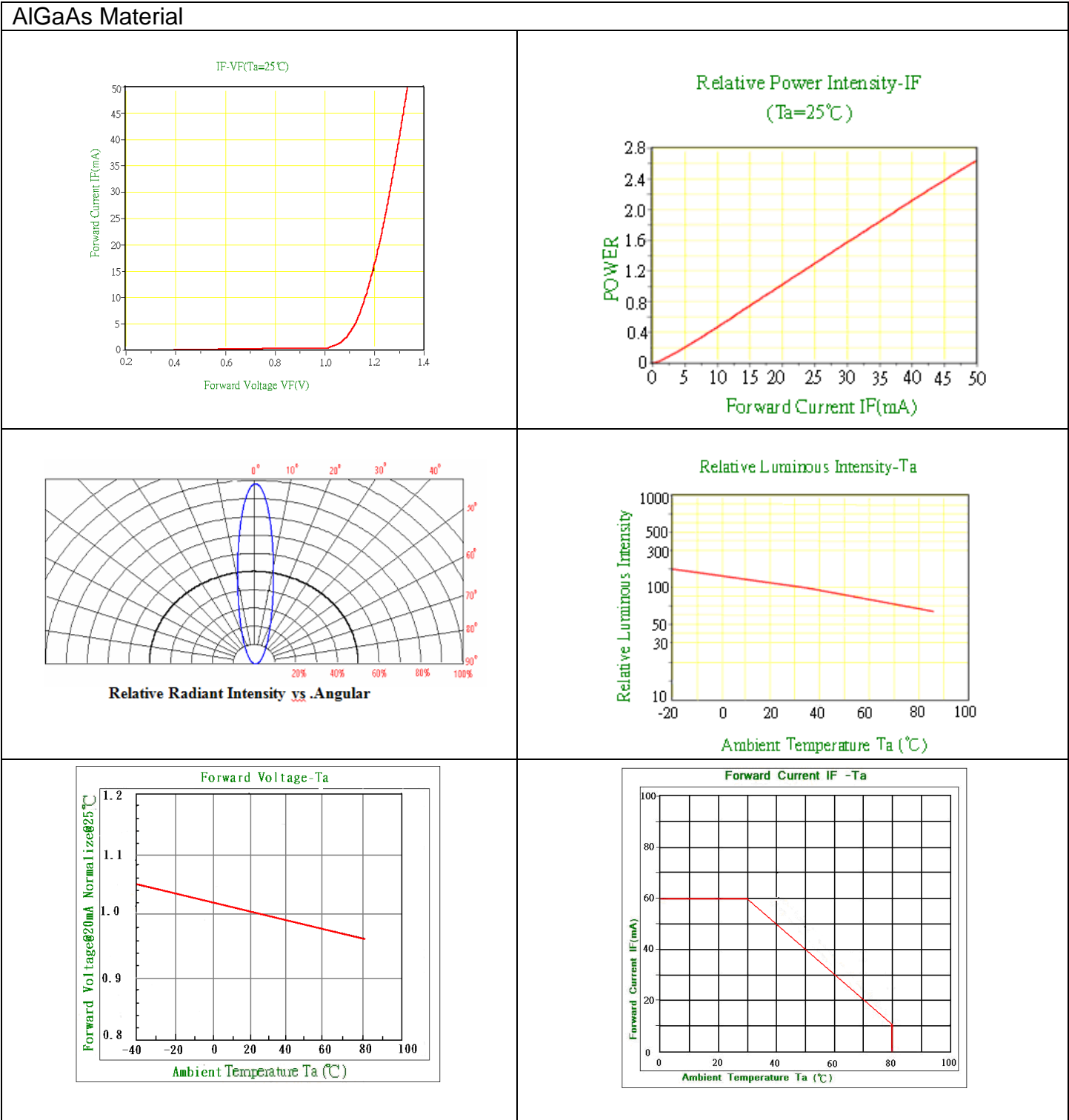
**Absolute Maximum Rating**

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)**
AlGaAs	150	70	100	5	-40 ~ +80	-40 ~ +100	260

\*Duty 1/10 @ 10KHz

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

**Characteristic Curves:**

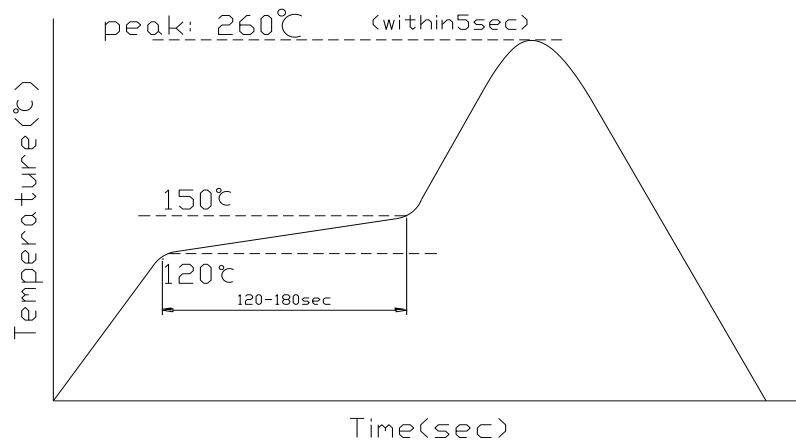


## Solder Profile & Footprint:

### A. Soldering

1. When soldering, the soldering iron needs to be at least 2mm away from the epoxy edge. After soldering, allow at least 3 minutes for LEDs to cool back to normal temperature. Do not apply any pressure to the epoxy encapsulation or the lead frame during the soldering process.
2. When reflow soldering or wave soldering, please solder once for less than 5 seconds at a maximum temperature of 260°C. During the soldering process, if the temperature or timing is not controlled within limits, it would cause the epoxy to deform or cause the die or wires within the LED to be damaged.

WAVE SOLDERING PROFILE FOR LEAD FREE PROCESS:



3. When using soldering iron, please solder once for less than 5 seconds at a maximum temperature of 300°C. When soldering a row of LED on a PCB, please do not solder both leads of a LED in sequence. (Solder all the positive lead first, then all the negative leads)

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4. Do not dip the epoxy encapsulation part of LED into any soldering paste liquid.

5. After soldering, do not adjust the location of the LED anymore.

When attaching electronic parts to a PCB with LEDs, the curing time for the whole PCB should be less than 60 seconds, at less than a temperature of 120

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**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 reel
QBED8220	QBED8220	I <sub>e</sub> = 12mW/sr @ 50mA, λ <sub>p</sub> = 880nm	TBD

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**Revision History:**

Description:	Revision #	Revision Date
New Release of QBED8220	V1.0	06/03/2011