



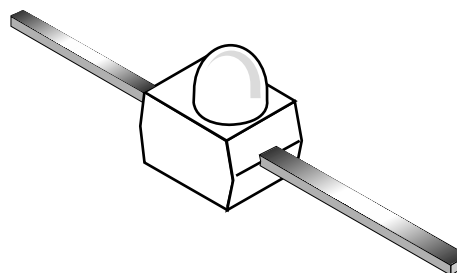
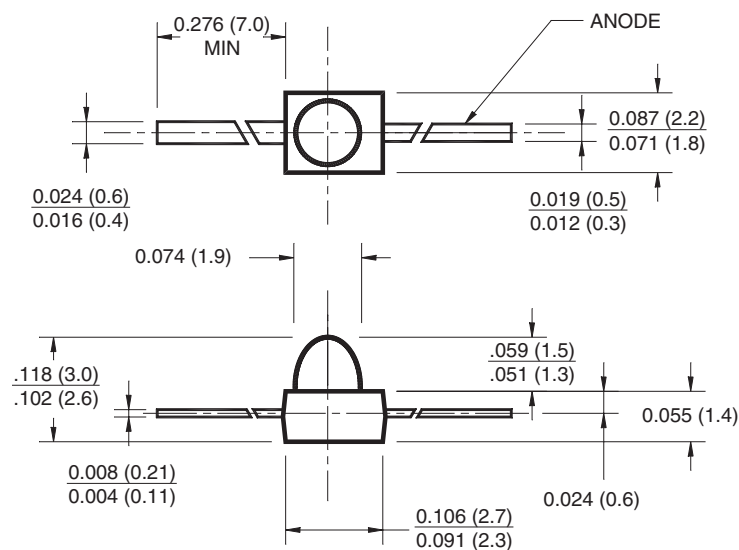
QEB363

Subminiature Plastic Infrared Emitting Diode

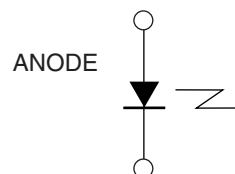
Features

- T-3/4 (2mm) Surface Mount Package
- Tape & Reel Option (See Tape & Reel Specifications)
- Lead Form Options: Gullwing, Yoke, Z-Bend
- Narrow Emission Angle, 24°
- Wavelength = 940nm, GaAs
- Clear Water Lens
- Matched Photosensor: QSB363
- High Radiant Intensity

Package Dimensions



Schematic



Notes:

1. Dimensions are in inches (mm).
2. Tolerance of ± 0.010 (.25) on all non nominal dimensions unless otherwise specified.

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Rating	Unit
T_{OPR}	Operating Temperature	-40 to +100	$^\circ\text{C}$
T_{STG}	Storage Temperature	-40 to +100	$^\circ\text{C}$
T_{SOL-I}	Soldering Temperature (Iron) ^(2,3,4)	240 for 5 sec	$^\circ\text{C}$
T_{SOL-F}	Soldering Temperature (Flow) ^(2,3)	260 for 10 sec	$^\circ\text{C}$
I_F	Continuous Forward Current	50	mA
V_R	Reverse Voltage	5	V
P_D	Power Dissipation ⁽¹⁾	100	mW

Notes:

1. Derate power dissipation linearly 1.33mW/ $^\circ\text{C}$ above 25°C .
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron 1/16" (1.6mm) minimum from housing.

Electrical/Optical Characteristics ($T_A = 25^\circ\text{C}$)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
λ_P	Peak Emission Wavelength	$I_F = 100\text{mA}$		940		nm
Θ	Emission Angle	$I_F = 100\text{mA}$		± 12		$^\circ$
V_F	Forward Voltage	$I_F = 100\text{mA}$, $t_p = 20\text{ms}$			1.6	V
I_R	Reverse Current	$V_R = 5\text{V}$			100	μA
I_e	Radiant Intensity	$I_F = 100\text{mA}$, $t_p = 20\text{ms}$	8			mW/sr
t_r	Rise Time	$I_F = 100\text{mA}$		1		μs
t_f	Fall Time	$t_p = 20\text{ms}$		1		μs

Typical Performance Curves

Fig. 1 Maximum Forward Current vs. Temperature

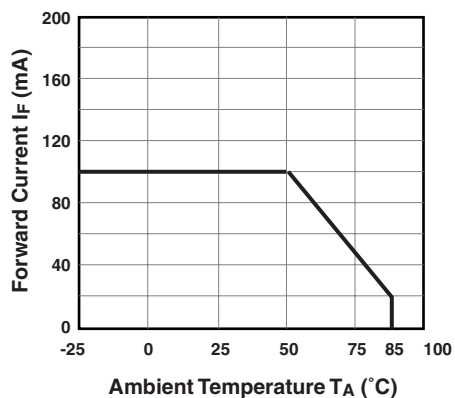


Fig. 2 Relative Radiant Intensity vs. Wavelength

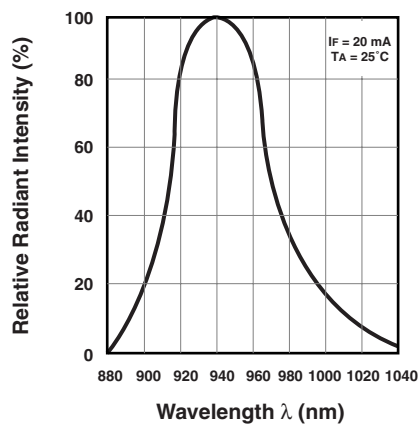


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

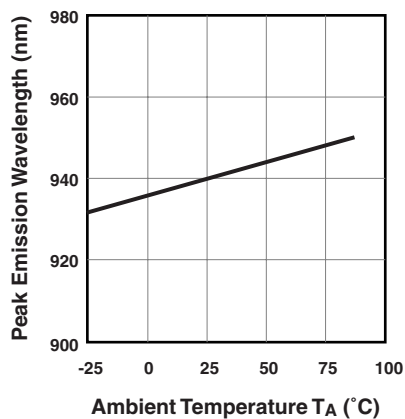


Fig. 4 Forward Current vs. Forward Voltage

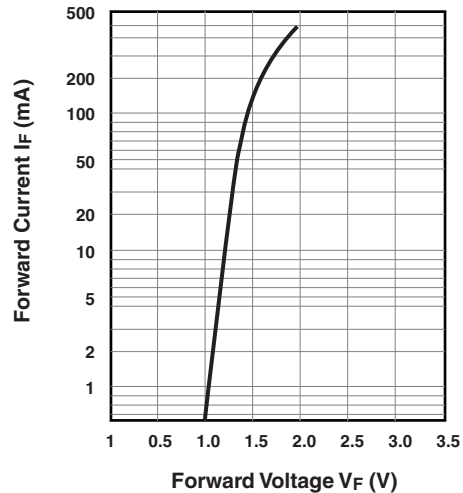


Fig. 5 Relative Radiant Flux vs. Ambient Temperature

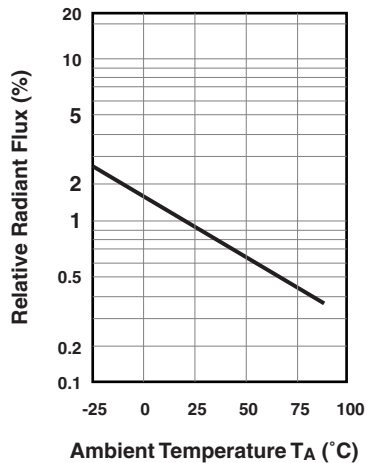
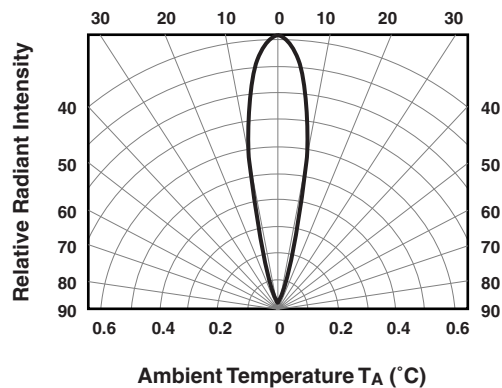


Fig. 6 Relative Radiant Intensity vs. Angular Displacement

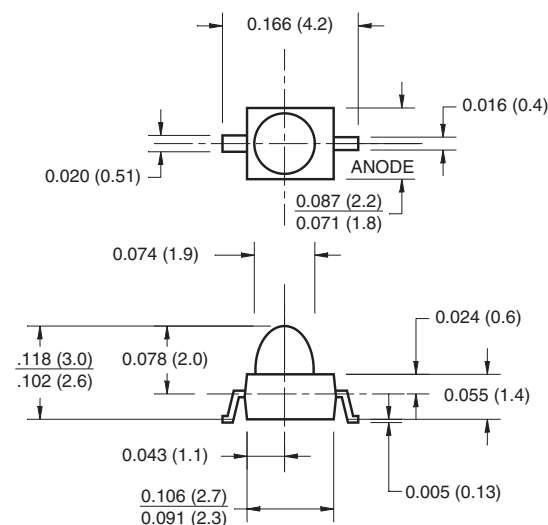


Surface Mount Options for T-3/4 Package

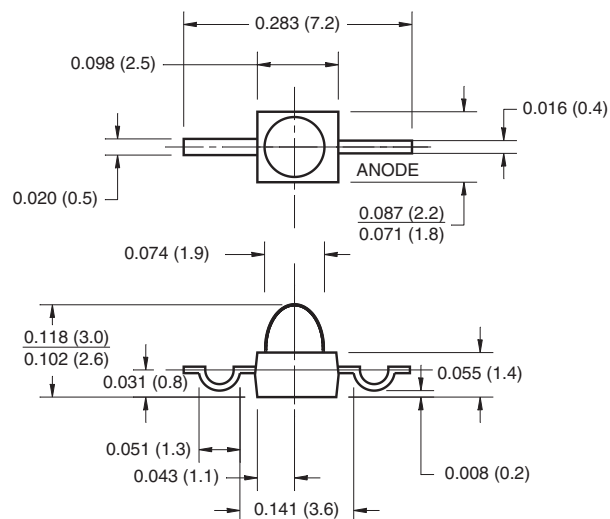
Features

- Three lead forming options: Gull Wing, Yoke and Z-Bend
- Compatible with automatic placement equipment
- Supplied on tape and reel or in bulk packaging
- Compatible with vapor phase reflow solder processes

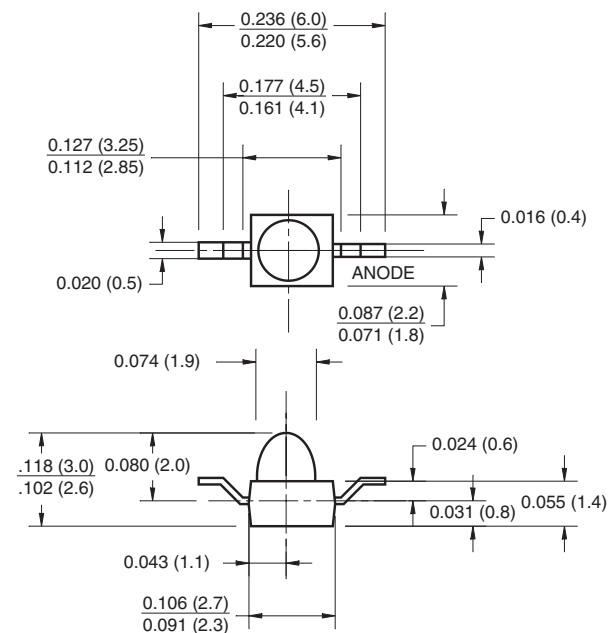
Gull Wing Lead Configuration



Yoke Lead Configuration



Z-Bend Lead Configuration



Notes: (Applies to all package drawings)

1. Dimensions are in inches (mm).
2. Tolerance of ± 0.010 (.25) on all non nominal dimensions unless otherwise specified.

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