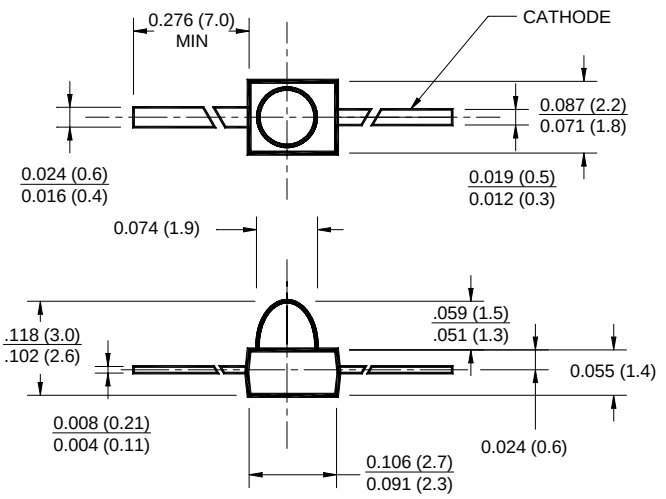
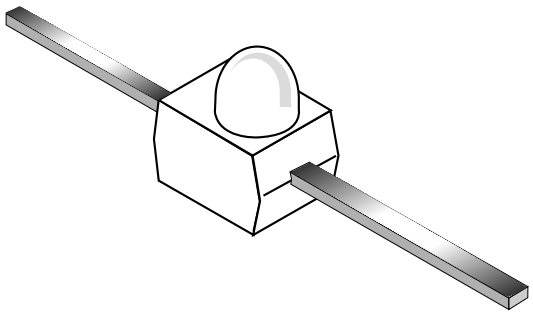
FAIRCHILD
SEMICONDUCTOR™

QEB373
SUBMINIATURE PLASTIC INFRARED EMITTING DIODE

PACKAGE DIMENSIONS



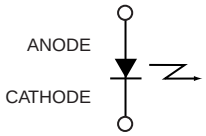
NOTES:
1. Dimensions are in inches (mm).
2. Tolerance of ± .010 (.25) on all non nominal dimensions unless otherwise specified.



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 = 880nm, AlGaAs
- Clear Lens
- Matched Photosensor: QSB363
- High Radiant Intensity

SCHEMATIC



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

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

NOTES

1. Derate power dissipation linearly 1.33 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron tip at 1/16" (1.6mm) from housing

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Peak Emission Wavelength	I_F = 100mA	λ_P	—	880	—	nm
Emission Angle	I_F = 100mA	Θ	—	±12	—	Deg.
Forward Voltage	I_F = 100mA, t_P = 20ms	V_F	—	—	1.7	V
Reverse Current	V_R = 5V	I_R	—	—	100	μA
Radiant Intensity	I_F = 100mA, t_P = 20ms	I_e	16	—	—	mW/sr
Rise Time	I_F = 100mA,	t_r	—	800	—	ns
Fall Time	t_P = 20ms	t_f	—	800	—	ns

TYPICAL PERFORMANCE CURVES

Fig. 1 Maximum Forward Current vs. Temperature

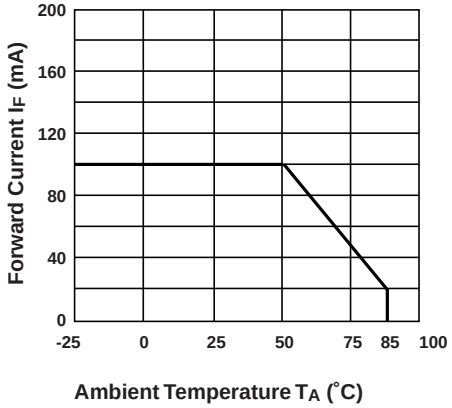


Fig. 2 Relative Radiant Intensity vs. Wavelength

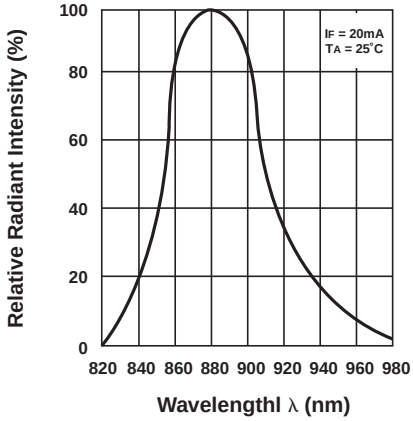


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

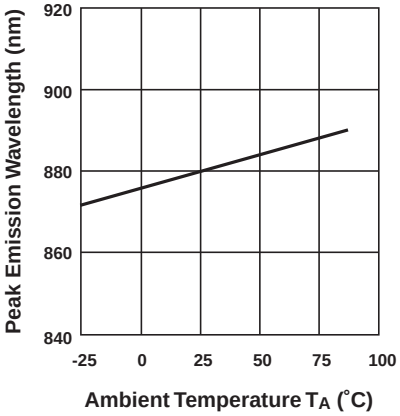


Fig. 4 Forward Current vs. Forward Voltage

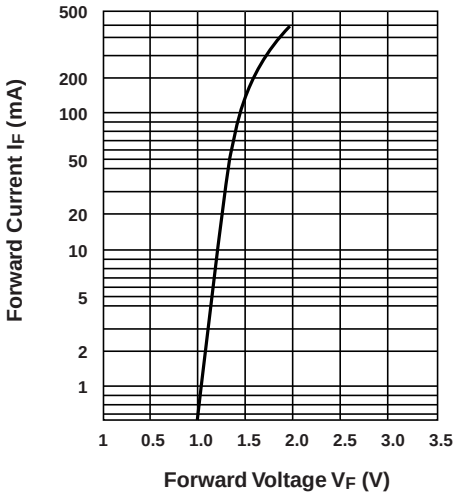


Fig. 5 Relative Radiant Flux vs. Ambient Temperature

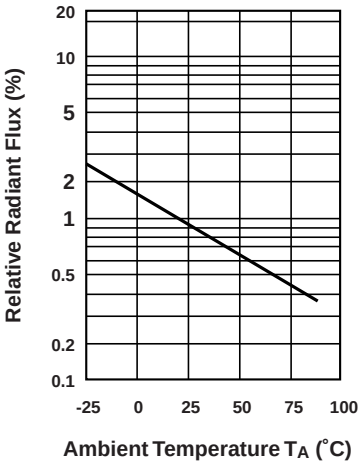
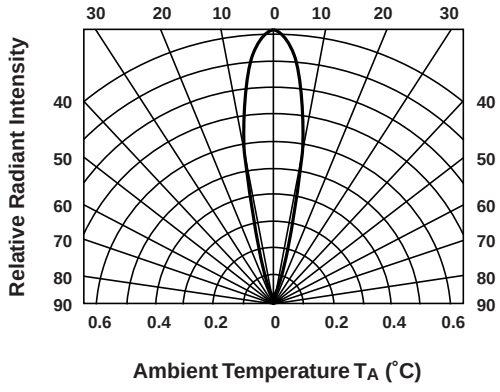
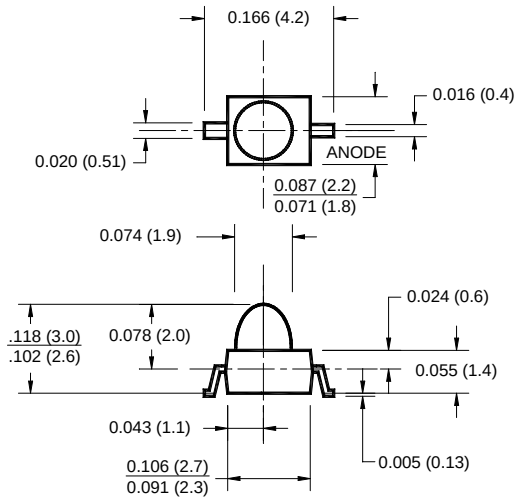


Fig. 6 Relative Radiant Intensity vs. Angular Displacement



SURFACE MOUNT OPTIONS
T-3/4 PACKAGES

GULL WING LEAD CONFIGURATION

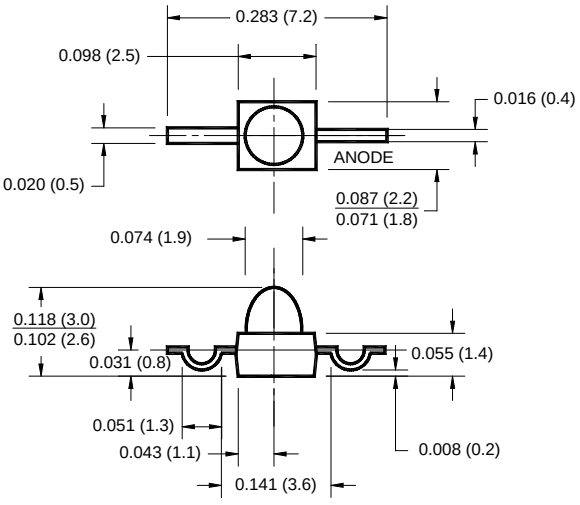


FEATURES

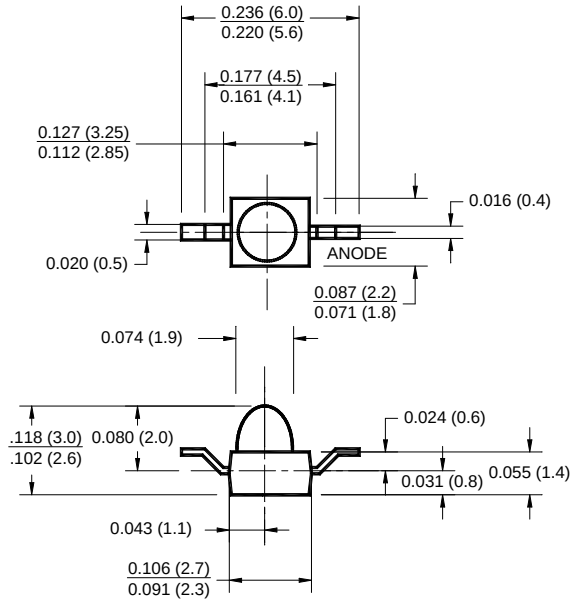
- Three lead forming options: Gull Wing, Yoke and Z-Bend
- Compatible with automatic placement equipment
- Supplied on tape and reel or in bulk packaging
- Compatible with vapor phase reflow solder processes

NOTES: (Applies to all package drawings)
1. Dimensions are in inches (mm).
2. Tolerance of ± .010 (.25) on all non nominal dimensions unless otherwise specified.

YOKE LEAD CONFIGURATION



Z-BEND LEAD CONFIGURATION



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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.