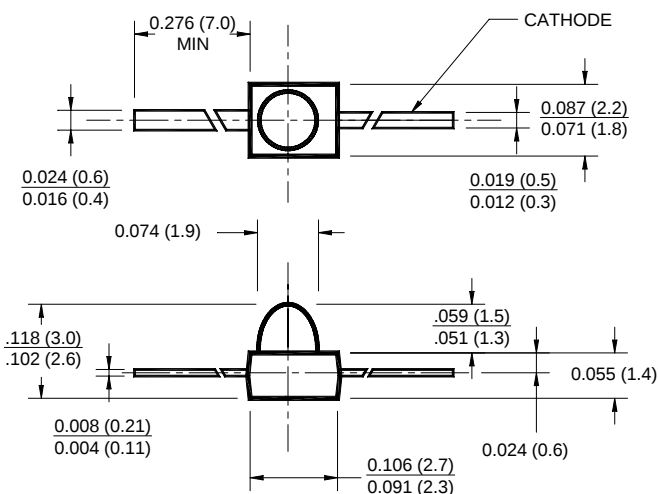
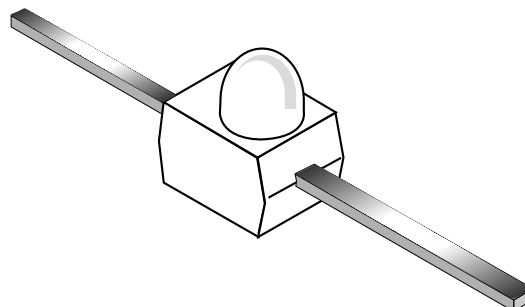


PACKAGE DIMENSIONS



NOTES:

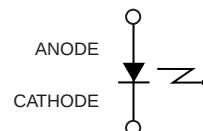
1. Dimensions are in inches (mm).
2. Tolerance of $\pm .010$ (.25) on all non nominal dimensions unless otherwise specified.



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

Parameter	Symbol	Rating	Units
Operating Temperature	T_{OPR}	-40 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Soldering Temperature (Iron) ^(2,3,4)	T_{SOL-I}	240 for 5 sec	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}	260 for 10 sec	$^\circ\text{C}$
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/ $^\circ\text{C}$ 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 ($T_A = 25^\circ\text{C}$)

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

TYPICAL PERFORMANCE CURVES

Fig. 1 Maximum Forward Current vs. Temperature

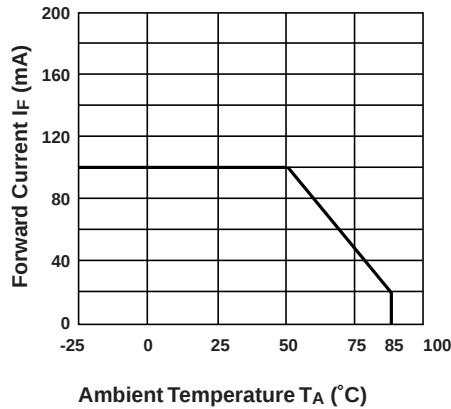


Fig. 2 Relative Radiant Intensity vs. Wavelength

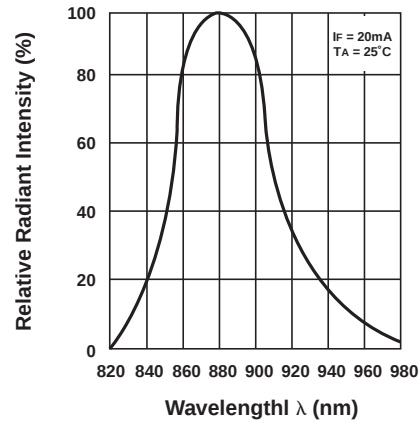


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

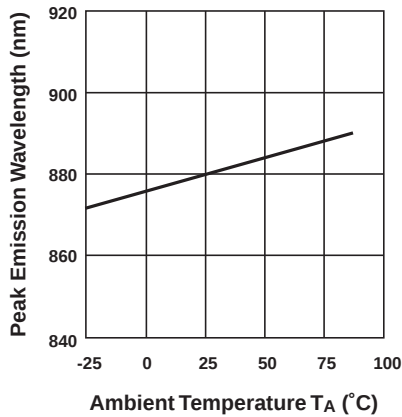


Fig. 4 Forward Current vs. Forward Voltage

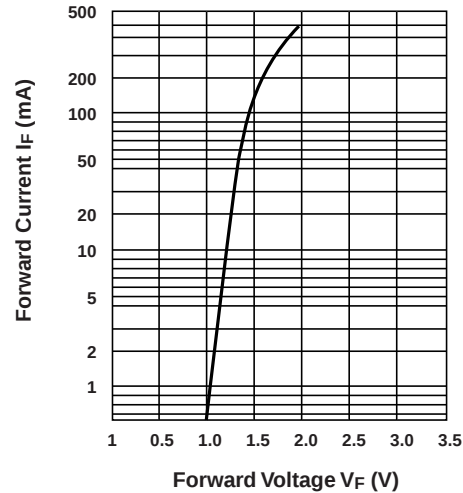


Fig. 5 Relative Radiant Flux vs. Ambient Temperature

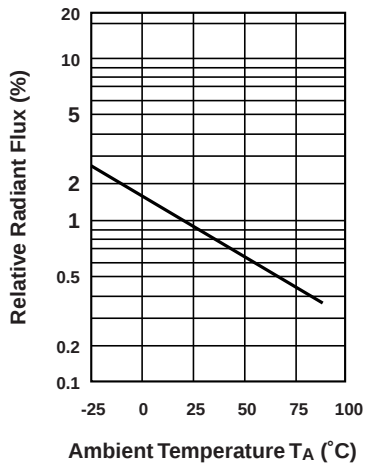
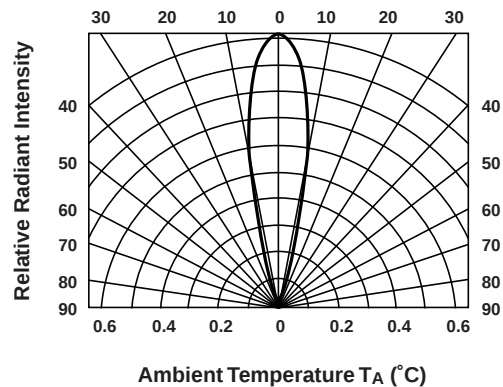
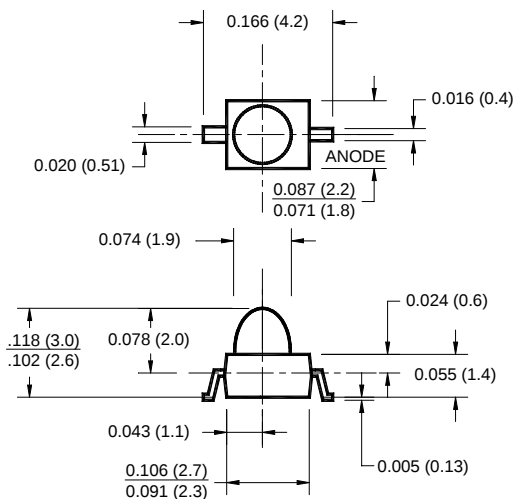


Fig. 6 Relative Radiant Intensity vs. Angular Displacement

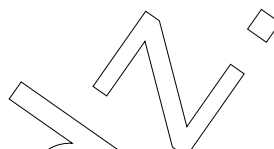


GULL WING LEAD CONFIGURATION



FEATURES

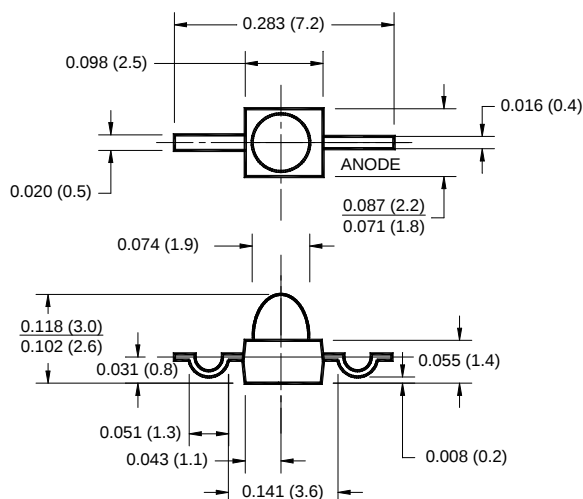
- Three lead forming options: Gull Wing, Yoke and Z-Bend
- Compatible with automatic placement equipment
- Supplied on tape and reel or in bulk packaging
- Compatible with vapor phase reflow solder processes



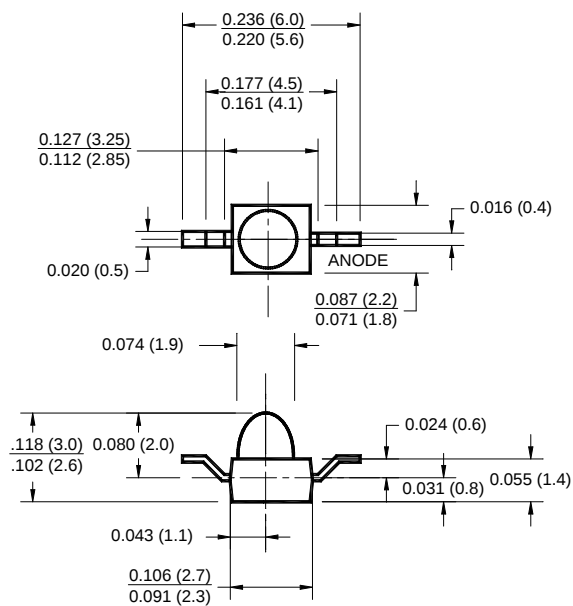
NOTES: (Applies to all package drawings)

1. Dimensions are in inches (mm).
2. Tolerance of $\pm .010$ (.25) on all non nominal dimensions unless otherwise specified.

YOKE LEAD CONFIGURATION



Z-BEND LEAD CONFIGURATION



DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
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.

www.fairchildsemi.com