



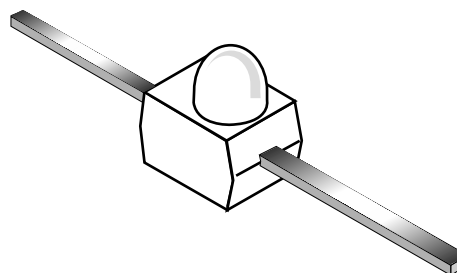
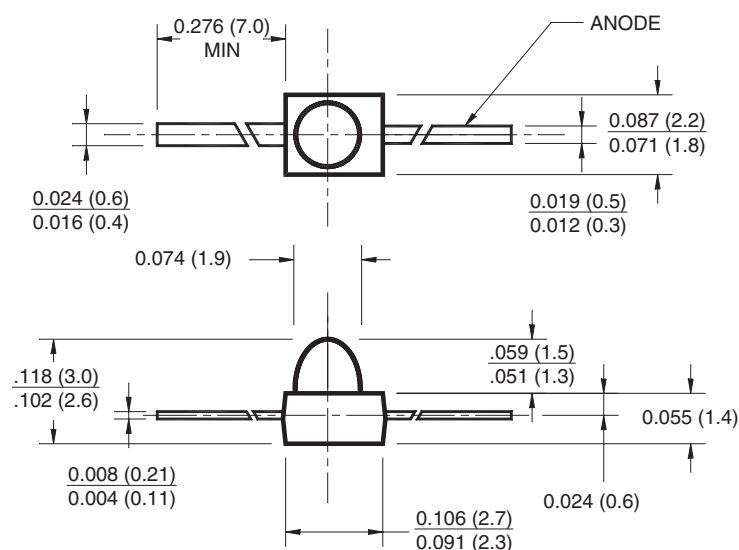
QEB363

Subminiature Plastic Infrared Emitting Diode

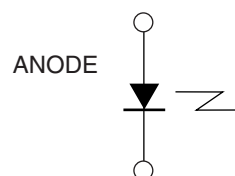
Features

- 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

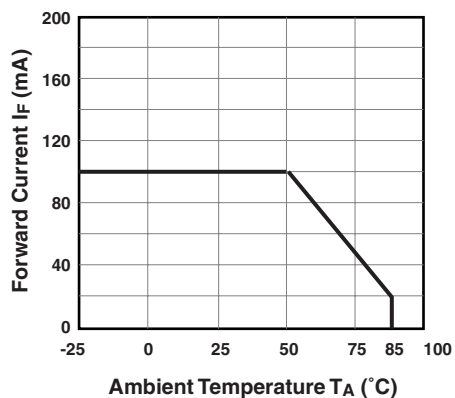


Fig. 2 Relative Radiant Intensity vs. Wavelength

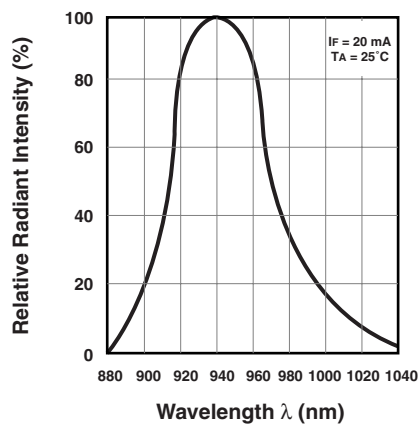


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

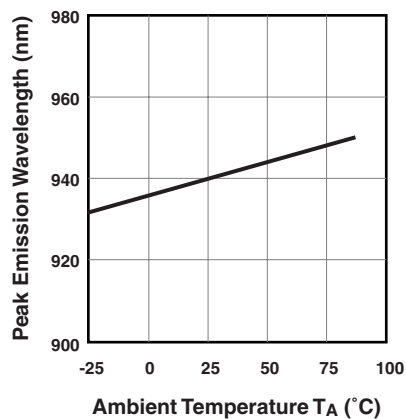


Fig. 4 Forward Current vs. Forward Voltage

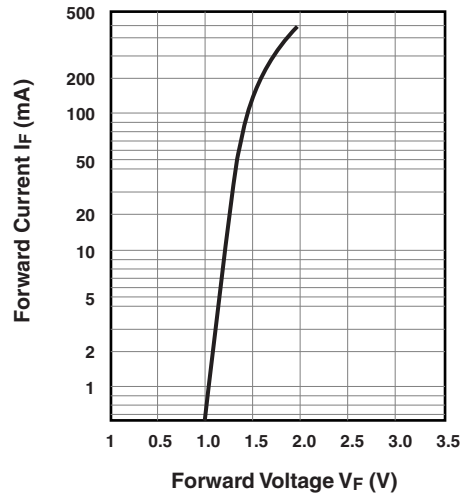


Fig. 5 Relative Radiant Flux vs. Ambient Temperature

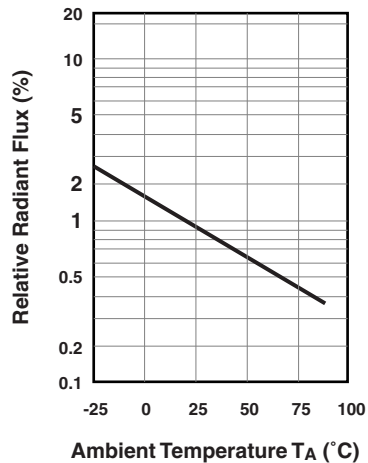
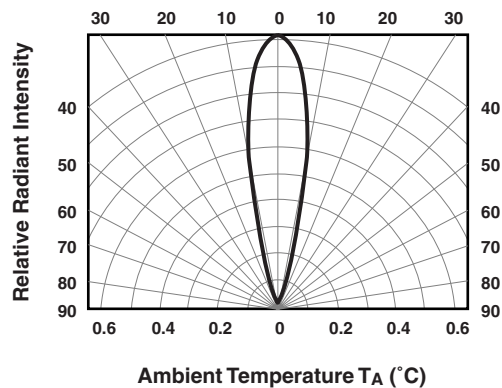


Fig. 6 Relative Radiant Intensity vs. Angular Displacement

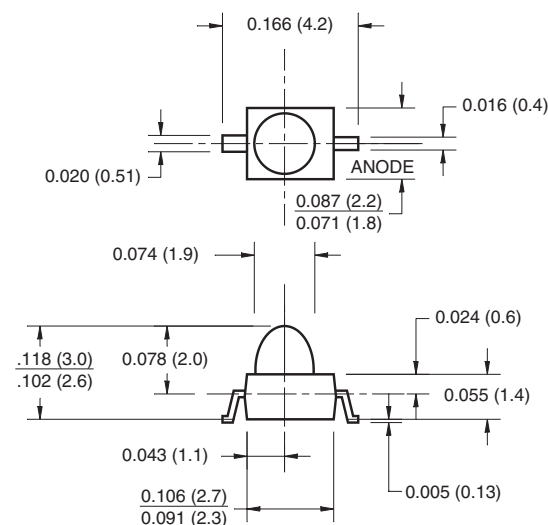


Surface Mount Options for T-3/4 Package

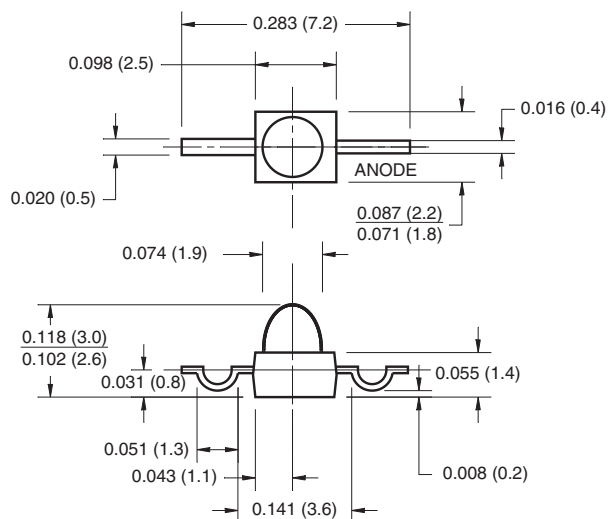
Features

- 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

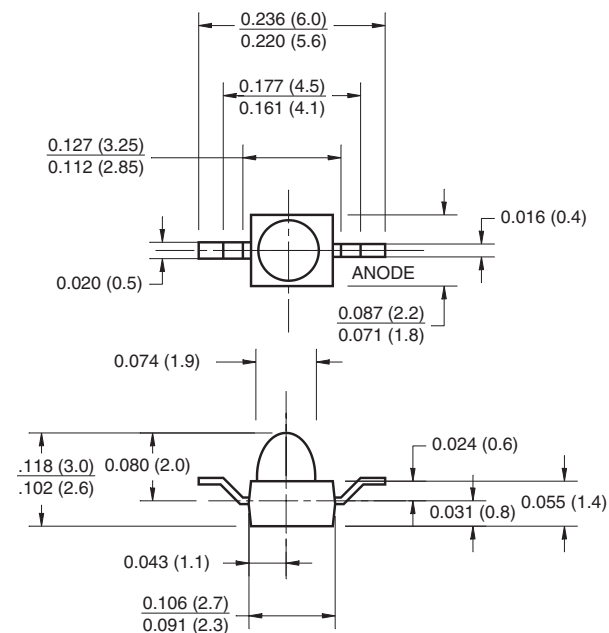
Gull Wing Lead Configuration



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.

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACE TM	FACT Quiet Series TM	OCX TM	SILENT SWITCHER [®]	UniFET TM
ActiveArray TM	GlobalOptoisolator TM	OCXPro TM	SMART START TM	UltraFET [®]
Bottomless TM	GTO TM	OPTOLOGIC [®]	SPM TM	VCX TM
Build it Now TM	HiSeC TM	OPTOPLANAR TM	Stealth TM	Wire TM
CoolFET TM	I ² C TM	PACMAN TM	SuperFET TM	
CROSSVOLT TM	i-Lo TM	POP TM	SuperSOT TM -3	
DOME TM	ImpliedDisconnect TM	Power247 TM	SuperSOT TM -6	
EcoSPARK TM	IntelliMAX TM	PowerEdge TM	SuperSOT TM -8	
E ² CMOS TM	ISOPLANAR TM	PowerSaver TM	SyncFET TM	
EnSigna TM	LittleFET TM	PowerTrench [®]	TCM TM	
FACT TM	MICROCOUPLER TM	QFET [®]	TinyBoost TM	
FAST [®]	MicroFET TM	QS TM	TinyBuck TM	
FAST TM	MicroPak TM	QT Optoelectronics TM	TinyPWM TM	
FPST TM	MICROWIRE TM	Quiet Series TM	TinyPower TM	
FRFET TM	MSX TM	RapidConfigure TM	TinyLogic [®]	
	MSXPro TM	RapidConnect TM	TINYOPTO TM	
Across the board. Around the world. TM		μSerDes TM	TruTranslation TM	
The Power Franchise [®]		ScalarPump TM	UHC TM	
Programmable Active Droop TM				

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. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THE WARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

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 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, or (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 significant injury to the user.
2. A critical component is 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.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

Rev. I20

AMEYA360

Components Supply Platform

Authorized Distribution Brand :



Website :

Welcome to visit www.ameya360.com

Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd
Minhang District, Shanghai , China

➤ Sales :

Direct +86 (21) 6401-6692

Email amall@ameya360.com

QQ 800077892

Skype ameyasales1 ameyasales2

➤ Customer Service :

Email service@ameya360.com

➤ Partnership :

Tel +86 (21) 64016692-8333

Email mkt@ameya360.com