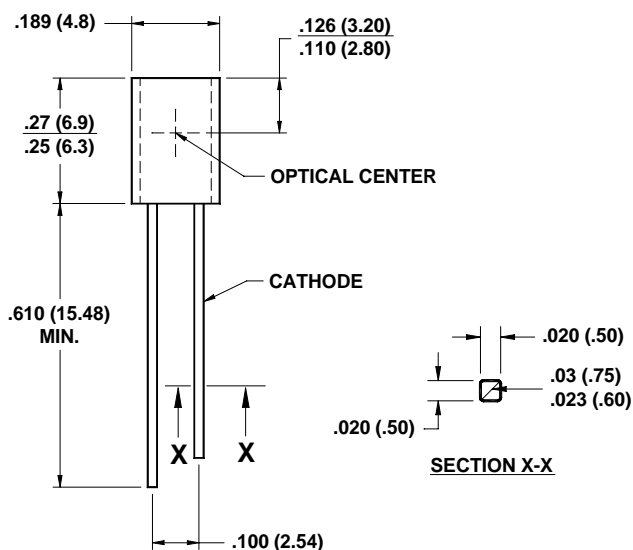
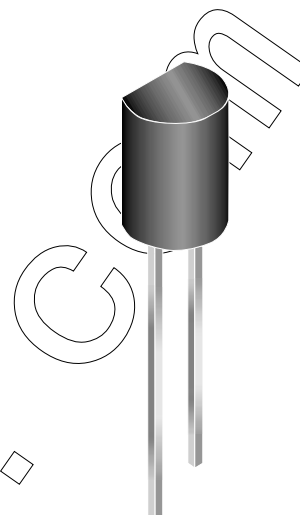


PACKAGE DIMENSIONS

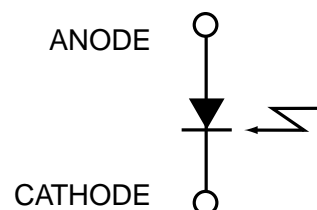


NOTES:

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



SCHEMATIC



DESCRIPTION

The QSE973 is a silicon PIN photodiode encapsulated in an infrared transparent, black, plastic T092 package.

FEATURES

- Daylight filter
- T092 package
- PIN photodiode
- Recepting angle 90°
- Chip size = .107² sq. inches (2.71² sq. mm)

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

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to +85	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +85	$^\circ\text{C}$
Soldering:	T_{SOL}	240 for 5 sec	$^\circ\text{C}$
Lead Temperature (Iron) (2,3,4,5)			
Lead Temperature (Flow) (2,3,5)		260 for 10 sec	
Reverse Voltage	V_R	32	V
Power Dissipation 25°C Ambient (2)	P_D	150	mW

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Reverse Breakdown Voltage	$I_R = 0.1 \text{ mA}$	V_R	32	—	—	V
Dark Reverse Current	$V_R = 10 \text{ V}$	$I_{R(D)}$	—	—	30	nA
Peak Sensitivity	$V_R = 5 \text{ V}$	λ_{PS}	—	930	—	nM
Reception Angle at 1/2 Power		θ	—	90	—	Deg.
Photocurrent (6)	$V_{CE} = 5 \text{ V}, E_\theta = 1.0 \text{ mW/cm}^2$	I_{ph}	30	—	—	μA
Capacitance	$V_R = 3 \text{ V}$	C	—	20	—	pF
Rise Time	$V_R = 5 \text{ V}, R_L = 1 \text{ K}\Omega$	t_r	—	50	—	nS
Fall Time	$V_R = 5 \text{ V}, R_L = 1 \text{ K}\Omega$	t_f	—	50	—	nS

NOTE:

1. Derate power dissipation linearly 2.5 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 1/16" (1.6 mm) from housing.
5. As long as leads are not under any stress or spring tension.
6. Light source is an GaAs LED which has a peak emission wavelength of 940 nm.

Fig. 1 Relative Spectral Sensitivity vs. Wavelength

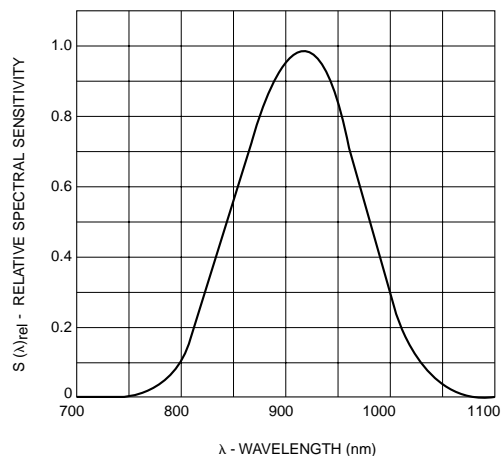


Fig. 2 Short Circuit Current vs. Irradiance

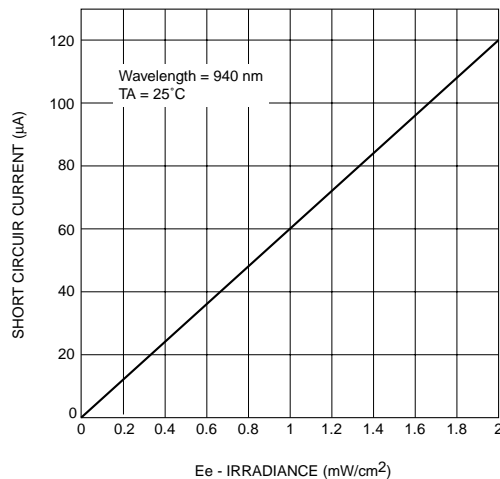


Fig. 3 Capacitance vs. Reverse Voltage

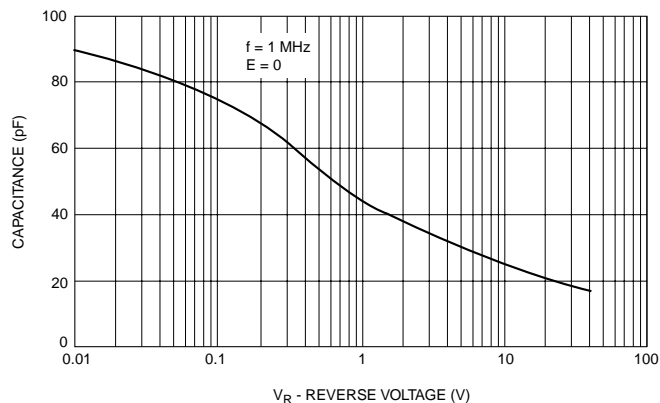


Fig. 4 Dark Current vs. Temperature

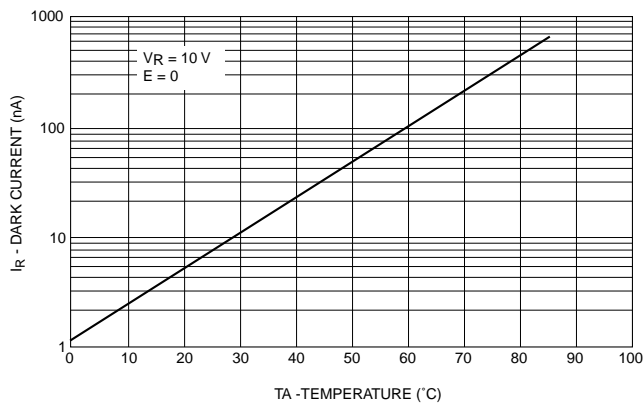
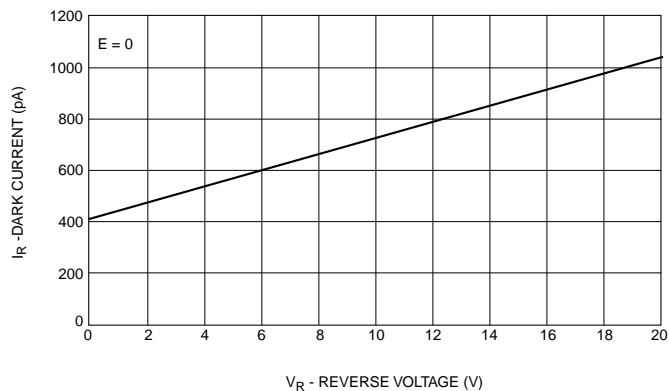


Fig. 5 Dark Current vs. Reverse Voltage



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