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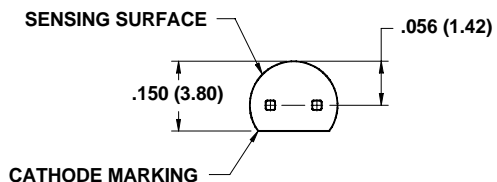
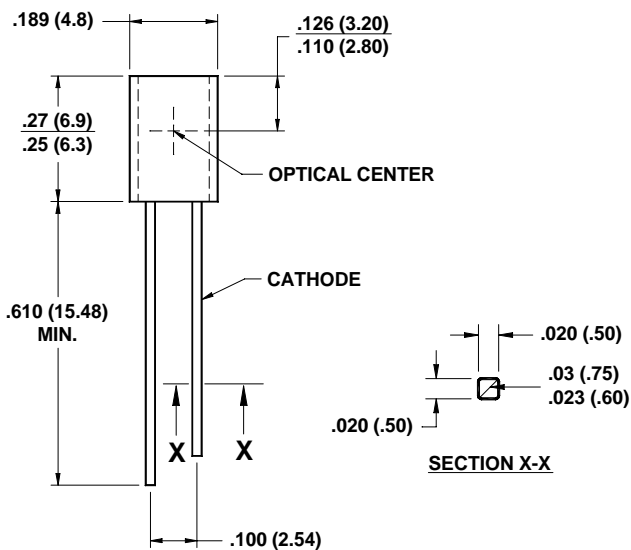
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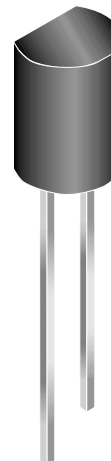
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PACKAGE DIMENSIONS

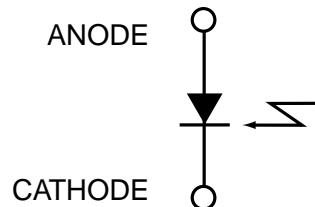


NOTES:

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
- Receiving angle 90°
- Chip size = $.107^2$ sq. inches (2.71^2 sq. mm)

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

Parameter	Symbol	Rating	Unit
Operating Temperature	T _{OPR}	-40 to +85	°C
Storage Temperature	T _{STG}	-40 to +85	°C
Soldering:			
Lead Temperature (Iron) (2,3,4,5)	T _{SOL}	240 for 5 sec	°C
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°C)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Reverse Breakdown Voltage	I _R = 0.1 mA	V _R	32	—	—	V
Dark Reverse Current	V _R = 10 V	I _{R(D)}	—	—	30	nA
Peak Sensitivity	V _R = 5 V	λ _{PS}	—	930	—	nM
Reception Angle at 1/2 Power		θ	—	90	—	Deg.
Photocurrent (6)	V _{CE} = 5 V, E _e = 1.0 mW/cm ²	I _{ph}	30	—	—	μA
Capacitance	V _R = 3 V	C	—	20	—	pF
Rise Time	V _R = 5 V, R _L = 1 KΩ	t _r	—	50	—	nS
Fall Time	V _R = 5 V, R _L = 1 KΩ	t _f	—	50	—	nS

NOTE:

1. Derate power dissipation linearly 2.5 mW/°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

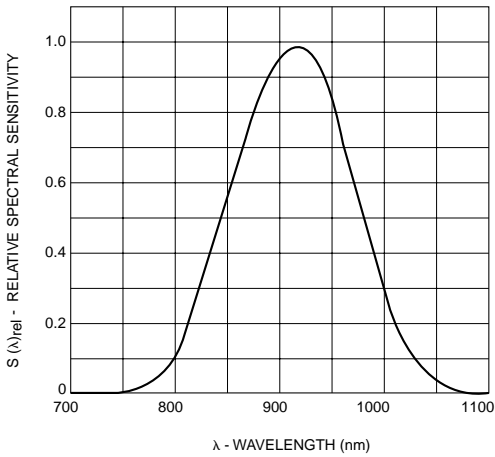


Fig. 2 Short Circuit Current vs. Irradiance

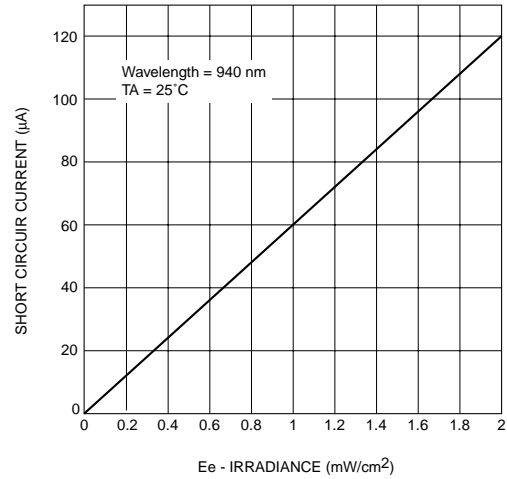


Fig. 3 Capacitance vs. Reverse Voltage

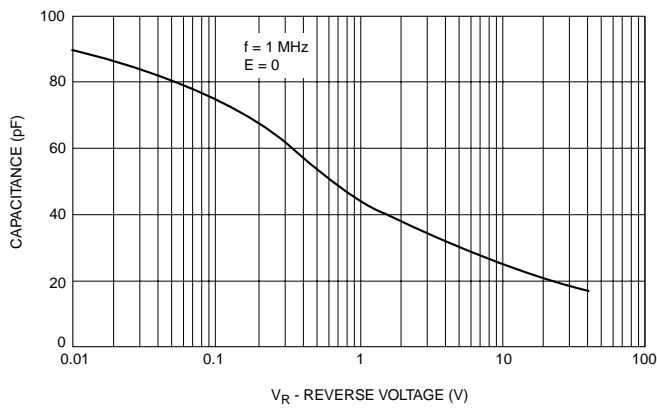


Fig. 4 Dark Current vs. Temperature

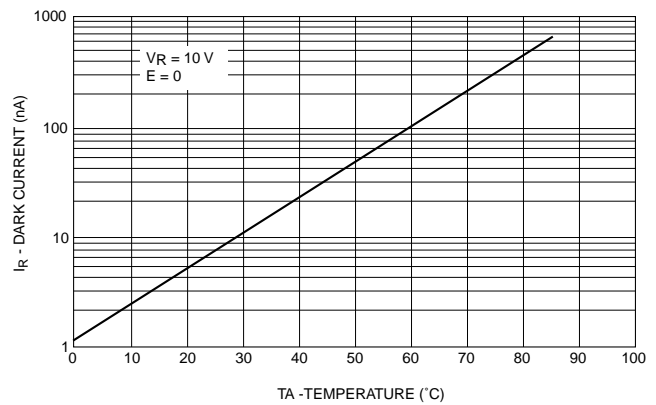
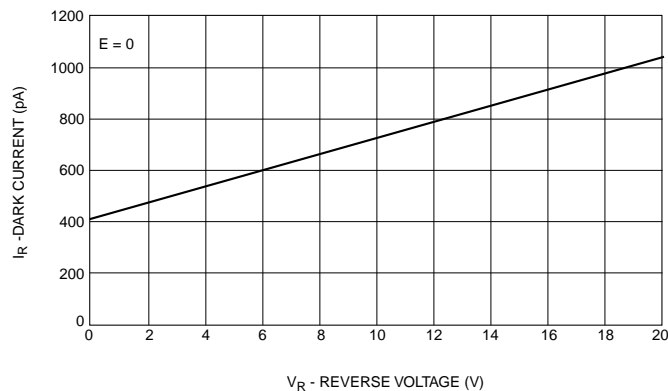


Fig. 5 Dark Current vs. Reverse Voltage



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