

PIN Silicon Photodiode Type OP950

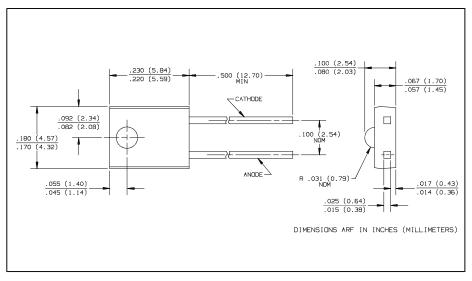




- Wide receiving angle
- Linear response vs. irradiance
- Fast switching time
- Side-looking package ideal for space limited applications

Description

The OP950 device consists of a PIN silicon photodiode molded in a clear epoxy package which allows spectral response from visible to infrared light wavelengths. The wide receiving angle provides relatively even reception over a large area. The side-looking package is designed for easy PC board mounting. This photodiode is mechanically and spectrally matched to Optek's GaAs and GaAlAs series of infrared emitting diodes.

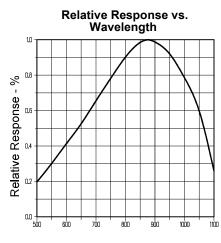


Absolute Maximum Ratings (T_A = 25^o C unless otherwise noted)

Reverse Breakdown Voltage..... Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 sec. with soldering Power Dissipation

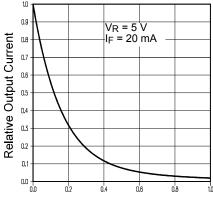
- **Notes:** (1) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering. Max. 20 grams force may be applied to leads when soldering. (2) Derate linearly 1.67 mW/° C above 25° C.
- (3) Light source is an unfiltered GaAs LED with a peak emission wavelength of 935nm and a radiometric intensity level which varies less than 10% over the entire lens surface of the photodiode being tested.
- (4) To calculate typical dark current in μA , use the formula I_D = $10^{(0.042~T_A^{-1.5})}$ where T_A is ambient temperature in $^{\circ}$ C.

Typical Performance Curves





Coupling Characteristics OP950 and OP240



Distance Between Lens Tips - inches

Optek Technology, Inc.

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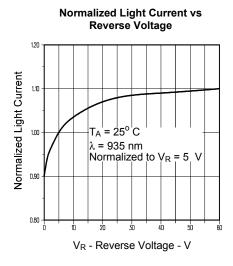
Fax (972) 323-2396

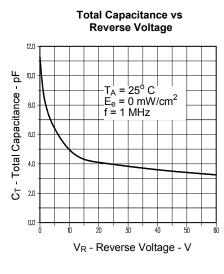
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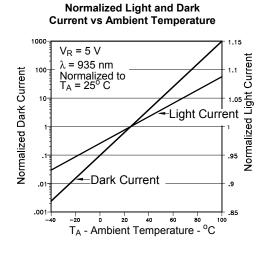
Electrical Characteristics (T_A = 25° C unless otherwise noted)

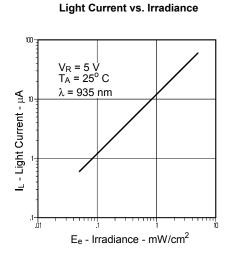
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	1
IL	Reverse Light Current	8		18	μΑ	$V_R = 5 \text{ V}, E_e = 1 \text{ mW/cm}^{2(3)}$
I _D	Reverse Dark Current		1	60	nA	V _R = 30 V, E _e = 0
V _(BR)	Reverse Breakdown Voltage	60			V	I _R = 100 μA
V _F	Forward Voltage			1.2	V	I _F = 1 mA
C _T	Total Capacitance		4		pF	V _R = 20 V, E _e = 0, f = 1.0 MHz
t _r , t _f	Rise Time, Fall Time		5		ns	V_R = 20 V, λ = 850 nm, R_L = 50 Ω

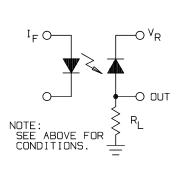
Typical Performance Curves











Switching Time Test Circuit

