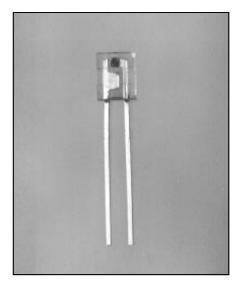
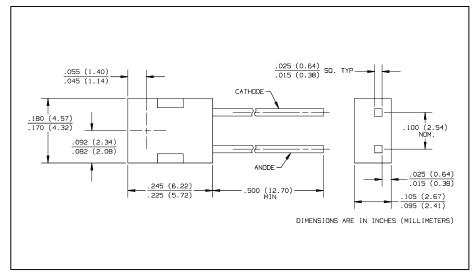


PIN Silicon Photodiode Type OP954





Features

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

Description

The OP954 device consists of a PIN silicon photodiode molded in a clear epoxy package which allows spectral response from visible to infrared light wavelengths. The very wide receiving angle provides relatively even reception over a large area. The side-looking package is designed for easy PC board mounting. These devices are 100% production tested using infrared light for close correlation with Optek's GaAs and GaAlAs emitters.

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

- **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.

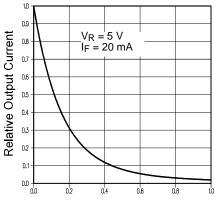
Typical Performance Curves

Wavelenght 1.0 % Relative Response 700

Relative Respnse vs.

λ - Wavelength - nm

Coupling Characteristics OP954 and OP245



Distance Between Lens Tips - inches

Optek Technology, Inc.

1215 W. Crosby Road

Carrollton, Texas 75006

(972) 323-2200

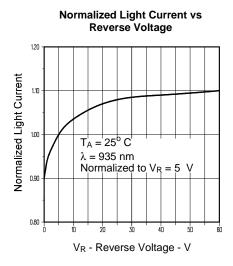
Fax (972) 323-2396

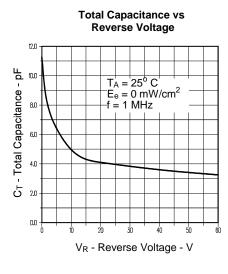
Type OP954

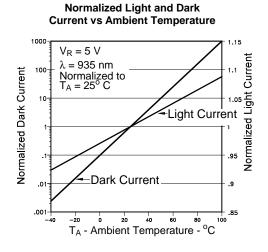
Electrical Characteristics (T_A = 25° C unless otherwise noted)

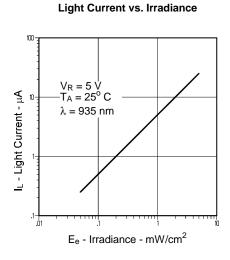
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
ΙL	Reverse Light Current	3.5		8	μΑ	$V_R = 5 \text{ V}, E_e = 1 \text{ mW/cm}^{2(3)}$
I_{D}	Reverse Dark Current		1	60	nA	$V_R = 30 \text{ V}, E_e = 0$
$V_{(BR)}$	Reverse Breakdown Voltage	60			V	$I_R = 100 \mu A$
V_{F}	Forward Voltage			1.2	V	I _F = 1 mA
Ст	Total Capacitance		4		pF	$V_R = 20 \text{ V}, E_e = 0, f = 1.0 \text{ MHz}$
t _r , t _f	Rise Time, Fall Time		5		ns	V_R = 20 V, λ = 850 nm, R_L = 50 Ω

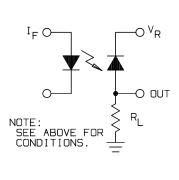
Typical Performance Curves











Switching Time Test Circuit

