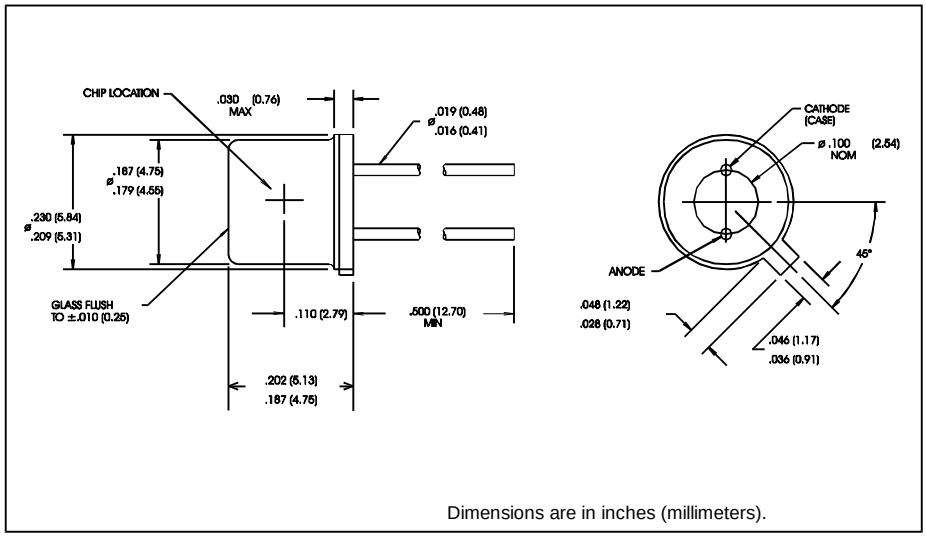
PIN Silicon Photodiode
Type OP910W



Dimensions are in inches (millimeters).

Features

- Wide receiving angle
- Fast switching time
- Linear response vs. irradiance
- Enhanced temperature range

Description

The OP910W consists of a PIN silicon photodiode mounted in a two-leaded hermetic TO-46 package. The flat lens has an acceptance half angle of ±40°.

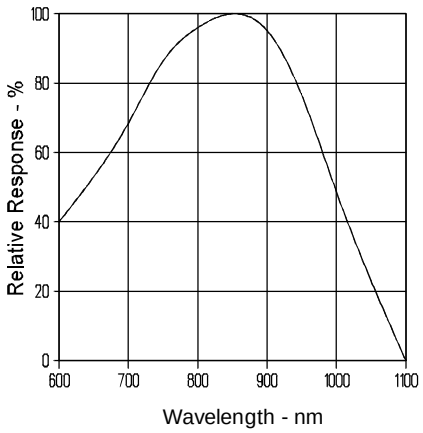
Absolute Maximum Ratings (T_A = 25°C unless otherwise noted)

Reverse Voltage	60 V
Storage Temperature Range	-65° C to +150° C
Operating Temperature Range	-65° C to +125° C
Lead Soldering Temperature [1/16 inch (1.6mm) from case for 5 sec. with soldering iron]	200°C(1)
Power Dissipation	250 mW

Notes:
(1) RMA Flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
(2) Light source is an unfiltered GaAs LED with a peak wavelength of 935 nm and a radiometric intensity level which varies less than 10% over the entire lens surface of the photodiode being tested.
(3) Junction temperature maintained at 25° C.
(4) To calculate typical dark current in nA, use the formula $I_D=10^{(0.42\ T_A\ -1.5)}$ where T_A is ambient temperature in ° C.
(5) Derate linearly 2.5 mW/° C above 25° C.

Typical Performance Curves

Typical Spectral Response



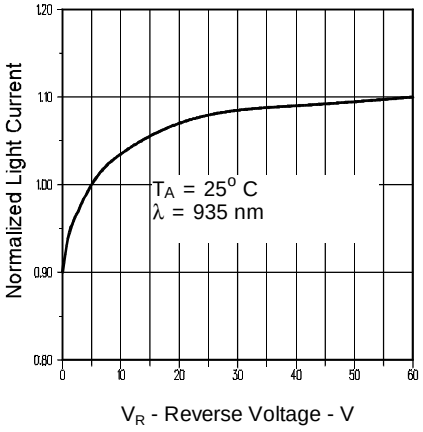
Type OP910W

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

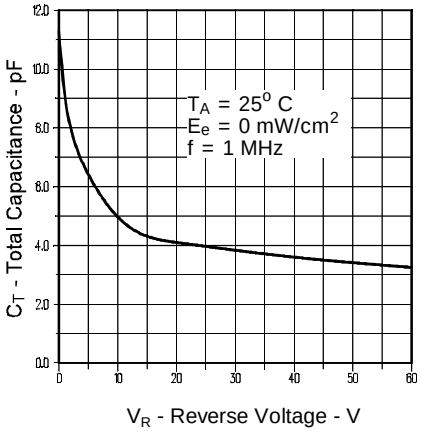
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITION
I_L	Light Current	1.7	2.4		mA	V_R = 20 V, E_e = .50 mW/cm^2 note 2, 3
I_D	Dark Current		1	10	nA	V_R = 20 V, E_e = 0.0
$V_{(BR)R}$	Reverse Voltage Breakdown	100			V	I_R = 100 mA
t_r	Rise Time		10		nS	V_R = 20 V, R_L = 50 OHMS
t_f	Fall Time		10		nS	V_R = 20 V, R_L = 50 OHMS
∅	Half Angle		+/-40		degr.	I_F = Constant
C_P	Capacitance		13		pF	V_R = 0 V, F = 1 Mhz, E_e = 0
V_F	Forward Voltage			1.2	V	I_F = 100 mA

Typical Performance Curves

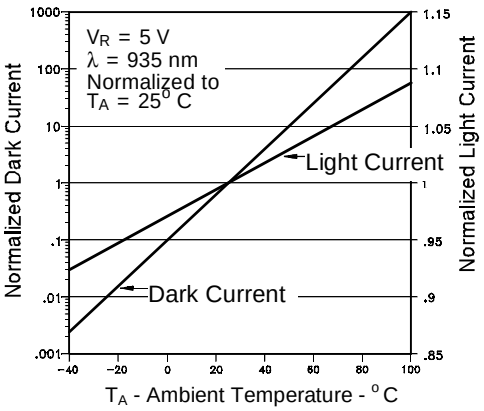
Normalized Light Current vs. Reverse Voltage

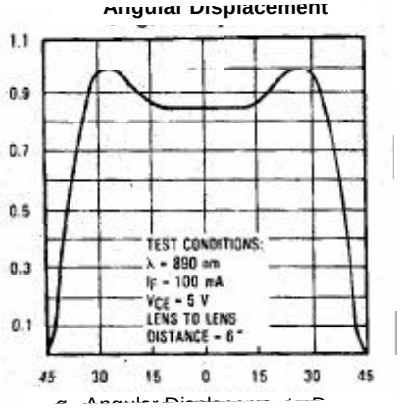


Total Capacitance vs. Reverse Voltage



Normalized Light and Dark Current vs. Ambient Temperature





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