

Silicon PIN Photodiode, RoHS Compliant Vishay Semiconductors

BASIC CHARACTERISTICS						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	I _R = 100 μA, E = 0	V _(BR)	60			V
Reverse dark current	V _R = 10 V, E = 0	I _{ro}		2	30	nA
Diode capacitance	V _R = 0 V, f = 1 MHz, E = 0	C _D		70		pF
	V _R = 3 V, f = 1 MHz, E = 0	C _D		25	40	pF
Open circuit voltage	$E_e = 1 \text{ mW/cm}^2, \lambda = 950 \text{ nm}$	Vo		350		mV
Temperature coefficient of Vo	$E_e = 1 \text{ mW/cm}^2, \lambda = 950 \text{ nm}$	TK _{Vo}		- 2.6		mV/K
Short circuit current	E _A = 1 klx	I _k		70		μΑ
	$E_e = 1 \text{ mW/cm}^2, \lambda = 950 \text{ nm}$	I _k		47		μΑ
Temperature coefficient of I _k	$E_e = 1 \text{ mW/cm}^2, \lambda = 950 \text{ nm}$	TK _{Ik}		0.1		%/K
Reverse light current	E _A = 1 klx, V _R = 5 V	I _{ra}		75		μΑ
	$E_e = 1 \text{ mW/cm}^2, \lambda = 950 \text{ nm}, \ V_R = 5 \text{ V}$	I _{ra}	40	50		μΑ
Angle of half sensitivity		φ		± 65		deg
Wavelength of peak sensitivity		λ_{p}		900		nm
Range of spectral bandwidth		λ _{0.1}		430 to 1100		nm
Noise equivalent power	$V_R = 10 \text{ V}, \lambda = 950 \text{ nm}$	NEP		4 x 10 ⁻¹⁴		W/√Hz
Rise time	$V_R = 10 \text{ V}, R_L = 1 \text{ k}\Omega, \lambda = 820 \text{ nm}$	t _r		100		ns
Fall time	$V_R = 10 \text{ V}, R_L = 1 \text{ k}\Omega, \lambda = 820 \text{ nm}$	t _f		100		ns

Note

T_{amb} = 25 °C, unless otherwise specified

BASIC CHARACTERISTICS

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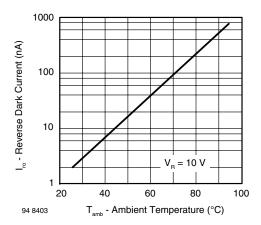


Fig. 1 - Reverse Dark Current vs. Ambient Temperature

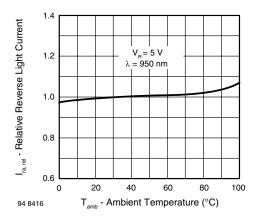


Fig. 2 - Relative Reverse Light Current vs. Ambient Temperature

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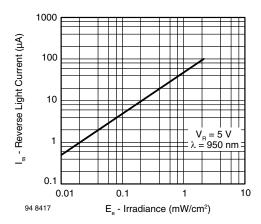


Fig. 3 - Reverse Light Current vs. Irradiance

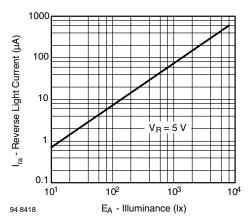


Fig. 4 - Reverse Light Current vs. Illuminance

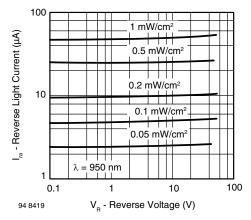


Fig. 5 - Reverse Light Current vs. Reverse Voltage

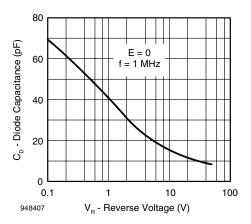


Fig. 6 - Diode Capacitance vs. Reverse Voltage

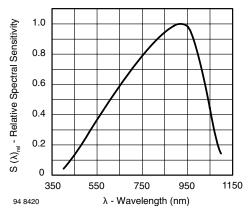


Fig. 7 - Relative Spectral Sensitivity vs. Wavelength

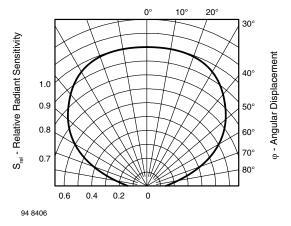


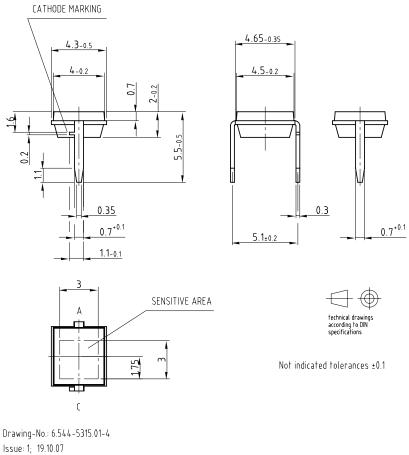
Fig. 8 - Relative Radiant Sensitivity vs. Angular Displacement



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PACKAGE DIMENSIONS in millimeters



96 12186

TUBE PACKAGING DIMENSIONS in millimeters

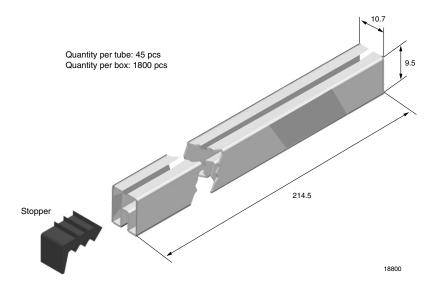


Fig. 9 - Drawing Proportions not scaled



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