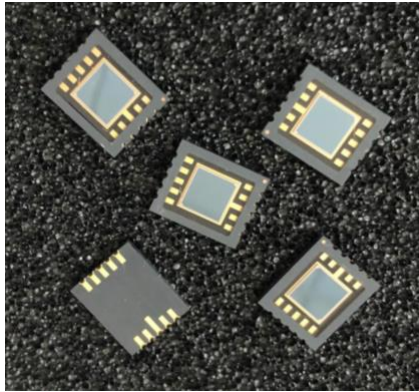


Silicon PIN Photodiode



Description

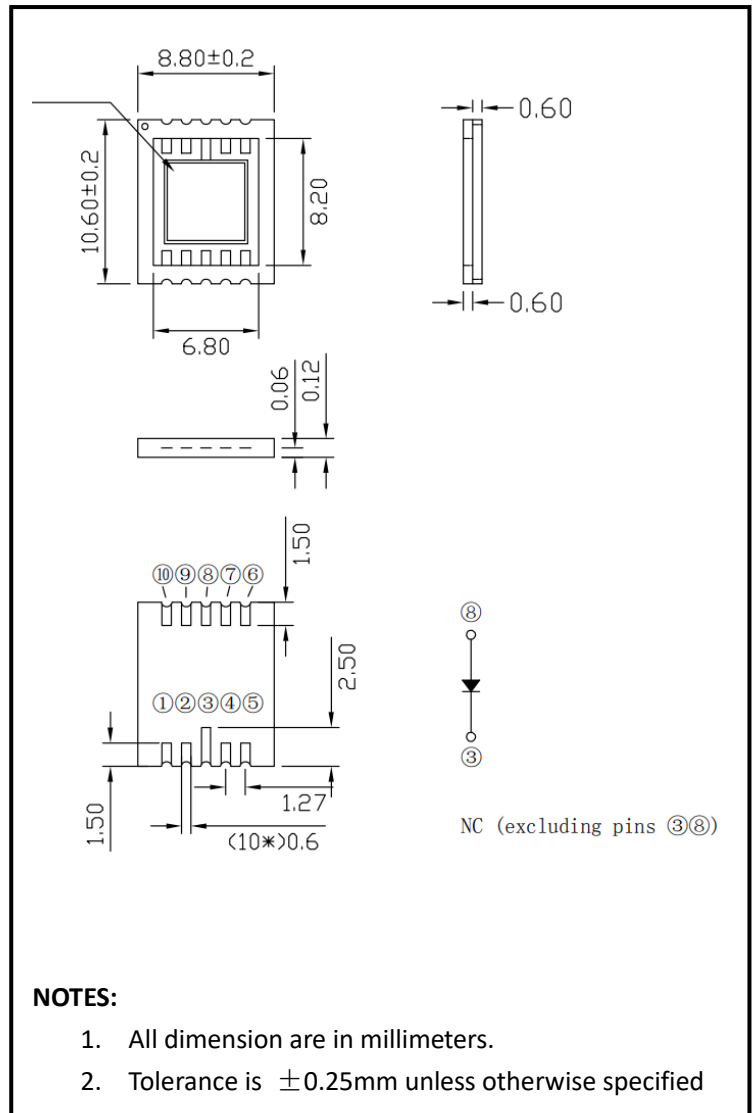
The OSD5106 is a low dark current PIN photodiode with P on N construction. Surface mount package with clear Epoxy encapsulant.

General Ratings

- * Type Silicon Photodiode
- * High linearity
- * Low cost
- * Low dark current

Applications

- * Laser detection
- * Medical instrumentation
- * Optical remote control
- * Pulse light sensor



Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice

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Absolute Maximum Ratings (Ta=25°C)

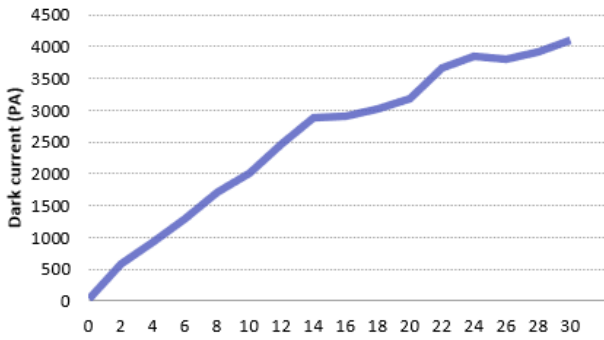
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	Size		5.04*5.04			mm ²
Active area	A		4.66*4.66			mm ²
Short circuit Current	I _{sc}	Ev=100lx fc=2856k*		28		μA
Isc Temperature Coefficient	TC I _{sc}	2856k		1.1		%/°C
Open Circuit Voltage	V _{oc}	Ev=100lx fc=2856k*		249		mV
Voc Temperature Coefficient	TC Voc	2856k		-2.2		mV/°C
Dark current	I _d	VR=100mV		0.17		nA
		VR=10V		2		
Rise time	t _r	V _R =10V;λ=850nm;R _L =50Ω		30		ns
Temp coefficient of I _d	T _{CI_D}			0.18		times/°C
Forward voltage	V _F	IF=20mA		1.3		V
Reverse breakdown voltage	V _{(BR)R}	I _R =100μA Ev=0lx	60			V
Junction Capacitance	C _J	V _R =0V f=1MHz		461		pF
		V _R =10V f=1MHz		40		
Photo sensitivity	S _R	650nm		0.38		A/W
		940nm		0.64		
Spectral Application Range	λ _{range}		300		1100	nm
Spectral Response-Peak	λ _p			940		nm
Shunt resistance	R _{sh}	V _R =10mV		0.01		GΩ
Rsh Temperature Coefficient	TC R _{sh}	Ev=100lx , VR=10mV		0.18		%/°C
Angular Resp 50% Resp Pt	θ _{1/2}			±60		Degrees
Noise Equivalent Power	NEP	VR =10V λ=940nm		1.6×10 ⁻¹⁴		W/Hz ^{1/2}
Specific Detectivity	D*	VR =10V λ=940nm		6.25×10 ¹³		cm(Hz/W) ^{1/2}

* Ev: Illuminance by CIE standard light source A (tungsten lamp)

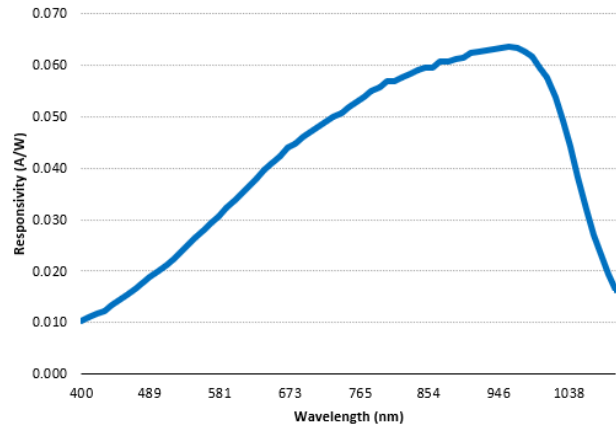
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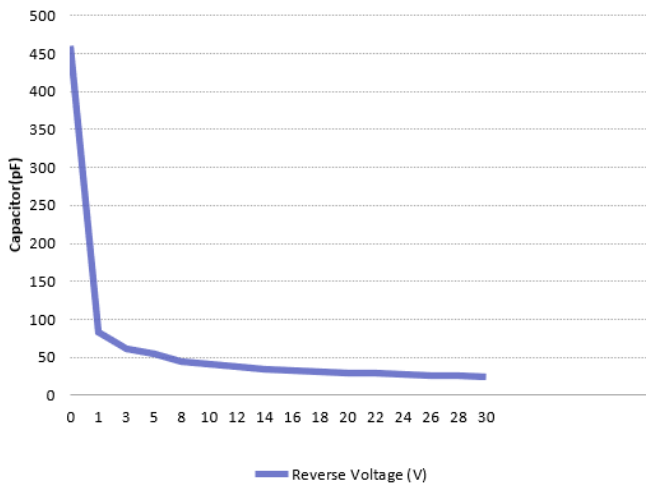
■ Dark current vs. reverse voltage



■ Spectral response



■ Relative Junction Capacitance VS. Voltage



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