

High speed Photodiode

OSX0184



Description

The OSX0184 is high speed, high sensitivity silicon Photodiode with high bandwidth.

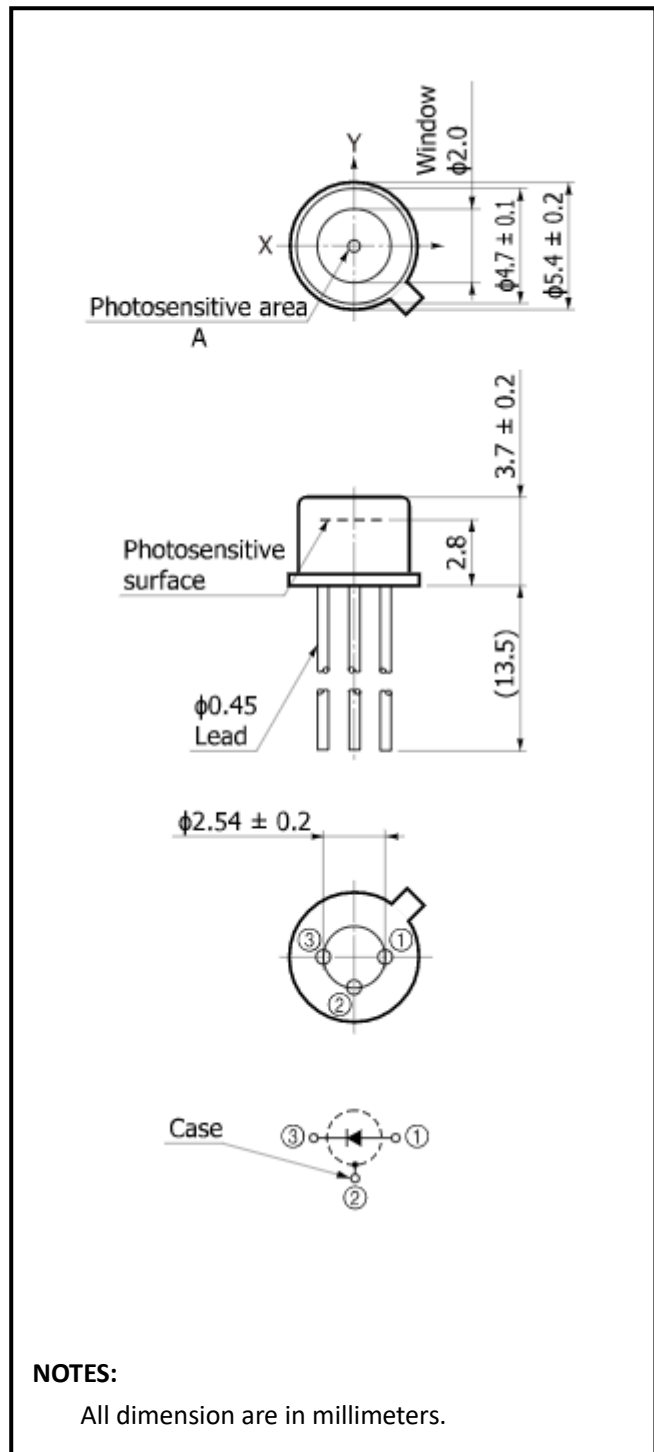
OSX0184 are available with a flat window or ball lens.

Features

- * High speed response
- * Low dark current
- * High reliability in demanding environments
- * Operating temperature is from -40 to +80°C
- * Storage temperature is from -40 to +100°C

Applications

- * High speed photometry
- * High speed switch
- * pulse light detection
- * High speed optical communications
- * Fiber optic light monitoring

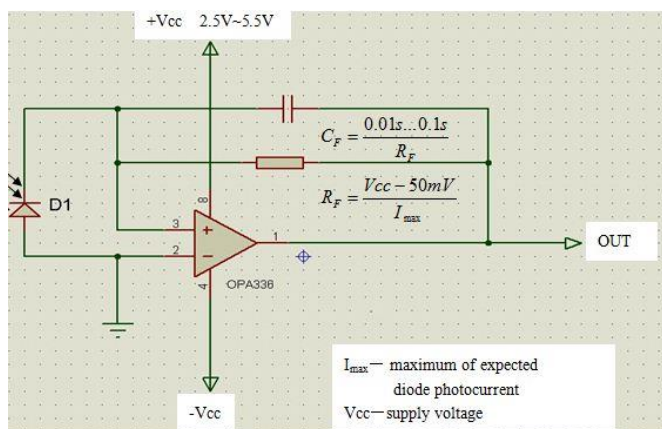


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Absolute Maximum Ratings (Ta=25°C)

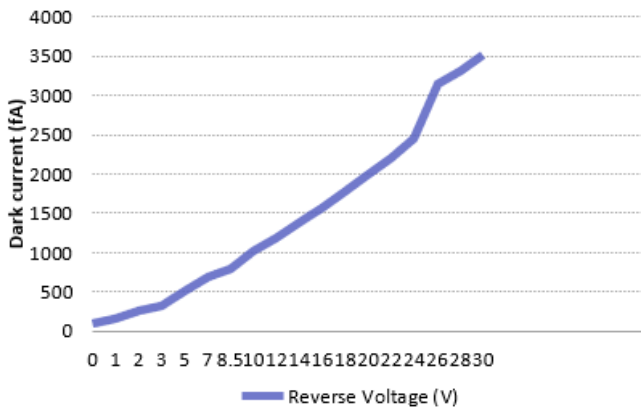
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	S			0.4*0.4		mm
Active area	A			Φ 0.184		mm
Dark current	I _D	V _R =0V		0.10		nA
Temp coefficient of I _D	T _{CID}			0.18		times/°C
Rise time	t _R	V _R =5V;λ=850nm;R _L =50Ω		0.5		ns
Reverse breakdown voltage	V _{(BR)R}	I _R =100μA Ev=0lx	20			V
Junction Capacitance	C _J	V _R =1V f=1MHz		1.237		pF
Photo sensitivity	S _R	830nm		0.54		A/W
Spectral Application Range	λ _{range}		400		1100	nm
Spectral Response-Peak	λ _p			830		
Shunt resistance	R _{sh}	V _R =10mV		0.10		GΩ
Rsh Temperature Coefficient	TC R _{sh}	Ev=100lx , V _R =10mV		0.18		%/°C
Angular Resp 50% Resp Pt	θ _{1/2}			±35		Degrees
Noise Equivalent Power	NEP	V _R =10V λ=830nm		1.8×10 ⁻¹⁴		W/Hz ^{1/2}
Specific Detectivity	D*	V _R =10V λ=830nm		3.9×10 ¹³		cm(Hz/W) ^{1/2}

Application Circuit:

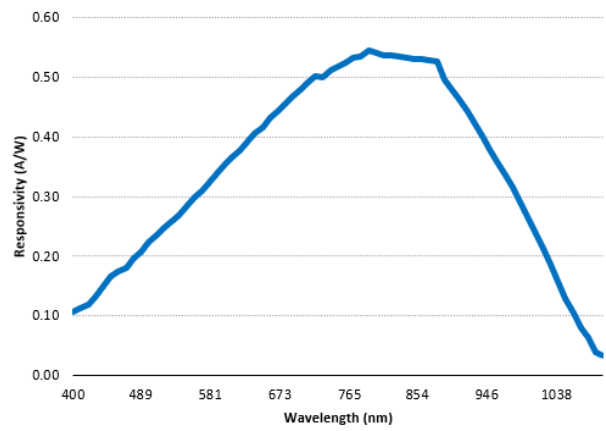


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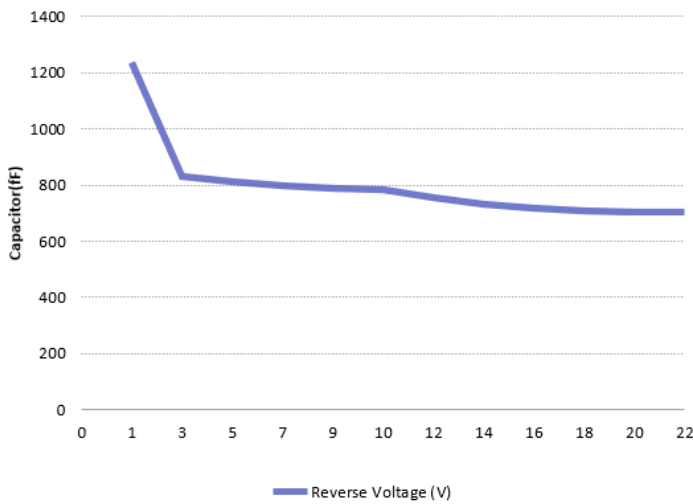
■ Dark current vs. reverse voltage



■ Spectral response



■ Capacitor vs. reverse voltage



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