

## High speed Photodiode

### OSX0184L



## Description

The OSX0184L is high speed, high sensitivity silicon Photodiode with high bandwidth.

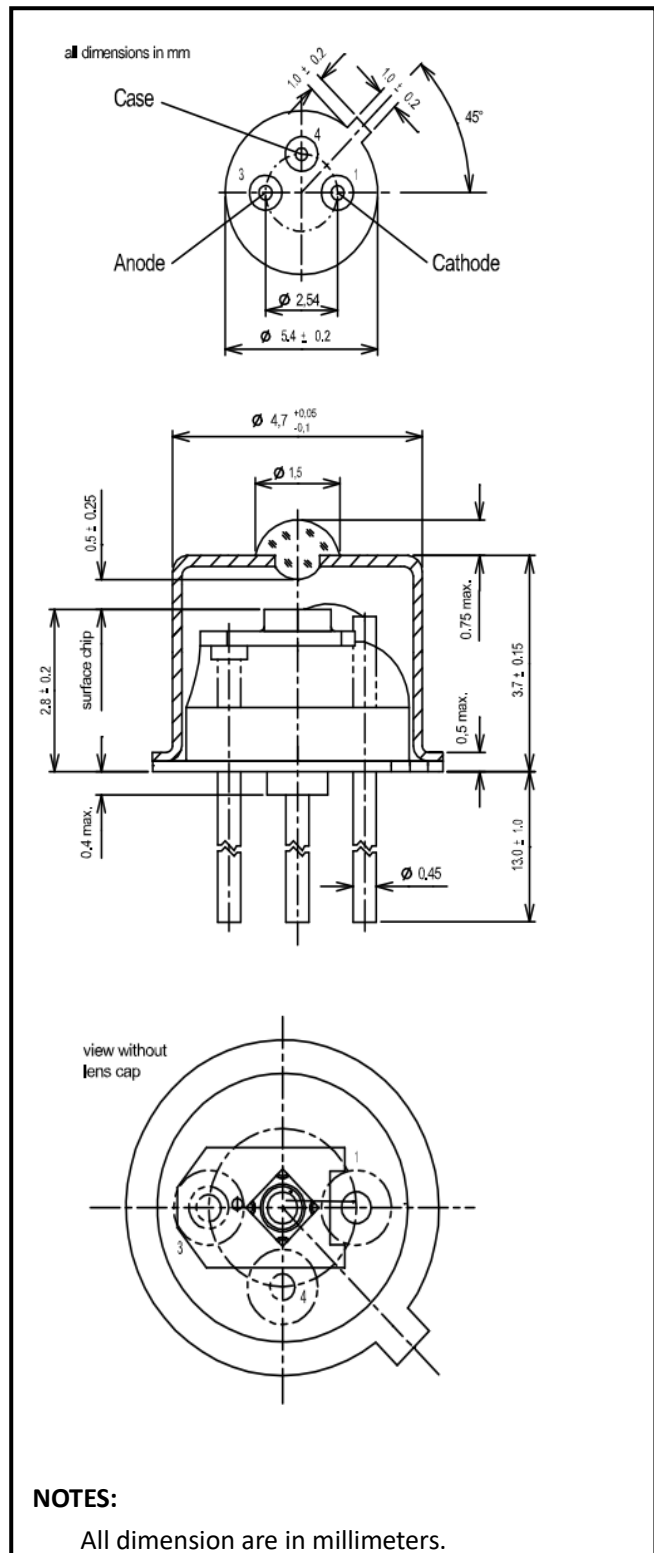
OSX0184 are available with a flat window or ball lens.

## Features

- \* High speed response
- \* Low dark current
- \* High reliability in demanding environments
- \* Operating temperature is from  $-40$  to  $+80^{\circ}\text{C}$
- \* Storage temperature is from  $-40$  to  $+100^{\circ}\text{C}$

## Applications

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



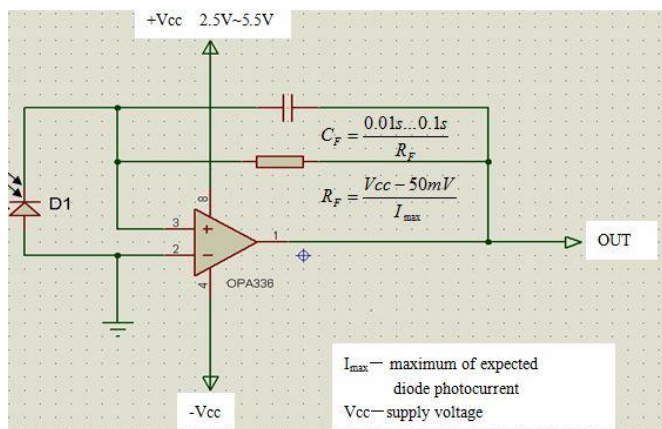
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Specifications are subject change without notice

## 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 <sub>D</sub>	V <sub>R</sub> =0V		0.10		nA
Temp coefficient of I <sub>D</sub>	T <sub>CID</sub>			0.18		times/°C
Rise time	t <sub>R</sub>	V <sub>R</sub> =5V;λ=850nm;R <sub>L</sub> =50Ω		0.5		ns
Reverse breakdown voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =100μA Ev=0lx	20			V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =1V f=1MHz		1.237		pF
Photo sensitivity	S <sub>R</sub>	830nm		0.54		A/W
Spectral Application Range	λ <sub>range</sub>		400		1100	nm
Spectral Response-Peak	λ <sub>p</sub>			830		
Shunt resistance	R <sub>sh</sub>	V <sub>R</sub> =10mV		0.10		GΩ
Rsh Temperature Coefficient	TC R <sub>sh</sub>	Ev=100lx , VR=10mV		0.18		%/°C
Noise Equivalent Power	NEP	V <sub>R</sub> =10V λ=830nm		1.8×10 <sup>-14</sup>		W/Hz <sup>1/2</sup>
Specific Detectivity	D*	V <sub>R</sub> =10V λ=830nm		3.9×10 <sup>13</sup>		cm(Hz/W) <sup>1/2</sup>

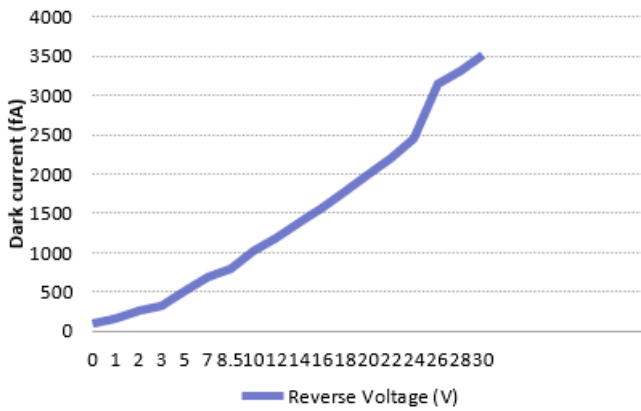
## Application Circuit:



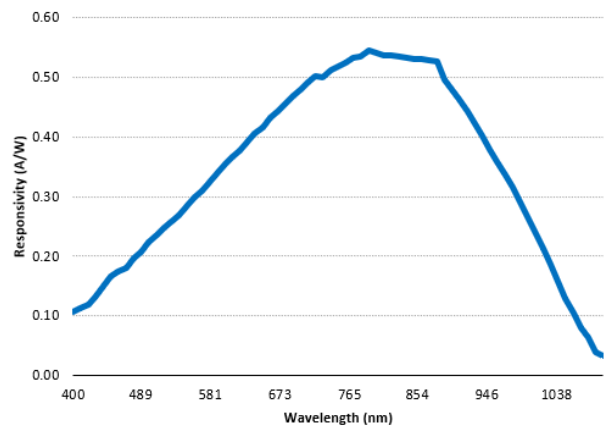
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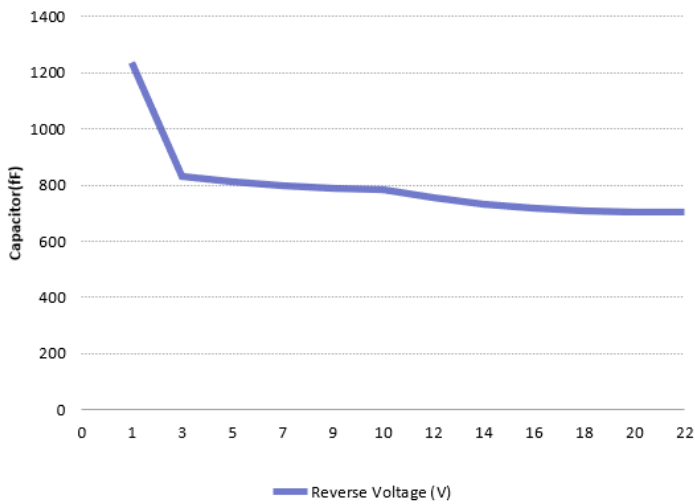
### ■ Dark current vs. reverse voltage



### ■ Spectral response



### ■ Capacitor vs. reverse voltage



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