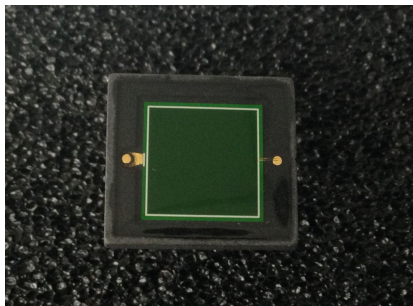


## Human eye response photo diode

### OSD100-EC



## Description

The OSD100-EC is human eye response high-output, high-speed silicon photo diode which is mounted in 2PIN ceramic package, permits wide angular response.

## Features

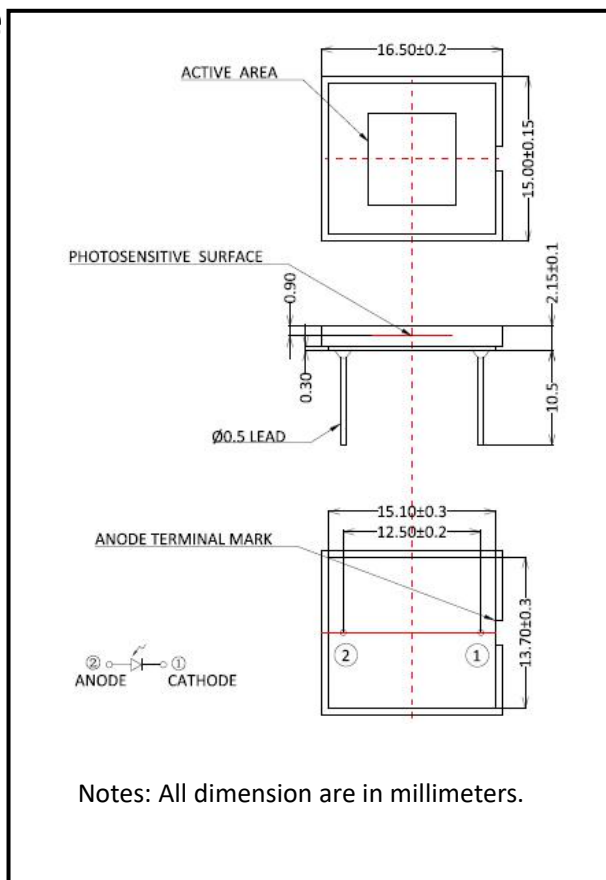
- \* High sensitivity, high speed response
- \* Wide angular response
- \* High reliability in demanding environments
- \* Operating temperature is from -40 to +80°C
- \* Storage temperature is from -40 to +100°C
- \* soldering temperature is 260°C @Max.5 seconds at the position of 2mm from the PIN legs.

## General Ratings

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

## Applications

- \*Color sensor
- \*Laser detect
- \* Medical equipment
- \*luminometer



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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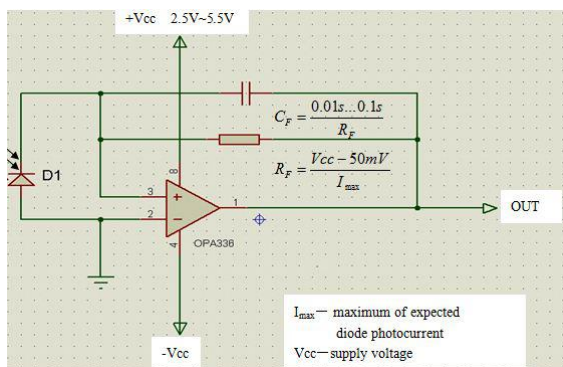
EMAIL:sales@otronsensor.com  
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## Absolute Maximum Ratings (Ta=25°C)

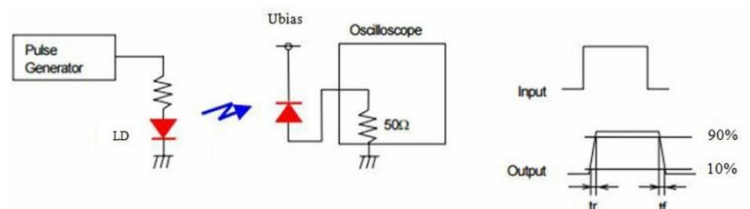
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	Size			10*10		mm
Active area	A			9.4*9.4		mm <sup>2</sup>
Short circuit Current	I <sub>sc</sub>	Ev=5mw/cm <sup>2</sup> fc=2856k*		750		μA
Isc Temperature Coefficient	TC I <sub>sc</sub>	2856k		1.2		%/°C
Open Circuit Voltage	V <sub>oc</sub>	Ev=5mw/cm <sup>2</sup> fc=2856k*		450		mV
Voc Temperature Coefficient	TC Voc	2856k		-2.2		mV/°C
Dark current	I <sub>D</sub>	VR=10mV		80		pA
		VR=10V		760		
Rise time	t <sub>R**</sub>	V <sub>R</sub> =0V; λ=535nm; R <sub>L</sub> =50Ω, f=1MHz,		320		ns
		V <sub>R</sub> =5V; λ=535nm; R <sub>L</sub> =50Ω, f=1MHz		310		ns
		V <sub>R</sub> =10V; λ=535nm; R <sub>L</sub> =50Ω, f=1MHz		270		ns
Temp coefficient of I <sub>D</sub>	T <sub>CID</sub>			0.18		times/°C
Reverse breakdown voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =100μA Ev=0lx	50			V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V f=1MHz		1754		pF
		V <sub>R</sub> =10V f=1MHz		1319		
Photo sensitivity	S <sub>R</sub>	550nm		0.45		A/W
Spectral Application Range	λ <sub>range</sub>		350		700	nm
Spectral Response-Peak	λ <sub>p</sub>			550		nm
Shunt resistance	R <sub>sh</sub>	VR=10mV		0.13		GΩ
Rsh Temperature Coefficient	TC R <sub>sh</sub>			0.18		%/°C
Angular Resp 50% Resp Pt	θ <sub>1/2</sub>			±60		Degrees

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

### Typical application circuit



### \*\* Response time measurement Circuit:



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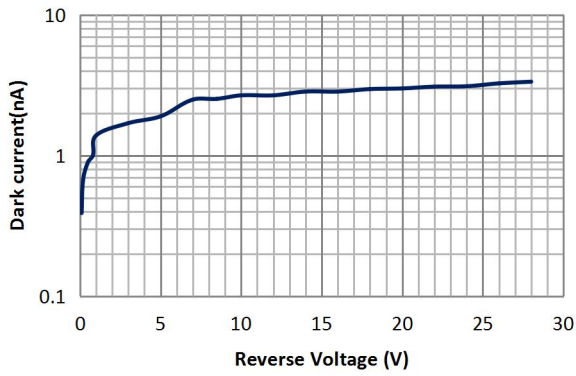
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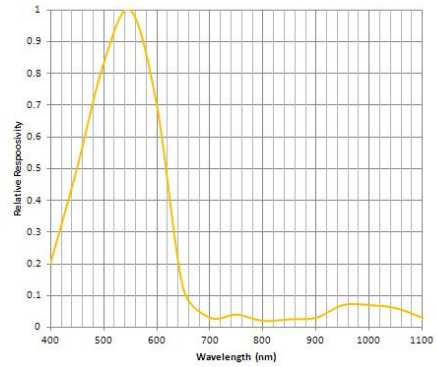
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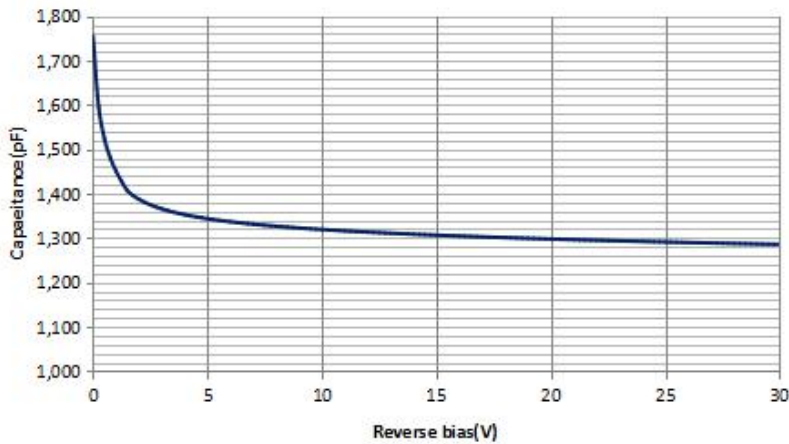
## ■ Dark current vs. reverse voltage



## ■ Spectral response



## ■ Relative Junction Capacitance VS. Voltage



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