OSD002-IT

IR Sensitive Silicon Photodiode

Description

The OSD002-IT is high-output, high sensitivity silicon Photodiode hermetically packaged in TO52 package with A clear borosilicate glass window cap.

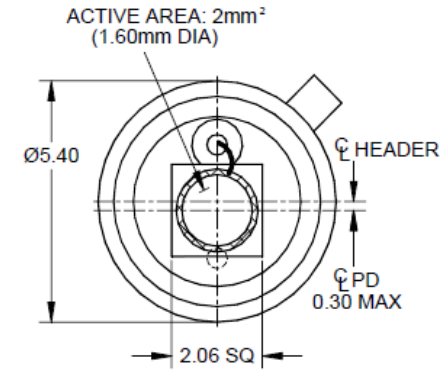
Features

* High speed response
* Wide angular response
* High reliability in demanding environments
* Operating temperature is from -40 to +80℃

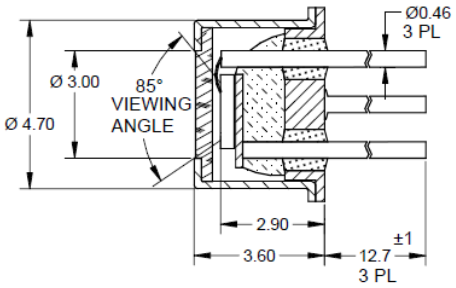
*Storage temperature is from -40 to +100℃

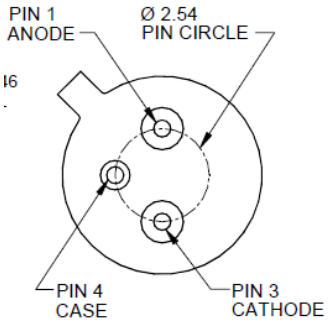
Applications

* Analytical instruments
* Precision photometry
* Fluorescence detector
* IR/ Laser light Monitoring



FRONTSIDE VIEW





BACKSIDE VIEW

NOTES:

All dimension are in millimeters.

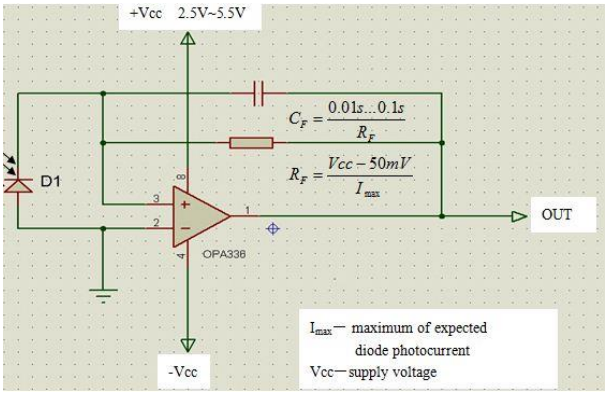
OTRON ELECTRONIC TECHNOLOGY CO., LTD
TEL:+86-21-54971821
FAX:+86-21-54971823
EMAIL: otron.sensor@gmail.com
http://www.e-otron.com

Absolute Maximum Ratings (Ta=25℃)

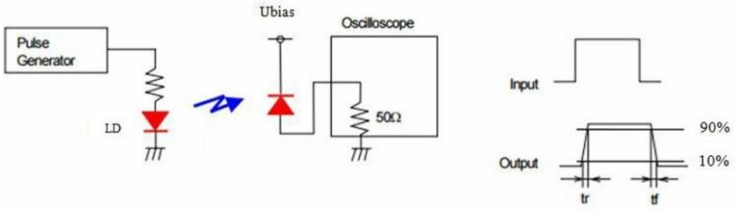
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Active area	A			Φ1.60		mm
				2		mm^2
Dark current	I_D	V_R=10mV		100		pA
		V_R=10V		10		
Rise time**	t_R	V_R=10V;λ=635nm;R_L=50Ω, f=1MHz		12		ns
Tempcoeffi-cient of I_D	T_{CID}			0.18		times/℃
Reverse breakdown voltage	$V_{(BR)R}$	I_R=100μA Ev=0lx		50		V
Junction Capacitance	C_J	Ev=0lx V_R=0V f=1MHz		82		pF
		Ev=0lx V_R=10V f=1MHz		13		
Photo sensitivity	S_R	650nm		0.38		A/W
		940nm		0.64		
Spectral Application Range	λ_{range}		400		1100	nm
Spectral Response-Peak	λ_p			940		nm
Shunt resistance	Rsh	V_R=10mV		0.1		GΩ
Rsh Temperature Coefficient	TC Rsh			0.18		%/℃
Angular Resp 50% Resp Pt	$\theta_{1/2}$			±55		Degrees
Noise Equivalent Power	NEP	V_R =10V λ=940nm		0.9×10^{-14}		$W/Hz^{1/2}$
Specific Detectivity	D*	V_R =10V λ=940nm		1.1×10^{13}		$cm(Hz/W)^{1/2}$

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

■Typical application circuit

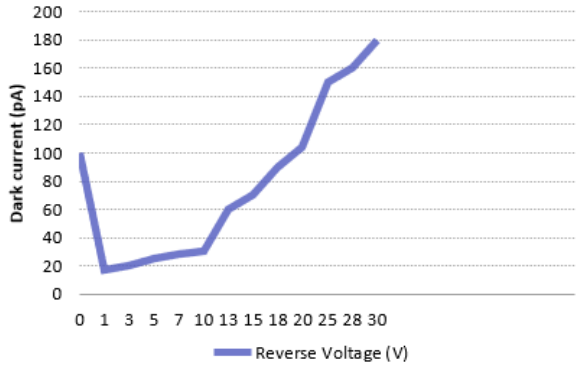


** Response time measurment Circuit:

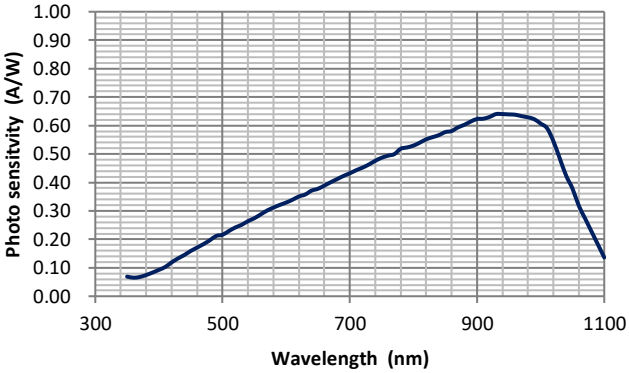


Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice

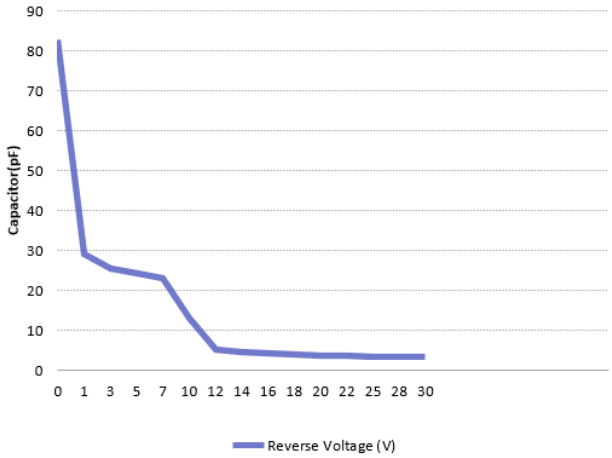
■Dark current vs. reverse voltage



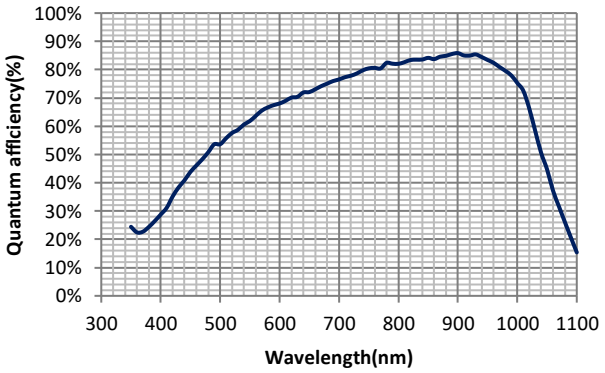
■ Spectral response



■Relative Junction Capacitance VS. Voltage



■Quantum efficiency



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