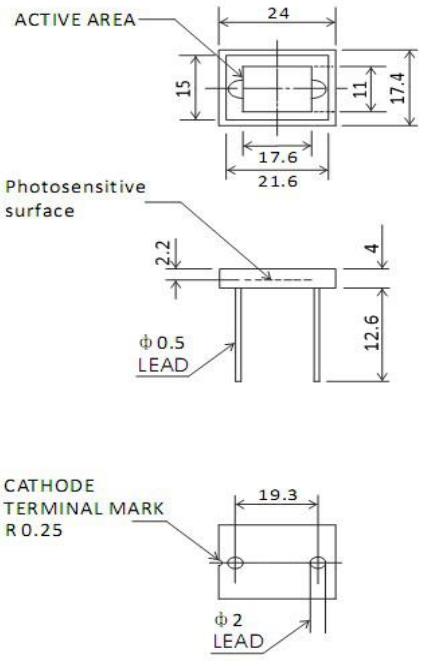
Large Active Area
Silicon Photodiode
OSD150-IC



NOTES:

All dimension are in millimeters.

Description

The OSD150-IC is high-output, high sensitivity silicon Photodiode mounted in ceramic with glass 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℃
* Storage temperature is from -40 to +100℃
* soldering temperature is 260℃ @Max.5 seconds at the position of 2mm from the PIN legs.

General Ratings

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

Applications

* Analytical instruments
* Optical measurement equipment
* Precision photometry
* Medical equipment
* Fluorescence detector
* Spectrum photometry/CT scan
* IR/ Laser light Monitoring

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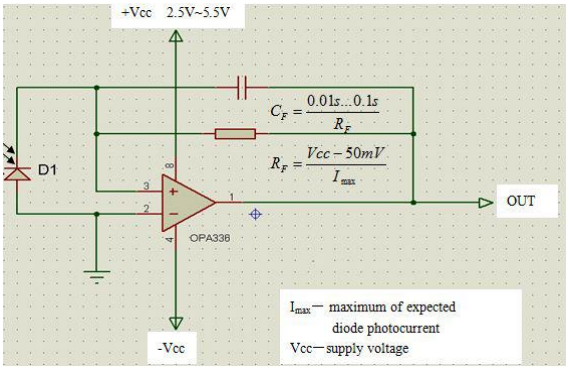
Absolute Maximum Ratings (Ta=25℃)

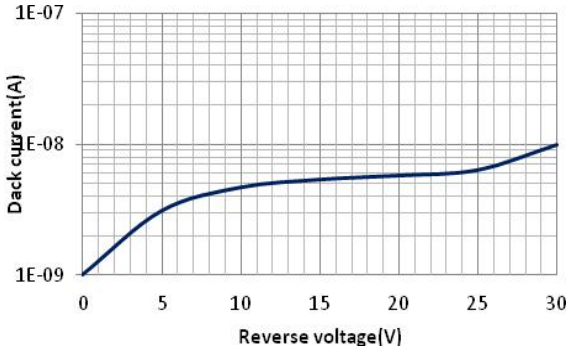
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Short circuit Current	I_{SC}	Ev=100lx fc=2856k*		134		μA
Isc Temperature Coefficient	TC Isc	2856k		1.2		%/℃
Open Circuit Voltage	Voc	Ev=100lx fc=2856k*		347		mV
Voc Temperature Coefficient	TC Voc	2856k		-2.2		mV/℃
Dark current	I_D	VR=10mV		1		nA
		VR=10V		5		
Rise time	t_R	V_R=0V; λ=635nm;R_L=50Ω，f=1KHz		580		ns
		V_R=0V; λ=635nm;R_L=50Ω，f=1KHz		480		ns
Temp coefficient 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	V_R=0V f=1MHz		128		pF
		V_R=10V f=1MHz		25		
Photo sensitivity	S_R	650nm		0.37		A/W
		940nm		0.66		
Spectral Application Range	λ_{range}		400		1100	nm
Spectral Response-Peak	λ_p			940		nm
Shunt resistance	Rsh	VR=10mV		0.01		GΩ
Rsh Temperature Coefficient	TC Rsh			0.18		%/℃
Angular Resp 50% Resp Pt	$\theta_{1/2}$			±60		Degrees
Noise Equivalent Power	NEP	V_R =10V λ=940nm		6.25×10^{-14}		$W/Hz^{1/2}$
Specific Detectivity	D*	V_R =10V λ=940nm		1.6×10^{13}		$cm(Hz/W)^{1/2}$

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

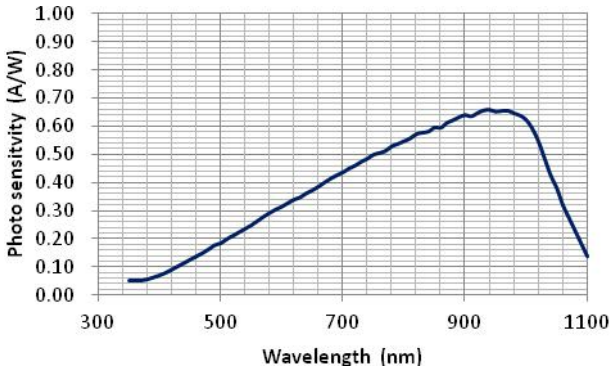
■Typical application circuit



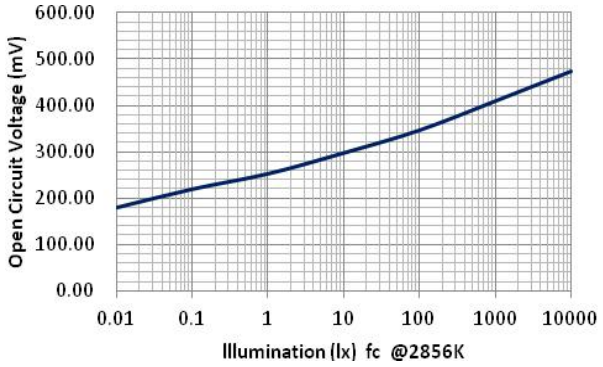
■Dark current vs. reverse voltage



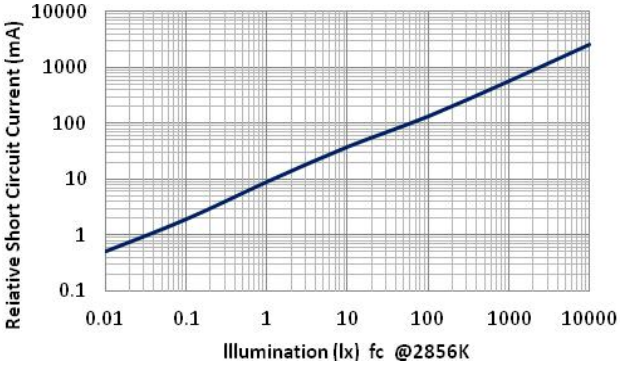
■ Spectral response



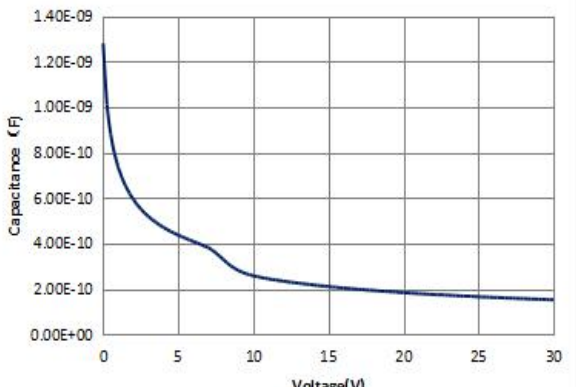
■Open circuit Voltage Vs. Illumination



■Relative Short Circuit Current vs. Illumination



■Relative Junction Capacitance VS. Voltage



■Quantum efficiency