

## UV Enhanced Photodiode

### OSD1226



### Description

The1226 is high-output, high-speed silicon UV-blue enhanced photodiode mounted in 2PIN TO metal Can package, permits wide angular response.

### Features

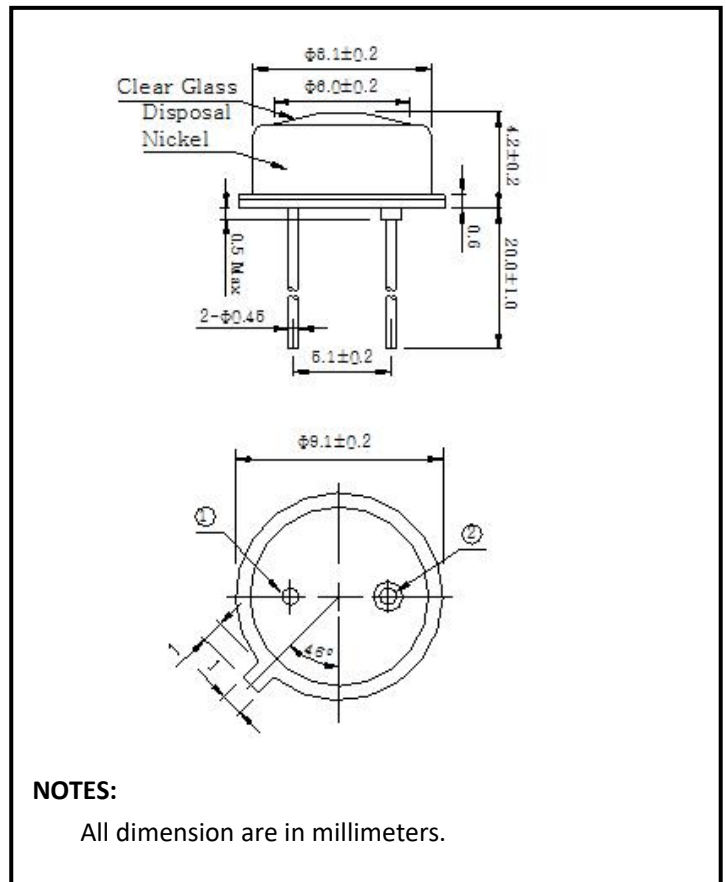
- \* High-speed response
- \* Wide angular response
- \* High reliability in demanding environments
- \* Operating temperature is from -40 to +80°C
- \* Storage temperature is from -40 to +100°C

### General Ratings

- \* Type Silicon Photodiode
- \* Similar to S1226-44BK
- \* Low cost
- \* Low dark current

### Applications

- \* UV-exposure Meters
- \* Optical measurement equipment
- \* Analytical/medical Instrument
- \* Pollution monitoring



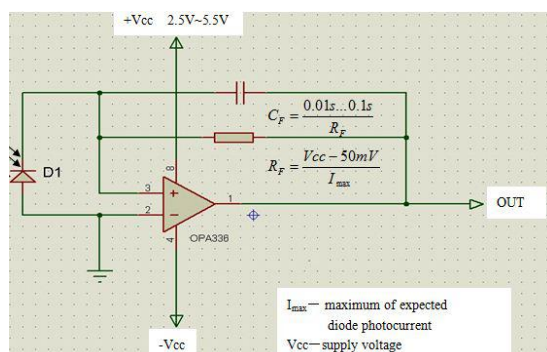
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## Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	Size		4.20*4.20			mm <sup>2</sup>
Active area	A		3.924*3.924			mm <sup>2</sup>
Short circuit Current	I <sub>sc</sub>	Ev=100lx fc=2856k*		40		μA
Isc Temperature Coefficient	TC I <sub>sc</sub>	2856k		1.1		%/°C
Open Circuit Voitage	Voc	Ev=100lx fc=2856k*		448		mV
Voc Temperature Coefficient	TC Voc	2856k		-2.2		mV/°C
Dark current	I <sub>d</sub>	V <sub>R</sub> =10mV		20		pA
		V <sub>R</sub> =10V		120		
Tempcoeffi-cient of I <sub>d</sub>	T <sub>CI<sub>d</sub></sub>			0.18		times/°C
Reverse breakdown voltage	V <sub>(BR)R</sub>	IR=100μA Ev=0lx	33			V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V f=1MHz		212		pF
		V <sub>R</sub> =10V f=1MHz		46		
Rise time	tr	V <sub>R</sub> =0V; λ =375nm;R <sub>L</sub> =50Ω		120		ns
		V <sub>R</sub> =10V; λ =375nm;R <sub>L</sub> =50Ω		100		
Photo sensitivity	S <sub>R</sub>	340nm		0.21		A/W
		730nm		0.40		
Spectral Application Range	λ <sub>range</sub>		190		1100	nm
Spectral Response-Peak	λ <sub>p</sub>			900		nm
Shunt resistance	Rsh	V <sub>R</sub> =10mV		0.5		GΩ
Rsh Temperature Coefficient	TC Rsh			0.18		%/°C
Angular Resp 50% Resp Pt	θ <sub>1/2</sub>			± 50		Degrees
Noise Equivalent Power	NEP	V <sub>R</sub> =10V λ=730nm		9.68 × 10 <sup>-15</sup>		W/Hz <sup>1/2</sup>
Specific Detectivity	D*	V <sub>R</sub> =10V λ=730nm		1.03 × 10 <sup>14</sup>		cm(Hz/W) <sup>1/2</sup>

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

## ■ Typical application circuit



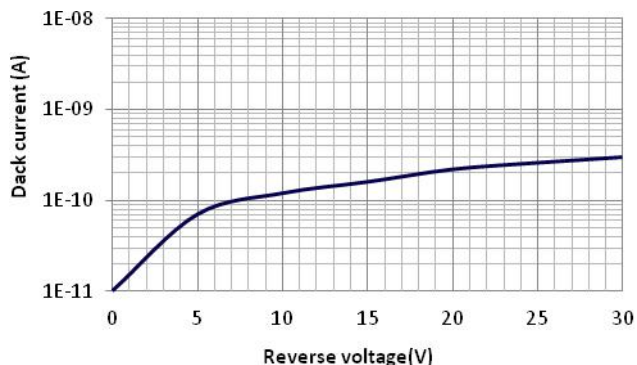
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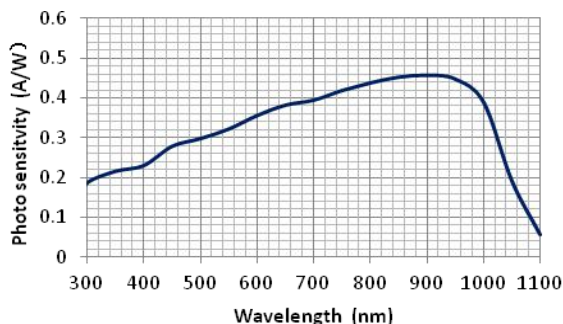
TEL:+86-21-54971821  
FAX:+86-21-54971823

EMAL:frank.shuai@e-otron.com  
<http://www.e-otron.com>

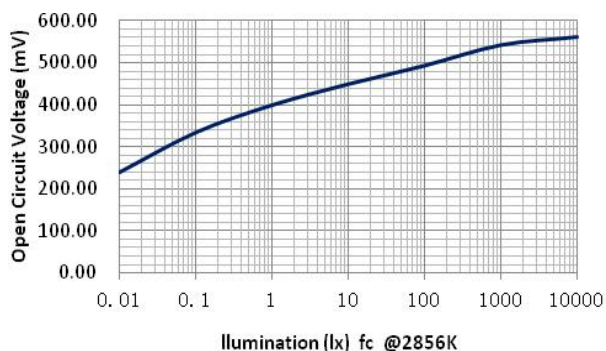
■ Dark current vs. reverse voltage



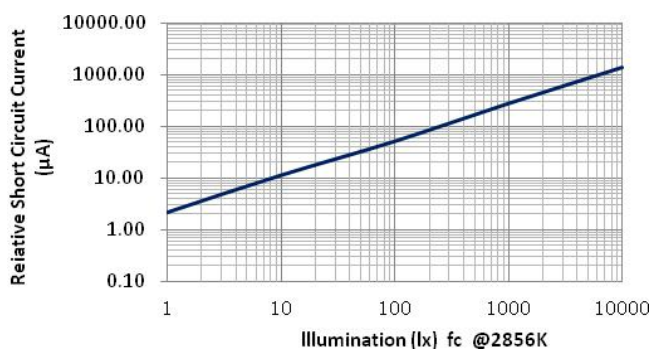
■ Spectral response



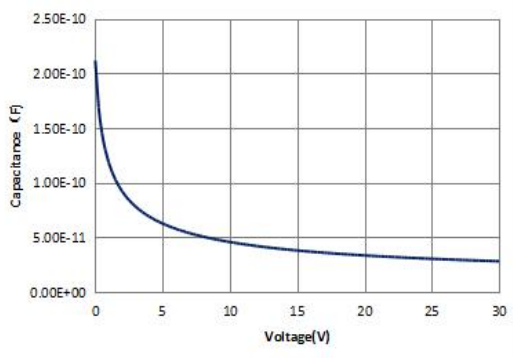
■ Open circuit Voltage  
vs Illumination



■ Relative Short Circuit  
Current vs. Illumination



■ Relative Junction Capacitance  
VS. Voltage



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