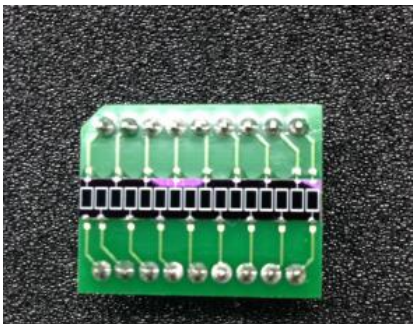
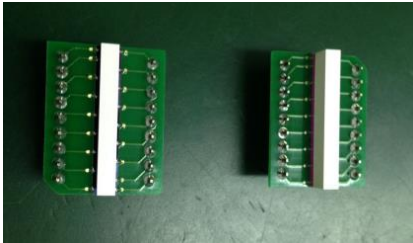


Silicon PIN Photodiode Array

OSA5668



Description

The OSA5668 is a high sensitive silicon planar photo-Diode array in a inline configuration.

Features

- * High-speed response
- * High photo sensitivity
- * 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.

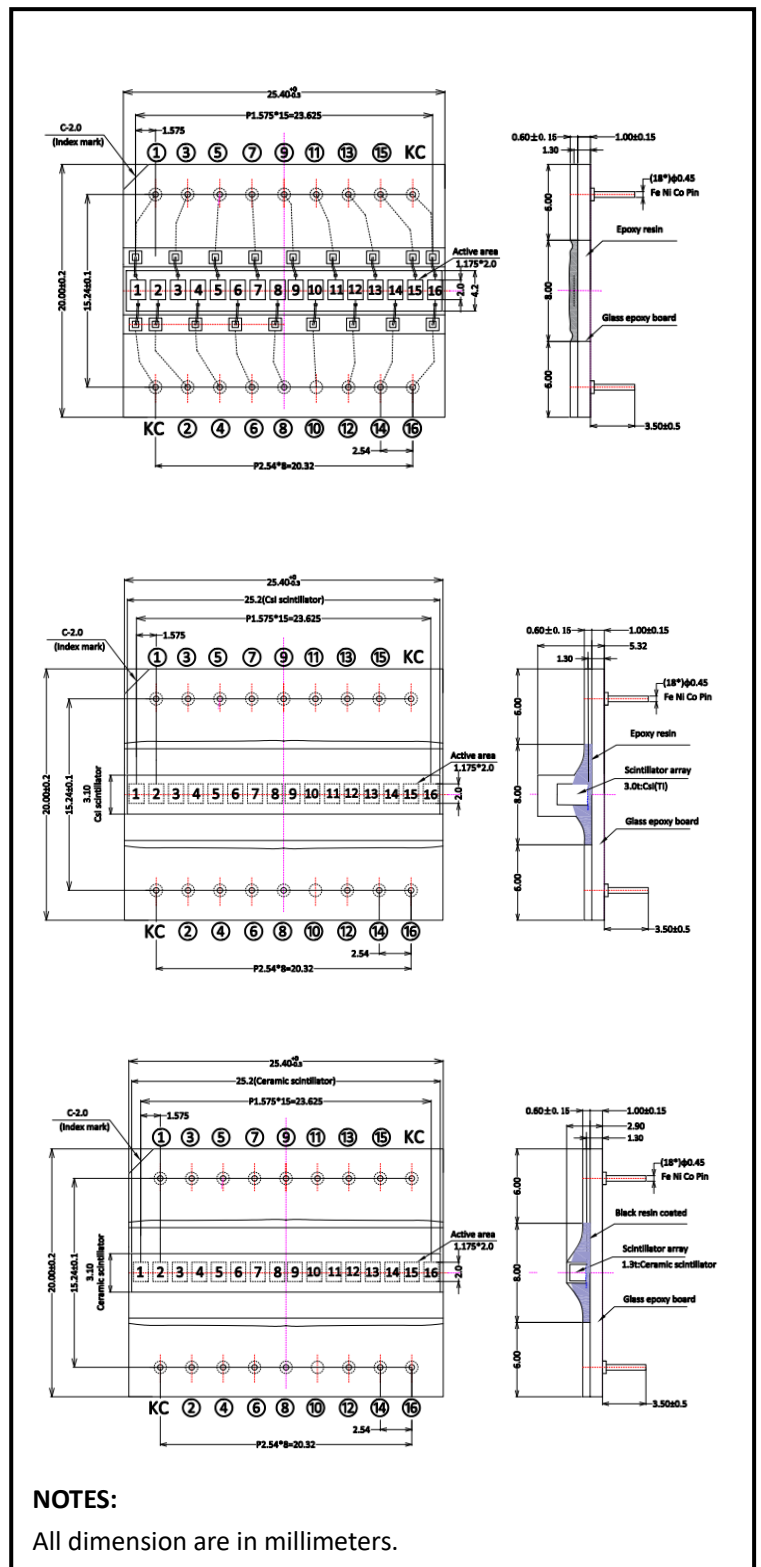
General Ratings

- * Chip active area: 2.675*2.675*16mm²
- * Low dark current * Gap of each element: 25.4um

Applications

- * optical switcher
- * X ray detector
- * pulse laser detector
- * Industry machine

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



NOTES:

All dimension are in millimeters.



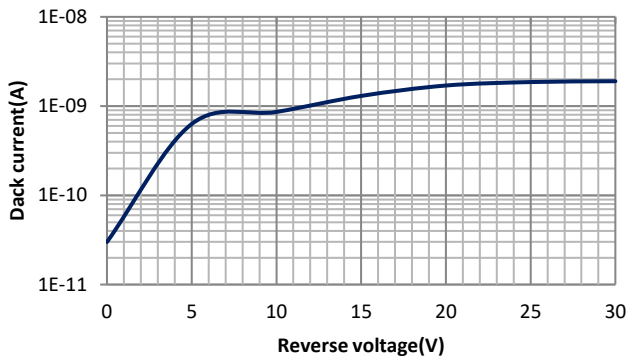
Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Short circuit Current	I _{sc}	Ev=100lx , fc=2856k*		42		μA
Isc Temperature Coefficient	TC I _{sc}	2856k		1.1		%/°C
Open Circuit Voltage	V _{oc}	Ev=100lx , fc=2856k*		344		mV
Voc Temperature Coefficient	TC Voc	2856k		-2.2		mV/°C
Dark current	I _d	V _R =10mV		50		pA
		V _R =10V		860		
Tempcoefficient of I _d	T _{CID}			0.18		times/°C
Reverse breakdown voltage	V _{(BR)R}	I _R =100μA , Ev=0lx	33			V
Junction Capacitance	C _J	V _R =0V , f=1MHz		33		pF
		V _R =10V , f=1MHz		8.2		
Turn-on/Turn-off Time	ton/toff	V _R =5V, λ=850nm, R _L =50Ω		50/50		ns
		VR=10V, λ=940nm, RL=1KΩ		1000/1000		
		VR=10V, λ=880nm, RL=1KΩ		200/200		
		VR=10V, λ=650nm, RL=1KΩ		80/80		
Photo sensitivity	S _R	650nm		0.38		A/W
		880nm		0.60		
		940nm		0.64		
CrossTalk Channel-to-Channel		400-850nm, Adjacent Channels		0.1	0.5	%
		850-1100nm, Adjacent Channels		1	5	
Uniformity of each Element	%		1		2	%
Spectral Application Range	λ _{range}		400		1100	nm
Spectral Response-Peak	λ _p			940		nm
Shunt resistance	R _{sh}	V _R =10mV		0.2		GΩ
Rsh Temperature Coefficient	TC R _{sh}			0.18		%/°C
Angular Resp 50% Resp Pt	θ _{1/2}			±60		Degrees
Noise Equivalent Power	NEP	V _R =10V, λ=940nm		2.59×10 ⁻¹⁴		W/Hz ^{1/2}
Specific Detectivity	D*	V _R =10V, λ=940nm		1.46 × 10 ¹³		cm(Hz/W) ^{1/2}

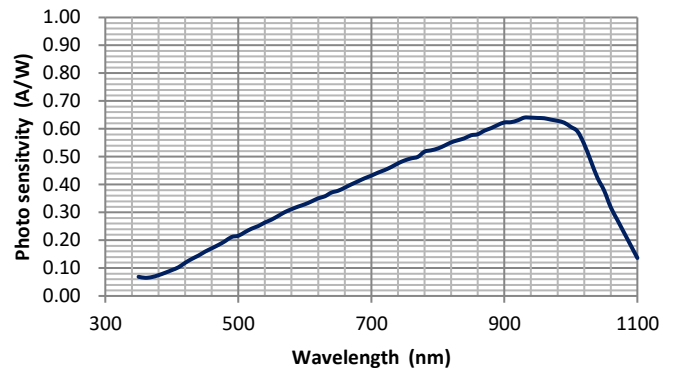
* Ev: Illuminance by CIE standard light source A (tungsten lamp)

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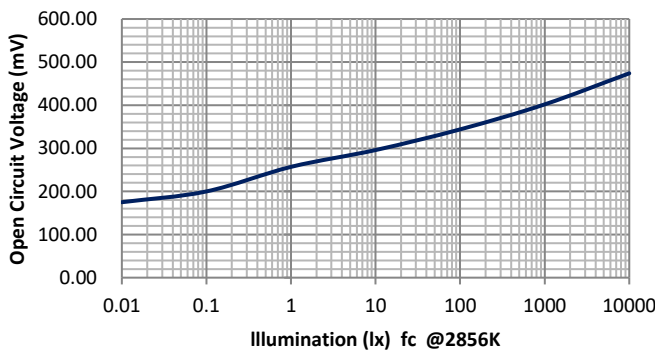
■ Dark current vs. reverse voltage



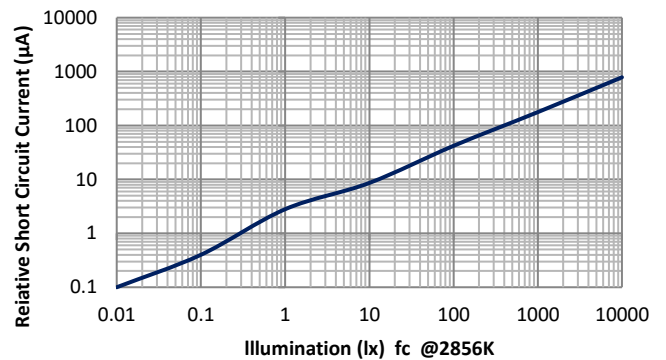
■ Spectral response



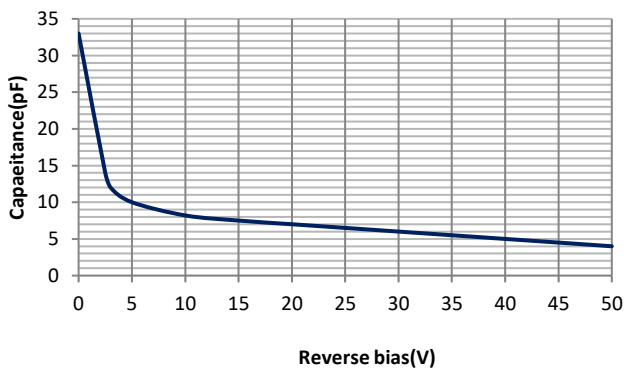
■ Open circuit Voltage vs Illumination



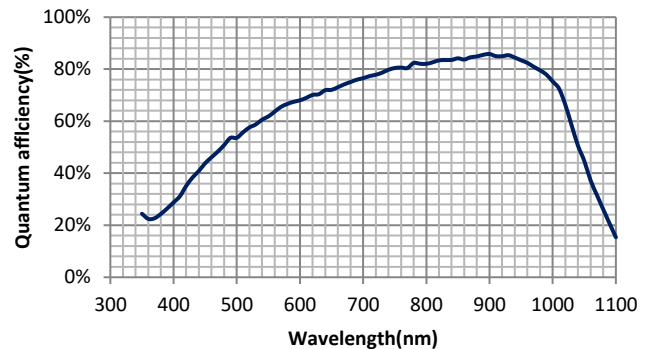
■ Relative Short Circuit Current vs. Illumination



■ Relative Junction Capacitance VS. Voltage



■ Quantum efficiency



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