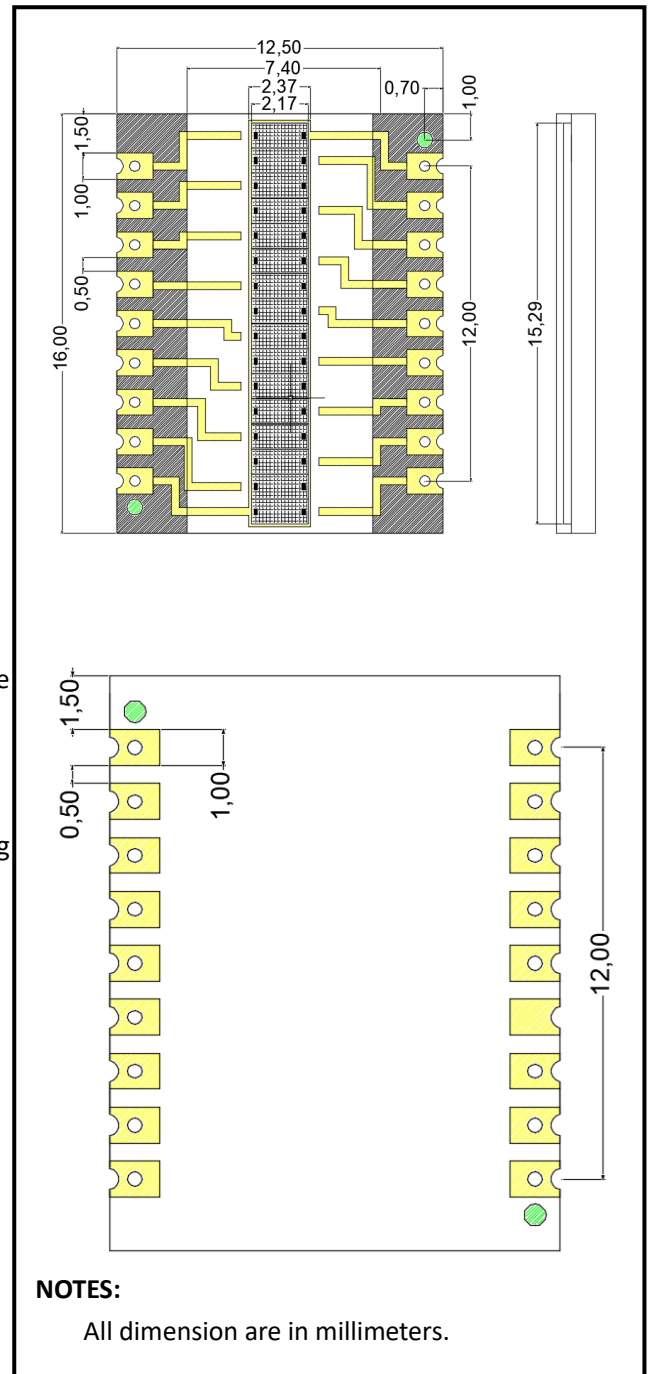
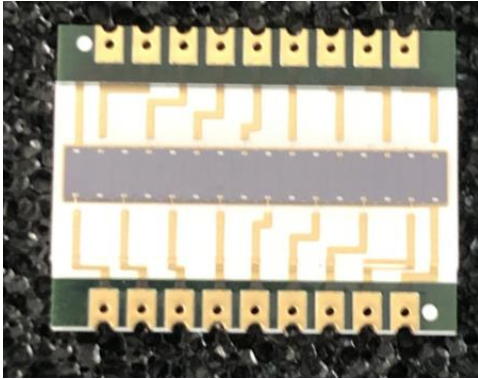


Silicon PIN photodiode

Array (16 elements)



Description

OSA2713-16 multichannel array photodetector consist of 16 single Element photodiode laid adjacent to each other forming a one Dimensional sensing area on a common cathode substrate.

This array can perform simultaneous measurement of a moving Beams of many wavelengths. It feature low electrical cross talk And super high uniformity between adjacent elements.

It is optimized for IR wavelength.

Features

- * Low-capacitance high sensitivity
- * 400-1100nm response
- * 16 pixels

Applications

- * Laser range finder, Lidar
- * High speed optical communications
- * Laser scanner, spectral measurement

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Absolute Maximum Ratings (Ta=25 °C)

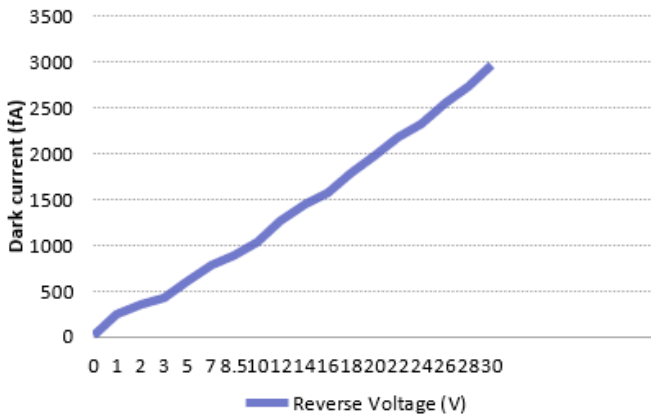


Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Number of effective pixels			16			pixel
Active area (each pixel)			2.489*0.90			um
Chip size (total chip)			2.794*15			um
Pixel pitch		Between elements	30			um
Spectral range			400		1100	nm
Photo sensitivity	S _R	830nm		0.54		A/W
		650nm	0.35	0.40		
Dark current	I _D	V _R =0mV		0.12		nA
		V _R =10V		0.50	10	
Rise time	t _R	V _R =3V;λ=850m;R _L =50Q		30		ns
Tempcoeffi-cient of I _D	T _{ClD}			0.18		times/°C
Reverse breakdown voltage	V _{(BR)R}	I _R =100μA Ev=0lx	60			V
Junction Capacitance	C _J	V _R =0V f=1MHz		225		pF
		V _R =10V f=1MHz		14		
CrossTalk Channel-to-Channel		400-850nm, Adjacent Channel		0.1	0.5	%
		850-1100nm, Adjacent Channels		1	5	
Uniformity of each Element	%		0.8		2	%
Shunt resistance	R _{sh}	V _R =10mV		0.50		GΩ
Rsh Temperature Coefficient	TC Rsh			0.18		%/°C
Noise Equivalent Power	NEP	V _R =10V λ=940nm		1.8×10 ⁻¹⁵		W/Hz ^{1/2}
Specific Detectivity	D*	V _R =10V λ=940nm		3.8×10 ¹⁴		cm(Hz/W) ^{1/2}

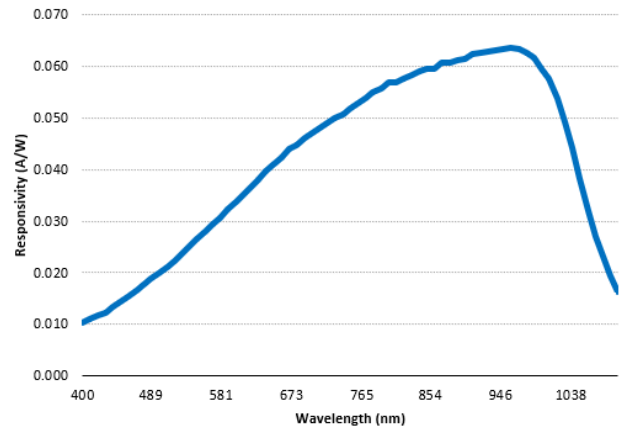
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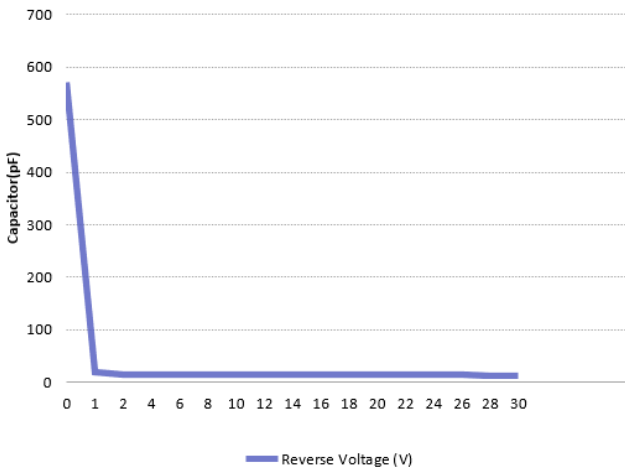
■ Dark current vs. reverse voltage



■ Spectral response



■ Capacitor vs. reverse voltage



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