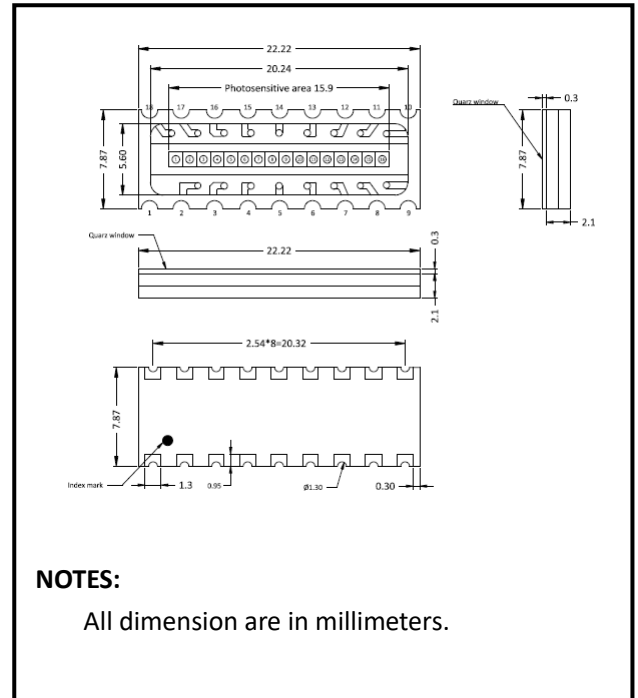
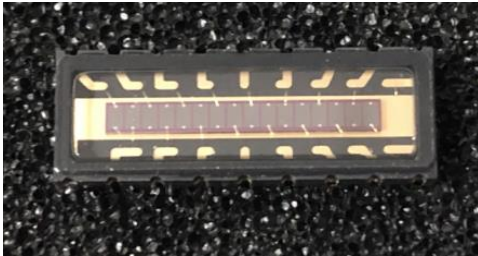


Silicon PIN photodiode

Array (16 elements)



Description

OSA4111-16Q 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 cover a wide spectral range from UV to near Infrared light.

It feature low electrical cross talk and super high uniformity Between adjacent elements.

Features

- * Low crosstalk
- * UV to NIR response
- * Low dark current
- * Custom devices available upon request

Applications

- * Multichannel spectrophotometers
- *Light spectrum analyzers

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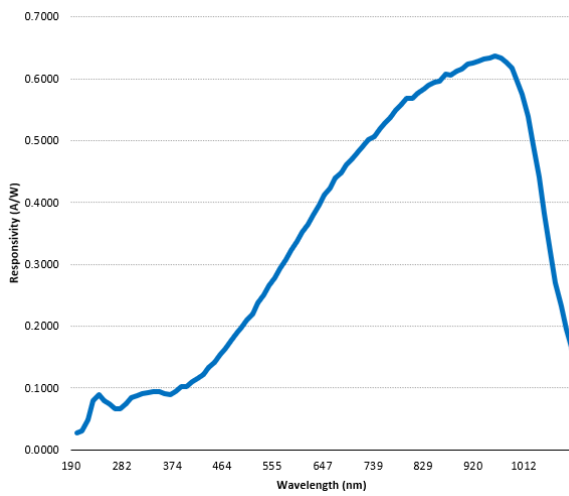
Absolute Maximum Ratings (Ta=25 °C)



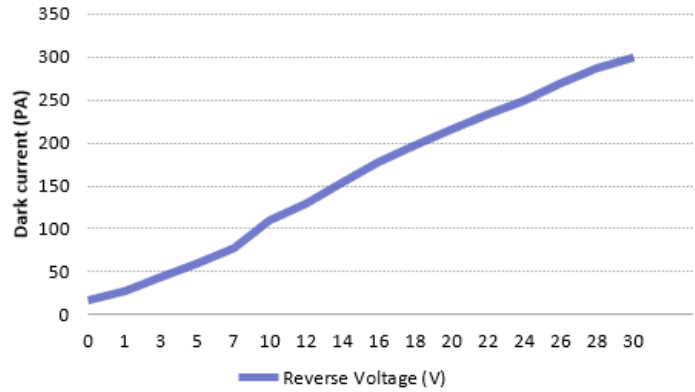
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Number of effective pixels			16			pixel
Active area (each pixel)			1450*900			um
Chip size (total chip)			1560*10040			um
Pixel pitch		Between elements	100			um
Spectral range			190		1100	μA
Photo sensitivity	S _R	940nm		0.60		A/W
		650nm	0.35	0.40		
Dark current	I _D	V _R =10mV		0.14		nA
		V _R =10V		0.24	2	
Rise time	t _R	V _R =10V;λ=850m;R _L =50Ω			100	ns
Tempcoeffi-cient of I _D	T _{CD}			0.18		times/°C
Reverse breakdown voltage	V _{(BR)R}	I _R =10μA E _v =0lx			30	V
Junction Capacitance	C _J	V _R =0V f=1MHz		43		pF
		V _R =10V f=1MHz		7.7		
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		0.625		GΩ
Rsh Temperature Coefficient	TC Rsh			0.18		%/°C
Noise Equivalent Power	NEP	V _R =10V λ=940nm		3×10 ⁻¹⁴		W/Hz ^{1/2}
Specific Detectivity	D*	V _R =10V λ=940nm		5.8×10 ¹³		cm(Hz/W) ^{1/2}

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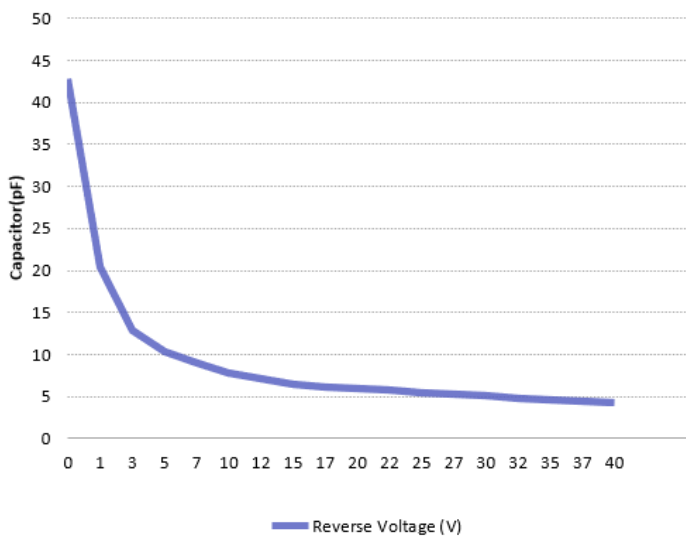
■ Spectral response (M=10)



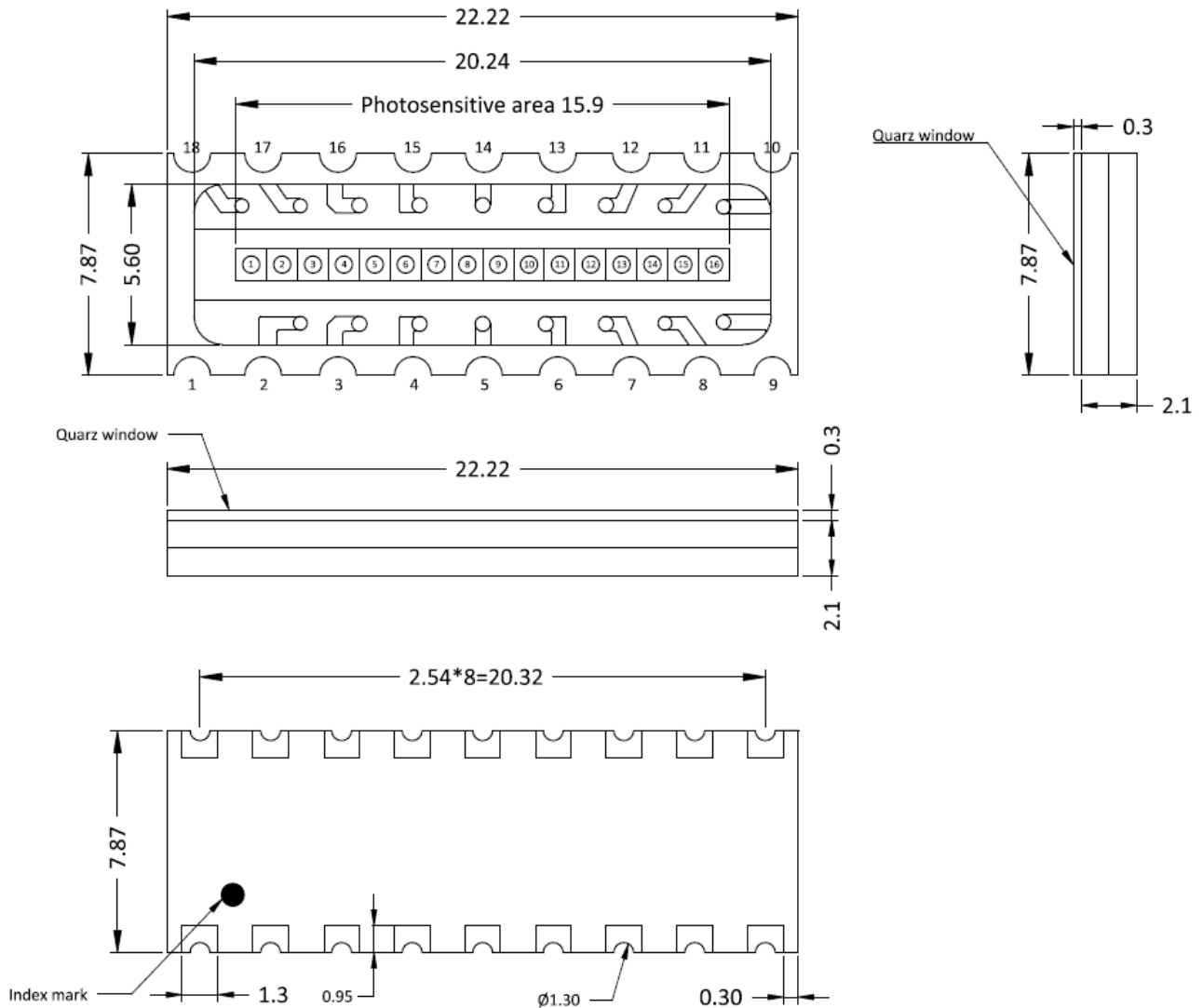
■ Dark current VS. Ubias



■ Breakdown Voltage vs. Temperature (M=10)



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PIN CONNECTION:

PIN No.	PD No.	PIN No.	PD No.	PIN No.	PD No.
1	Cathode	7	(12)	13	(11)
2	(2)	8	(14)	14	(9)
3	(4)	9	(16)	15	(7)
4	(6)	10	Cathode	16	(5)
5	(8)	11	(15)	17	(3)
6	(10)	12	(13)	18	(1)

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