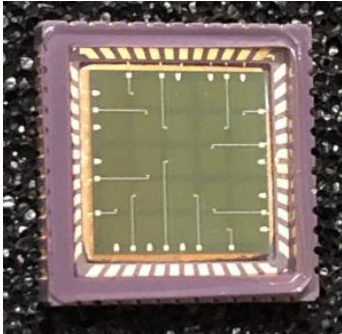


Silicon PIN photodiode

Array (25 elements)



Description

OSA1-25 multichannel array photodetector consist of 25 single Element photodiode laid adjacent to each other forming two 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.

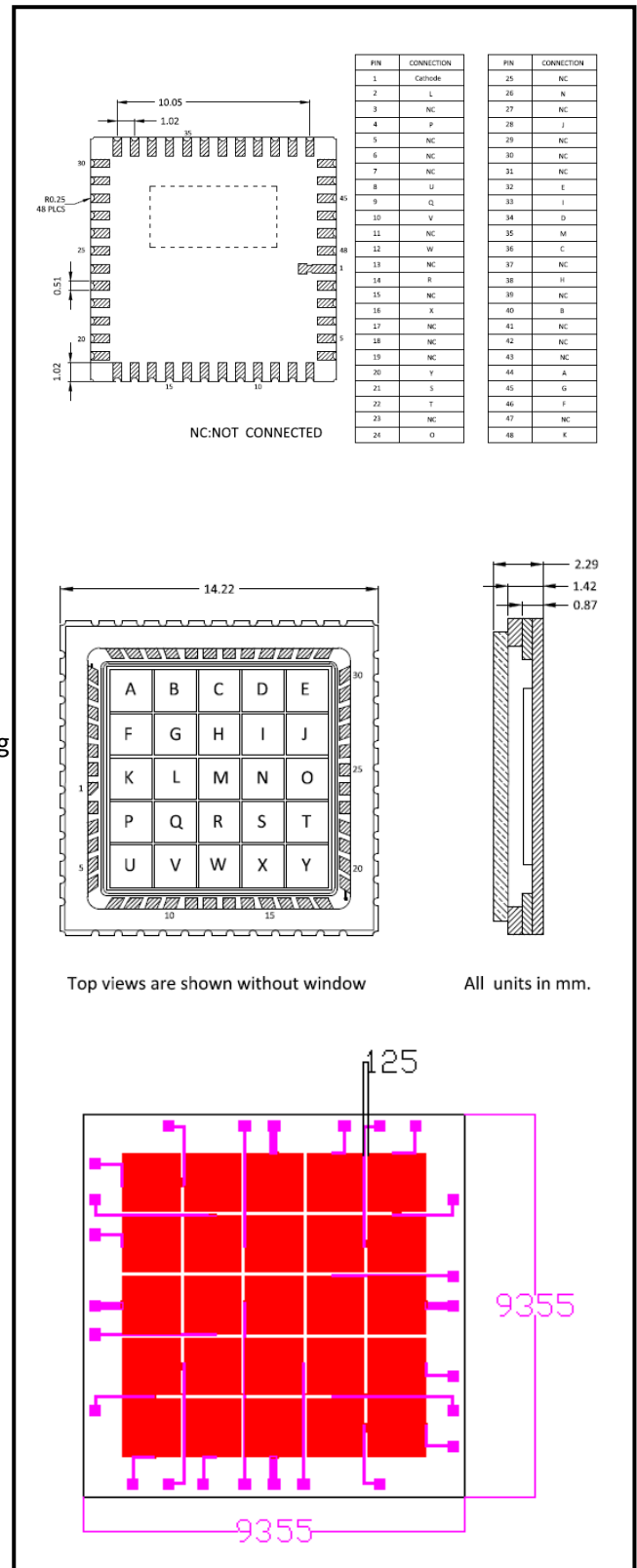
It is optimized for IR wavelength.

Features

- * Low-capacitance high sensitivity
- * 400-1100nm response
- * 25 pixels
- * Assembled in LCC48-package with plane glass window
- * Custom devices available upon request

Applications

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



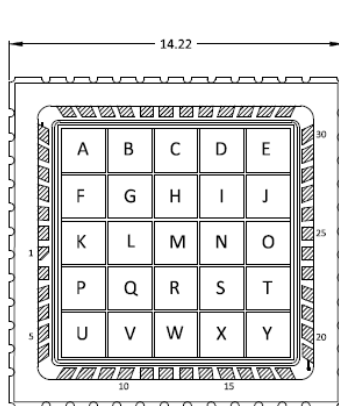
Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice

Absolute Maximum Ratings (Ta=25 °C)

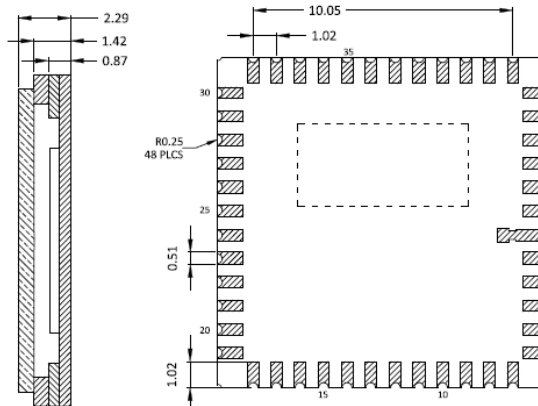


Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Number of effective pixels			16			pixel
Active area (each pixel)			1000*1000			um
Chip size (total chip)			9355*9355			um
Pixel pitch		Between elements	125			um
Spectral range			400		1100	μA
Photo sensitivity	S _R	940nm		0.60		A/W
		650nm	0.35	0.40		
Dark current	I _D	V _R =10mV		0.016		nA
		V _R =10V		0.109	2	
Rise time	t _R	V _R =10V;λ=850m;R _L =50Ω			5	ns
Tempcoeffi-cient of I _D	T _{ClD}			0.18		times/°C
Reverse breakdown voltage	V _{(BR)R}	I _R =10μA E _v =0lx			50	V
Junction Capacitance	C _J	V _R =0V f=1MHz		28		pF
		V _R =10V f=1MHz		124		
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}

PIN LEGS:



Top views are shown without window



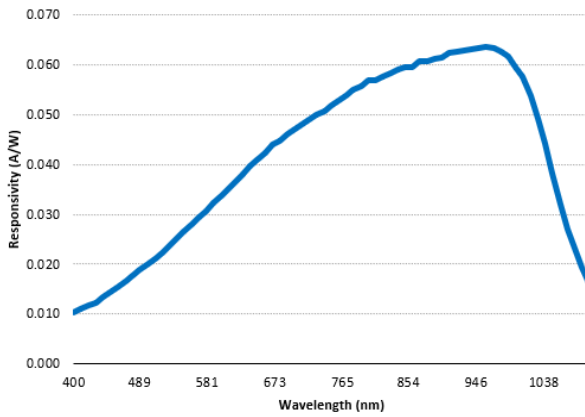
All units in mm.

NC:NOT CONNECTED

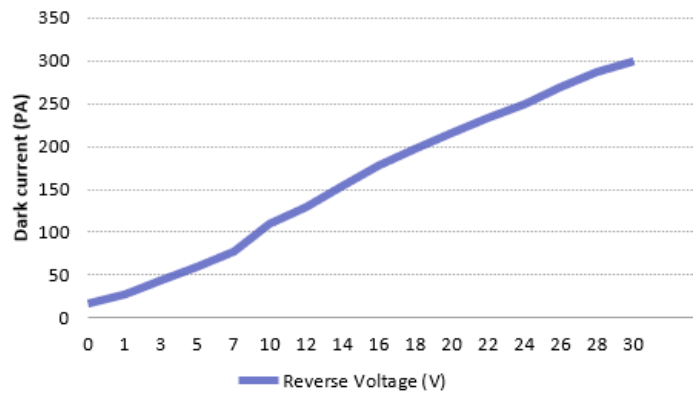
PIN	CONNECTION
1	Cathode
2	L
3	NC
4	P
5	NC
6	NC
7	NC
8	U
9	Q
10	V
11	NC
12	W
13	NC
14	R
15	NC
16	X
17	NC
18	NC
19	NC
20	Y
21	S
22	T
23	NC
24	O

PIN	CONNECTION
25	NC
26	N
27	NC
28	J
29	NC
30	NC
31	NC
32	E
33	I
34	D
35	M
36	C
37	NC
38	H
39	NC
40	B
41	NC
42	NC
43	NC
44	A
45	G
46	F
47	NC
48	K

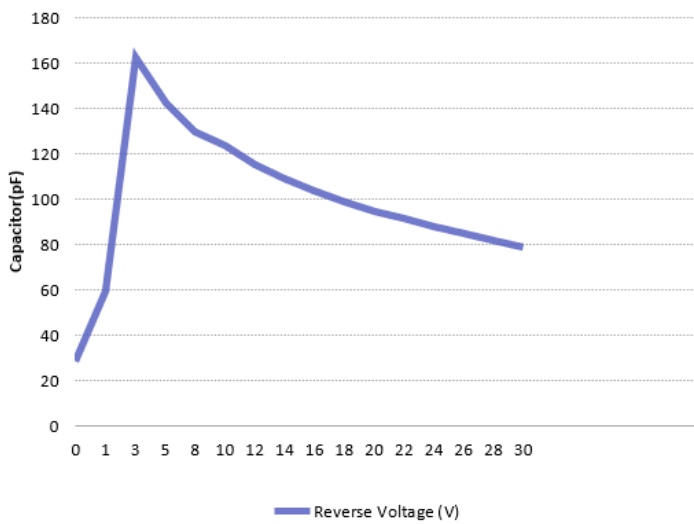
■ Spectral response (M=10)



■ Dark current VS.Ubias



■ Breakdown Voltage vs. Capacitor



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