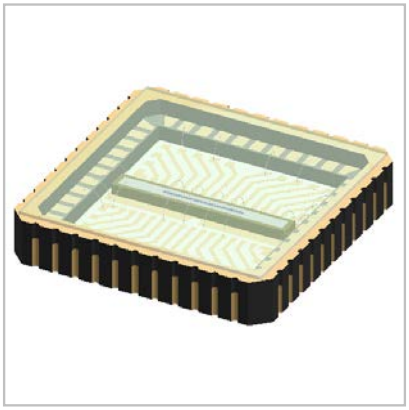
Si-APD-Array
SAH1L08-Series

Description

The SAH1L08-Series is a linear Si-APD-array with 8 elements in a LCC44 package with protective window. Responsivity is optimised for 850 nm.



Features

- 8 element APD array
- Very narrow gap
- High quantum efficiency
- Low noise, high speed
- 620 µm x 190 µm active area per element
- Wide operating temperature range
- Low crosstalk

Applications

- Rangefinding
- LIDAR ACC
- Laser scanner

05/19 / V02 / IF / lc-apd/sah1l08-series

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Electro-Optical Characteristics, Ta= 25°C

Parameter	Condition	Min	Typ	Max	Unit
# of elements			8		
Active area			620 x 190		µm
Gap			40		µm
Dark current I_d	M= 100, λ= 905 nm, per element		4	10	nA
Capacitance, C	M= 100, per element		3		pF
Responsivity, R_I	M= 100, λ= 905 nm	40	50		A/W
Rise time, t_r	M= 100, λ= 905 nm, R_L= 50 Ohms		1000		psec
Breakdown voltage, V_{BR}	I_R= 10 µA	80	150	200	V
Temperature coefficient	I_R= 10 µA		0.44		V/K
Crosstalk	λ= 905 nm		50		dB
Dark current uniformity	M= 100		±5	±20	%
Photo current uniformity	M= 100, λ= 905 nm		±5	±20	%

Absolute Maximum Ratings

Parameter		Min	Max	Unit
Storage temperature		-55	100	°C
Operating temperature		-40	85	
Soldering (15s)			260	
Reverse current (Peak)	CW		0.200	mA
	1s Pulse		1	
Forward current (Avg)	CW		10	
	1s Pulse		50	
Max total power dissipation			60	mW

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Curves

Fig. 1: Spectral Response

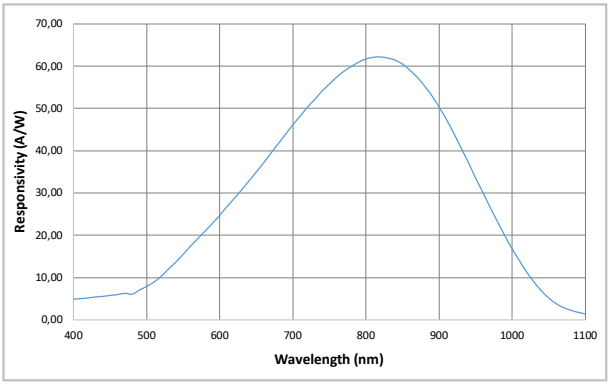


Fig. 2: Quantum Efficiency

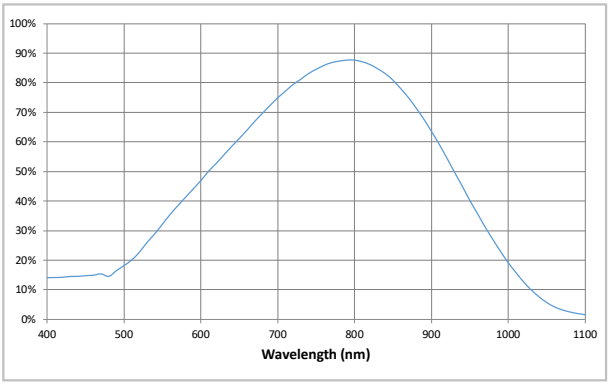


Fig. 3: Multiplication

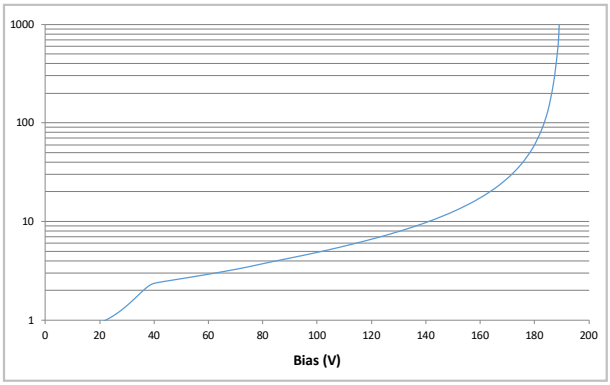


Fig. 4: Current vs. Reverse Voltage

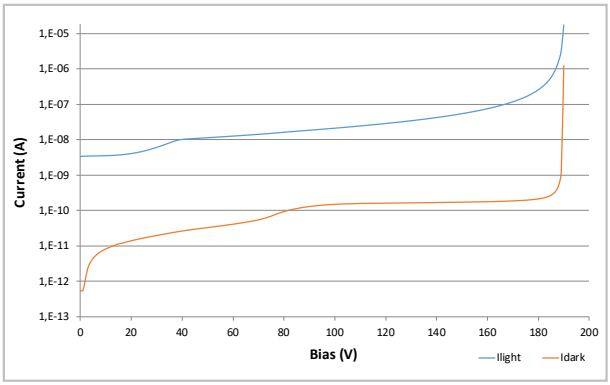


Fig. 5: Capacitance vs. Reverse Voltage

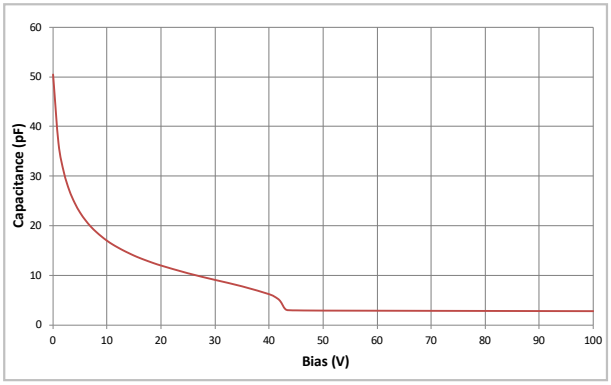
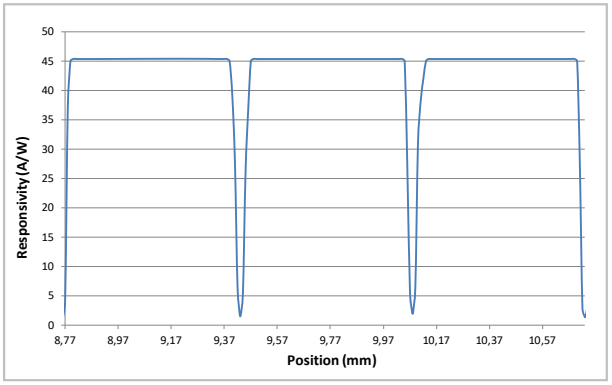


Fig. 6: Spot Scan



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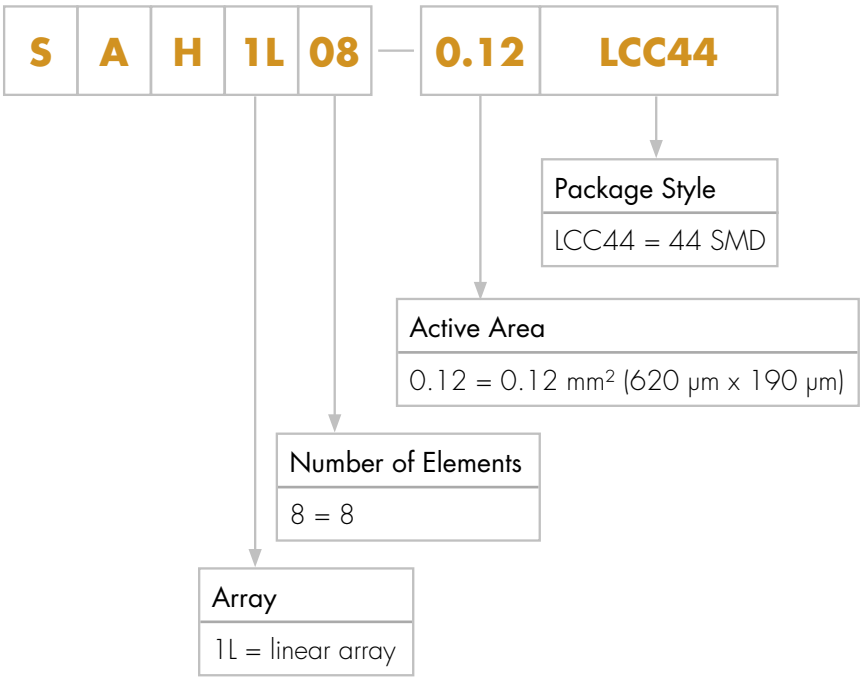
Product Number Designation



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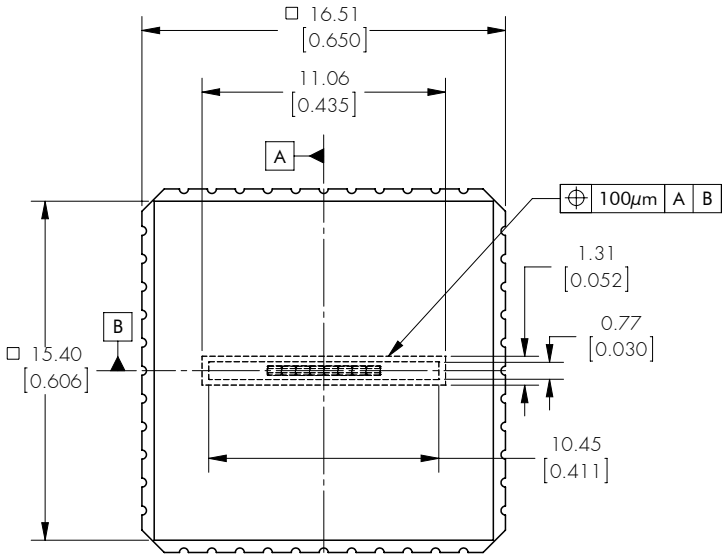
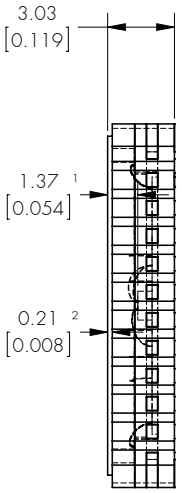
Package Drawings



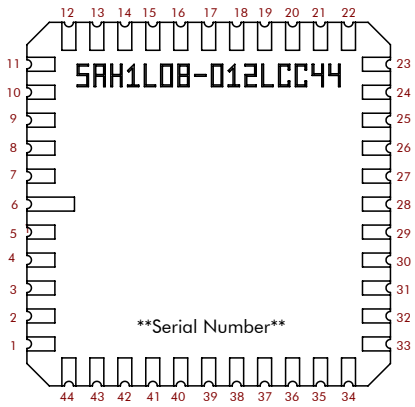
TOP VIEW



SIDE VIEW

[1] Distance from top of active area to top of device.

[2] Window thickness.



BOTTOM VIEW

PAD 43: ELEMENT 1
PAD 14: ELEMENT 2
PAD 41: ELEMENT 3
PAD 16: ELEMENT 4
PAD 38: ELEMENT 5
PAD 19: ELEMENT 6
PAD 36: ELEMENT 7
PAD 21: ELEMENT 8
PAD 8,30: GUARD RING
PAD 27,29,5,7: ANODE
PAD 1-4,6,9-13,15,17,18,20,22, 23-26,28,31-35,37,39,40,42,44: NC

Product Changes

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Ordering Information

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