

Si-APD-Array SAH1L12LCC44-Series

Description

The SAH1L12-Series is a linear Si-APD-array with 12 elements in a LCC44 package with protective window. Responsivity is optimised for 850 nm.



Features

- 12 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

Electro-Optical Characteristics, Ta= 25 °C

Parameter	Condition	Min	Typ	Max	Unit
# of elements			12		
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	
Operating temperature	-40	85	°C
Soldering (15s)		260	
Reverse current (Peak)	CW	0.200	
	1s Pulse	1	
Forward current (Avg)	CW	10	mA
	1s Pulse	50	
Max total power dissipation		60	mW

Curves

Fig. 1: Spectral Response

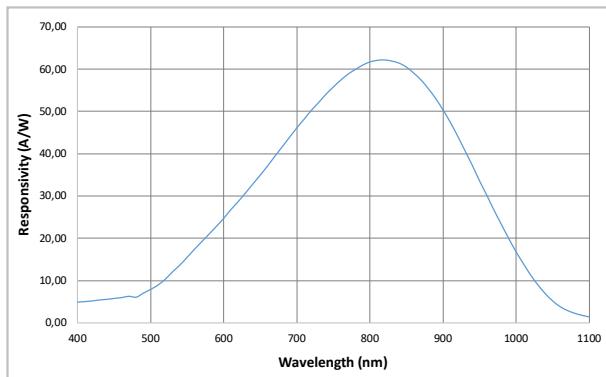


Fig. 2: Quantum Efficiency

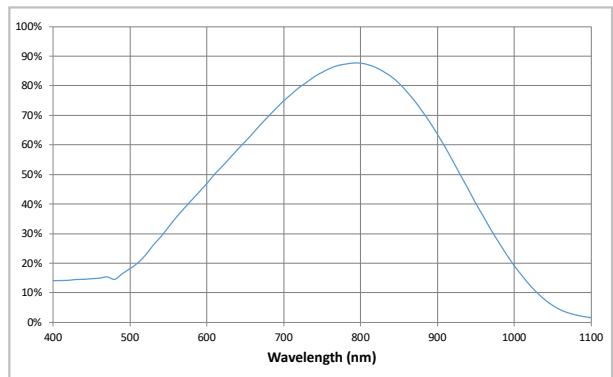


Fig. 3: Multiplication

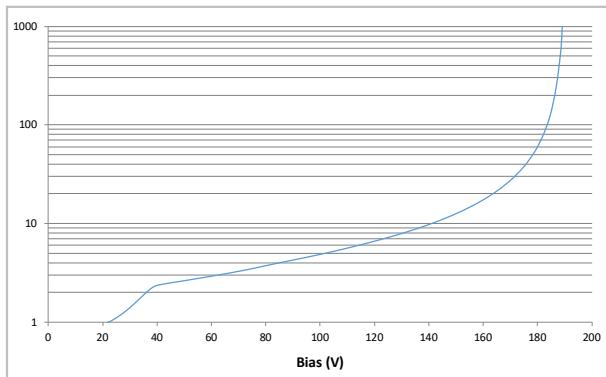


Fig. 4: Current vs. Reverse Voltage

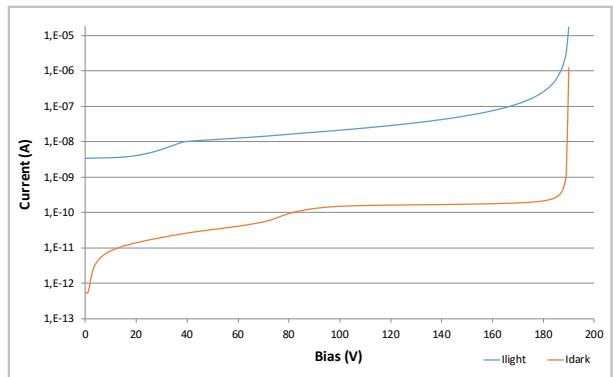


Fig. 5: Capacitance vs. Reverse Voltage

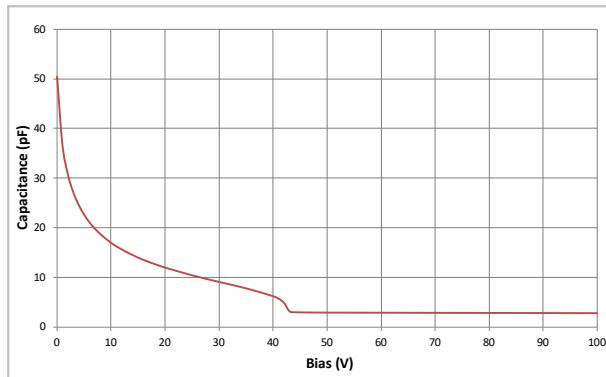
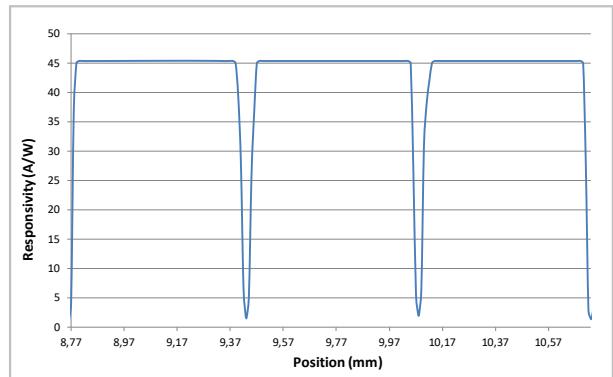
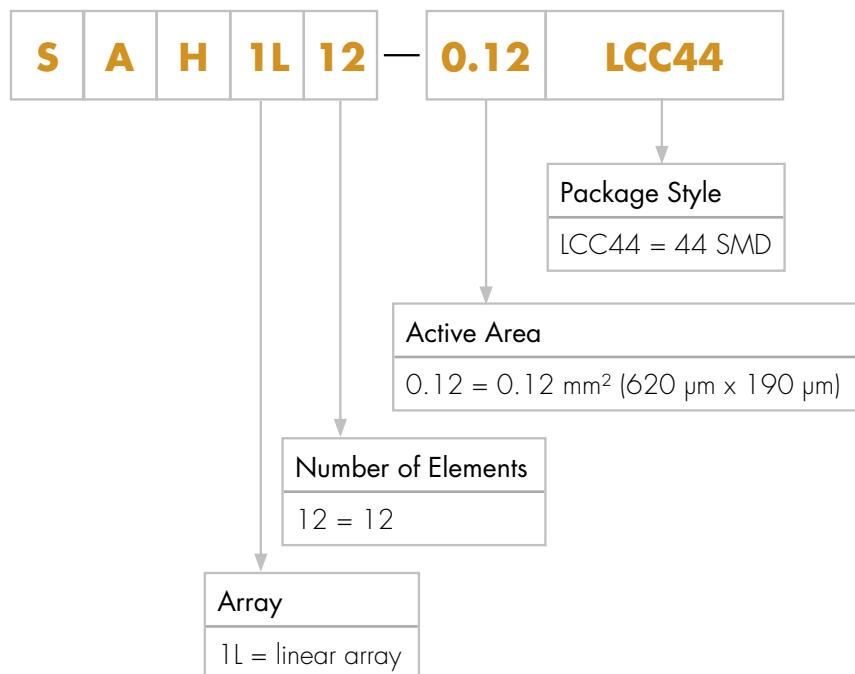


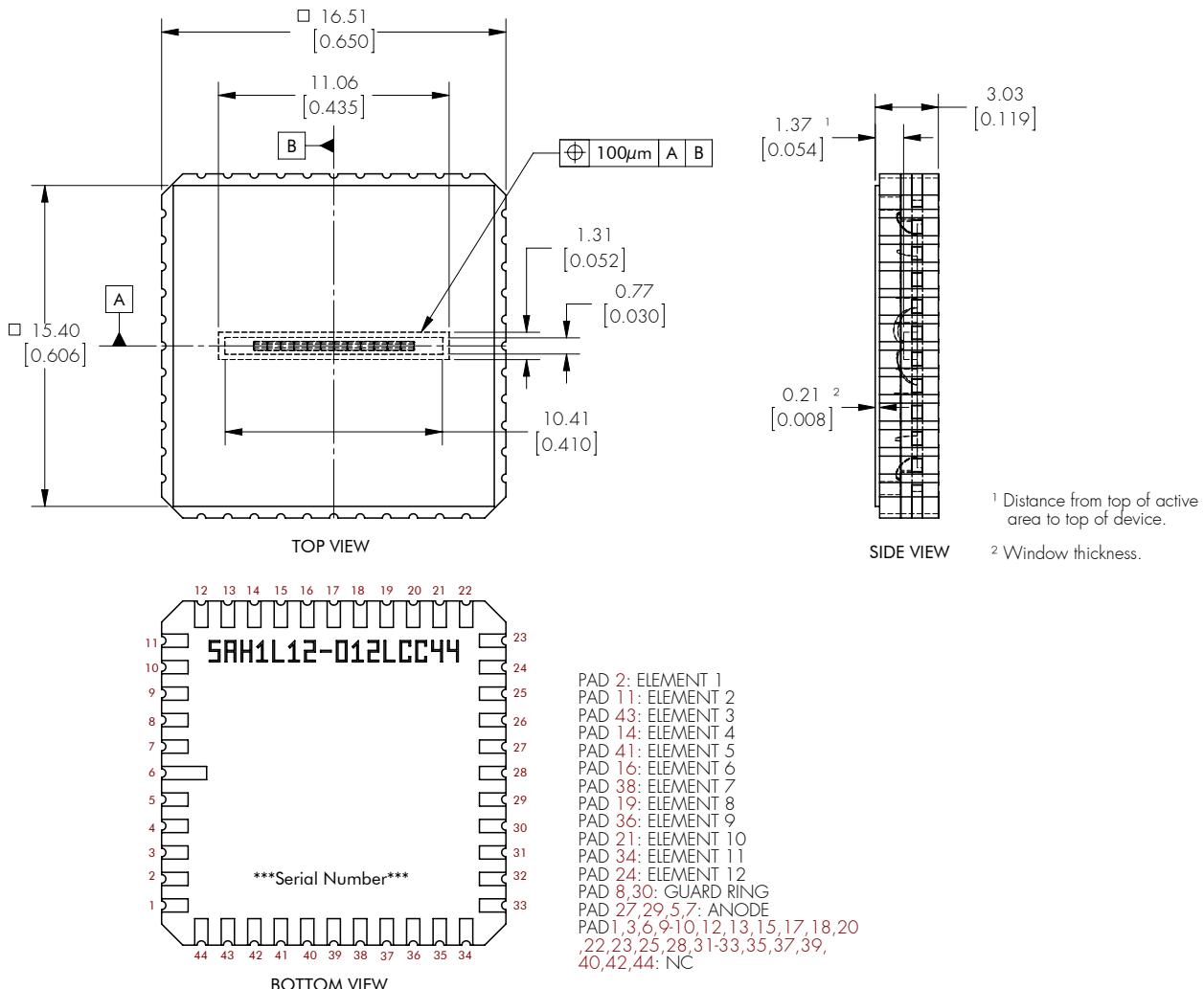
Fig. 6: Spot Scan



Product Number Designation



Package Drawings



Product Changes

LASER COMPONENTS reserves the right to make changes to the product(s) or information contained herein without notice.

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Ordering Information

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website at www.lasercomponents.com
Custom designed products are available on request.