

## Si-APD-Array SAH1L08-Series

### Description

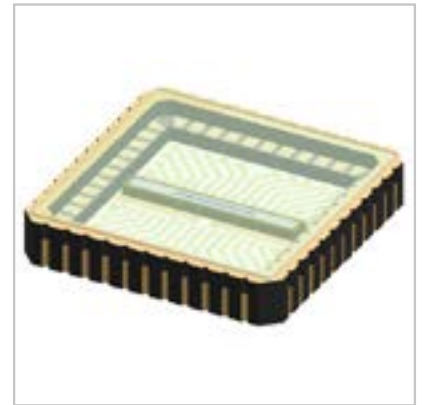
The SAH1L08-Series is a linear Si-APD-array with 8 elements in a LCC44 package with protective window. Responsivity is optimised for 850 nm.

### Features

- 8 element APD array
- Very narrow gap
- High quantum efficiency
- Low noise, high speed
- 620  $\mu\text{m}$  x 190  $\mu\text{m}$  active area per element
- Wide operating temperature range
- Low crosstalk

### Applications

- Rangefinding
- LIDAR ACC
- Laser scanner

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### Electro-Optical Characteristics, $T_a = 25^\circ\text{C}$

Parameter	Condition	Min	Typ	Max	Unit
# of elements		8			
Active area		620 × 190			μm
Gap		40			μm
Dark current $I_d$	$M = 100$ , $\lambda = 905$ nm, per element		4	10	nA
Capacitance, C	$M = 100$ , per element		3		pF
Responsivity, $R_l$	$M = 100$ , $\lambda = 905$ nm	40	50		A/W
Rise time, $t_r$	$M = 100$ , $\lambda = 905$ 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	$\lambda = 905$ nm		50		dB
Dark current uniformity	$M = 100$		±5	±20	%
Photo current uniformity	$M = 100$ , $\lambda = 905$ 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
	1 s Pulse		1	
Forward current (Avg)	CW		10	
	1 s Pulse		50	
Max total power dissipation			60	mW

Curves

Fig. 1: Spectral Response

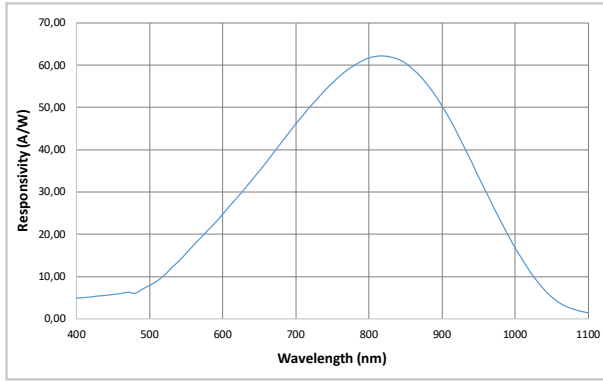


Fig. 2: Quantum Efficiency

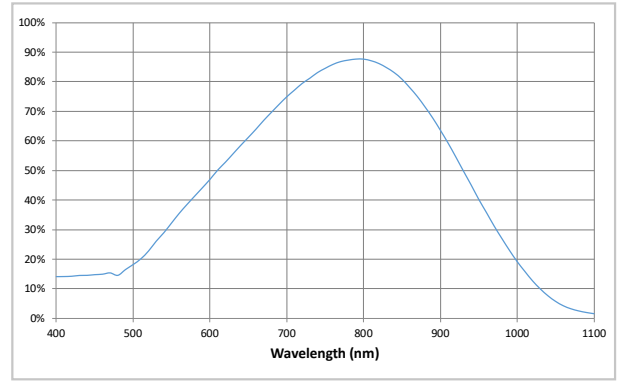


Fig. 3: Multiplication

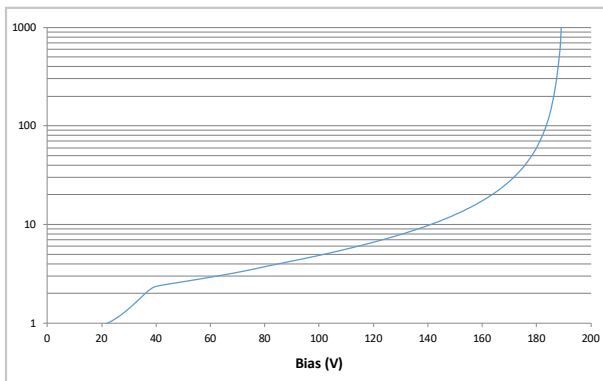


Fig. 4: Current vs. Reverse Voltage

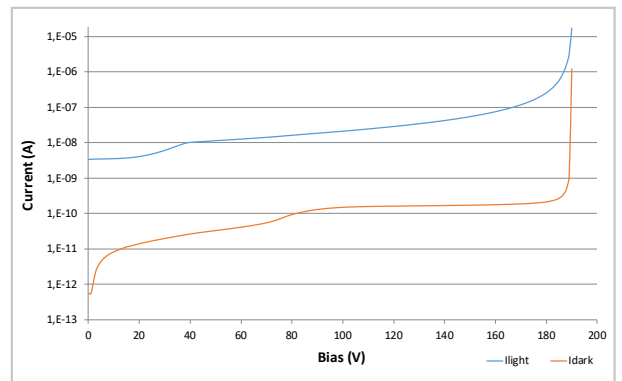


Fig. 5: Capacitance vs. Reverse Voltage

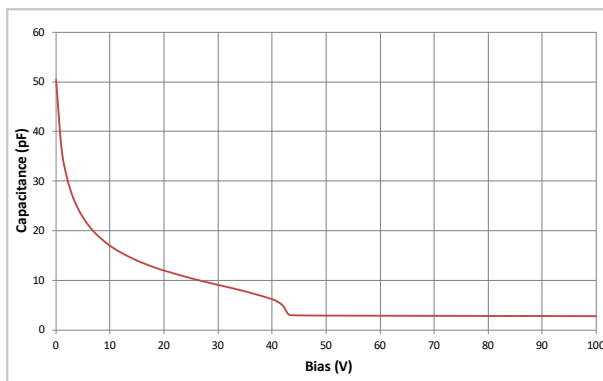
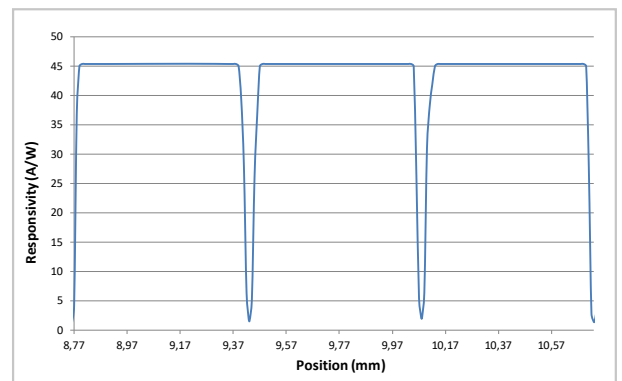
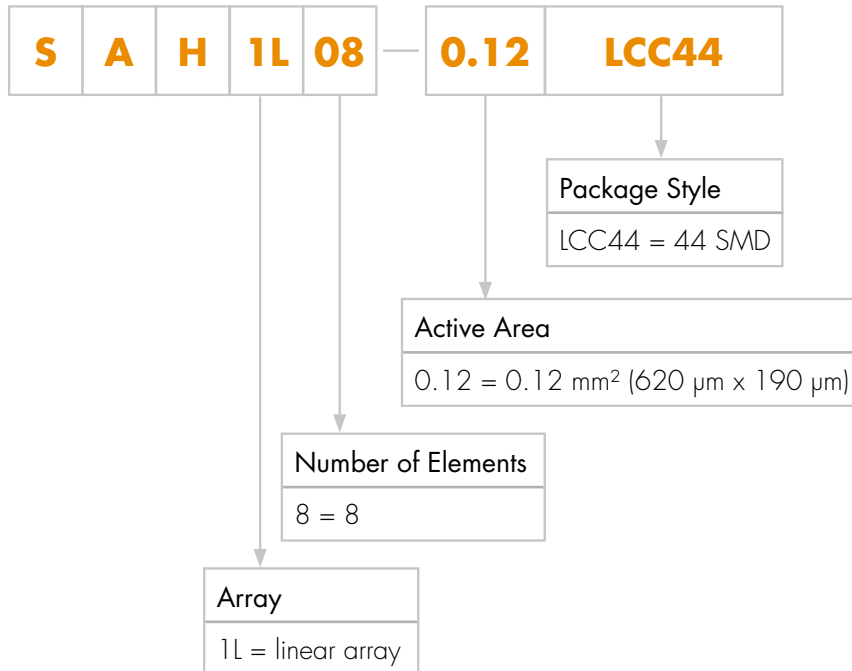


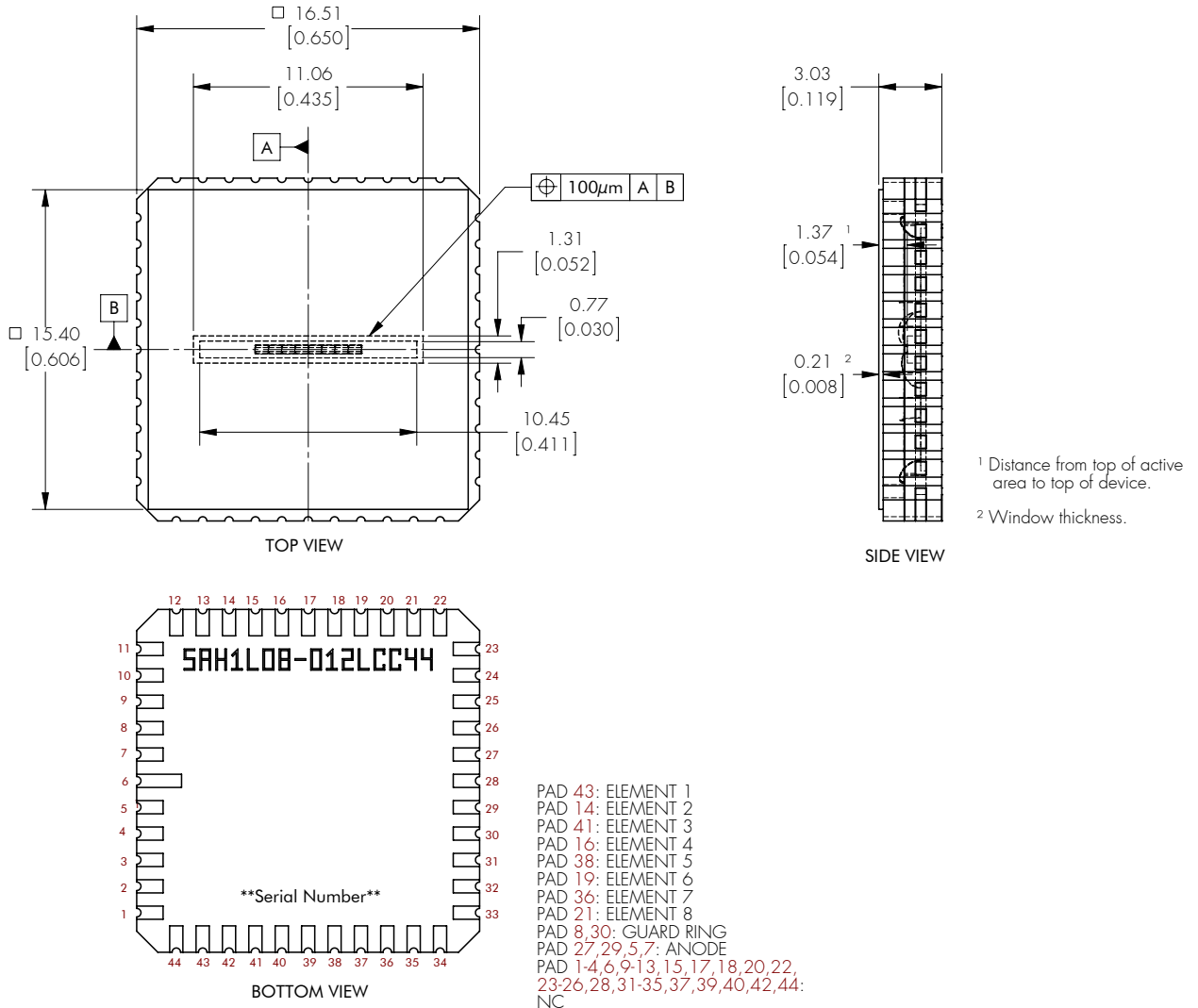
Fig. 6: Spot Scan



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](http://www.lasercomponents.com)

Custom designed products are available on request.