

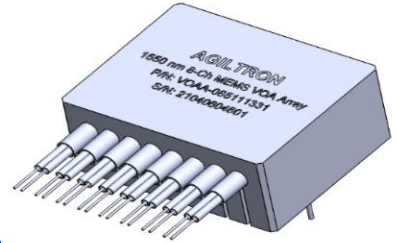
# 8 Channel MEMS Variable Attenuation Array

(Compact Size)

US patent 8,666,218 and other patents pending

## Product Description

The **MEMS** series VOA is based on a micro-electro-mechanical mechanism featuring compact design, simple construction, easy direct drive, and excellent optical performance. The **MEMS** series VOA is compliant with the Telcordia 1209 and 1221 reliability standards. The VOA is driven by directly applying an electrical voltage.



## Performance Specifications

2~8 Channel MEMS VOA array	Specification	Unit
Operating Wavelength	850~1310, 1260~1620	nm
Insertion Loss (without connector)	0.6 typ., 0.8 max.	dB
Attenuation Dynamic Range	55 min.	dB
Polarization Dependent Loss (SM, 0~20dB)	0.1 max.	dB
Extinction Ratio (PM)	18 min, 22 typ.	dB
Return Loss	SM, PM: 50 min.	dB
	MM: 35 min.	dB
Wavelength Dependent Loss (40 nm band, 0~20dB)	0.45 typ., 0.8 max.	dB
Polarization Mode Dispersion	≤ 0.05	ps
Optical Cross Talk	≥ 65	dB
Attenuation Resolution	Continuous	dB
Response Time (0~20dB)	5 typ., 10 max.	ms
Max. Power Consumption	≤ 170 <sup>[1]</sup>	mW/Ch
Electric Power Input (DC)	5	V
Electrical Control Signal	0 ~ 5	V
Operating Temperature	-20 ~ +75	°C
Storage Temperature	-40 ~ +85	°C
Optical Power Handling (CW)	300 typ., 500 max.	mW/ch
Relative Humidity Range	0 ~ 85	%

1. At the maximum attenuation 55 dB, typical 40 mW at 30 dB.

## Features

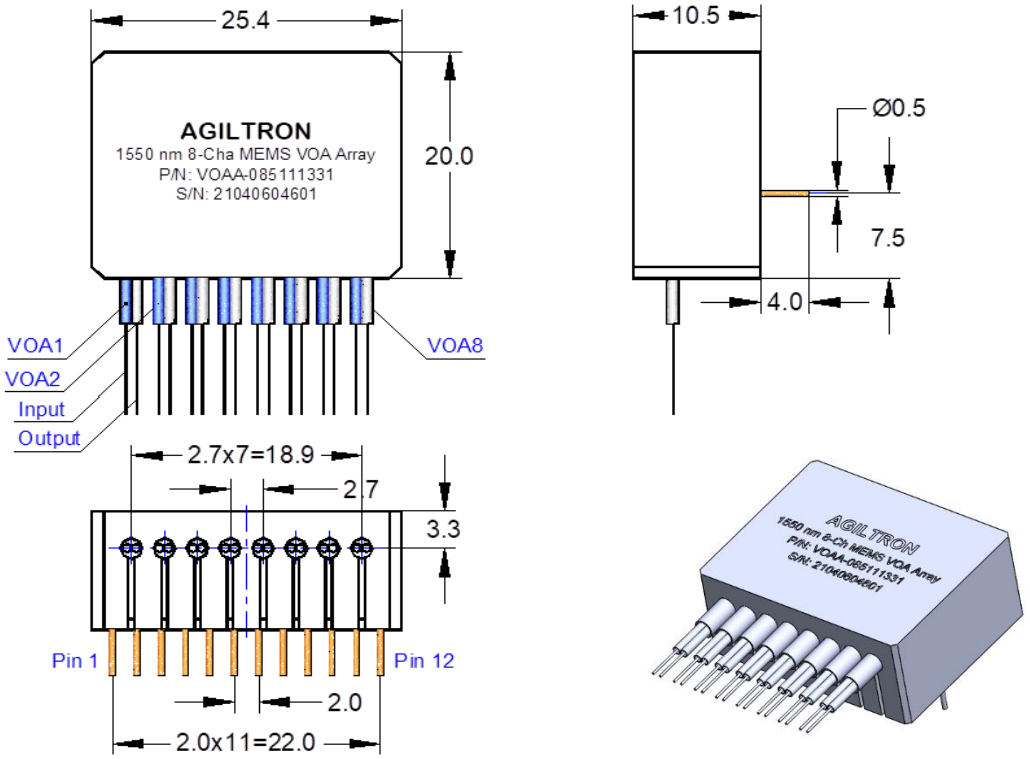
- Low Loss
- High Reliability
- Compact

## Applications

- Gain Control
- Power Equalizer

# 8 Channel MEMS Variable Attenuation Array (Compact Size)

## Dimensions For Package 5 (Unit: mm)



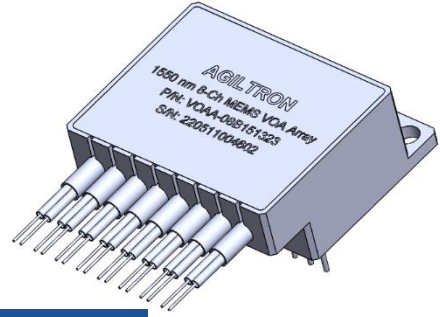
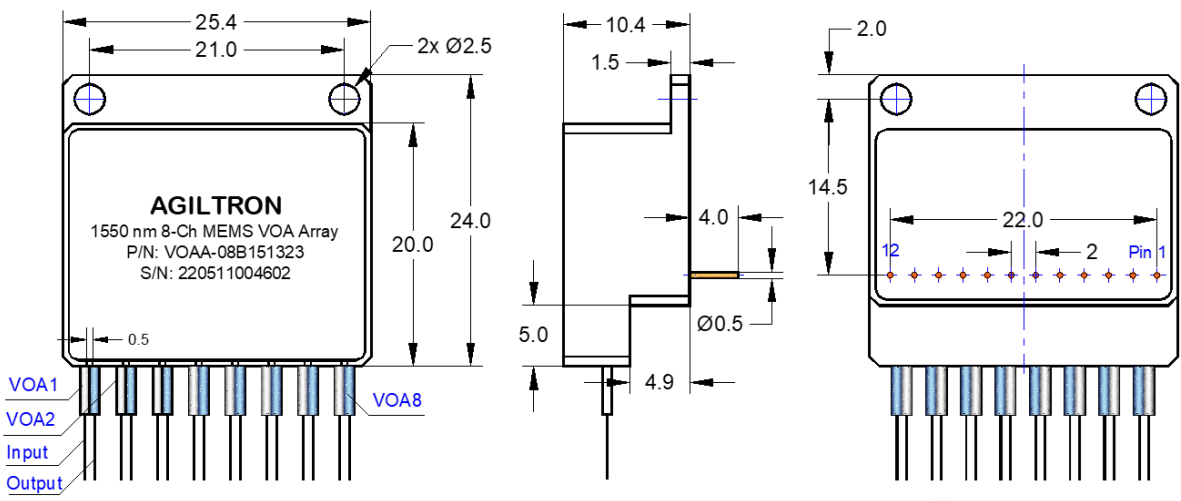
\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

## Driving Instruction

Pin 1	VOA 1 (0~5V)	Pin 7	VOA 5 (0~5V)
Pin 2	VOA 2 (0~5V)	Pin 8	VOA 6 (0~5V)
Pin 3	VOA 3 (0~5V)	Pin 9	VOA 7 (0~5V)
Pin 4	VOA 4 (0~5V)	Pin 10	VOA 8 (0~5V)
Pin 5	GND	Pin 11	GND
Pin 6	GND	Pin 12	5V power supply

# 8 Channel MEMS Variable Attenuation Array (Compact Size)

## Dimensions For Package 4 (Unit: mm)



## Driving Instruction

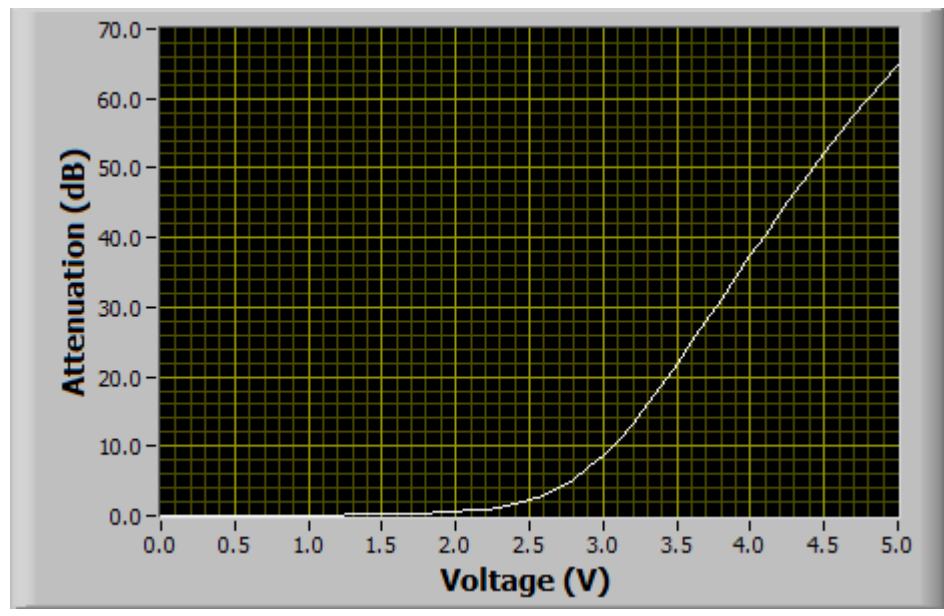
Pin 1	VOA 1 (0~5V)	Pin 7	VOA 5 (0~5V)
Pin 2	VOA 2 (0~5V)	Pin 8	VOA 6 (0~5V)
Pin 3	VOA 3 (0~5V)	Pin 9	VOA 7 (0~5V)
Pin 4	VOA 4 (0~5V)	Pin 10	VOA 8 (0~5V)
Pin 5	GND	Pin 11	GND
Pin 6	GND	Pin 12	5V power supply

# 8 Channel MEMS Variable Attenuation Array

(Compact Size)

## VOA array attenuation curve

8-Channel MEMS VOA array typical attenuation curve



## Ordering Information

VOAA-	Type	Wavelength	Off State	Package	Fiber Type	Fiber Length	Connector	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	8-ch =08 7-ch =07 6-ch =06 5-ch =05 4-ch =04 3-ch =03 2-ch =02	1060=1 C+L=2 780=7 850=8 850~1310= A 1260~1620= B Special = 0	Transparent=1 Opaque = 2 Special=0	Standard=5 Special=0	SMF28 =1 HI1060 =2 HI780 =3 MM50/125=5 MM62.5/125=6 PM1550/250=B PM1310/250=D PM980/250=E PM850/250=F Special = 0	Bare fiber=1 900 μm tube=3 Special = 0	0.25 m= 1 0.5 m = 2 1.0 m = 3 Special =0	None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Duplex LC=8 Special=0