

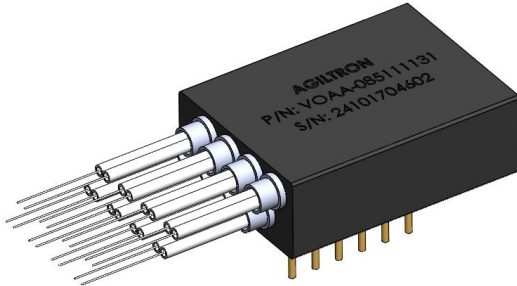
Ultra-Mini MEMS Variable Attenuation Array

(8 channels, 0-5V, 780-2640nm, 40dB attenuation, SM, MM, PM)



DATASHEET

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Features

- High Stability
- Low Cost
- High Repeatability
- Low Power Consumption
- Low Drift
- Compact Size

Applications

- Laboratory Uses
- Testing
- Instrumentation

This series of MEMS Variable Attenuator Arrays boasts an ultra-miniature design, offering a 0-5V drive and low power consumption. It delivers excellent repeatability and outstanding optical performance. These arrays are fully compliant with the Telcordia 1209 and 1221 reliability standards, ensuring robust and reliable operation. The design incorporates pins for mounting, providing an efficient and secure installation method.

Specifications

Parameter	Min	Typical	Max	Unit
Operation Wavelength	850-1310, 1260~1620			nm
Insertion Loss (Without Connector)		0.6	1.0 [3]	dB
Attenuation Dynamic Range	40		55	dB
Polarization Dependent Loss (SM, 0~15dB)		0.1	0.2	dB
Repeatability (0-60 °C)		0.3	0.5	dB
Extinction Ratio (PM)	18	22		dB
Return Loss	SM, PM	50		dB
	Multimode	35		
Wavelength Dependent Loss [1]		0.45	0.8	dB
Response Time (0~20 dB)		1	3	ms
Optical Power Handling (CW)		300	400	mW
Polarization Mode Dispersion		≤ 0.05		ps
Optical Crosstalk		≥ 65		dB
Attenuation Resolution		Continuous		
Max. Power Consumption		≤ 10 [2]		mW
Electric Power Input		0 ~ 5		VDC
Electrical Control Signal [4]	-20		+75	°C
Storage Temperature	-40		+85	°C
Relative Humidity Range		0 ~ 85		%

Notes:

[1]. Within 40nm band, 0~20dB.

[2]. At the maximum attenuation 50dB for all 8 channels.

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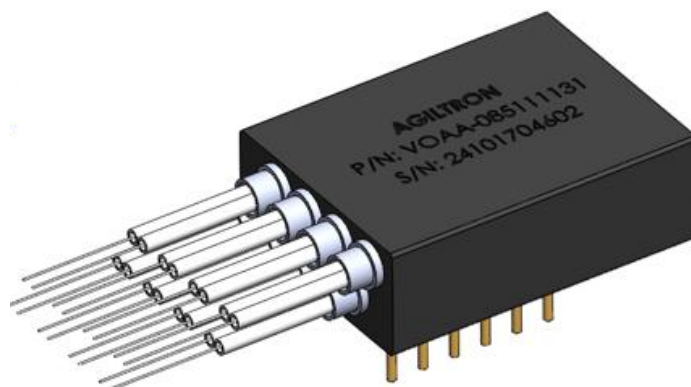
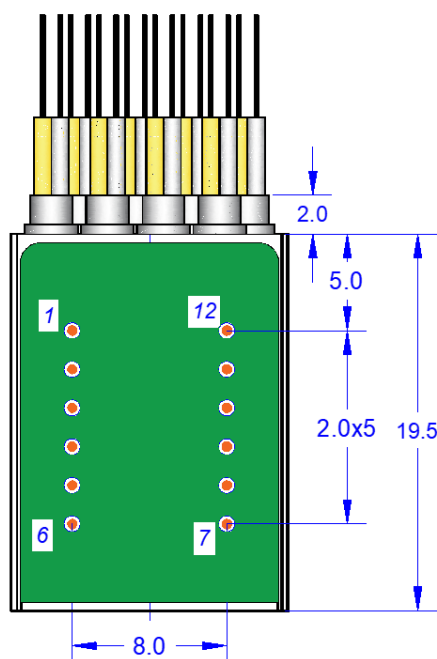
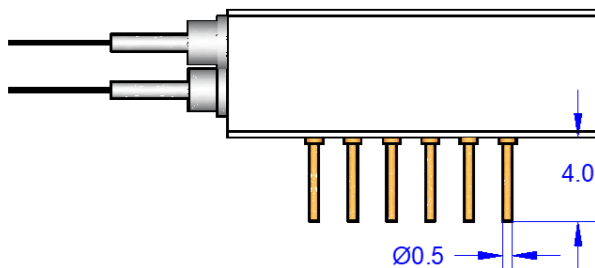
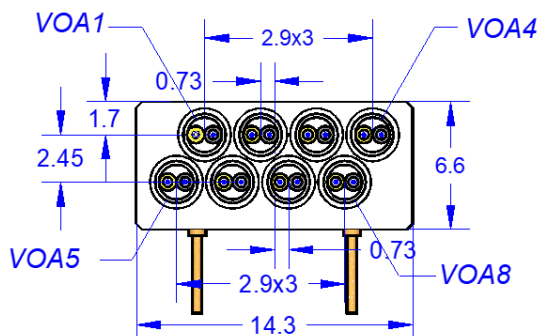
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Mechanical Dimensions (mm)



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

Electrical/Computer Connection

Pin #	Control VOA #	Control Voltage
1	VOA 1	0 ~ 5 VDC
2	VOA 2	
3	VOA 3	
4	VOA 4	
5	VOA 5	
6	VOA 6	

Pin #	Control VOA #	Control Voltage
7	VOA 7	0 ~ 5 VDC
8	VOA 8	
9	0V	
10		
11	N/A	
12		

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Ordering Information (Part Number)

	☐	☐	☐	☐	☐	☐	☐	☐
Prefix	Type	Wavelength	Off Stage	Package	Fiber Type	Fiber Cover	Fiber Length	Connector ^[1]
VOMA-	4-ch = 04 5-ch = 05 6-ch = 06 7-ch = 07 8-ch = 08	1060 = 1 C + L = 2 1310 = 3 1550 = 5 780 = 7 850 = 8 850/1310 = A 1260~1620 = B Special = 0	Transparent = 1 Opaque = 2 Special = 0	Special = 0	SMF-28 = 1 HI1060 = 2 HI780 = 3 MM 50/125 = 5 MM 62.5/125 = 6 PM1550 = B PM1310 = D PM980 = E PM850 = F Special = 0	Bare fiber = 1 900 um tube = 3 Special = 0	0.25m = 1 0.5m = 2 1.0m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 Duplex LC/PC = 8 MTP = 9 LC/APC = A LC/UPC = U Special = 0

Notes:

*Only bare fiber is available due to the compact size. Adding a connector to bare fiber increases the risk of damage and costs.

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.