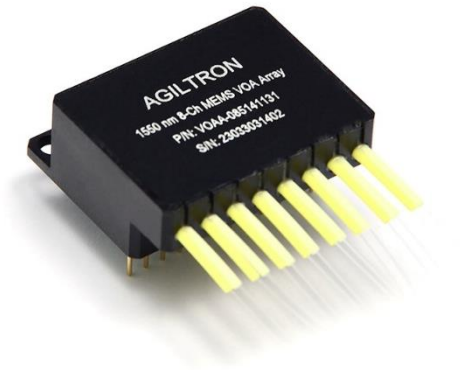
8 Channel MEMS Variable Attenuation Array

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

(Protected by U.S. patent 8,666,218 and other patents pending)

DATASHEET

BUY NOW



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.

Features

- Low Loss
- High Reliability
- Low Power Consumption
- Compact

Applications

- Gain Control
- Power Equalizer

Specifications

Parameter		Min	Typical	Max	Unit
Operating Wavelength			850~1310, 1260~1620		nm
Insertion Loss (without connector)			0.6	0.8	dB
Attenuation Dynamic Range		40		55	dB
Repeatability (0-60 °C)			0.3	0.5	dB
Polarization Dependent Loss (SM, 0~15dB)			0.1	0.2	dB
Extinction Ratio (PM)		18	22		dB
Return Loss	SM, PM:	50			dB
	MM:	35			dB
Wavelength Dependent Loss [1]			0.45	0.8	dB
Response Time (0~20dB)			1	3	ms
Optical Power Handling (CW)			300	400	mW/ch
Polarization Mode Dispersion			≤ 0.05		ps
Optical Cross Talk			≥ 65		dB
Attenuation Resolution			Continuous		dB
Max. Power Consumption			≤ 10 [2]		mW
Electric Power Input (DC)			5		V
Electrical Control Signal			0 ~ 5		V
Operating Temperature			-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

Rev 05/10/24

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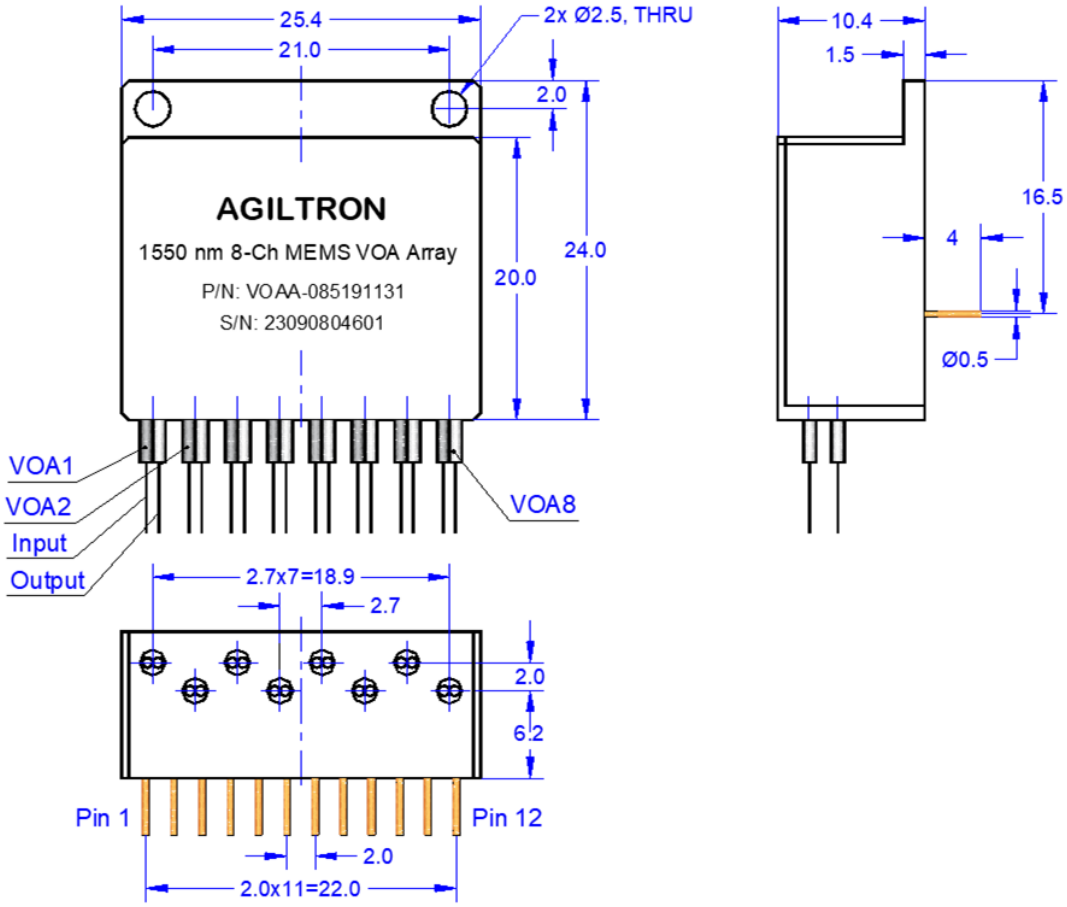
Dimensions (Unit: mm)

Package 8



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

Driving Instruction

Package 8

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

NOTE: The control signal current is less than 0.2mA

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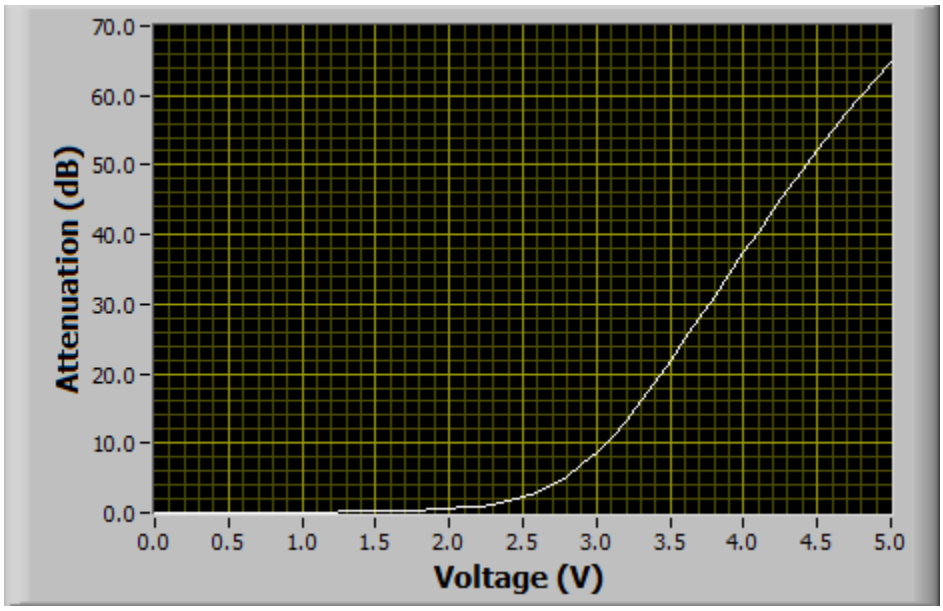
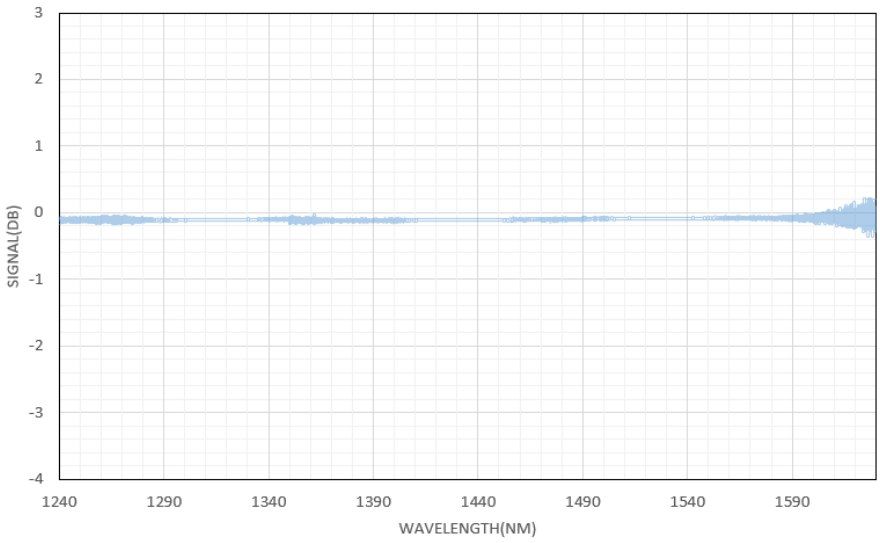
VOA array typical attenuation curve

8-Channel MEMS VOA array typical attenuation curve



Typical Insertion Loss vs Wavelength (1240-1630nm)



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Ordering Information

	☐☐	☐	☐	8	☐	☐	☐	☐
Prefix	**Type**	**Wavelength**	**Off State**	**Package**	**Fiber Type**	**Fiber Cover**	**Fiber Length**	**Connector**
VOAA-	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 1310 = 3 1550 = 5 780 = 7 850 = 8 850~1310 = A 1260~1620 = B Special = 0	Transparent = 1 Opaque = 2 Special = 0		SMF28 = 1 HI1060 = 2 HI780 = 3 MM50/125 = 5 MM62.5/125 = 6 PM1550 = B PM1310 = D PM980 = E PM850 = F Special = 0	Bare fiber = 1 0.9mm 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/PC = 7 Duplex LC/PC = 8 LC/APC = A LC/UPC = U Special = 0

Note:

"**transparent**" means no attenuation without applying a controlling voltage-off state, the "**opaque**" means the highest attenuation without applying a controlling voltage.