

Broadband MEMS Variable Optical Attenuator (VOA)

Product Description

The MM Series VOA is based on a proprietary micro-electro-mechanical mechanism featuring ultra-high reliability, compact design, fiber to fiber coupling technology, simple construction, easy drive, and excellent optical performance. This series VOA is specially designed for broad wavelength operation without any optical coating. The MM series VOA is available in either normally-transparent or normally-dark configurations.

PN: SMOA-220101322-WYT03



Performance Specifications

MM Series VOA	Min	Typical	Max	Unit
Operation Wavelength	400	1310	2000	nm
Insertion Loss ^[1]		0.8	1.2	dB
Polarization Dependent Loss ^[2]		0.3	0.45	dB
Temperature Dependent Loss ^[3]		0.1	0.3	dB
Attenuation Range @2.5-5 V ^[4]		40		dB
Repeatability ^[1]		0.1		dB
Maximum drive voltage			5	V
Discontinuous jumps			<1	dB
Monotonicity			<0.2	dB
Polarization Mode Dispersion ^[2]		0.1	0.5	ps
Return Loss	40			dB
Response Time		2.5	5	ms
Operating Temperature	-5		75	°C
Electrical Power Consumption		90	130	mW
Optical Power Handling		100	200	mW
Storage Temperature	-40		85	°C
Reliability	Telcordia 1209 and 1221			
Fiber Type	Corning SMF28			
Fiber Length	0.5 m for input and output			
Fiber Cable	900 μm black loose tube jacket at both input and output ports			
Connector Type	FC/PC on both input and output ports			
Package Dimension		Φ6.0x30		mm

Notes:

- [1] Without connector and at room temperature with 1310 nm laser source.
- [2] At attenuation of 20dB or less with 1310 nm laser source.
- [3] At 0 attenuation and at whole temperature range for 1310 nm laser source.
- [4] This attenuation is measured under control voltage between 2.5-5 V.

Features

- Broad-Band
- Low Cost
- High Reliability
- Low IL, PDL, WDL and TDL
- Direct Voltage Drive
- Low Power Consumption

Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation



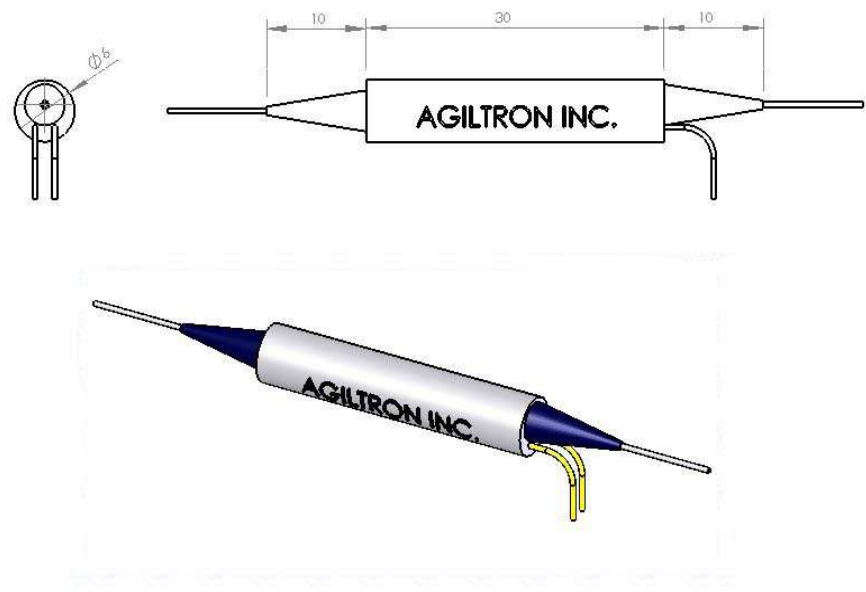
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Electrical Configurations

NOTES

- Pin1 and Pin2 are for control voltage without polarity.
- Do not apply more than 5.2V.

Package Type 1 (Standard)



Ordering Information

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	Type	Wavelength	Off State	Package Type	Fiber Type	Fiber Length	Connector Type	
	Current control=22 Special=00	S+C+L= 1 1310=3 1550 = 5 660=6 1310/1550=2 Special = 0	Normally transparent = 1 Normally opaque = 2	Standard = 1 Special=0	SMF-28 =1 Special=0	Bare fiber=1 900um loose tube=3 Special=0	0.25m= 1 0.5m = 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 Special = 0

