

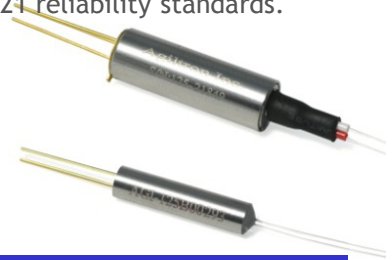
MEMS Variable Optical Attenuator (Polarization Maintaining)

(patents pending)

Product Description

The MM Series VOA is based on a proprietary micro-electro-mechanical mechanism featuring compact design, intrinsic reliability, easy direct drive, and excellent optical performance. The MM series VOA is compliant with the Telcordia 1209 and 1221 reliability standards.

The MM series VOA is available in either normally-open or normally-closed configurations and with an integrated tap option. The VOA is driven by applying an electrical voltage.



Performance Specifications

MM Series PM VOA	Min	Typical	Max	Unit
Wavelength	1310±50 / 1480±50 / 1550±50			nm
Insertion Loss ¹		0.5	0.8	dB
Attenuation Range	25	30		dB
Wavelength Dependent Loss	@10dB	0.2	0.4	dB
	@20dB	0.4	0.7	dB
Temperature Dependent Loss ²	@10dB	0.4	0.7	dB
	@20dB	0.8	1.2	dB
Attenuation Resolution	Continuous			
Extinction Ratio	18	23	35	dB
Return Loss	45			dB
Response Time		3	6	ms
Driving voltage ³		5	6	V
Power consumption ³		80	120	mW
Optical Power Handling		300	500	mW
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C
Reliability	Telcordia 1209 and 1221			
Fiber Type	Corning panda PM 400/250			
Package Dimension	See drawing below			mm

Notes:

1. Excluding connectors
2. Reference to room temperature
3. For full dynamic range. Other drive voltages available

Features

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

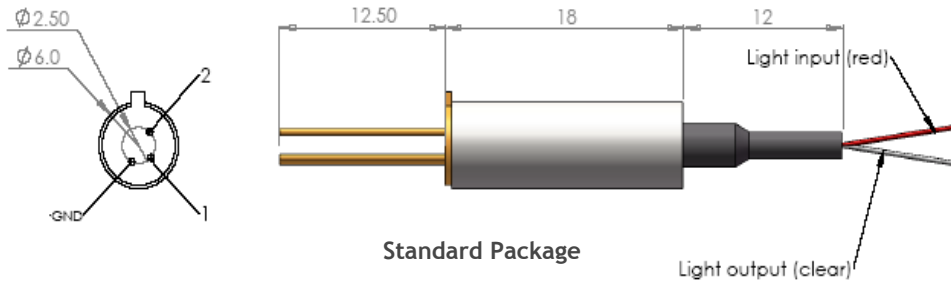
Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation



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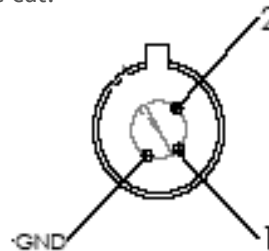
Mechanical Footprint Dimensions (mm)



Electrical Driving Instruction

NOTES

- Pin1 and Pin2 are for control voltage without polarity.
- GND connect to the case. It can be cut.
- Do not applying more than 6.5V.



Ordering Information

TMOA-	<input type="checkbox"/> 8	<input type="checkbox"/> 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type	Wavelength	Off State	Package	Fiber	Fiber Length	Connector		
PM voltage control	1310=3 1550=5 C+L=2 1260-1620=8 Special=0	Transparent=1 Opaque=2	Standard=5 Special=0	Panda 250um=1 Panda 400um=2 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	



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Typical Performance Charts

