

Small Form-Factor Pluggable (SFP) MEMS Variable Optical Attenuator

(patents pending)

Product Description

Agiltron's MEMS Series VOA is based on a proprietary micro-electro-mechanical mechanism featuring compact design, simple construction, easy direct drive, and excellent optical performance. The SFP VOA integrates a single channel VOA and tap power monitor into MSA compliant compact SFP form factor and provides I²C communication interface for easy system integration.

The device has a built-in firmware that linearizing the attenuation to the control signal. The power tap provides a digital warning when the output optical signal level below certain level. Either normally-open or normally-closed configurations are available



Performance Specifications

Parameter		Min	Typical	Max	Unit
Wavelength		1310±50 / 1480±50 / 1550±50			nm
Insertion Loss ¹			1	1.5	dB
Attenuation Range	Bright	25	30		dB
	Dark	40			dB
Polarization Dependent Loss	@10dB		0.15	0.3	dB
	@20dB		0.3	0.5	dB
Wavelength Dependent Loss	@10dB		0.3	0.5	dB
	@20dB		0.7	1.2	dB
Attenuation Accuracy	@20dB		0.5		dB
Attenuation Resolution				0.1	dB
Polarization Mode Dispersion			0.01	0.05	ps
Return Loss		40			dB
Response Time			5	10	ms
Power consumption ²			140	200	mW
Optical Power Handling			300	500	mW
Operating Temperature		-5		75	°C
Storage Temperature		-40		85	°C
Package Dimension			SFP		mm
Notes:					
1. Include both input and output connectors					

Features

- SFP Compact Form
- Hot Pluggable
- Duplex LC Connector
- Optical Power Monitoring
- I²C Communication Interface
- Low Power Consumption

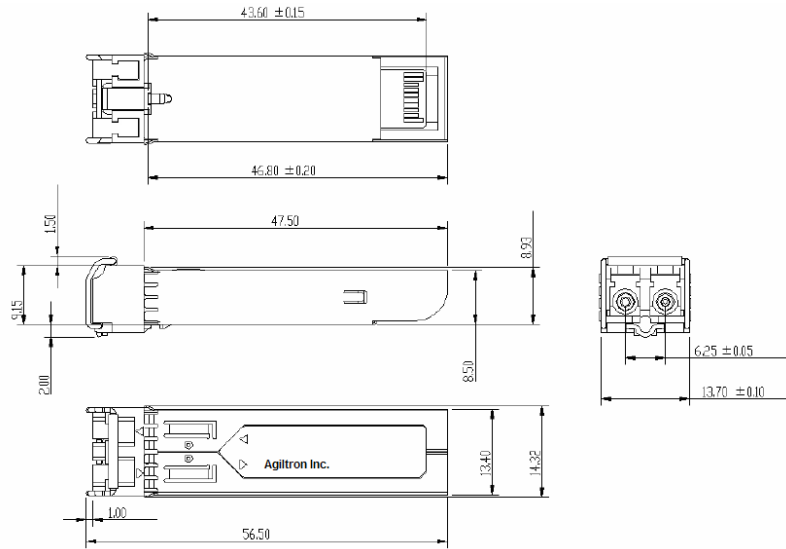
Applications

- Power Control
- Power Regulate
- Instrumentation



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Mechanical Footprint Dimensions (mm)



Electrical Pin Assignment

The electrical pad layout is defined as below per the MSA agreement

20	GND
19	N/C
18	N/C
17	GND
16	3.3V Power
15	3.3V Power
14	GND
13	N/C
12	N/C
11	GND

Top of Board (label Side)

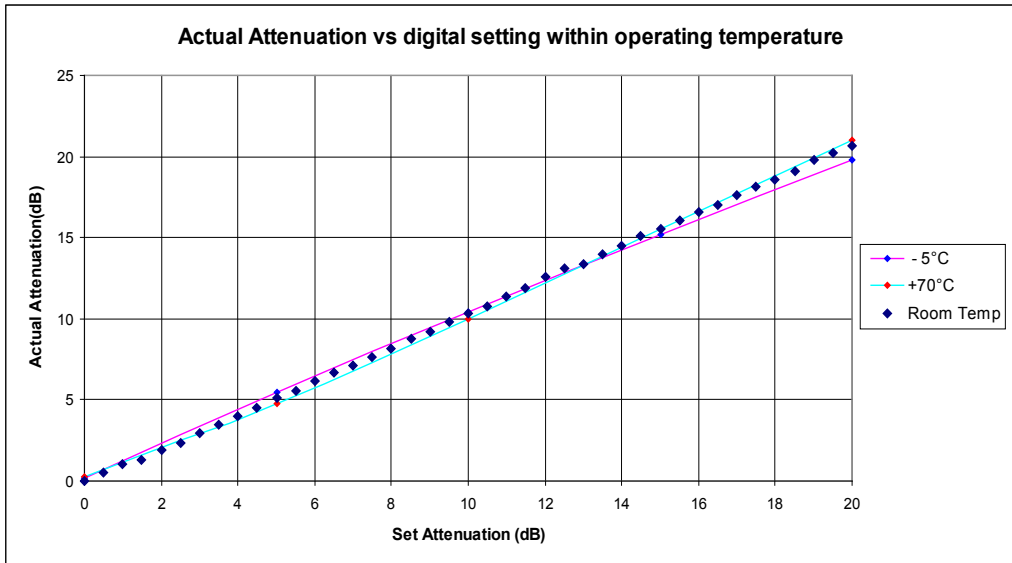
1	GND
2	Fault Alarm
3	Optical Shutter Mode
4	Serial Data
5	Serial Clock
6	GND
7	N/C
8	Loss of Output Power Alarm
9	GND
10	GND

Bottom of Board (as viewed thru top of the board)



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Typical Performance Chart



Ordering Information

SFOA-	<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"/>
	Type	Wavelength	Off State	Mode	Fiber				Connector
	Standard=11	1310=3 1550 = 5 C+L=2 1260-1620= 8 Special = 0	Transparent=1 Opaque = 2	Single Mode=1	SMF-28 =1 Special = 0				LC/PC = 1 Special = 0

