

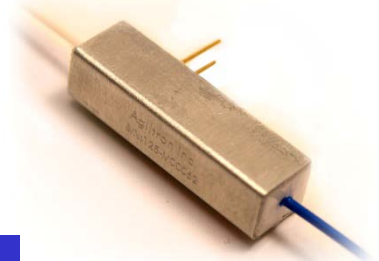
Straight Multimode etMEMS™ Variable Optical Attenuator

(US patent 8,666,218 and other patents pending)

Product Description

The etMEMS™ Series variable attenuator (VOA) is based on a proprietary MEMS design, offering many desirable features. The MEMS shutter is capable of totally blocking the light, providing exceptionally large extinction. It has no optical coating or lens, enabling broad wavelength operation, as well as high power capability. This device is also low cost.

The VOA is driven with an electrical current at low voltage, and the attenuation can be continuously adjusted with the applied current or voltage. The silicon MEMS device is highly reliable with longevity. However, it can be damaged by applying voltage over the threshold.



Performance Specifications

etMEMS™ MM Series VOA	Min	Typical	Max	Unit
Operation Wavelength	350		2050	nm
Insertion Loss ^[1]		1.5	1.8	dB
Wavelength Dependent Loss ^[2]		0.6		dB
Temperature Dependent Loss ^[3]		0.2		dB
Attenuation Range			35	dB
Attenuation Resolution		Continuous		
Return Loss		>20		dB
Response Time		10		ms
Driving Voltage		4.5	5.2 ^[4]	V
Device Electrical Resistance		100		ohm
Optical Power Handling ^[5]			500	mW
Operating Temperature	-10		75	°C
Storage Temperature	-40		85	°C
Fiber Type	50/125, 62.5/125 MM fiber			
Package Dimension	22x5.6x6			mm

Notes:

- [1]. CPR<15, wavelength of 1550 nm, at room temperature, without connectors
- [2]. At attenuation of 20dB or less
- [3]. At 0 attenuation and at whole temperature range
- [4]. Over this value will damage the device
- [5]. High power version also available
- [6]. Current control version is available

Features

- Compact
- Broad-Band
- Low Cost
- High Reliability
- Low IL, PDL, WDL & TDL
- Low Power Consumption

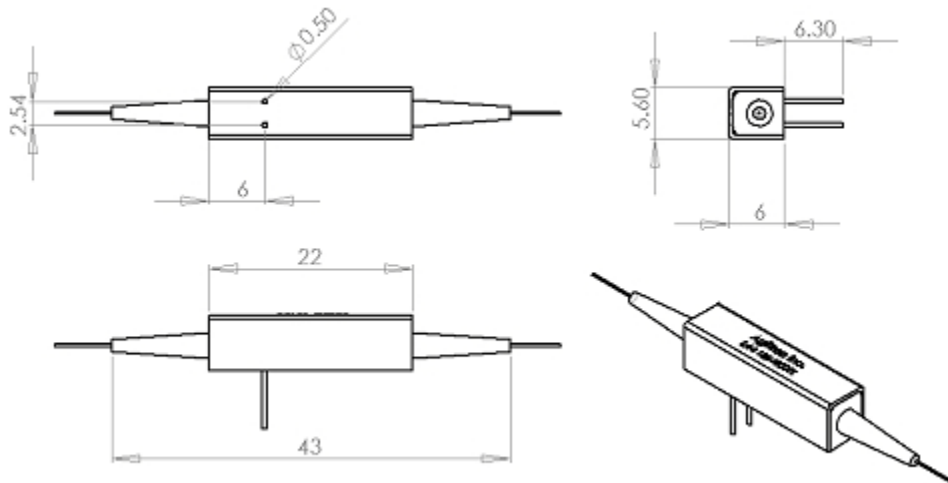
Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation

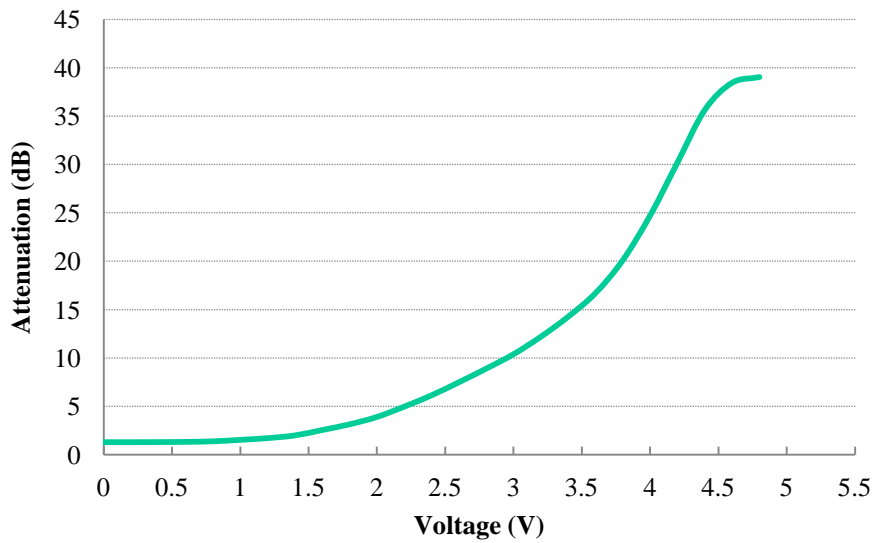


Straight Multimode *et*MEMS™ Variable Optical Attenuator (SMMA)

Mechanical Footprint Dimensions (mm)



VOA Performance



Straight Multimode eMEMS™ Variable Optical Attenuator (SMMA)

Ordering Information

SMMA -	<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	Package Type	Fiber Type	Fiber Length	Connector		
Voltage control=11 Current Control=22	S+C+L=1 1060=6 1310=3 1550=5 2000=2 780=7 850=8 980=9 Special=0	Normally open =1 Normally opaque=2	Standard=2 Special=0	MM50/125=5 MM62.5/125=6 Special=0	Bare fiber=1 900um 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	

