

Straight Single Mode PM MEMS Variable Optical Attenuator

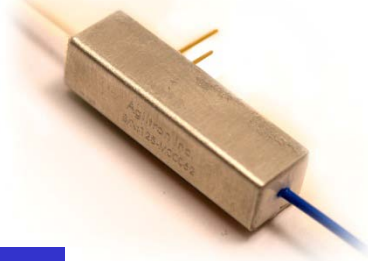
(all wavelength bands and types of fibers)

(patents pending)

Product Description

The SM Series PM variable attenuator (VOA) is based on proprietary MEMS design, offering many desirable features. The MEMS shutter is capable of totally blocking the light providing exceptionally large extinction. This device is low cost, as well as high power capability. The device features ceramic packaging providing exceptional temperature stability.

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

SM Series VOA	Min	Typical	Max	Unit
Operation Wavelength	350		2050	nm
Insertion Loss ^[1]	0.3	0.7	1.2	dB
Wavelength Dependent Loss ^[2]		0.3		dB
Temperature Dependent Loss ^[3]		0.2		dB
Extinction Ratio		25		dB
Attenuation Range			65	dB
Attenuation Resolution		Continuous		
Return Loss		55		dB
Response Time		10		ms
Driving Voltage ^[4]			5 ^[5]	V
Device Electrical Resistance		100		ohm
Optical Power Handling ^[6]			500	mW
Operating Temperature	-10		75	°C
Storage Temperature	-40		85	°C
Fiber Type	See order information			
Package Dimension		22x5.6x6		mm

- Notes:
- [1]. Without connector and at room temperature
 - [2]. At attenuation of 20dB or less
 - [3]. At 0 attenuation and at whole temperature range
 - [4]. The order of terminals does not matter
 - [5]. Over this value will damage the device
 - [6]. High power version also available

Features

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

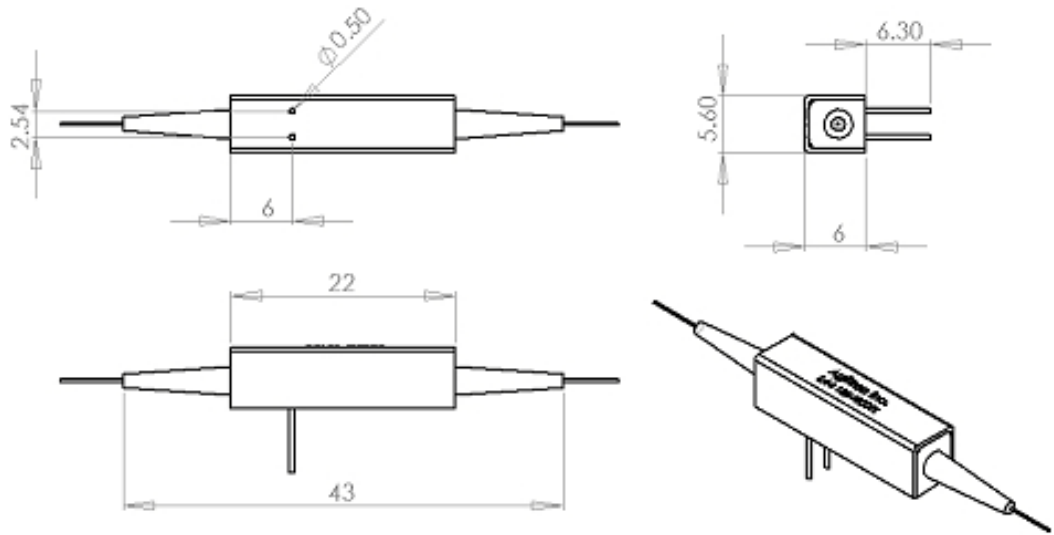
Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation

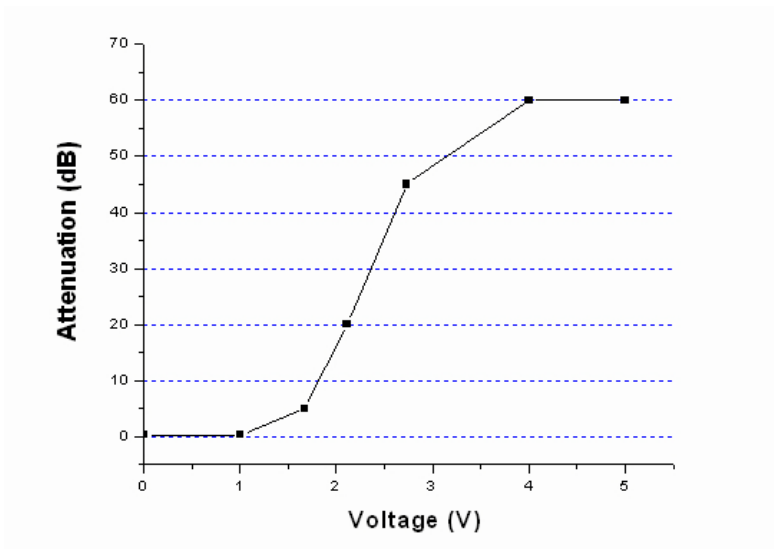


Straight Single Mode PM MEMS Variable Optical Attenuator (SSMA)

Mechanical Footprint Dimensions (mm)



VOA Performance



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Ordering Information

SSMA -	<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		
Polarization Maintain, Voltage control=31	1060=6 1310=3 1550=5	Normally open =1 Normally opaque=2	Standard=1 Special=0	Panda 250µm=2 Panda 400µm=4 PM980=9 PM780=7 PM650 =6 PM550= 5 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	
Polarization Maintain, Current Control=32	980=9 850=8 780=7 650=4 550=1 Special=0							

