

Straight Single Mode PM etMEMS™ Variable Optical Attenuator

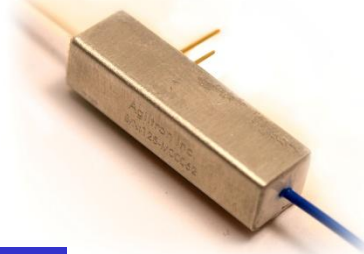
(all wavelength bands and types of fibers)

(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.



Features

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

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 | 18 | 22 | | dB |
| Attenuation Range | 25 | 35 | | 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

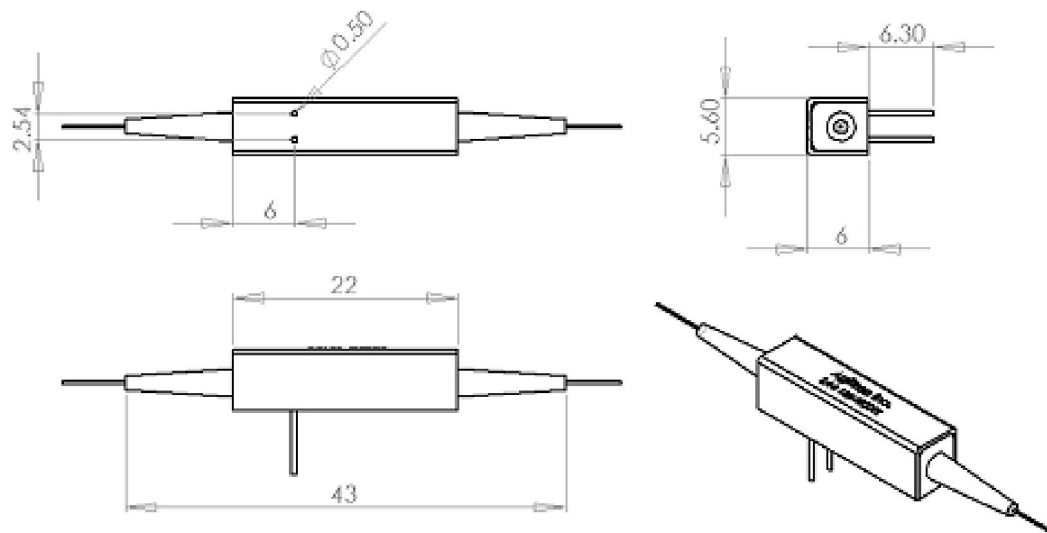
Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation

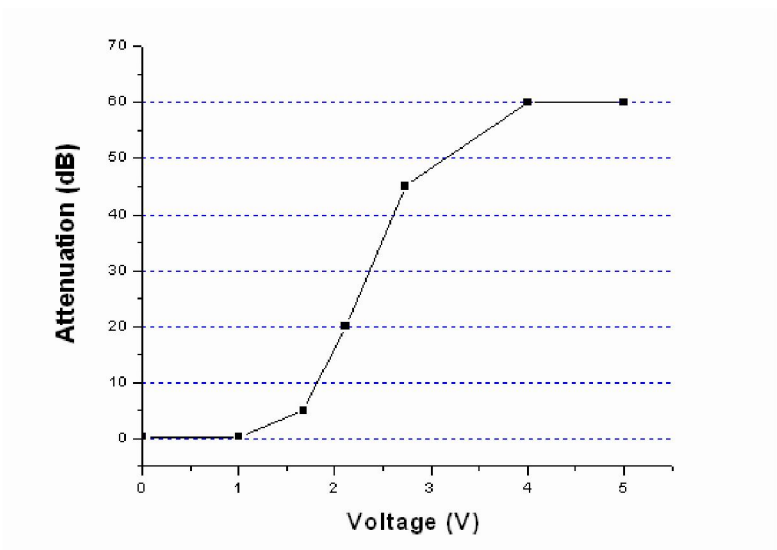


Straight Single Mode PM etMEMS™ Variable Optical Attenuator (SSMA)

Mechanical Footprint Dimensions (mm)



VOA Performance





Straight Single Mode PM etMEMS™ Variable Optical Attenuator (SSMA)

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 Polarization Maintain, Current Control=32 | 1060=6 1310=3 1550=5 2000=2 980=9 850=8 780=7 650=4 550=1 Special=0 | 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 | |

