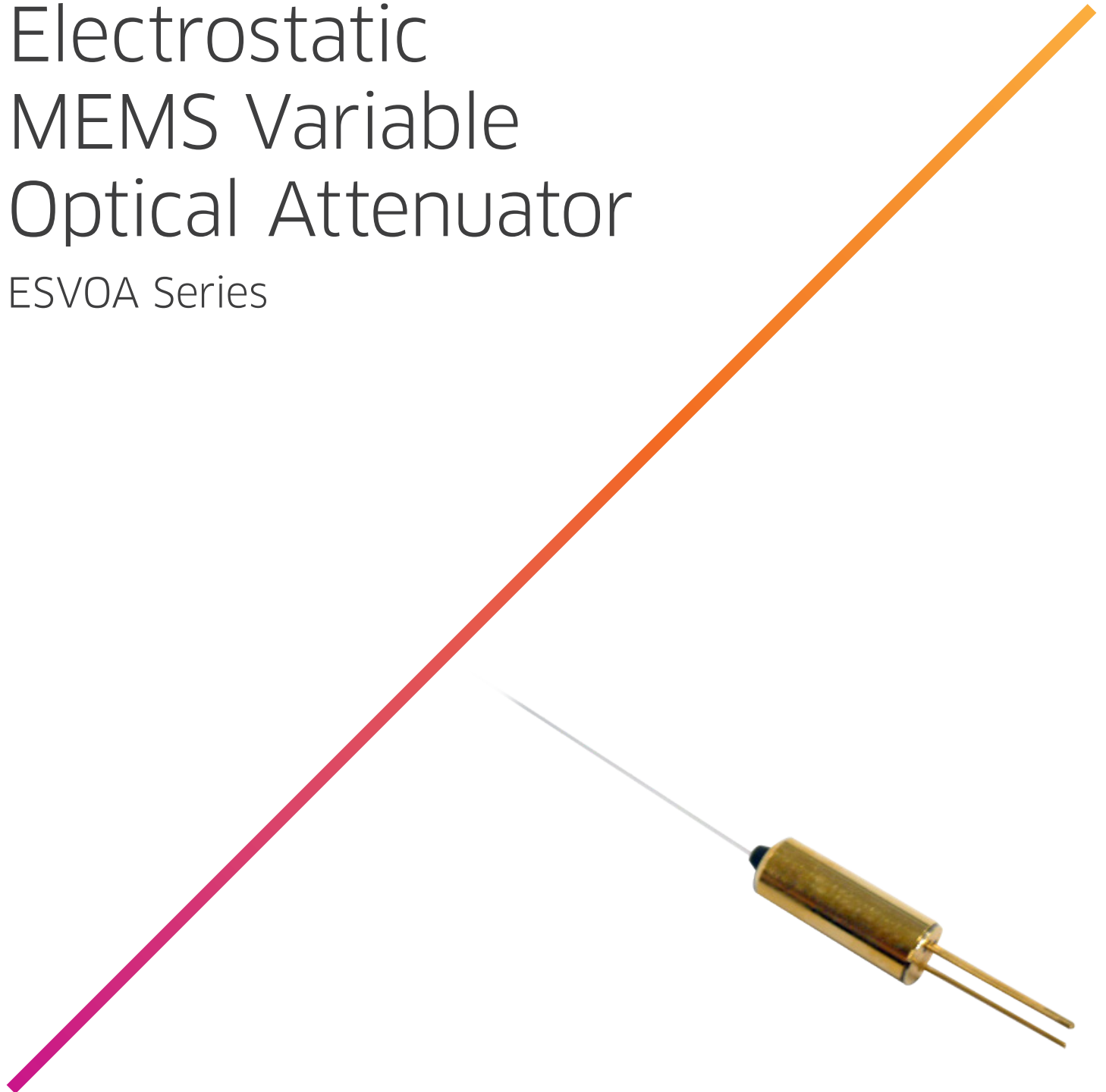


Electrostatic MEMS Variable Optical Attenuator

ESVOA Series



The Lumentum Agile Optical Components family includes modulators, switches, attenuators and tunable filters. These products provide the basis for spectrally efficient DWDM transmission utilizing dispersion tolerant modulation, channel monitoring, wavelength switching, remote power control and dynamic channel selection. They support a wide range of flexible functionalities at lower operational expenses for the Agile Optical Network. In addition, we have a complete line of tunable lasers assemblies and sub-assemblies in our Agile Transmission Module family.

Lumentum Electrostatic MEMS Variable Optical Attenuators (ESVOA) focus on key network optical power management applications. Lumentum offers ESVOA series attenuators in normally open and normally closed states. ESVOA series attenuators fully comply with the Telcordia 1221 reliability program. Key features include a small size, low wavelength dependent loss (WDL), and high reliability.

The ESVOA series attenuator achieves highly repeatable optical attenuation over C and/or L bands using an electrostatic rotatable mirror. Applied voltage/power actuates the mirror to rotate, changing the light coupling between the input fiber and the output fiber of the ESVOA series attenuator.

Key Features

- Low insertion loss
- Low wavelength dependent loss
- Low polarization dependent loss
- Multiple devices easily packaged into common housing



Applications

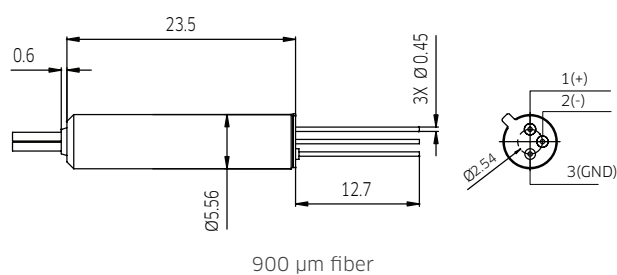
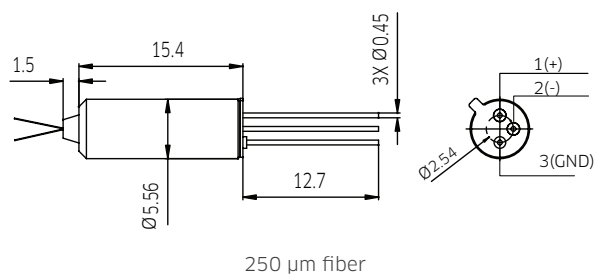
- Power equalization in multi-channel, optically amplified networks
- Gain-tilt control in erbium doped fiber amplifiers (EDFAs)
- Power control in narrowband wavelength division multiplexers (WDMs) and configurable networks
- Photoreceiver trimming
- Receiver protection/switch during transmitter turn-ons

Compliance

- Telcordia 1209 and 1221

Dimensions Diagram

(Specifications in mm unless otherwise noted.)

**Specifications**

Parameter		Specification
Attenuation type		Open or closed
Operating wavelength range		C band L band
Attenuation range	Minimum	30 dB
Insertion loss ¹	Maximum	0.7 dB
Tuning speed ²	Maximum	2 ms
Optical power handling		300 mW
Wavelength dependence ³		At insertion loss (IL) At 20 dB
	Maximum Maximum	0.2 dB ±0.8 dB
Wavelength dependence ripple (0.4 nm)		At 20 dB
	Maximum	0.2 dB
Polarization dependence loss		0 to 10 dB 10 to 20 dB
	Maximum Maximum	0.15 dB 0.3 dB
Return loss ¹	Minimum	45 dB
Drive voltage ^{2,4}	Maximum	6.5 V or 18 V DC
Drive power ²	Maximum	1.8 mW
Fiber type		9/125/250 or 9/125/900 SMF-28 or equivalent
Fiber marking		Input port Output port
		Red Clear/White
Operating temperature		-5 to 75°C

1. Excluding connectors

2. For full dynamic range

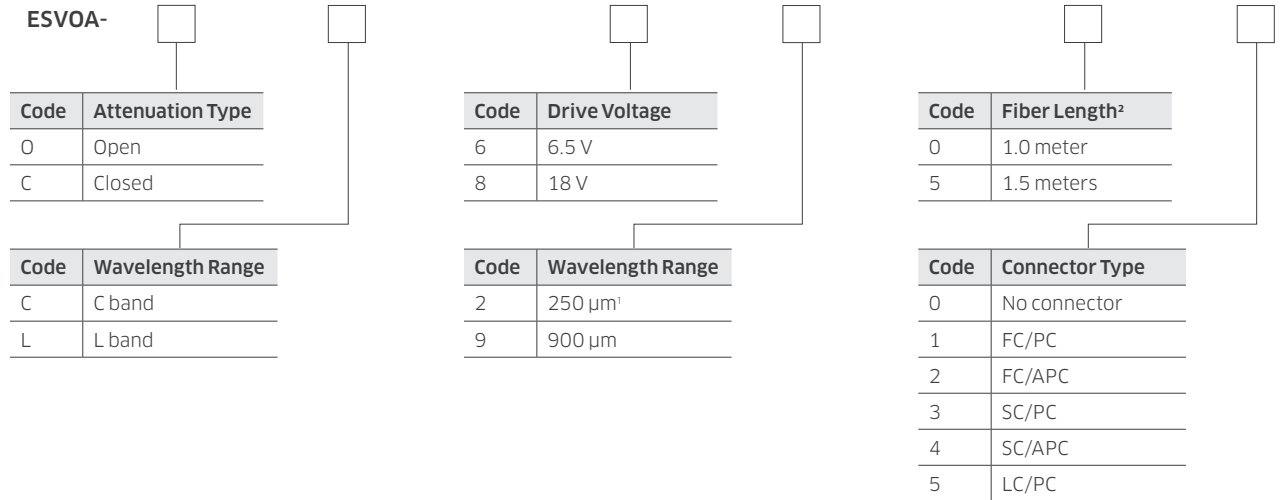
3. Over C or L bands at 23±3°C relative to 1550 nm or 1590 nm

4. Other drive voltages available

Ordering Information

For more information on this or other products and their availability, please contact your local Lumentum account manager or Lumentum directly at customer.service@lumentum.com.

Sample: ESVOA-OC6200



1. 250 μm fiber is only available with the 'no connector' option.
2. Tolerance on fiber length is ± 0.1 m.

SMF-28 is a registered trademark of Corning Incorporated.
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North America
Toll Free: 844 810 LITE (5483)

Outside North America
Toll Free: 800 000 LITE (5483)

China
Toll Free: 400 120 LITE (5483)

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