Manual Fiber Attenuator High Power

(10W high power, continuous fiber of lossless, up to 12dB)

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This All-Fiber Manual Lossless VOA uses a continuous fiber, offering near-lossless transmission in the open/transparent state. Attenuation is generated by applying stresses inside the fiber. The unique design is capable of maintaining high polarization extinction ratio under stress. The MOVL series of VOAs beneficially features high optical power handling, near-lossless in the open/transplant state, and ultra-broadband that preserves the fiber's intrinsic transmission characteristics. The design is compatible with all types of fibers.

Features

- Lossless
- Broadband
- High Power
- All Fiber Types
- Up To 20W

Applications

- Instrument
- Laboratory
- High Power Fiber
- Lasers

Specifications

Parameter	Min	Typical	Max	Unit
Wavelength	300		5000	nm
Insertion Loss [1]	0.00	0.01	0.1	dB
Attenuation Resolution		Continuous		dB
Attenuation Range [2]	0		12	dB
Polarization Dependent Loss		0.02	0.1	dB
Stability [3]			1	dB
Return Loss	60			dB
Power Handling			10	W
Operating Temperature	-10		70	°C
Storage Temperature	-40		85	°C

Notes:

[1]. Excluding connectors. Each connector add 0.3dB loss and 2dB ER reduction for PM fiber

[2]. SM 9/125 fiber. Other type fiber may differ

[3]. Measured at 10dB attenuation, low attenuation is more stable

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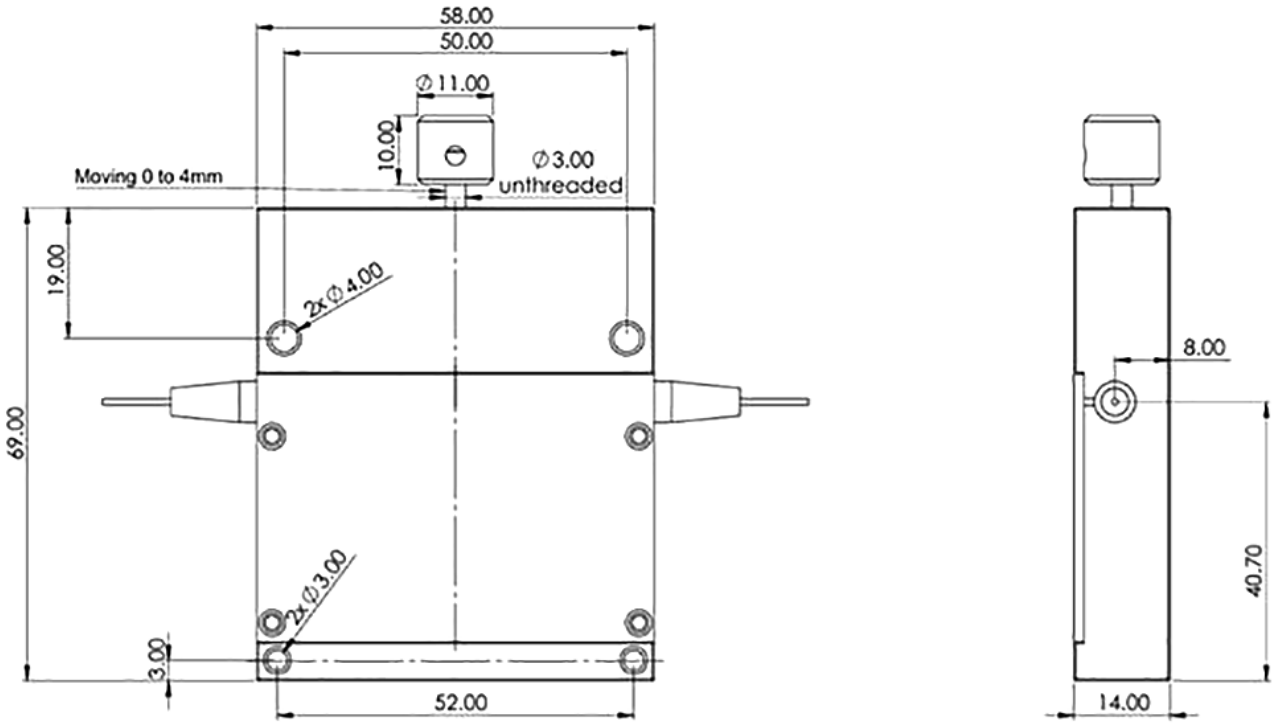
Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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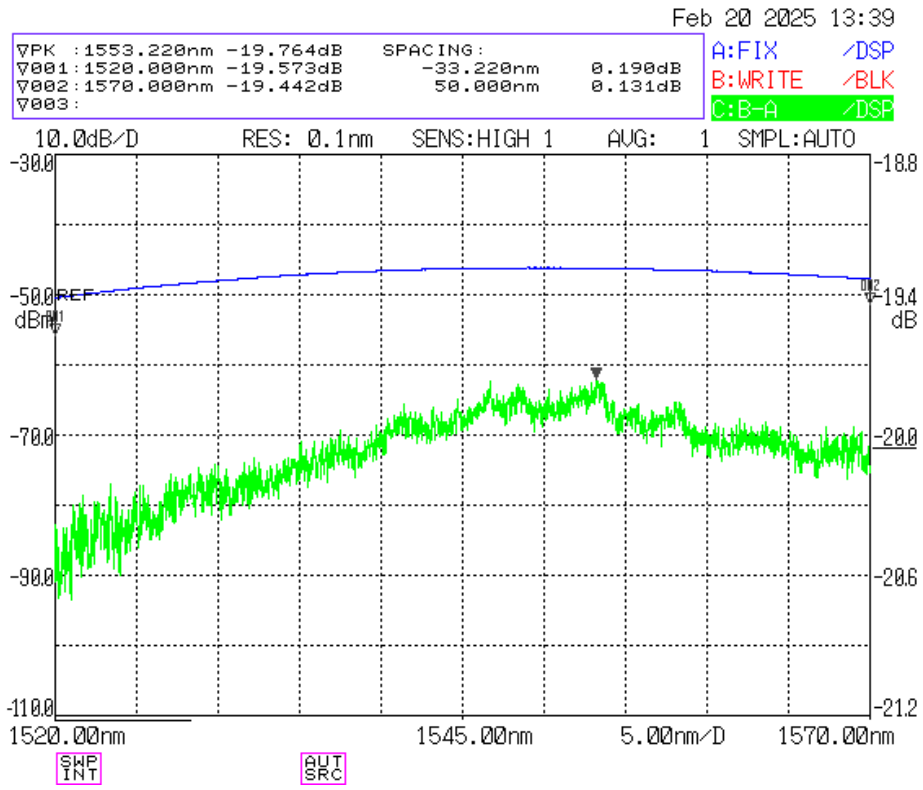
Typical Wavelength Dependence @20dB Attenuation



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Ordering Information

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Prefix	**Configuration**	**Type**	**Test Wavelength** [1]	**Fiber Type**	**Fiber Cover**	**Fiber Length**	**Connector** [2]
MVOL-		Normally Open = 1	450 = 4 532 = 5 630 = 6 780 = 7 850 = 8 980 = 9 1060 = 1 1310 = 3 1550 = C 2000 = 2 Special = 0	Select from the table below	900um tube = 3 3mm tube = 4 Special = 0	0.25m = 1 0.5m = 2 1.0m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/UPC = 7 Special=0

[1]. The device is ultra-broadband, limited by the fiber transmission.

[2]. High power connector need order specially about $420 each

Fiber Type Selection Table:

01	**SMF-28**	34	**PM1550**	71	
02	**SM1060**	35	**PM1950**	72	
03		36	**PM1310**	73	
04		37	**PM400**	74	
05	**SM1950**	38	**PM480**	75	
06	**SM600**	39	**PM630**	76	
07	**780HP**	40	**PM850**		
08	**SM800**	41	**PM980**		
09	**SM980**	42	**PM780**		
10		43			
11		44			
12		45	**PM460**		
13		46			

Application Notes

Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

Fiber Cleanliness

Fibers with smaller core diameters (<5 μm) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the how handling by expanding the core side at the fiber ends.