

Fiber-Fiber™ Manual Fiber Optical Variable Attenuator

(Patent pending)



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BUY NOW



Features

- Low Insertion Loss
- High Reliability
- Low Cost
- Low power consumption
- Super compact

Applications

- Dynamic gain equalization
- Variable MUX/DeMUX
- Instrumentation

The Fiber-Fiber™ series Manal VOA is based on fiber to fiber coupling with a micro self align technology, featuring ultra-low loss, broadband, high power, compact size, and low cost. It can accommodate to all type of fibers.

Specifications

Parameter	Min	Typical	Max	Unit
Wavelength	180 ^[1]		2000	nm
Band Width	Broad band without coating			
Insertion Loss ^[1]		0.1	0.4	dB
Attenuation Resolution		Continuous		dB
Attenuation Range		60	70	dB
Return Loss		50	60 ^[2]	dB
Power Handling		500	1000	mW
Operating Temperature		-40 ~ 70		°C
Storage Temperature		-40 ~ 85		°C

Notes:

[1]. Measure with CPR<14 laser source and excluding connectors

[2]. Single Mode, For Multimode, return loss relates to laser condition

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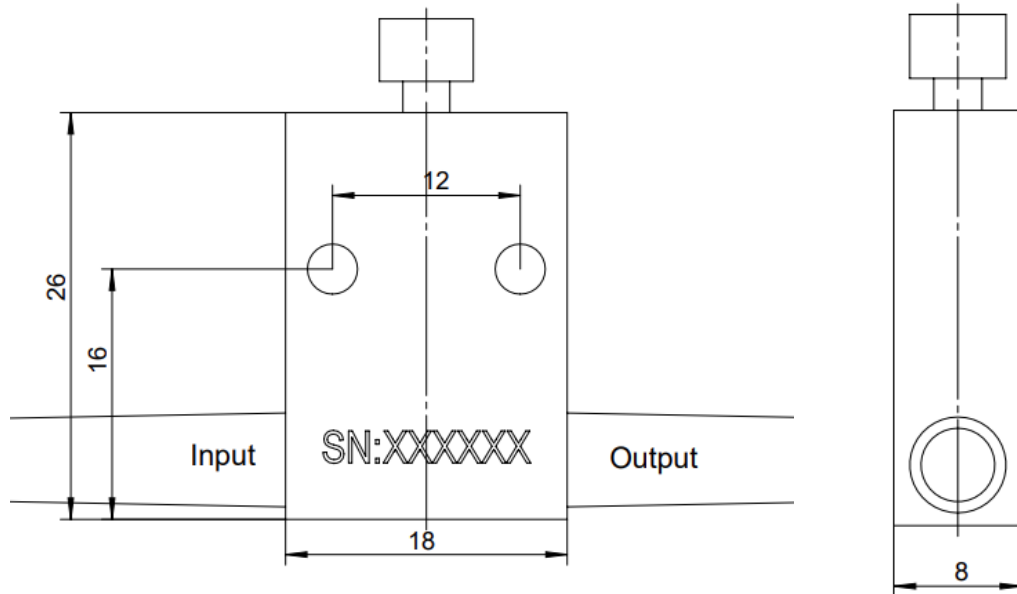
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Mechanical Dimensions-Package



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

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Ordering Information

	3 3	1	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prefix	Configuration	Type	Test Wavelength*	Fiber Type	Fiber Cover	Fiber Length	Connector
MVOA-	Special = 00	Transparent = 1	350 = A 488 = 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/PC = 7 LC/UPC = U Special = 0

*Without adjustment, this device is transparent to the passing light in the normal state.

**The device is ultra-broadband limited by the fiber transmission. However, we only test at one selected wavelength to save cost. If customer needs to test at several wavelengths, the selection is special =0 with added cost.

NOTE:

“transparent” means no attenuation without applying a controlling voltage, the “opaque” means the highest attenuation without applying a controlling voltage.

Fiber Type Selection Table:

01	SMF-28	34	PM1550	71	GIF 50/125 μm
02	SMF-28e	35	PM1950	72	GIF 62.5 μm
03	Corning XB	36	PM1310	73	105/125 μm
04	SM450	37	PM400	74	FG105LCA
05	SM1950	38	PM480	75	FG50LGA
06	SM600	39	PM630	76	FG10LDA
07	Hi780	40	PM850		
08	SM800	41	PM980		
09	Hi980	42	PM780		
10	Hi1060	43	PM350		
11		44	PM405		
12	SM400	45	PM460		

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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 ($<5\text{ }\mu\text{m}$) 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 handling by expanding the core side at the fiber ends.