

Fiber-Fiber™ Large Core Variable Optical Attenuation

(Large core fiber, Broad, Bidirectional, High power)

Product Description

The Fiber-Fiber™ Large Core Series Optical Variable Attenuation connects optical channels by directly aligning a pair of fibers. This achieved by using a precision mini motor. Latching capability preserves the selected optical path after the drive signal has been removed. The compact FF series switches has passed space application qualification. Agiltron unique design offers low insertion loss covering an ultrabroad spectral band from 300 to 5000 nm with various fiber core size from 100 μm to 1500 μm. The Variable Optical Attenuation is ideal for sensor and spectroscopy applications with bidirectionality.

The driving PCB has interfaces with a computer through USB or RS232.



Performance Specifications

FF Large Core VOA	Min	Typical	Max	Unit
Operation Wavelength	300		2500	nm
Insertion Loss ^[1]		0.5	1.0	dB
Wavelength Dependent Loss		0.05	0.3	dB
Polarization Dependent Loss		0.03	0.10	dB
Attenuation Range		50	60	dB
Return Loss	35			dB
Operating Voltage		5	5.5	VDC
Power Consumption			2	W
Response Time			100	ms
Durability	10 ⁷			Cycle
Optical Power Handling ^[4]	0.5		5	W
Operating Temperature	0		70	°C
Storage Temperature	-40		85	°C
Fiber Type	≥ Ø100 μm core fiber			
Package Dimension	See Mechanical Dimensions			

[1]. Without connectors, at Room temperature.

[2]. Within 100 nm bandwidth

Features

- Unmatched Low Cost
- Very Broad Spectral Range
- High Isolation
- High Reliability
- Epoxy-Free Optical Path

Applications

- Signal management
- Sensor
- Spectroscopy
- High Power Laser
- Instrumentation

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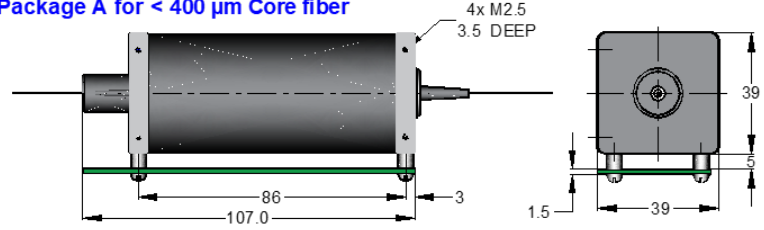
(Large core fiber, Broad, Bidirectional, High power)

Electrical Driving Requirement

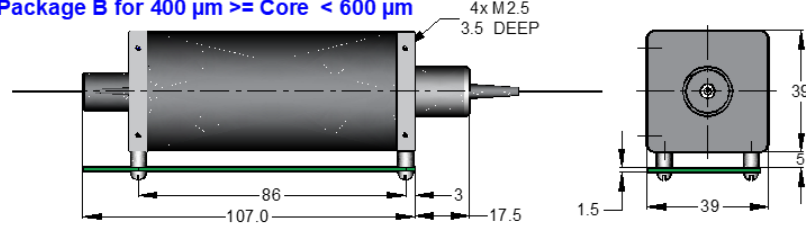
Computer controlling kit with USB or RS232 interfaces and Windows™ GUI.

Mechanical Dimensions (Unit: mm)

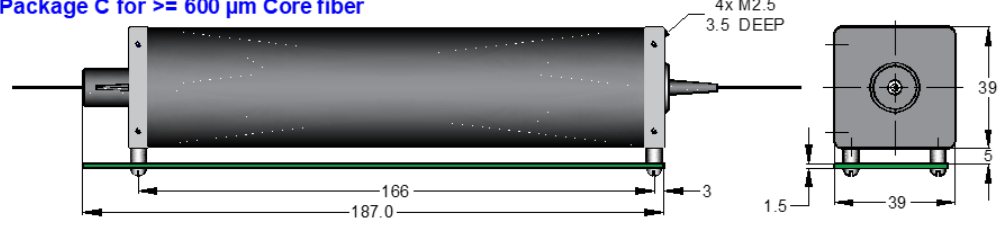
Package A for < 400 μm Core fiber



Package B for 400 μm >= Core < 600 μm



Package C for >= 600 μm Core fiber



Ordering Information

Prefix	Configuration	Wavelength	Type	Optical Power	Fiber Core Size	Fiber Cover	Fiber Length	Connector
FFVU- ^[1] FFVR- ^[2] FFVT- ^[3]	1 1	800-1100 =1 1500-1700=2 300-600 = 6 600-800 =8 1100-1600=B Special=0	nOpen* =1	0.5 W =1 2 W =2 5 W =3 10 W =4 Special=0	100 mm =E 200 mm (NA0.22) =F 300 mm =G 400 mm (NA0.22) =H 400 mm (NA0.39) =K** 500 mm =I 600 mm =J	Bare fiber=1 2 mm Jacket=2 900 um tube=3 Special=0	0.25 m =1 0.5 m =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/PC=7 LC/APC=8 SMA905=9 Special= 0

[1]. FFVU: Fiber-Fiber Large Core VOA with USB driver.
 [2]. FFVR: Fiber-Fiber Large Core VOA with RS232 driver.
 [3]. FFVT: Fiber-Fiber Large Core VOA with TTL driver.

* Normally Open

**This fiber has no class cladding layer, thus about 2dB extra loss