Precision Variable Optical Attenuator

(High Setting Precision, Ultra-Low Loss, Broad Band, Latching)

(US patent 8,666,218 and other patents pending)

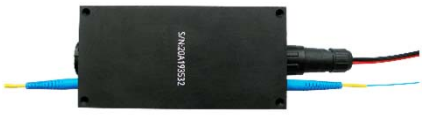
Features

- Very Low Loss
- Highly Repeatable
- Latching
- High Resolution
- Large Attenuation

Product Description

The Precision Fiber Variable Optical (VOA) is based on a micro-electro-mechanical system platform driven by a mini-motor. It uniquely offers advantageous performances that are unmatched in the industry. It features ultra-broadband covering from 200 to 2500nm, ultra-low insertion loss of less than 0.2dB, ultra-high setting precision, high optical power handling, and latching function. Once, the VOA attenuation value is set, it will latch to and remain at the value regardless of the environment variable and the removal of electrical power. It is available with all types of fibers with diameter as large as 1mm. The device is immersed inside an optical index matching liquid to achieve ultra-low loss and low back reflection. The light transmission is solely determined by the fiber property.

The VOA is driven by an integrated control board with USB, or RS262, SPI interface options. A user-friendly GUI software is provided. It is powered by a 12VDC wall plug supply.



Performance Specifications

Precision Motor **Series VOA**	Min	Typical	Max	Unit
Operation Wavelength	300		2500	nm
Insertion Loss [1]	0.1	0.2	0.5	dB
Polarization Dependent Loss		0.15	0.5	dB
Wavelength Dependence Loss		0.1	0.2	dB
Attenuation Range		50	60	dB
Attenuation Setting Repeatability			0.1	dB
Attenuation Setting backlash			0.2	dB
Extinction Ratio (PM version only)	18	23	25	dB
Polarization Mode Dispersion (SM version only)		0.01	0.05	ps
Return Loss	45			dB
Response Time			100	ms
Optical Power handling			5	W
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C
Package		40x25x10		mm

Notes:

[1].Without connector and at room temperature
[2].At attenuation equal or less than 20 dB
[3].At 0dB attenuation and at whole temperature range
[4].Within 40nm Bandwidth
[5].At 20dB attenuation for transparent version, at 0.8dB attenuation for opaque version.
[6].This is related to tap ratio. The spec data is regarding 3% tap.

Applications

- Power Control
- Power Regulation
- Channel Balance
- Instrumentation

RoHS Compliant

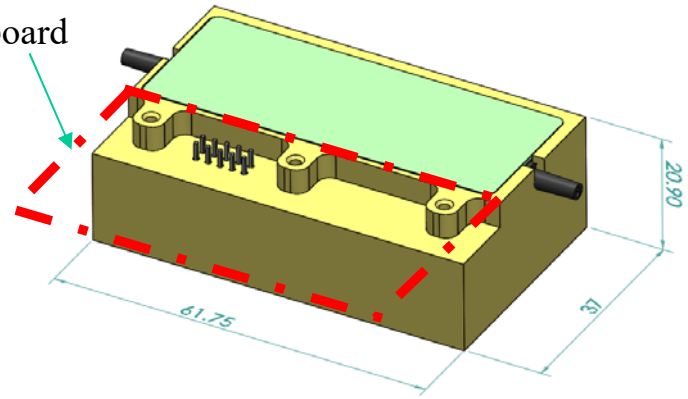
Revision: 11/30/2020

15 Presidential Way, Woburn MA 01801 Tel: (781) 935-1200 Fax: (781) 935-2040

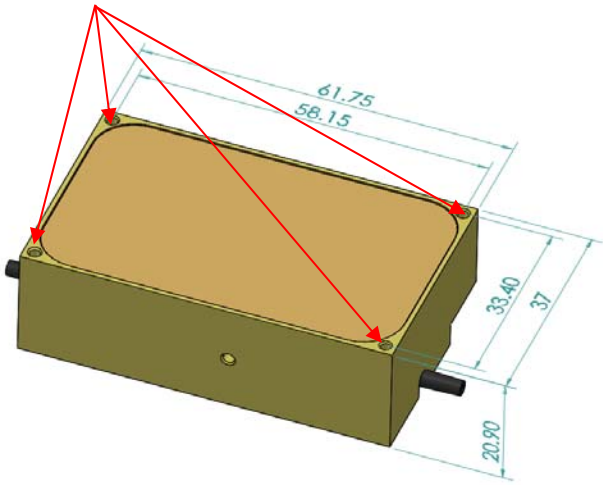
www.agiltron.com

Mechanical Footprint Dimensions (Unit:mm)

Driver board



Screw hole



Ordering Information

FFOA-	☐	☐	☐	☐	☐☐	☐	☐	☐
	Type	Controller	Off State	Test Wavelength	Fiber type		Fiber Length	Connector
	Regular Core= 5 Large Core=6 Special=0	USB/I2C=1 RS232/SPI=2	Transparent =1 Opaque = 2 Special =0	488 = 4 532 = 5 630 = 6 780 = 7 850 = 8 980 = 9 1060 = 1 1310 = 3 1550 = C 2000 = 2 Special = 0	Pick from below table	Bare fiber=1 900um tube=3 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=7 Special=0

01	SMF-28	34	PM1550	67	STEP 50/125μm)
02	SMF-28e	35	PM1950	68	
03	Corning XB	36	PM1310	69	
04	SM450	37	PM400	70	
05	SM2000	38	PM480	71	GIF50 (GIF 50/125μm)
06	SM600	39	PM630	72	GIF625 (GIF 62.5/125μm)
07	Hi780	40	PM850	73	106/125μm
08	SM800	41	PM980	74	FG105LCA
09	Hi980	42		75	FG50LGA
10	Hi1060	43		76	200 μm
11	Draka BBE	44		77	400 μm
12		45		78	

15 Presidential Way, Woburn MA 01801 Tel: (781) 935-1200 Fax: (781) 935-2040

www.agiltron.com