NanoSpeed™ Variable Fiber Optical Attenuator (SMF, PMF, High Power)

(Protected by U.S. patent 7,403,677B1 and pending patents)

Features

- Solid-State
- High speed
- Ultra-high reliability
- Low insertion loss
- Compact

Applications

- Optical blocking
- Configurable operation
- Instrumentation

Product Description

The NS Series Variable Fiber Optical Attenuator (VOA) provides electrical control of optical power. This is achieved using a patent pending non-mechanical configuration and activated via a voltage electrical control signal. The solid-state optical crystal design eliminates mechanical movement and organic materials. The NS Series Variable Optical Attenuators are designed to meet the most demanding operation requirements of ultra-high reliability and fast response time with minimal mechanical footprint. Agiltron also offers customized electronic designs to meet special control requirements and applications. The switch is bidirectional.

The NS Series VOA is available in either normally-transparent or normally-opaque configurations.

Agiltron's PCB driver listed in the web is recommended to operate this device, featuring high efficiency and low cost with 12VDC power and 0-5V control input.

Performance Specifications

NanoSpeed Series VOA		Min	Typical	Max	Unit
Central wavelength [1]		780		1650	nm
Insertion Loss [2]	1260~1650nm		0.6	1.0	dB
	960~1100nm		0.8	1.3	
	780~960nm (Normal power VOA only)		1.0	1.5	
Attenuation Range		20	28	36	dB
PDL (SMF VOA only)			0.1	0.3	dB
PMD (SMF VOA only)			0.1	0.3	ps
ER (PMF VOA only)		18	25		dB
Resolution			Continuous		dB
Return Loss		45	50	60	dB
Response Time (Rise, Fall)				300	ns
Fiber Type			SMF-28, Panda PM, or equivalent		
Repeat Rate	5kHz driver	DC	5		kHz
	100kHz driver	DC	100		
Modulation rate [3]		0.1		5	MHz
Optic power Handling [4]	Normal power VOA		300		mW
	High power VOA			5	W
Operating Temperature		-5		70	°C
Storage Temperature		-40		85	°C

[1] Operation bandwidth is +/- 25nm approximately at 1550nm.
[2] Measured without connectors. For other wavelength, please contact us.
[3] Special circuit for narrow frequency range, maximum modulation depth is 5~10%.
[4] Defined at 1310nm/1550nm. For the shorter wavelength, the handling power may be reduced, please contact us for more information.

RoHS Compliant

15 Presidential Way, Woburn, MA 01801 Tel: (781) 9351200 Fax: (781) 935-2040

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Revised on 07-24-17

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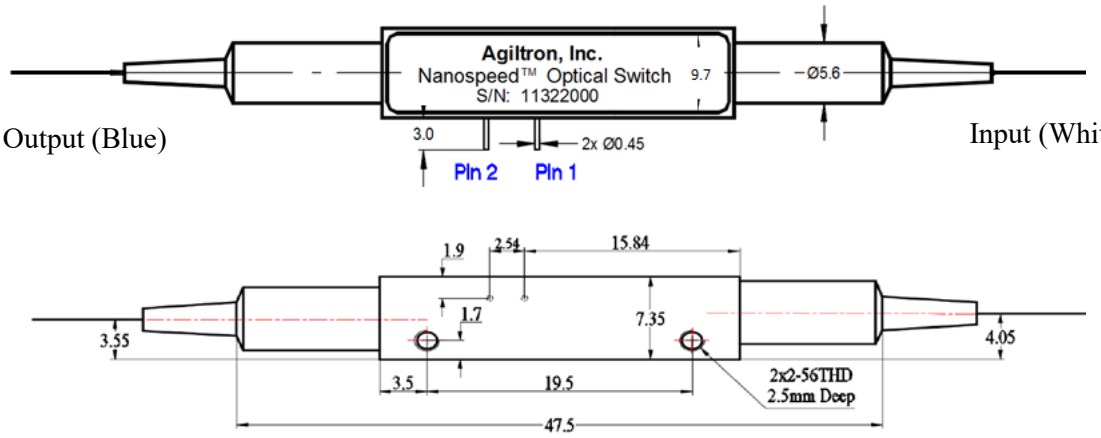
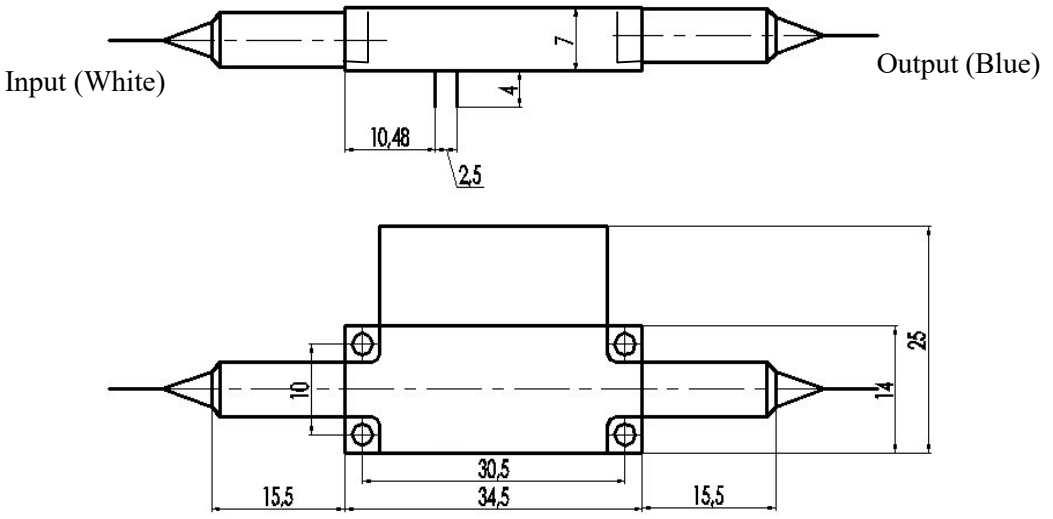
Mechanical Dimensions (mm)



Low Power VOA



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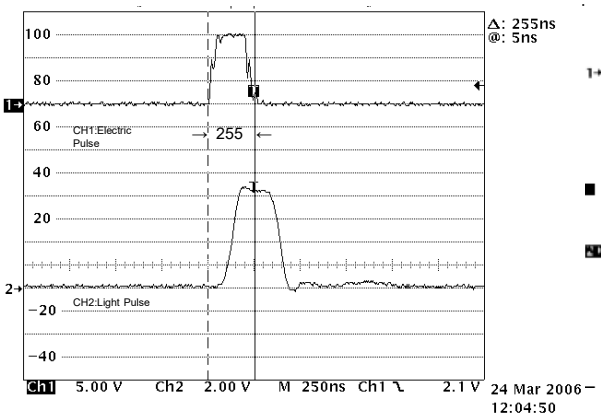
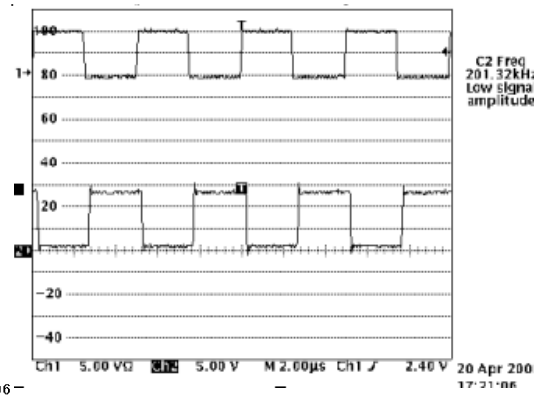
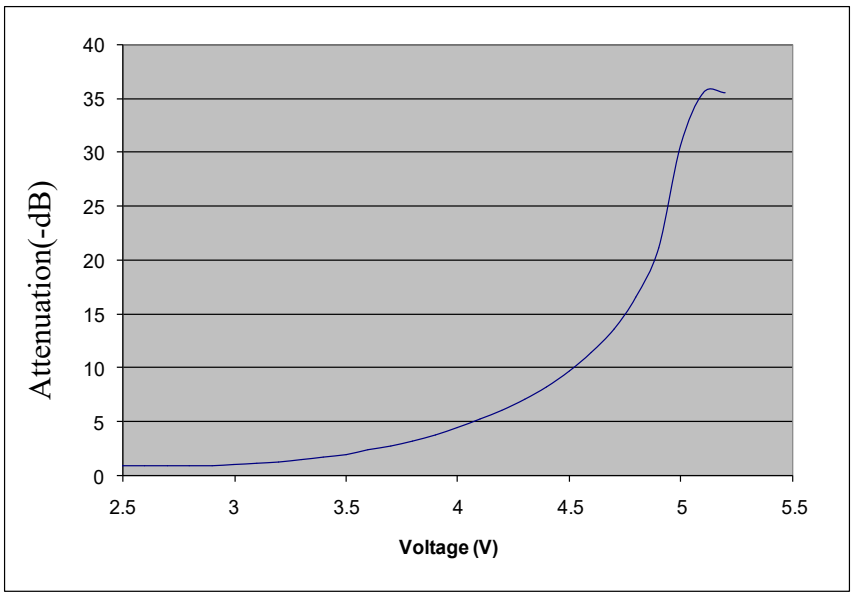
Typical Speed and Repetition Measurement





Typical Attenuation versus Voltage



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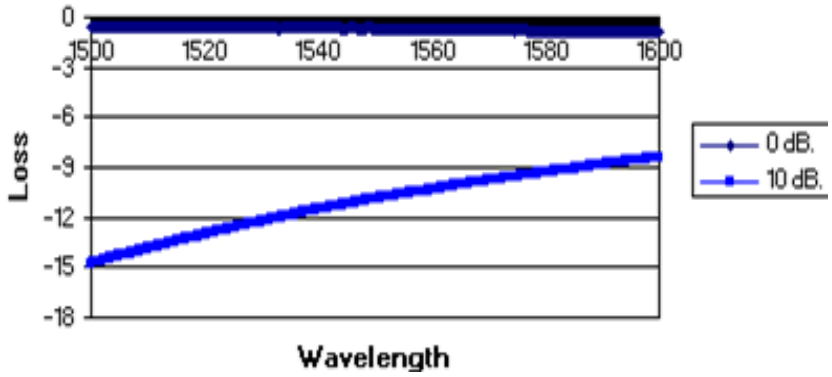
Typical WDL @10dB attenuation



Ordering Information

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	Type	Wavelength [1]	Configuration	Fiber Type		Fiber Length	Connector [2]
NVOA = Normal power VOA NHOA = High power VOA		1060nm=1 L Band=2 1310nm=3 1410nm=4 1550nm=5 780nm=7 850nm=8 Special=0	Transparent & single stage =11 Opaque & single stage = 21 Special = 00	SMF-28=1 HI1060=2 HI780=3 PM 1550/400=4 PM 1550/250=5 PM980=9 PM850=8 Special=0	Bare fiber=1 900um loose tube=3 Special=0	0.25m=1 0.5m=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 Duplex LC=8 LC/APC=9 Special=0

[1]. High power VOA isn't available for the wavelength shorter than 960nm
[2]. There isn't any connector in the high power VOA normally. Please contact us for high power connectors.

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