

# BroadBand 1260-1650nm NanoSpeed™ Miniature Variable Optical Attenuator/ Modulator (Bidirectional)

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

## Product Description

The NS Miniature series variable fiber optic attenuator 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 minimum mechanical footprint. Agiltron also offers customized electronic designs to meet special control requirements and applications. The switch is truly bidirectional and for broadband applications

The NS Series VOA is available in either normally-transparent or normally-opaque configurations. The device can be driven by a cost effective circuit with 12 V input voltage and 0-5 V control signal.



## Performance Specifications

NS Variable Optical Attenuator	Min	Typical	Max	Unit
Wavelength	1260		1625	nm
Insertion Loss <sup>1</sup>		0.7	1.0	dB
Polarization Dependent Loss		0.1	0.35	dB
Return Loss	45	50		dB
Attenuation Range	22			dB
Response Time (Rise, Fall)			300	ns
Repetition Rate	DC	5	300**	KHz
Modulation Rate	DC		5***	MHz
Resolution		Continuous		dB
Operating Optical Power <sup>2</sup>			500	mW
Operating Temperature		-5 ~ 70		°C
Storage Temperature		-40 ~ 85		°C
Package Dimension		56 X8.2X5.95		mm

\* Driver kit is recommended

\*\* Special circuit, 100% depth

\*\*\*Special circuit, Maximum modulation depth is 5%

1. Excluding connectors.

2. We also offer optical power up to 5W CW

## Features

- No Moving Parts
- High Reliability
- Solid-State High Speed
- Broadband
- Bidirectional
- Low Insertion Loss
- High power handling
- Low Power Consumption
- Simple Driver

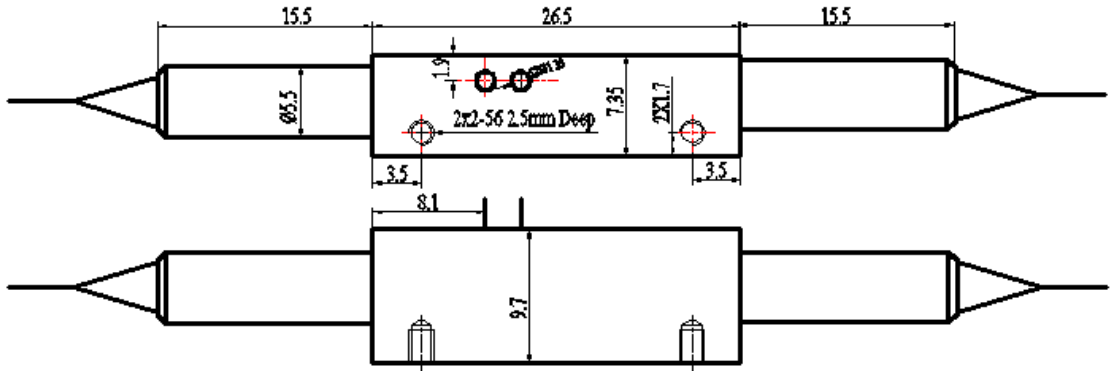
## Applications

- Power Control
- Power Regulation
- Power Balance
- Instrumentation

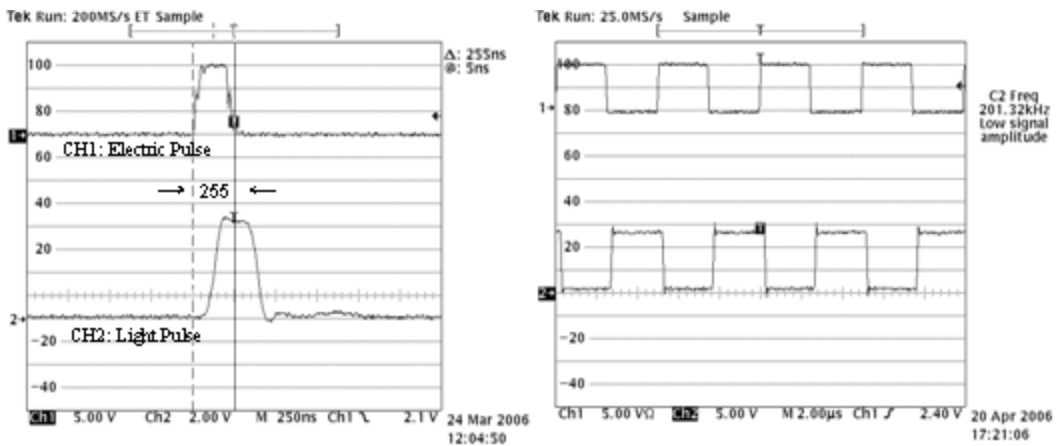


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## Mechanical Footprint Dimensions (Unit:mm)

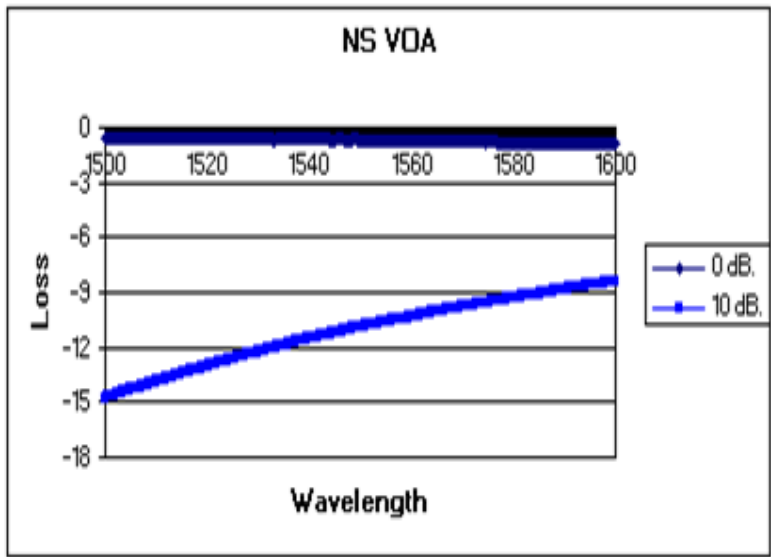


## Speed and Repetition Measurement

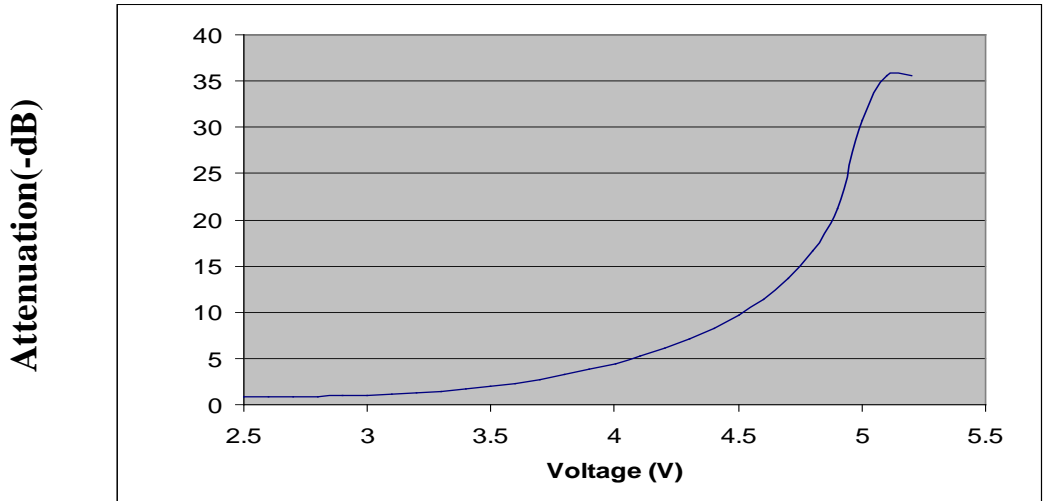


# BroadBand 1260-1650nm NanoSpeed™ Miniature Variable Optical Attenuator/ Modulator

Specify wavelength dependent loss @10dB attenuation



Typical curve of Attenuation versus Voltage



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## Ordering Information

NVOA-	4 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength	State	Optical power	Fiber Type		Fiber Length	Connector
	Regular slope=2	1260-1620nm=1 Special=0	Transparent = 1 Opaque = 2	500mW CW=8 1W CW=1 2W CW=2 5W CW=5	SMF-28 =1 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 = 7 Special = 0

