

# NanoSpeed™ Miniature Variable Optical Attenuator/ Modulator

(patent pending)

## 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 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.



## Features

- No Moving Parts
- High Reliability
- Solid-State High Speed
- Low Insertion Loss
- Epoxy-Free Optical Path
- Low Power Consumption
- Simple Driver

## Performance Specifications

NS Variable Optical Attenuator	Min	Typical	Max	Unit
Wavelength	400		1800	nm
Insertion Loss		0.4	1.0	dB
Polarization Dependent Loss		0.1	0.3	dB
Return Loss	45	50		dB
Attenuation Range	22	28	36	dB
Response Time (Rise, Fall)			300	ns
Repetition Rate	DC	5	300**	KHz
Modulation Rate	DC		5***	MHz
Resolution		Continuous		dB
Operating Optical Power			500	mW
Operating Temperature		-5 ~ 70		°C
Storage Temperature		-40 ~ 85		°C
Package Dimension		51.9X8.2X5.95		mm

\* Driver kit is recommended  
 \*\* Special circuit, 100% depth  
 \*\*\* Special circuit, Maximum modulation depth is 5%

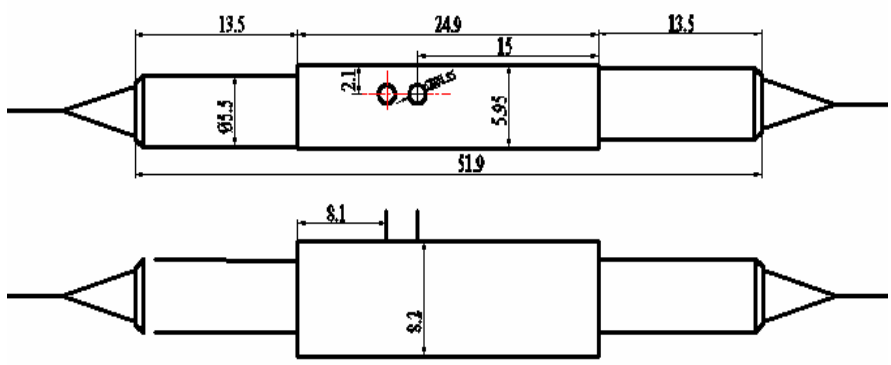
## Applications

- Power Control
- Power Regulation
- Power Balance
- Instrumentation

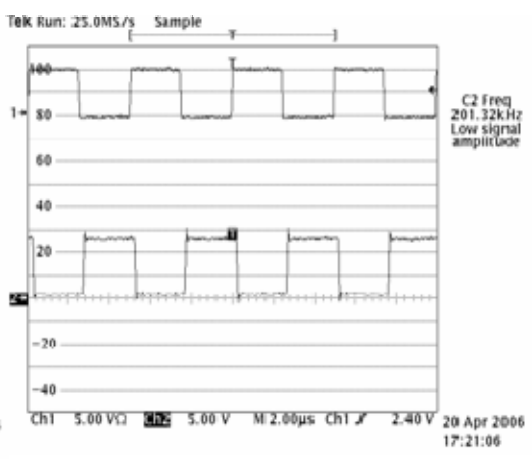
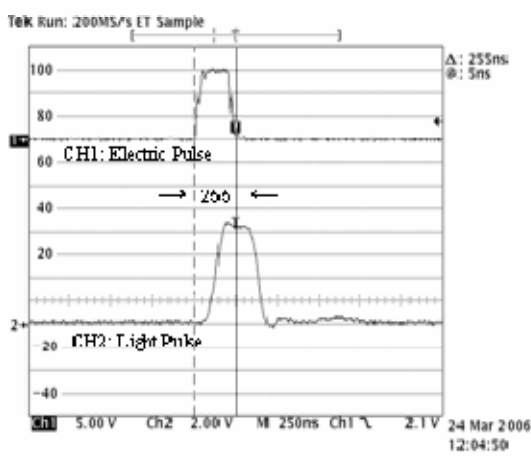


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## Mechanical Footprint Dimensions (Unit:mm)



## Speed and Repetition Measurement





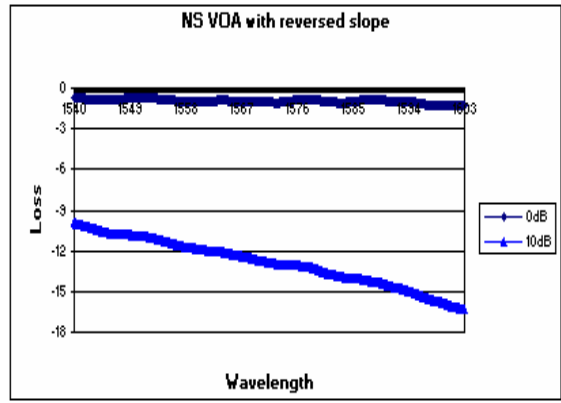
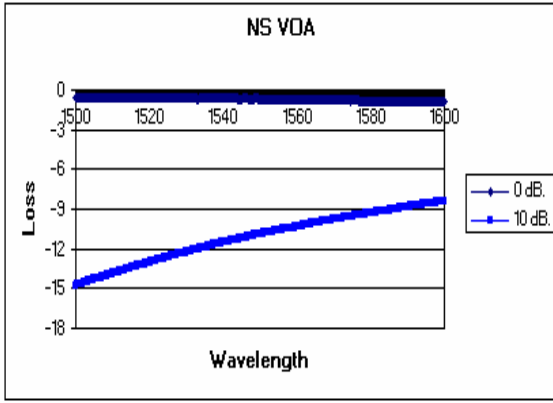
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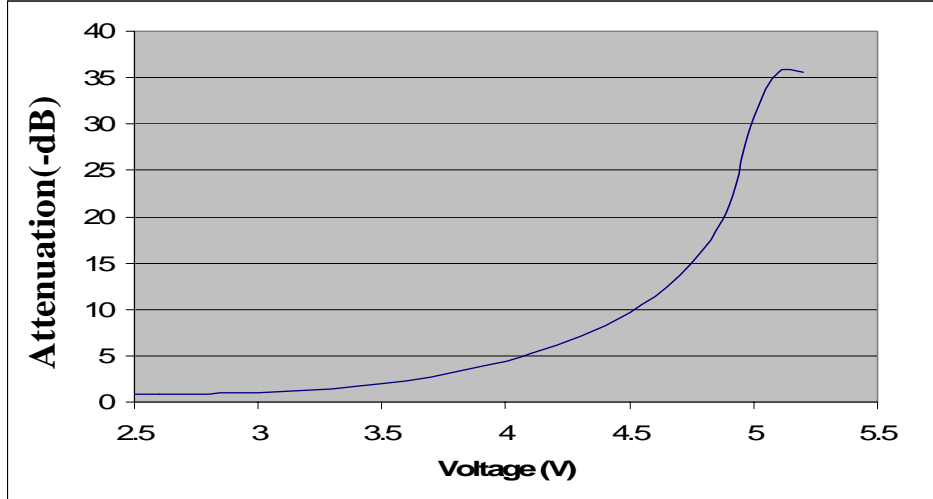
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# NanoSpeed™ Miniature Variable Optical Attenuator/ Modulator

Specify wavelength dependent loss @10dB attenuation



## Typical curve of Attenuation versus Voltage



## Ordering Information

NVOA-	3 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength	State	Package	Fiber Type	Fiber Length	Connector	
	Regular slope=2 Reversed slope=3	1310 = 3 1550 = 5 Special = 0	Transparent = 1 Opaque = 2		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





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