

# NanoSpeed™ High Power Variable Optical Attenuator/Modulator (Bidirectional)

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

## Product Description

The NS 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 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. The device can be driven by a cost effective circuit with 12 V input voltage and 0-5 V control signal.



## Performance Specifications

NH Variable Optical Attenuator	Min	Typical	Max	Unit
Wavelength	780		1800	nm
Insertion Loss <sup>1</sup>		0.4	1.0	dB
Polarization Dependent Loss		0.1	0.35	dB
Return Loss	45	50		dB
Attenuation Range	22	28	36	dB
Response Time (Rise, Fall)			300	ns
Repetition Rate	DC	5	100**	KHz
Modulation Depth	DC		5***	MHz
Resolution		Continuous		dB
Operating Optical Power			5****	W
Operating Temperature	-5 ~ 70			°C
Storage Temperature	-40 ~ 85			°C
Package Dimension	65.5x25x7			mm

\* Driver kit is recommended

\*\* Special circuit, 100% depth

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

\*\*\*\* Continuous operation, for pulse operation call

1. Excluding connectors, Max 1dB for 1310nm and 1550nm, 1.4dB for other wavelengths.

## Features

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

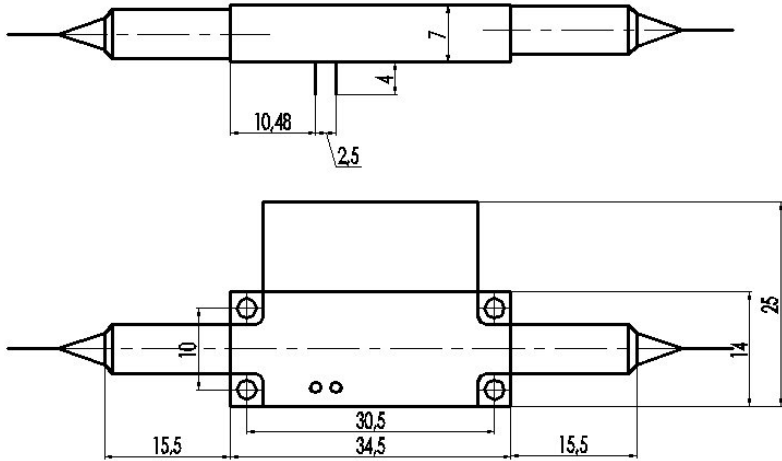
## Applications

- Power Control
- Power Regulation
- Power Balance
- Instrumentation

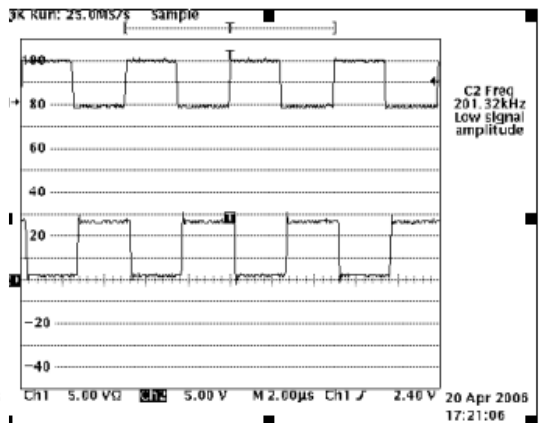
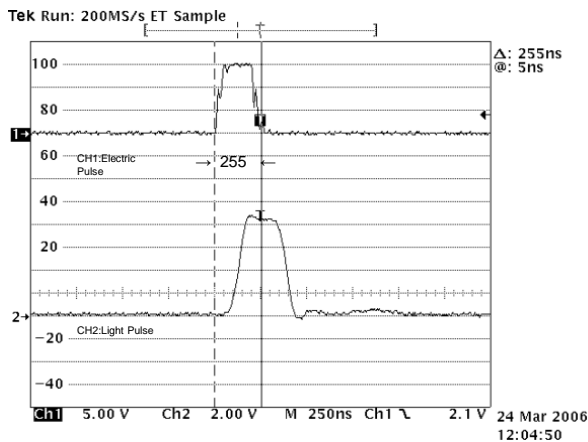


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## Mechanical Footprint Dimensions (Unit:mm)

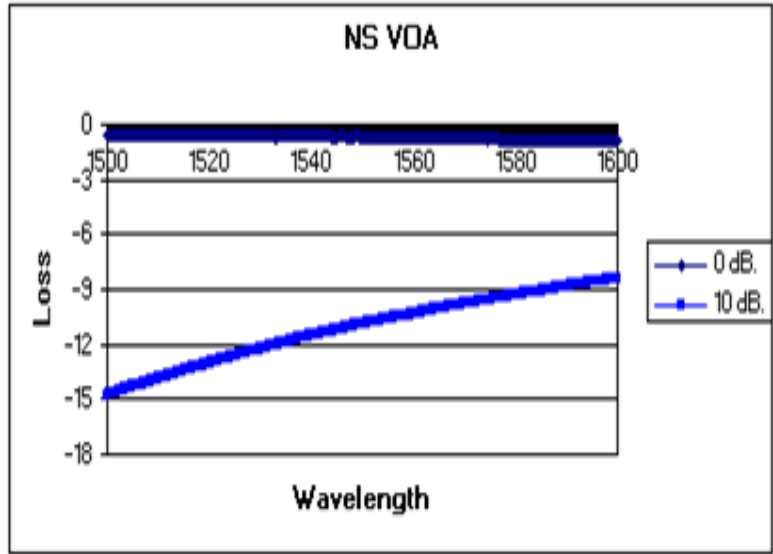


## Speed and Repetition Measurement



# NanoSpeed™ High Power Variable Optical Attenuator/Modulator

Specify wavelength dependent loss @ 10dB attenuation



## Ordering Information

NHOA-	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type	Wavelength	State	Package	Fiber Type	Fiber Length	Connector		
Regular Slope=2	1060=1 L Band=2 1310=3 1410=4 1550=5 650=6 780=7 850=8 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	

\* Agiltron provide high power connector, please call.