

# NanoSpeed™ 1x1 Fiberoptic Switch / On-Off Shutter

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

## Product Description

The NS 1x1 fiber optic switch/on-off shutter is a fast shutter device featuring very low loss, fast response, and high optical power handling. This is achieved using patented non-mechanical configurations with solid-state all-crystal designs, which eliminates the need for mechanical movement and organic materials. The NS fiber-optic switch is designed to meet the most demanding switching requirements of ultra-high reliability, fast response time, and continuous switching operation. The switch is bidirectional.

Agiltron's PCB driver listed in the web is recommended to operate this device, featuring high efficiency and low cost with 12V DC power and TTL control signal.

## Performance Specifications

NS 1x1 Switch/Shutter	Min	Typical	Max	Unit
Central Wavelength	780		2000	nm
Insertion Loss <sup>[1]</sup>	1260-1650nm	0.6	1.0	dB
	960-1200nm	0.8	1.3	dB
	760-900nm	1.0	1.5	dB
Extinction ratio	20	25		dB
Polarization Dependent Loss		0.15	0.35	dB
IL Temperature Dependency		0.25	0.5	dB
Polarization Mode Dispersion		0.1	0.3	ps
Return Loss	45	50		dB
Response Time (Rise, Fall)			300	ns
Repetition Rate <sup>[2]</sup>	DC	5		kHz
Operating Temperature	-5		70	°C
Optical Power Handling <sup>[3]</sup>		300		mW
Storage Temperature	-40		85	°C
Package Dimension		57.5x7.35x9.7		mm

[1] Measured without connectors

[2] Standard driver. High repetition rate (up to 500 KHz) is available with special circuit, please call us.

[3] Defined at 1550nm. For the shorter wavelength, the handling power may be reduced. High power version (up to 5W) for 1310nm, 1550nm is available, please call us for more information.

## Features

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

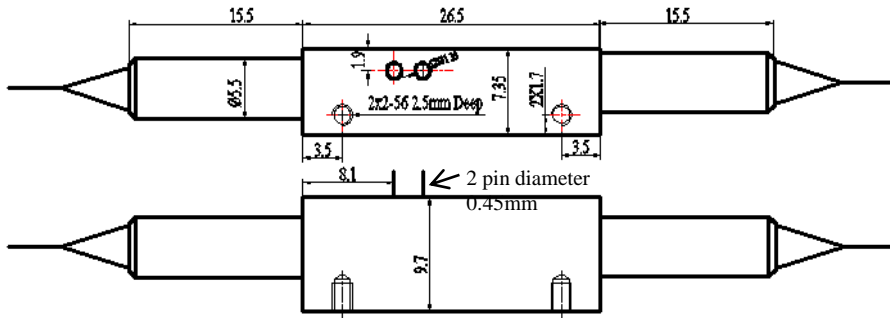
## Applications

- Optical blocking
- Configurable operation
- Instrumentation

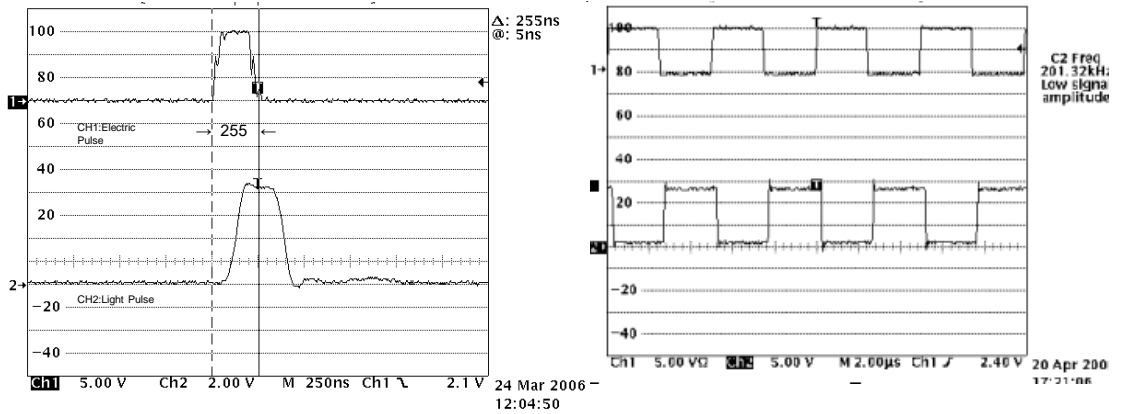


# NanoSpeed™ 1x1 Fiberoptic Switch / On-Off Modulator

## Mechanical Dimensions (mm)

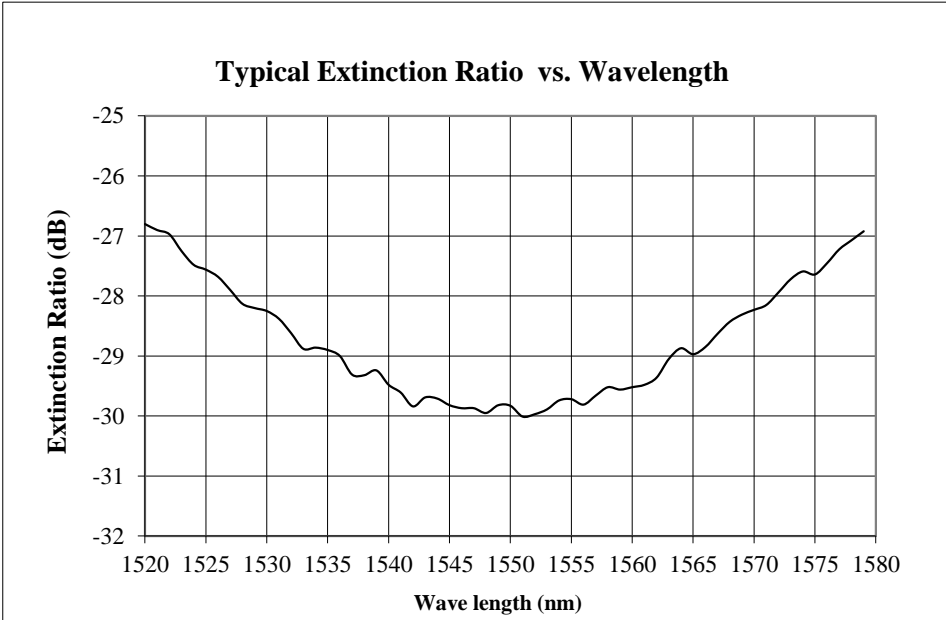


## Speed and Repetition Measurement



# NanoSpeed™ 1x1 Fiberoptic Switch / On-Off Shutter

## Bandwidth Measurement



## Ordering Information

NSSW-	1 1	<input type="checkbox"/>	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type	Wavelength	Configuration	Package	Fiber Type	Fiber Length	Connector		
	1060=1 L Band=2 1310=3 1550=5 780=7 850=8			SMF-28=1 HI1060=2 HI780=3 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 LC/APC=8 Special=0	