

# NanoSpeed™ 2X2 Solid-State Fiber-optic Switch (Bidirectional)

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

## Product Description

The NS Series 2x2 solid-state fiber optic switch connects optical channels by redirecting an incoming optical signal into a selected output optical fiber. This is achieved using patent pending non-mechanical configurations with solid-state all-crystal design, 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.

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 Series 2x2 Switch	Min	Typical	Max	Unit
Central Wavelength	1260		2000	nm
Insertion Loss <sup>[1]</sup>		0.8	1.5	dB
Cross Talk	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	42	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		77.1x8.5x8.4		mm

[1] Excluding connectors.

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

[3] Defined at 1550nm. High power version (up to 5W) is available, please call.

### Features

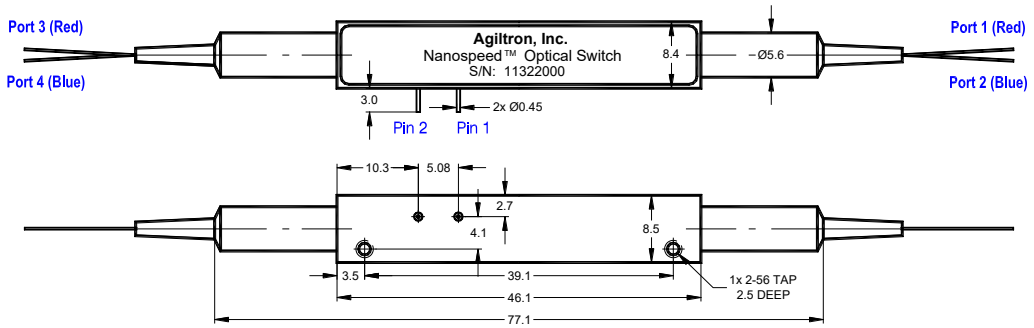
- Solid-State
- High speed
- Ultra-high reliability
- Low insertion loss
- Compact

### Applications

- Optical blocking
- Configurable operation
- Instrumentation

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## Mechanical Dimensions (Unit: mm)

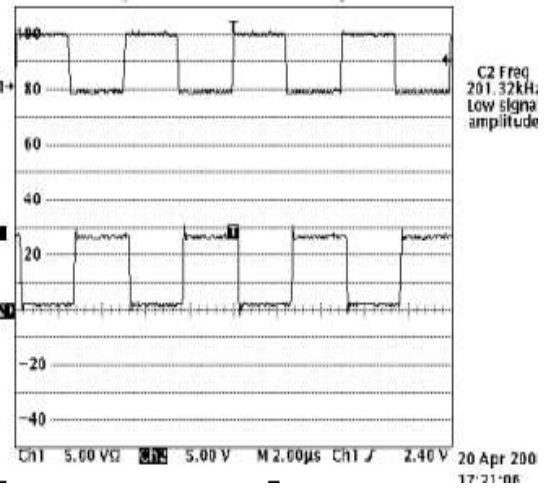
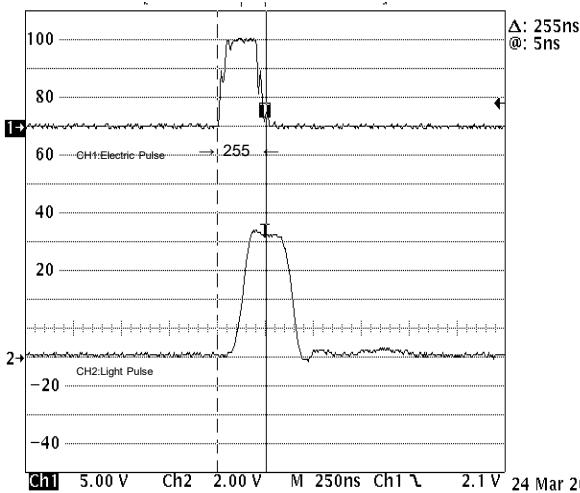


## Optical Path Driving Table

Optical Path	Pin 1	Pin 2
Port 1 → Port 3 Port 2 → Port 4	No Power	
Port 1 → Port 4 Port 2 → Port 3	H	GND

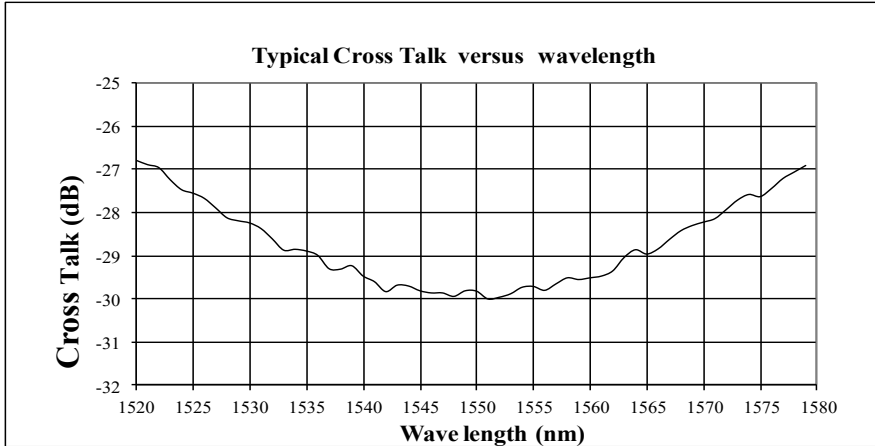
H: 360 ~ 420V

## Speed and Repetition Measurement



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## Bandwidth Measurement



## Ordering Information

NSSW-	2 2	<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		
2x2=22	L Band=2 1310=3 1550=5 Special=0			SMF-28=1 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/PC=8 LC/APC=9 Special=0		