

NanoSpeed™ Broadband 1x2 Series Fiber Optical Switch

(SMF, PMF, High Power)

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

Product Description

The NanoSpeed™ Series 1x2 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 non-mechanical configurations with solid-state all-crystal designs, which eliminates the need for mechanical movement and organic materials. The broadband series of NS fiber optic switch is designed to meet the most operation requirements of wave length band in addition of ultra-high reliability, fast response time, and continuous switching operation. This series of switches are **bidirectional** intrinsically.

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.

Features

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

Performance Specifications

NS Broadband Series 1x2 Switch		Min	Typical	Max	Unit
Insertion Loss ^[1]	1260-1650nm		0.6	1.0	dB
	960-1100nm		0.8	1.3	
	760-960nm (Normal power switch only)		1.0	1.5	
Cross Talk		20	25	35	dB
PDL (SMF Switch only)			0.15	0.3	dB
PMD (SMF Switch only)			5	6	ps
ER (PMF Switch only)		18	25		dB
IL Temperature Dependency			0.25	0.5	dB
Return Loss		45	50	60	dB
Response Time (Rise, Fall)				300	ns
Fiber Type	SMF-28, Panda PM, or equivalent				
Repeat Rate	5kHz driver	DC	5		kHz
	100kHz driver	DC	100		
	500kHz driver	DC	500		
Optic Power Handling ^[2]	Normal power switches		300		mW
	High power switches			5	W
Operating Temperature		-5		70	°C
Storage Temperature		-40		85	°C

[1] Measured without connectors.

[2] Defined at 1310nm/1550nm. For the shorter wavelength, the handling power may be reduced, please contact us for more information.

Applications

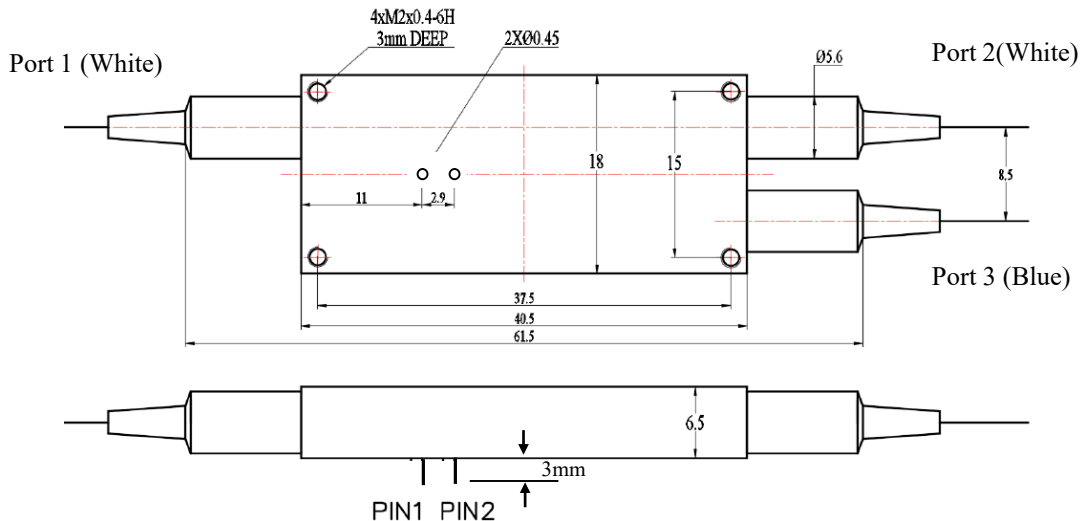
- Optical protection
- Configurable operation
- Instrumentation

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Mechanical Dimensions (mm)

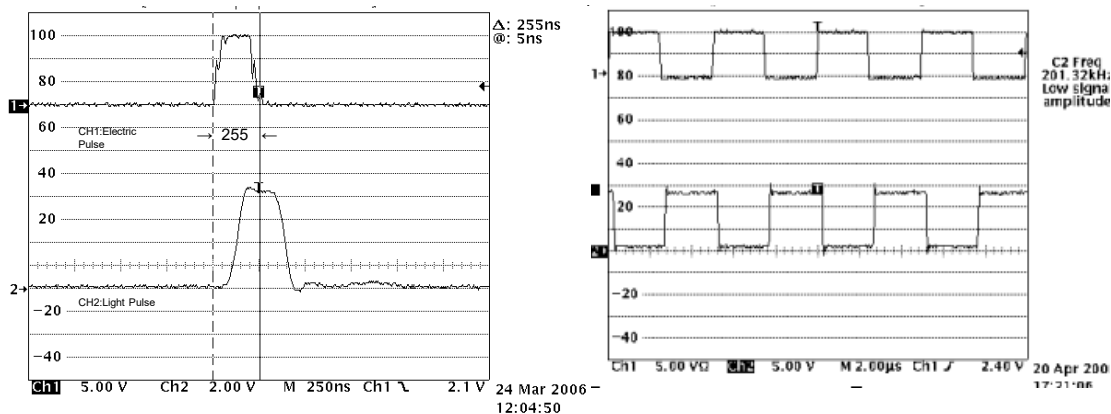


Optical Path Driving Table

Optical Path	Pin 1	Pin 2
Port 1→Port 2	No Power	
Port 1→ Port 3	H	GND
H: 360 ~ 420 V. It may need to adjust the HV for the different central wavelength to obtain the optimal CT in this broadband version.		

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Typical Speed and Repetition Measurement



Ordering Information

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	Type	Wavelength ^[1]	Configuration & Package	Fiber Type		Fiber Length	Connector ^[2]
NSBW = Normal power switch NHBW = High power switch	1x 2=12	1260-1650nm=1 960-1200nm=2 780-960nm=3 Special=0	Single stage & Normal package = 12	SMF-28=1 HI1060=2 HI780=3 PM 1550/400=4 PM 1550/250=5 PM980=9 PM850=8 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 Duplex LC=8 LC/APC=9 Special=0

[1]. High power switch isn't available for the wavelength shorter than 960nm

[2]. There isn't any connector in the high power switches normally. Please contact us for high power connectors.