

NanoSpeed™ 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 NS fiber optic switch is designed to meet the most demanding switching requirements of ultra-high reliability, fast response time, and continuous switching operation. This series of switches are **bidirectional** intrinsically.

The NS Series switch is controlled by 5V TTL signals with a specially designed electronic driver having performance optimized for various repetition rate.



Performance Specifications

NanoSpeed Series 1x2 Switch		Min	Typical	Max	Unit
Central wavelength ^[1]		780		1650	nm
Insertion Loss ^[2]	1260-1650nm		0.6	1.0	dB
	960-1100nm		0.8	1.3	
Cross Talk ^[3]		20	25	35	dB
PDL (SMF Switch only)			0.15	0.3	dB
PMD (SMF Switch only)			0.1	0.3	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			
Driver Repeat Rate	100kHz driver	DC	100		kHz
	500kHz driver	DC	500		
Optic power Handling ^[4]	Normal power switches		300		mW
	High power switches			5	W
Operating Temperature		-5		70	°C
Storage Temperature		-40		85	°C

[1] Operation bandwidth is +/- 25nm approximately at 1550nm.

[2] Measured without connectors. For other wavelength, please contact us.

[3] Cross talk is measured at 100kHz, which may be degraded at the high repeat rate.

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

Features

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

Applications

- Optical protection
- Configurable operation
- Instrumentation

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(SMF, PMF, High Power)

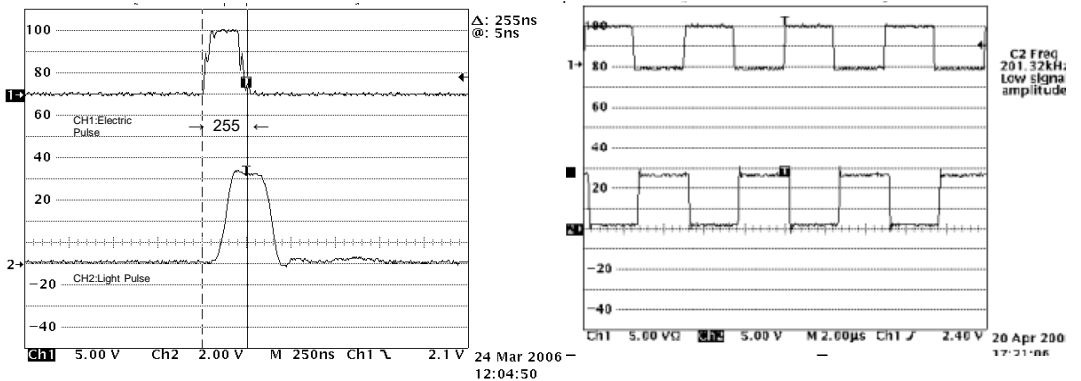


Driving Board Selection

Maximum Repetition Rate	Part Number (P/N)
100kHz	SWDR-11a261111
500kHz	SWDR-11a291111

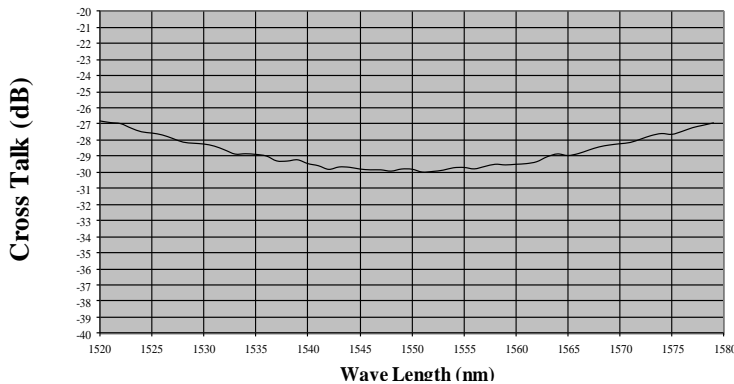
* Note: For customers that prefer to design their own driving circuit, they are responsible for the optical performance. For more technical information, please contact us.

Speed and Repetition Measurement



Bandwidth Measurement

Typical Cross Talk versus wavelength



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Ordering Information

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1 2	<input type="checkbox"/>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength ^[1]	Configuration	Package	Fiber Type		Fiber Length	Connector ^[2]
NSSW = Normal power switch NHSW = High power switch	1x 2=12	1060nm=1 L Band=2 1310nm=3 1410nm=4 1550nm=5 Special=0	Single stage = 1	Standard = 1 Special = 0	SMF-28=1 HI1060=2 PM 1550/400=4 PM 1550/250=5 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]. For shorter wavelength, please refer to Premium NS switches
 [2]. Please contact us for high power connectors.

* For short wavelength., please refer to Premium NS Switch.