NanoSpeed™ Solid-State 1x2 Fiberoptic Switch
(Bidirectional)

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

Product Description

The NS 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 pending non-mechanical configurations with solid-state all-crystal designs, which eliminates the need for mechanical movement and organic materials. The NS fiberoptic switch is designed to meet the most demanding switching requirements of ultra-high reliability, fast response time, and continuous switching operation.

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

Features

- Solid-State high speed
- Ultra-high reliability
- Low insertion loss
- Compact size
- Low cost
- Low power consumption
- Simple driver

Performance Specifications

NS Series 1x2 Switch		Min	Typical	Max	Unit
Operation Wavelength		760		1800	nm
Insertion Loss*	1260~1800nm		0.6	1.0	dB
	960~1260nm		0.8	1.3	dB
	760~960nm		1.0	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		45	50		dB
Response Time (Rise, Fall)				300	ns
Repetition Rate**		DC	5		KHz
Operating Temperature		-5		70	°C
Optical Power Handling***			300		mW
Storage Temperature		-40		85	°C
Package Dimension			67.3x8.5x8.4		mm

* Measured without connectors
** Standard driver. High repetition rate (up to 500 KHz) is available with special circuit.
*** High power version (up to 5W) available from 960~1800nm

Applications

- Optical blocking
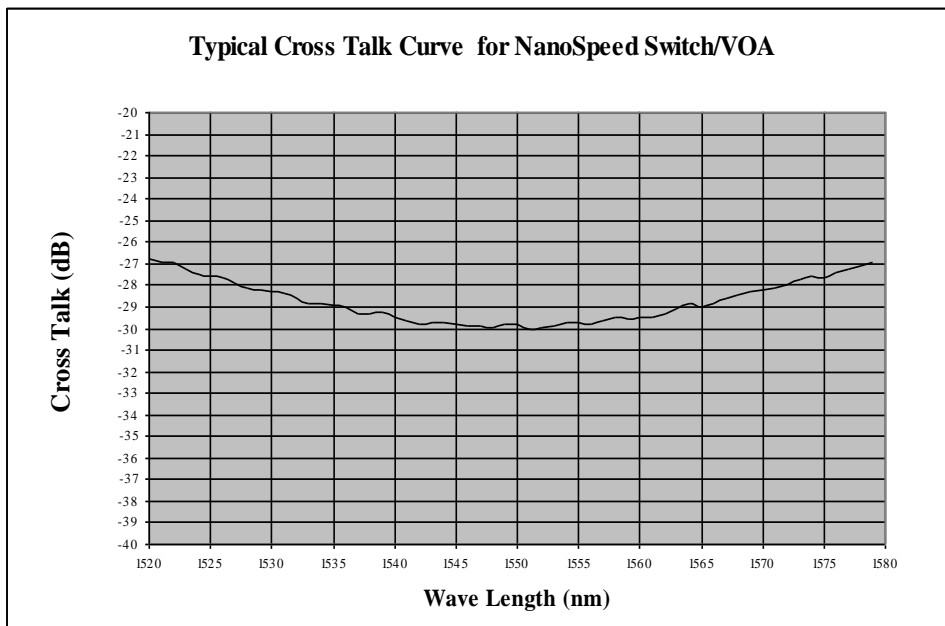- Configurable operation
- Instrumentation

RoHS Compliant

NanoSpeed™ Solid-State
1x2 Fiberoptic Switch

Mechanical Dimensions (mm)

Speed and Repetition Measurement

NanoSpeed™ Solid-State 1x2 Fiberoptic Switch

Bandwidth Measurement

Typical Cross Talk Curve for NanoSpeed Switch/VOA

Cross Talk (dB) vs Wave Length (nm), Y-axis from -20 to -40, X-axis from 1520 to 1580.

Ordering Information

NSSW-	1 2		1	2	1			
	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 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 Duplex LC=8 Special=0

* For 1060nm or short wavelength. Please refer to NS High Power 1x2 Switch.