NanoSpeed™ 1x1 PM Fiberoptic Switch / On-Off Modulator
(Bidirectional)

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

Product Description

The NS 1x1 PM fiber optic switch/on-off modulator 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 fiberoptic PM 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.

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

Features

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

Applications

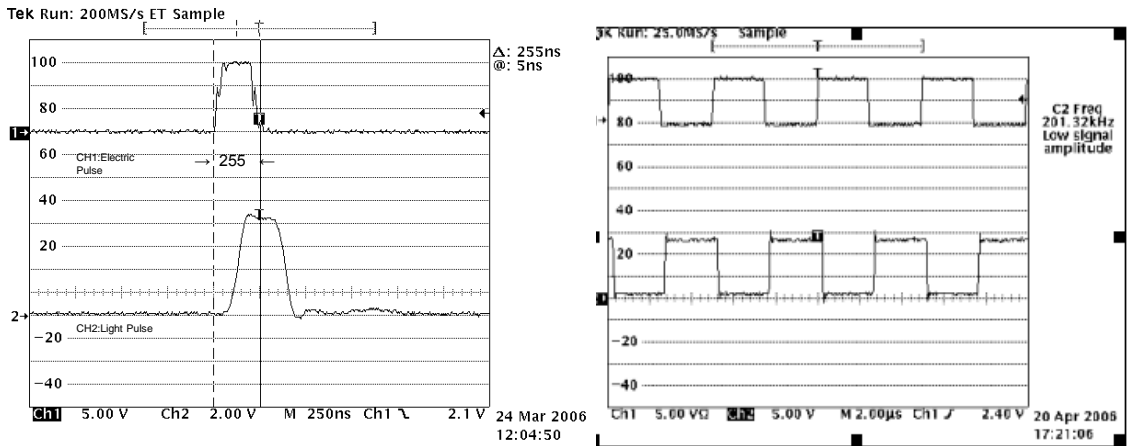- Optical blocking
- Light path re-directing
- Instrumentation

Performance Specifications

NS 1x1 PM Switch/Modulator		Min	Typical	Max	Unit
Operation Wavelength		780		1800	nm
Insertion Loss[1]	1260~1800nm		0.6	1.0	dB
	960~1260nm		0.8	1.3	dB
	760~960nm		1.0	1.5	dB
IL Temperature Dependency			0.25	0.5	dB
Isolation		20	25		dB
Extinction ratio		18	25	30	dB
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	500	mW
Storage Temperature		-40		85	°C
Fiber Type		Panda PM fiber			
Package Dimension		57.5x7.35x9.7			mm

* Measured without connectors.
** Standard driver. High repetition rate (up to 500 KHz) is available with special circuit.

RoHS Compliant

08-31-15

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Mechanical Dimensions (mm)
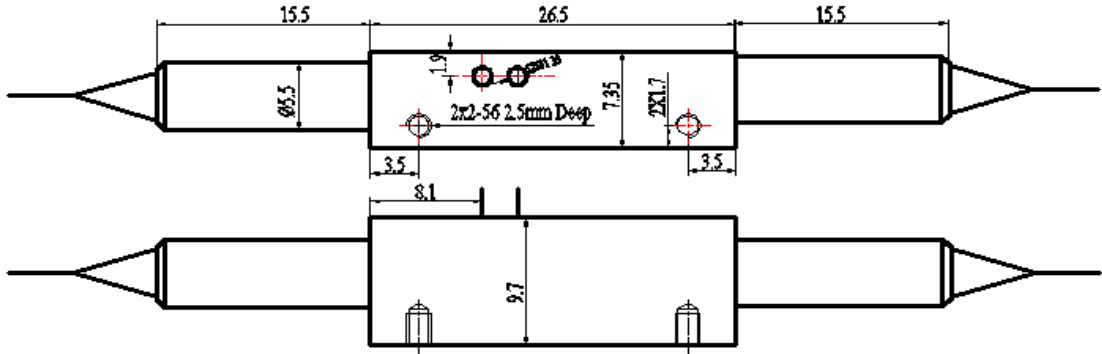
Speed and Repetition Measurement

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Bandwidth Measurement

Typical Cross Talk Curve for NanoSpeed Switch/VOA

(Y-axis: Cross Talk (dB), range −20 to −40; X-axis: Wave Length (nm), range 1520 to 1580)
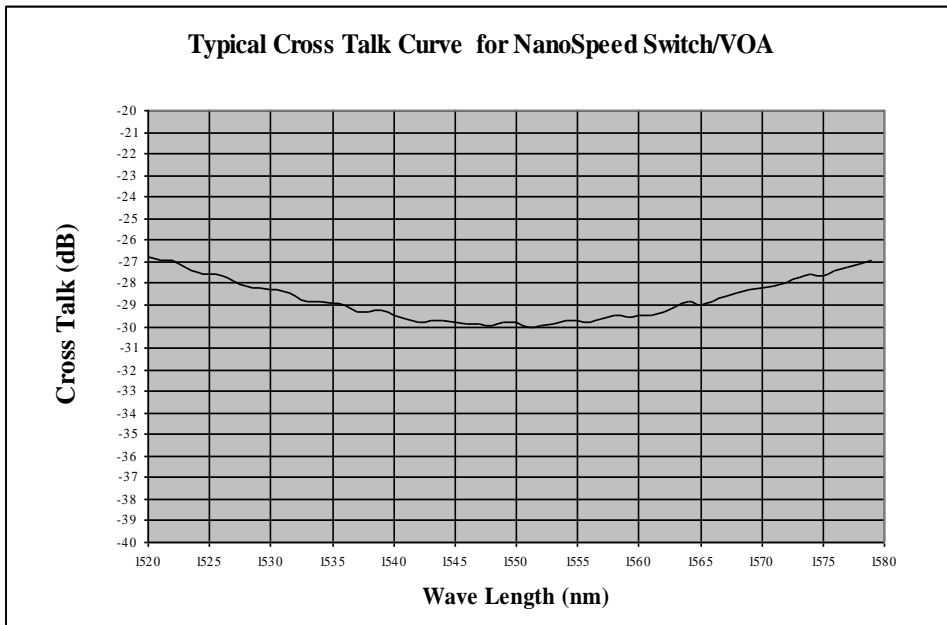
Ordering Information

NSSW-	Type	Wavelength	Configuration	Package	Fiber Type		Fiber Length	Connector
	1 1	☐	1	1	☐	☐	☐	☐
	1X1=11	1060=1 L Band=2 1310=3 1550=5 780=7 850=8			Panda PM fiber 400=4 Panda PM fiber 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=7 Special=0