

NanoSpeed™ 1x2 Solid-State Variable Fiberoptic Splitter

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

Product Description

The NS 1x2 Solid-State Variable Fiber Optic Splitter splits an incoming optical signal among two output optical fibers with an electrically variable power ratio. This is achieved using a patent pending non-mechanical configuration. When the electrical control signal is removed, the splitter latches to a pre-determined ratio with a standard version of 100:0. The device is bidirectional, transmitting light in both direction simultaneously. The all-solid-state crystal design eliminates the need for mechanical movement and organic materials. The NS Fiber Optic Splitter is designed to meet the most demanding switching requirements of ultra-high reliability, fast response time, and continuous operation.

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

Performance Specifications

NS 1x2 Splitter	Min	Typical	Max	Unit
Central Wavelength	780		2000	nm
Insertion Loss ^[1]	1260-1650nm	0.6	1	dB
	900-1260nm	0.8	1.3	dB
	760-900nm	1	1.5	dB
Cross Talk at 100% splitter ^[2]	20	25	35	dB
Splitting Variation	Output 1	100-0		%
	Output 2	0-100		%
Type	Continuous			
Response Time (Rise, Fall)			300	Ns
Repetition Rate ^[3]	DC	5	100	kHz
Polarization Dependent Loss		0.1	0.35	dB
IL Temperature Dependency		0.25	0.5	dB
Polarization Mode Dispersion		0.1	0.2	Ps
Return Loss	45	50	60	dB
Operating Temperature	-5		70	°C
Optical Power Handling ^[3]		300		mW
Storage Temperature	-40		85	°C
Package Dimension	65.8x8.5x8.4			mm

[1] Excluding connectors.

[2] Cross talk is measured at 5kHz, which may be degraded at the high repeat rate.

[3] High repetition rate (up to 100 kHz) is available.

[3] Defined at 1310/1550nm. For the shorter wavelength, the handling power may be reduced.

Features

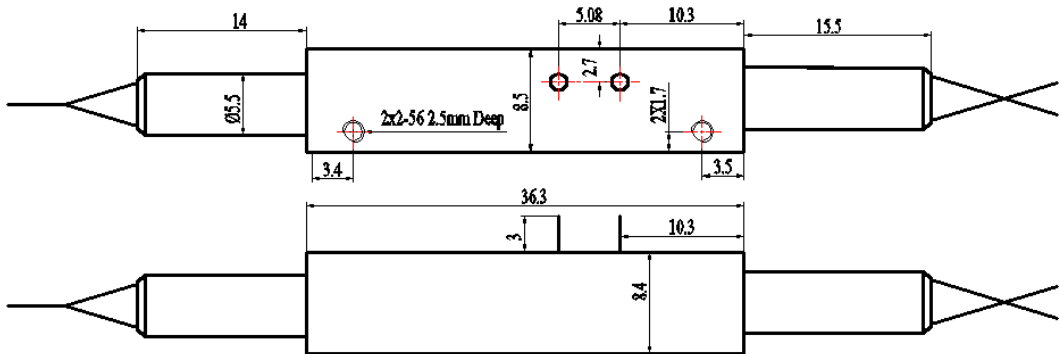
- Solid-State High Speed
- Ultra-High Reliability
- Low Insertion Loss
- Compact

Applications

- Optical Channel Blocking
- System Monitoring
- Instrumentation

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Mechanical Dimensions (mm)



Optical Splitter Driving Table

Optical Power Ratio		TTL Signal
Port # 2 / Port #3	100% / 0%	L (< 0.8V)
Port # 2 / Port #3	0% / 100%	H (> 4.5V)

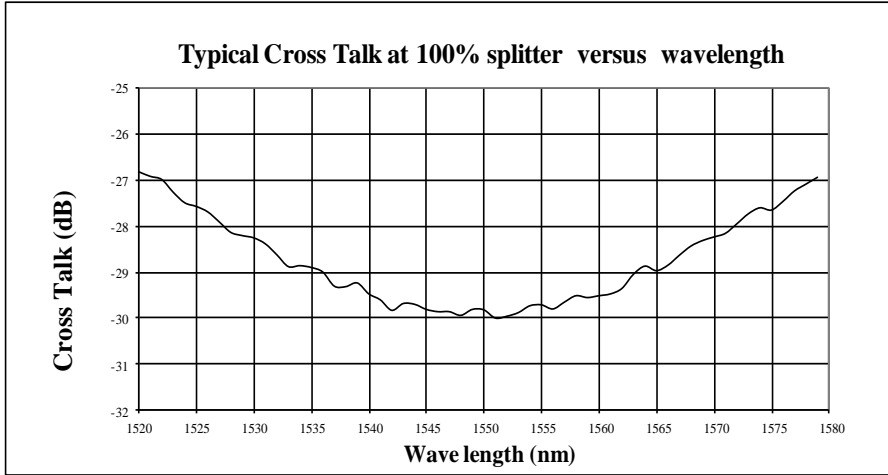
Driving Board Selection

Maximum Repetition Rate	Part Number (P/N)
5kHz	NVDR-111221112
20kHz	NVDR-113235112
100kHz	NVDR-112221112

* 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.

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Bandwidth Measurement



Ordering Information

NSSW-	3 0	<input type="checkbox"/>	1	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type	Wavelength	Configuration	Package	Fiber Type	Fiber Length	Connector		
Splitter=30	1060=1 L Band=2 1310=3 1550=5 780=7 850=8 980=9			SMF28e=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/PC=7 LC Duplex=8 LC/APC=9 Special=0	