

(Protected by U.S. patents 7,403,677B1; 6,757,101B2; and pending patents)



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The NS Series fiber optic resonance switch features fast repetition at a fixed resonance frequency of about 5 Mhz, low optical loss, and high optical power handling. This is achieved using a patented electro-optical configuration with a built-in high Q resonant circuit. The devices use special electro-optical crystals of high stability that increase power handling and reduce drift/darkening. The NS fiber optic switch meets the most demanding switching requirements of continuous operations over 25 years and non-mechanical ultra-high reliability.

Specifications

Parameter		Min	Typical	Max	Unit	
	1900-2200nm		1.3	1.9	dB	
Incortion Loss ^[1]	1260~1650nm		1	1.5		
Insertion Loss * *	960~1100nm		1.5	2		
	780-960nm		1.7	2.2		
Cross Talk On/Off Rat	io ^[2]	18	20	35	dB	
Durability		10 ¹⁴			cycles	
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	1.5	dB	
Return Loss		45	50	60	dB	
Repetition Rate			20	100	MHz	
Optic power	Normal power version		300		mW	
Hallulling	High power version			5	w	
Operating	Standard	-5		75	°C	
Temperature	Large range version	-30		85		
Storage Temperature		-40		100	°C	

Notes:

[1]. Measured without connectors.

Wavelength <850nm or > 1700nm is available only in the special version with a long lead time.

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

[3]. It is defined as the rising or fall time between 10% and 90% of optical intensities.

[4]. Defined at 1310nm/1550nm. For the shorter wavelength, the handling power may be reduced, please contact us for more information. High power version available by incorporating fiber core enlargement (expensive).

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Features

- Compact
- Low Cost
- High Reliability
- Low IL, PDL, WDL & TDL
- Low Power Consumption

Applications

- Laser Power Control
- PD Receiving Power Adjust
- Channel Balance
- Instrumentation



5MHz, High Power, Bidirectional

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Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Typical Bandwidth Measurement



Electrical Information

- 1. Self-contain tuned to the resonance
- 2. Power Input: 12V Wall pluggable (110-240 AVC)

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Ordering Information

Prefix	Туре	Wavelength	Power Handling ^[1]	Repetition Rate	Fiber Type	Fiber Cover	Fiber Length	Connector ^[2]
NSRS-	1x1 = 1 1x2 = 2 2x2 = 3	1060 = 1 2000 = 2 1310 = 3 1550 = 5 1625 = 6 780 = 7 850 = 8 650 = E Special = 0	Regular = 1 500mW = 2 5W = 5	1MHz = 01 2MHz = 02 5MHz = 05 Special = 00	SMF-28 = 1 H1060 = 2 H1780 = 3 PM1550 = 5 PM850 = 8 PM980 = 9 Special = 0	Bare fiber = 1 900um 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/APC = 8 Special = 0

[1]. Wavelength < 850nm or > 1700nm is available only in the special version with a long lead time

[2]. Please contact the sale about the high power connector for NPHW version.

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Operation Manual

- 1. Attach and connect the accompanying power supply (a wall-pluggable unit).
- 2. The device should then function properly.

Note: Do not open the box and alter device factory settings.

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