

1X1/1X2/2X2 Nanosecond Fiber optic Switch

Product Description

The Nanosecond fiber optic switch is developed for high repeat rate and moderate driving voltage based on the standard NS series of switching technology. This is achieved using patented electro-optical configuration featuring clean fast response without ripples and temperature compensation for outdoor operation. The NSP fiber optic switch is designed to meet the most demanding switching requirements of continuous operations over 20 years and non-mechanical ultra-high reliability.

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

Features

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

Applications

- Optical blocking
- Configurable operation
- Instrumentation

Performance Specifications

| Nanosecond Switches | | Min | Typical | Max | Unit |
|--|----------------------|---------------------|---------|-----|------|
| Insertion Loss ^[1] | 1900-2200nm | | 0.8 | 1.8 | dB |
| | 1260-1650nm | | 0.6 | 1.0 | |
| | 960-1100nm | 0.9 | 1.2 | 1.8 | |
| | 780-960nm | 1.2 ^[1b] | 1.6 | 2.5 | |
| | 520-780nm | 1.5 ^[1b] | 2.5 | 3.5 | |
| Cross Talk ^[2] | Single stage | 18 | 25 | 35 | dB |
| | Dual stage | 30 | 36 | 45 | |
| 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 |
| Optical transition time ^[3] | | 40 | 90 | | ns |
| Driver Repeat Rate | 200kHz driver | DC | 200 | | kHz |
| | 1000kHz driver | DC | 1000 | | |
| Optic power Handling ^[4] | Normal power version | | 300 | | mW |
| | High power version | | | 5 | W |
| Operating Temperature | Standard | -5 | | 75 | °C |
| | Large range version | -30 | | 85 | °C |
| Storage Temperature | | -40 | | 100 | |

[1] Measured without connectors. For other wavelengths, please contact us.

[2] Cross talk is measured at 500kHz, which may be degraded at the higher repeat rate.

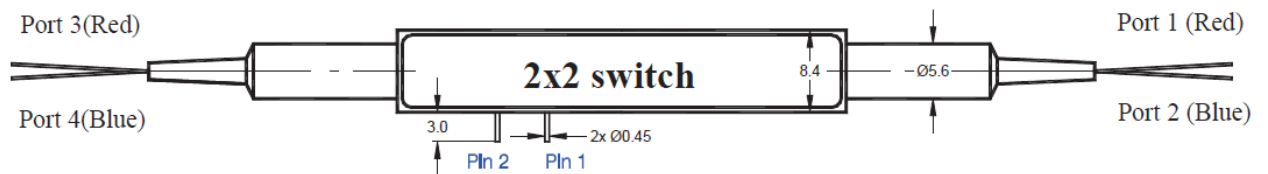
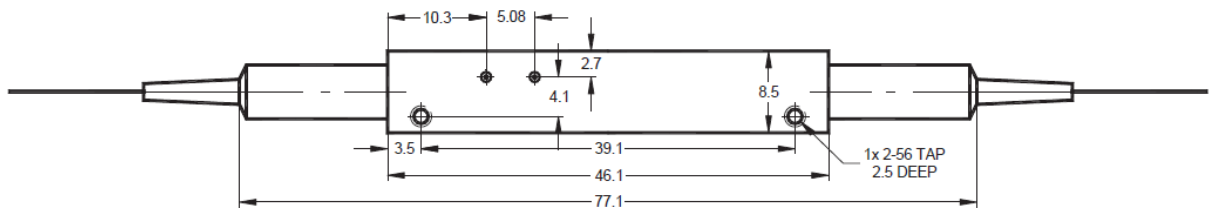
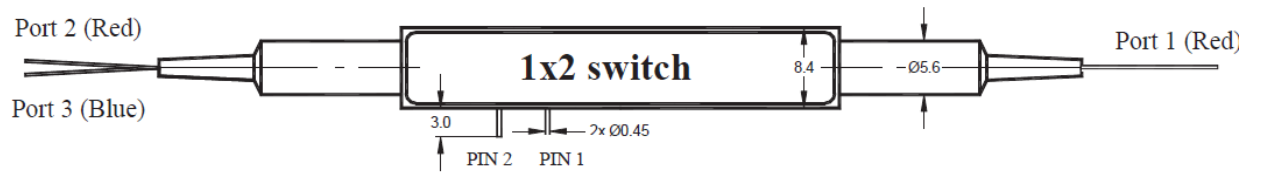
[3] It is defined as the rising or fall time between 10% and 90% of optical intensities.

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

reduced, please contact us for more information.

[1b] NPLC version available for high power and low loss that incorporating fiber core enlargement (expensive).

Mechanical Dimensions (Unit: mm)



Optical Path Driving Table

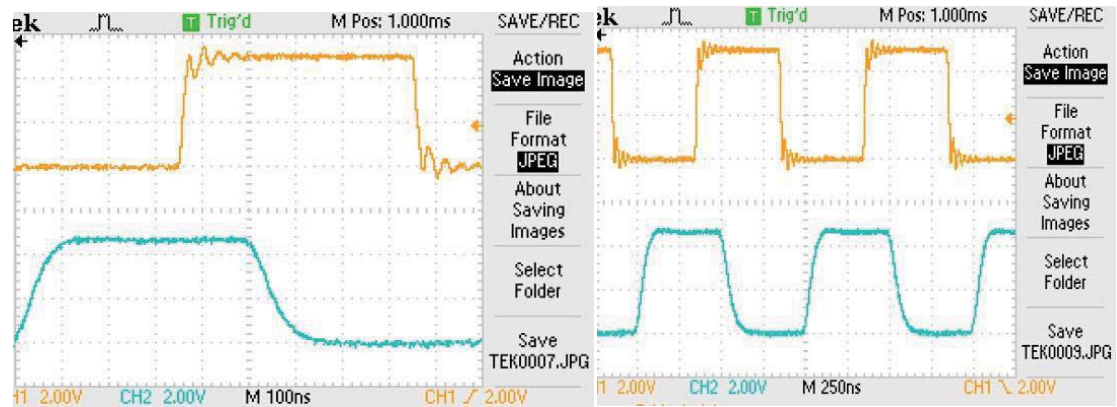
| 1x1 Optical Path | TTL Signal |
|--|------------|
| ON for normally-open, OFF for normally-close | L(< 0.8V) |
| OFF for normally-open, ON for normally-close | H(> 3.5V) |

| 1x2 Optical Path | TTL Signal |
|------------------|------------|
| Port 1→Port 2 | L(< 0.8V) |
| Port 1→Port 3 | H(> 3.5V) |

| 2x2 Optical Path | TTL Signal |
|------------------------------|------------|
| Port 1→Port 3, Port 2→Port 4 | L(< 0.8V) |
| Port 1→Port 4, Port 2→Port 3 | H(> 3.5V) |

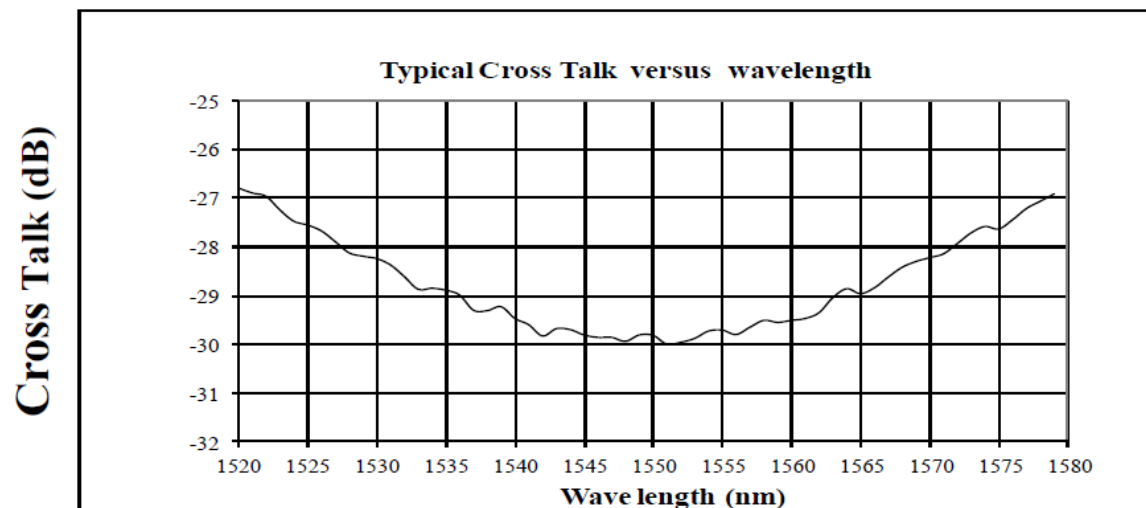
Typical Speed and Repetition Measurement

1MHz Response



Note: Top Traces are electrical; Bottom traces are optical

Typical Bandwidth Measurement



订购信息: A-B-C-D-E-F-G-H-I

| A | B | C | D | E | F | G | H | I |
|--|----------------------------|---|--|--------------------|--|--|---|---|
| | Type | Wavelength | Grade | Repetition Rate | Fiber Type | | Fiber Length | Connector ^[1] |
| NPSW = Normal power version | 11=1x1 12=1x2 22=2x2 | 1=1060 2=2000 3=1310 4=1480 | 1= Single stage 2= Dual stage | 1=200kHz 2=1MHz | 1=SMF-28 2=HI1060 3=HI780 4=PM1550/4 00 | 1= Bare fiber 3= 900um loose tube 0= Special | 1=0.25m 2=0.5m 3=1.0m 0= Special | 1=无 2=FC/PC 3=FC/APC 4=SC/PC 5=SC/APC 6=ST/PC 7=LC/PC 8=LC/APC 0= Special |
| NPHW = High Power version | | 5=1550 6=1625 7=780 8=850 | | | 5=PM1550/2 50 8=PM850 9=PM980 0= Special | | | |
| NPLC[2] = Large Core version for high power and low loss | | E=650 F=550 G=400 L=1565-620 0= Special | | | | | | |

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

[2]: NPLC version is available only for wavelength shorter than 780nm.