

## OVERVIEW

The SW $1 \times 4$ switch is a very fast opto-mechanical switch working over both telecom wavelength windows from 1240 nm to 1600 nm . The highly reliable switching mechanism is based on micromechanical mirrors and features below 1 ms switching time and only 1.0 dB insertion loss.
The miniature package withstands rugged environments and is well suited for direct mounting on printed circuit boards.

## FAST

## FIBER OPTIC 1x4 SWITCH

## FEATURES

- reliable
- 1.0 dB insertion loss
- 1 ms response time
- 60 dB crosstalk
- non-latching


## APPLICATIONS

- Source Selection
- Protection Switching
- Monitoring
- Wavelength provisioning

ORDERING INFORMATION
SW1x4-9N


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## DESCRIPTION

The non-latching $1 \times 4$ switch modules are fast and reliable switches designed for single mode fiber instrumentation and communication equipment. The device is based on MEMS technology and uses micro-mechanical mirrors to redirect the light. The underlying MEMS technology allows to achieve a constant switching quality over billions of actuation cycles. The switch features fast switching below 1 ms and high crosstalk attenuation above 60 dB . Repeatability is better than 0.01 dB . The switch is powered by a 5 V supply voltage. A 5 V TTL or CMOS drive signal is used to control the switching state.

| TECHNICAL SPECIFICATIONS |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Switch | Unit | Min | Typ | Max |
| Wavelength Range |  |  |  |  |
| Insertion Loss | nm | 1240 |  | 1640 |
| Crosstalk | dB |  | 0.5 | 1.0 |
| Backreflection | dB |  | 75 | 60 |
| Polarisation Dependent Loss | dB | dB | 55 | 50 |
| Switching Time | ms |  | 0.10 |  |
| Switching Voltage | V | 0.5 | 1 |  |
| Fiber Pigtail | $\mu \mathrm{m}$ |  | $9 / 125 / 900$ | 5 |
| Durability | cycles |  | no wear out |  |
| Package |  |  | 10 | 50 |
| Power Consumption | mW |  | 10 | 70 |
| Operation Temperature | ${ }^{\circ} \mathrm{C}$ | 0 |  | 85 |
| Storage Temperature | ${ }^{\circ} \mathrm{C}$ | -40 |  |  |
| Size (L x W x H) | mm |  | $80 \times 50 \times 9.5$ |  |

Optical Port Selection

| S1 | S2 | S3 | Port |
| :---: | :---: | :---: | :---: |
| 0 V | 0 V | x | A |
| 5 V | x | 5 V | B |
| 5 V | x | 0 V | C |
| 0 V | 5 V | x | D |



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