

1×N MEMS Optical Switch (MEMS SMOS)

Description

The MEMS SM OS 1×N optical switch is a type of optical switch based on MEMS (Micro-Electro-Mechanical Systems) technology, allowing channel selection between a single input optical signal and N output optical signals. It features a compact size, long lifespan, and stable reliability, making it widely used in optical network fields such as OADM (Optical Add-Drop Multiplexer), OXC (Optical Cross-Connect), and OPM (Optical Power Monitor).

Key Features

- Mini Size
- Fast Switching Time
- Low Insertion Loss
- Enhanced Reliability and Exceptional Stability

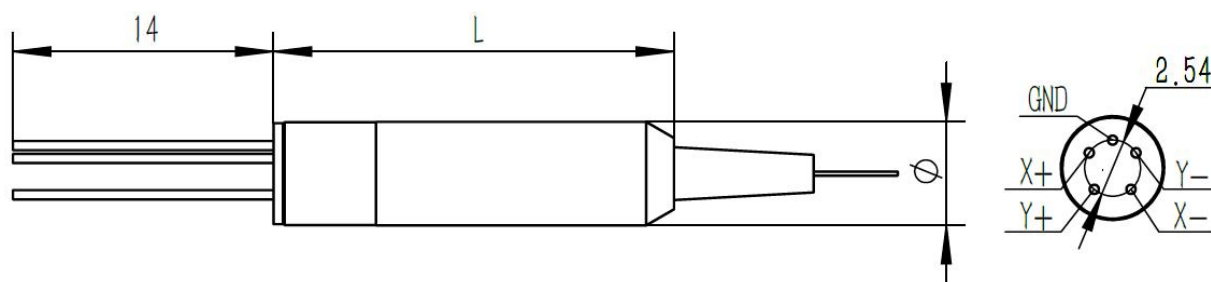
Applications

- Metropolitan Area Network
- Data Center
- Fiber Optic Sensing and Monitoring
- Instruments

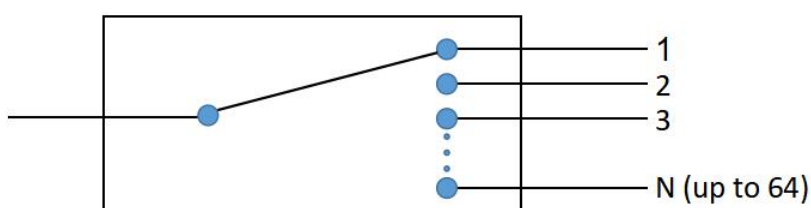
Follow the Standards

- Telcordia GR-1221
- Telcordia GR-1073

Mechanical Dimension



Optical Path Diagram



Specifications

Parameter \ Type	Unit	1×N (N≤64) MEMS SMOS						
		1×2	1×4	1×8	1×16	1×32	1×48	1×64
Center Wavelength	nm	1310/1550/1625/1650						
Insertion Loss	dB	≤0.6	≤0.8	≤1.0	≤1.2	≤1.8		
Wavelength Dependent Loss	dB	≤0.3						
Temperature Dependent Loss	dB	≤0.4 (2≤N≤16), ≤0.6 (18≤N≤64)						
Polarization Dependent Loss	dB	≤0.15						
Return Loss	dB	≥50						
Cross Talk	dB	≥50 (2≤N≤32), ≥45 (33≤N≤64)						
Repeatability	dB	≤0.05						
Response Time	ms	≤8						
Switching Mode	/	Non-Latching						
Handling Power	mW	≤500						
Drive Voltage	V	≤60						
Fiber Type	/	SMF						
Operating Temperature	°C	-5~+70						
Storage Temperature	°C	-40~+85						
Operating Humidity	%	5~95						
Dimensions	mm	Φ5.55×40(±0.1) (2≤N≤16) Φ6.0×45(±0.1) (18≤N≤64)						

- Specifications are without connectors. IL is 0.2dB higher and RL is 5dB lower for each connector added.
- IL is measured at CWL, 23°C.
- IL is for single-band. Dual-band adds 0.1dB.
- Power off isolation is same as crosstalk.
- WDL is measured in a +/- 20nm range at 23°C.
- Repeatability is defined after 100 cycles.

Ordering Information

MEMS-SMOS-1*N-XXXX-XX-XXX-XX/XX-XX*XX

