

Optical Switch Singlemode 1x2 · 1x4 · 2x2

The fiber optical switches are based on a proprietary micro-mechanical/microoptical design. This guarantees superior properties, wide flexibility for many applications and highest long term reliability.

The switches are available for broad wavelength ranges from the visible to the infrared various fiber types.

Optical Features

- Low insertion loss
- Low PDL
- Excellent repeatability
- High optical isolation
- Ultra low back reflection
- Broad spectral ranges
- Short switching times up to 2.0 ms

Package Highlights

- Compact rugged metal housing
- Flexible housing options available (compact with pigtails; table top or 19" rack mounts)
- In house optical connectorization
- Low power consumption
- Integrated microcontroller with several electrical interfaces servers for flexible switch control options

Reliability

- Excellent long term reliability: > 10⁸ switching cycles
- Compliant with Telcordia GR-1073



Applications and Technology

The SM series has been developed to serve for the most demanding applications in telecommunication, testing and measurement. Some examples for highly sophisticated applications are laser scan microscopy, multi-channel optical power monitoring, fiber bragg grating sensors, testing of fiberoptical transmission lines, environmental trace analysis.

The optomechanical design of the switch ensures an excellent optical performance combined with short switching time due to refractive micro-optical components and industry proofed high resonant actuators.

Switch Version	IR	NIR	VIS
Operating wavelength [nm]	1260 – 1360 1480 – 1630	600 – 850 900 – 1200	400 – 670
Insertion loss max. (typical) [dB]	1.0 (0.7)	1.4 (0.9)	1.4 (0.9)
Return loss [dB]	≥ 65	≥ 55	≥ 55
Crosstalk [dB]	≥ 55		
Repeatability [dB]	≤ 0.005	≤ 0.01	≤ 0.01
Polarization dependent loss [dB]	≤ 0.05		
Switching time [ms]	≤ 2		
Guaranteed lifetime [cycles]	≥ 10 ⁸		
Switching frequencies [s ⁻¹]	≤ 50		
Operating voltage [V]	5		
Power consumption [mW]	< 450		
Operating temperature [°C]	0 to + 60		
Storage temperature [°C]	–40 to + 80		
Housing dimensions [mm]	standard large (124 x 56 x 13) or standard small (75 x 50 x 13)		

For Requests Please Specify:

- Number of channels [1x2, 1x4 or 2x2]
- Spectral range operating wavelength range
- Optical power (max.) high power versions available up to 1 W
- Fiber type [e.g. Corning SMF 28 Type]
- Pigtail length [in meter]
- Connector type(s) [e.g. LC, FC, SC, ST, MU, E2000]
- Electronic interface [e.g. TTL, RS-232, I²C, Ethernet]
- Special requirements

To request for a quotation or to obtain additional information please contact us.