

Optical switch multimode 1xN (N=1...16) · 2xN

The fiber optical multimode 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 and with various fiber types.

Optical Features

- Low insertion loss
- Excellent repeatability
- High optical isolation
- Broad spectral ranges
- Short switching times up to 2.0 ms

Package Highlights

- Compact rugged metal housing
- Flexible housing options available (compact with pigtailed; 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 MM series has been developed to serve for the most demanding applications in telecommunication, testing, measurement and biomedical sciences. Some examples for highly sophisticated applications are spectroscopy, multi channel sensor systems, environmental trace analysis and optical power transmission.

The optomechanical switch design based on industry proofed high resonant actuators ensures an excellent optical performance combined with short switching time and exceptional reliability.

Specifications

Switch Version	50 μm – 100 μm		200 μm		400 μm		600 μm		800 μm	
Number of output channels N	1...4	5...16	1...4	5...6	1...4	5...6	1...4	5...16	1...4	5...16
Operating wavelength [nm]	according to fiber transmission range									
Insertion loss (typical) [dB]	<1.0 (0.7)	<2.0 (1.4)	\leq 1.0 (0.7)	<2.0 (1.4)	\leq 1.0 (0.7)	<2.0 (1.4)	\leq 1.0 (0.7)	<2.0 (1.4)	\leq 1.0 (0.7)	<2.0 (1.4)
Cross talk [dB]	<-60		<-55		<-45		<-40		<-40	
Repeatability [dB]	0.03									
Switching time [ms]	5		5		10		20		20	
Switching frequencies [s^{-1}]	\leq 50									
Guaranteed lifetime [cycles]	$>10^8$									
Operating voltage [V]	5									
Power consumption [mW]	<450									
Operating temperature [$^{\circ}\text{C}$]	0 to +60									
Storage temperature [$^{\circ}\text{C}$]	-40 to +80									
Housing	various options from compact to table top housings, minimum size depending on type of fiber									

For Requests Please Specify:

- Number of channels [1xN (N = 1 ... 16) • 2xN]
- Spectral range operating wavelength range of fiber
- Fiber type [NA?, GI or SI?, core diameter?]
- Pigtail length [in meter]
- Connector type(s) [e.g. SMA, FC, ST]
- Electronic interface [e.g. parallel (TTL), RS 232, I²C, Ethernet]
- Special requirements

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

Please note: To minimize back reflection and spectral etalon effects both AR coatings and angle polished fiber ends can be implemented; please specifically request this.

Germany and Other Countries

Laser Components Germany GmbH
Tel: +49 8142 2864-0
Fax: +49 8142 2864-11
info@lasercomponents.com
www.lasercomponents.com

France

Laser Components S.A.S.
Tel: +33 1 39 59 52 25
Fax: +33 1 39 59 53 50
info@lasercomponents.fr
www.lasercomponents.fr

United Kingdom

Laser Components (UK) Ltd.
Tel: +44 1245 491 499
Fax: +44 1245 491 801
info@lasercomponents.co.uk
www.lasercomponents.co.uk