



MEMS 2×2/3×3/4×4 Optical Switch Module

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■ Features

- > Modular Design
- > Fast Switching Time
- > Low IL, Good Repeatability
- > High Reliability and stability

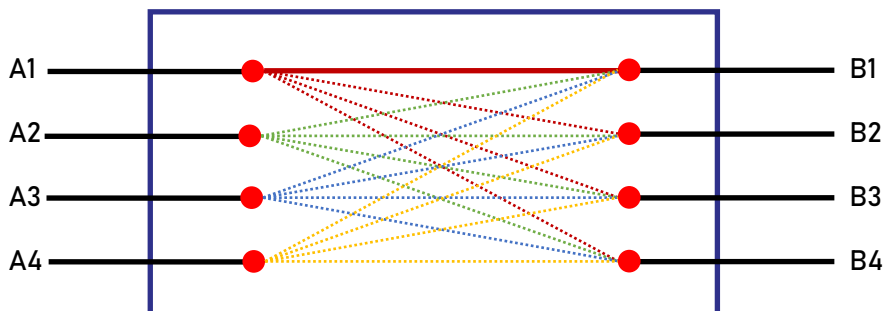
■ Application

- > MAN
- > Data Center
- > Fiber Sensing and Monitoring
- > Instrumentation

■ Compliance

- > Telcordia GR-1221
- > Telcordia GR-1073

■ Optical Route



Note: Only one A port can be selected at a time, corresponding to one B port.

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Specifications (Single Mode)

Parameters		Unit	MEMS N×N-SM (N≤4)		
Working Wavelength		nm	O band: 1290~1330 C band: 1530~1570 L band: 1570~1610 L+ band: 1625~1650		
Testing Wavelength		nm	1310/1550/1625/1650		
Insertion Loss			2×2	3×3	4×4
	@CWL Single-band	dB	≤0.8		≤1.2
	@CWL Dual-band		≤1.0		≤1.4
WDL		dB	≤0.3		
PDL		dB	≤0.2		
Return Loss		dB	≥50		
Crosstalk		dB	≥50		
Repeatability		dB	≤±0.05		
Switching Time		ms	≤10		
Durability		times	≥10 ⁹		
Operating Voltage / Current			DC5V±10% / I≤250mA		
Input Optical Power		mW	≤500		
Operating Temp.		°C	-5 ~ +70		
Storage Temp.		°C	-40 ~ +85		
Dimension		mm	M3: 90×55×12 ±0.2		

1. Within operating temperature and all SOP.
2. Excluding connector.
3. WDL is measured in a ±20nm range at 23°C.

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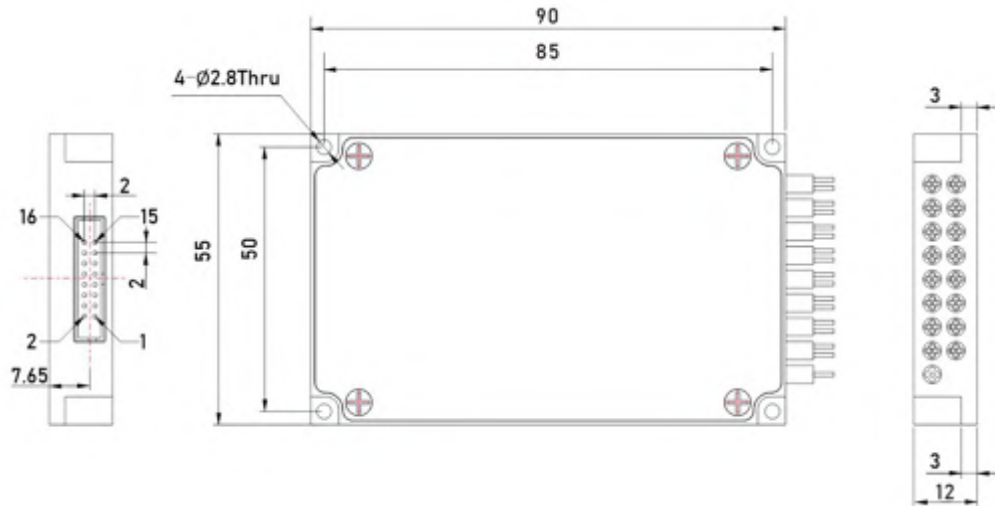
Specifications (Multi-Mode)

Parameters		Unit	MEMS N×N-MM (N≤3)	
Working Wavelength		nm	850±30, 1310±30	
Testing Wavelength		nm	850/1310	
Insertion Loss			2×2	3×3
	@CWL Single-band	dB	≤0.8	≤1.0
	@CWL Dual-band		≤1.0	≤1.2
WDL		dB	≤0.3	
PDL		dB	≤0.2	
Return Loss		dB	≥30	
Crosstalk		dB	≥30	
Repeatability		dB	≤±0.05	
Switching Time		ms	≤10	
Durability		times	≥10 ⁹	
Operating Voltage / Current		V	DC5V±10% / I≤250mA	
Input Optical Power		mW	≤500	
Operating Temp.		°C	-5 ~ +70	
Storage Temp.		°C	-40 ~ +85	
Dimension		mm	M3: 90×55×12 ±0.2	

1. Within operating temperature and all SOP.
2. Excluding connector.
3. WDL is measured in a ±20nm range at 23°C.

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Dimension



M3: 90×55×12mm

Pin Configuration

Pin No.	Pin Assignment	Signal Type	Description
1	D0	Input	Data bit (D0) (low-order)
2	NC		No connection
3	VCC	Power	Power Supply (DC 5V,1.0A)
4	NC		No connection
5	NC		No connection
6	GND	Power	GND
7	NC		No connection
8	D1	Input	Data bit (D1)
9	TXD	Output	Data Transmit (TTL Level)
10	RXD	Input	Data Receive (TTL Level)
11	D2	Input	Data bit (D2)
12	D3	Input	Data bit (D3) (high-order)
13	/BUSY	Output	Low level means ready to reset or receiving data
14	/ALARM	Output	High level means running error
15	/STROBE	Input	Falling edge execution data bit
16	/RESET	Input	Low level reset to channel 0

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Ordering Information: MEMS N×N-A-B-C-D-E-F-G

A	
Code	Mode
S	Single Mode
M	Multi-Mode

B	
Code	Wavelength
85	850nm
13	1310nm
14	1490nm
15	1550nm
162	1625nm
165	1650nm
13/15	1310/1550nm
X	other

C	
Code	Dimension
M3	90×55×12mm
X	other

D	
Code	Fiber Type
5	50/125
6	62.5/125
9	9/125
X	other

E	
Code	Fiber Dimension
025	Φ0.25mm
09	Φ0.9mm
X	other

G	
Code	Connector
00	无
FP	FC/UPC
FA	FC/APC
SP	SC/UPC
SA	SC/APC
LP	LC/UPC
LA	LC/APC
MP	MPO
X	other

F	
Code	Fiber Length
05	0.5m
10	1.0m
15	1.5m
X	other