



1 × N MEMS Optical Switch

1×N MEMS Optical Switch

■ Key Features

- > Ultra-Compact Structure
- > Fast Switching Time
- > Low Insertion Loss
- > High Reliability

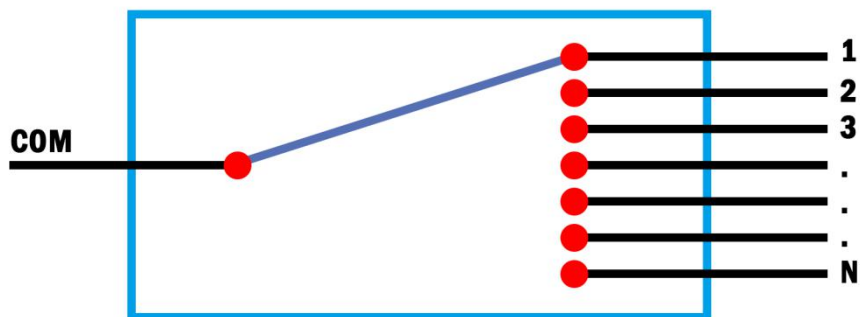
■ Application

- > PON Network
- > Protection
- > Instrumentation
- > Network Monitoring

■ Compliance

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

■ Optical Route



1×N MEMS Optical Switch

■ Specifications (Single Mode)

Parameters		Unit	MFSW 1×N (N≤64)						
Operating Wavelength		nm	O-band:1290~1330 C-band:1530~1570 L-band:1570~1610 1625 1650						
Testing Wavelength		nm	1310/1550/1625/1650						
Insertion Loss			1×4	1×8	1×16	1×24	1×32	1×48	1×64
	@CWL Single-band	dB	0.8	0.8	1.0	1.3	1.3	1.5	1.5
	@CWL Dual-band		1.0	1.0	1.2	1.5	1.5	1.7	1.7
WDL		dB	≤ 0.3						
TDL	2≤N≤16	dB	≤ 0.4						
	17≤N≤64		≤ 0.6						
PDL		dB	≤ 0.2						
Return Loss		dB	≥ 50						
Crosstalk	2≤N≤32	dB	≥ 50						
	33≤N≤64		≥ 45						
Repeatability		dB	≤ ±0.1						
Switching Time		ms	≤ 8						
Durability		times	≥ 10 billion						
Operating Voltage		V	60						
Switching Mode			Non-Latching						
Optical Power		mW	≤ 500						
Operating Temperature		°C	-20 ~ +85						
Storage Temperature		°C	-40 ~ +85						
Operating humidity		%	5 ~ 95						
Dimension	2≤N≤16	mm	Φ5.5×42(±0.1)						
	17≤N≤64		Φ6.0×47(±0.1)						

Note: 1. Within operating temperature and all SOP.

2. Excluding connector, and add 0.3dB IL for a pair of connectors.

3. WDL is measured in a ±20nm range at 23°C.

1×N MEMS Optical Switch

■ Specifications (Multi-Mode)

Parameters		Unit	MFSW 1×N (N≤16)
Operating Wavelength		nm	850/1310±30
Testing Wavelength		nm	850 / 1310
Insertion Loss	@MM 850 or 1310	dB	0.8
	@MM 850 & 1310		1.0
WDL		dB	≤ 0.3
TDL		dB	≤ 0.4
PDL		dB	≤ 0.2
Return Loss		dB	≥ 30
Crosstalk		dB	≥ 30
Repeatability		dB	≤ ±0.1
Switching Time		ms	≤ 8
Durability		times	≥ 10 billion
Operating Voltage		V	60
Switching Mode			Non-Latching
Optical Power		mW	≤ 500
Operating Temperature		°C	-20 ~ +85
Storage Temperature		°C	-40 ~ +85
Operating humidity		%	5 ~ 95
Dimension		mm	Φ5.5×42(±0.1)

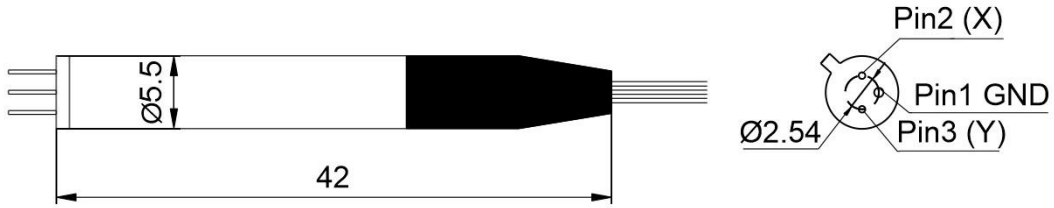
Note: 1. Within operating temperature and all SOP.

2. Excluding connector, and add 0.3dB IL for a pair of connectors.

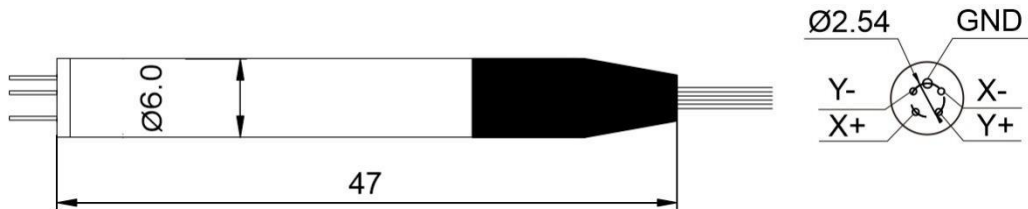
3. WDL is measured in a ±30nm range at 23°C.

1×N MEMS Optical Switch

Dimension



$2 \leq N \leq 16$, 3Pin



$17 \leq N \leq 64$, 5Pin

Ordering Information: MFSW 1×N-A-B-C-D

A	
Code	Wavelength
C	C Band
L	L Band
O	O Band
O&C	O+C Band
C&L	C+L Band
X	other

B	
Code	Fiber Type
SM	Single Mode
M1	Multi-Mode 50/125
M2	Multi-Mode 62.5/125
X	other

C	
Code	Fiber Dimension
25	Φ0.25mm
X	other

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