1x16 MEMS Optical Switch

OPNETI 1x16 MEMS switch is based on MEMS technology . The component makes an opticalconnection between an optical port and either one of 16 input or output line. The highly reliable switching mechanism use integrated micromirrors and feautre below 1ms switching time and only 1.5 dB insertion loss. The switch is powered by a 5V supply voltage. A 5 V TTL or CMOS drive signal is used to control the swithcing state

Features
Low insertion loss
High Crosstalk
Fast response time
Mini Size

Applications
Optical Reconfiguration
Instrumentation
Provisioning

Specifications

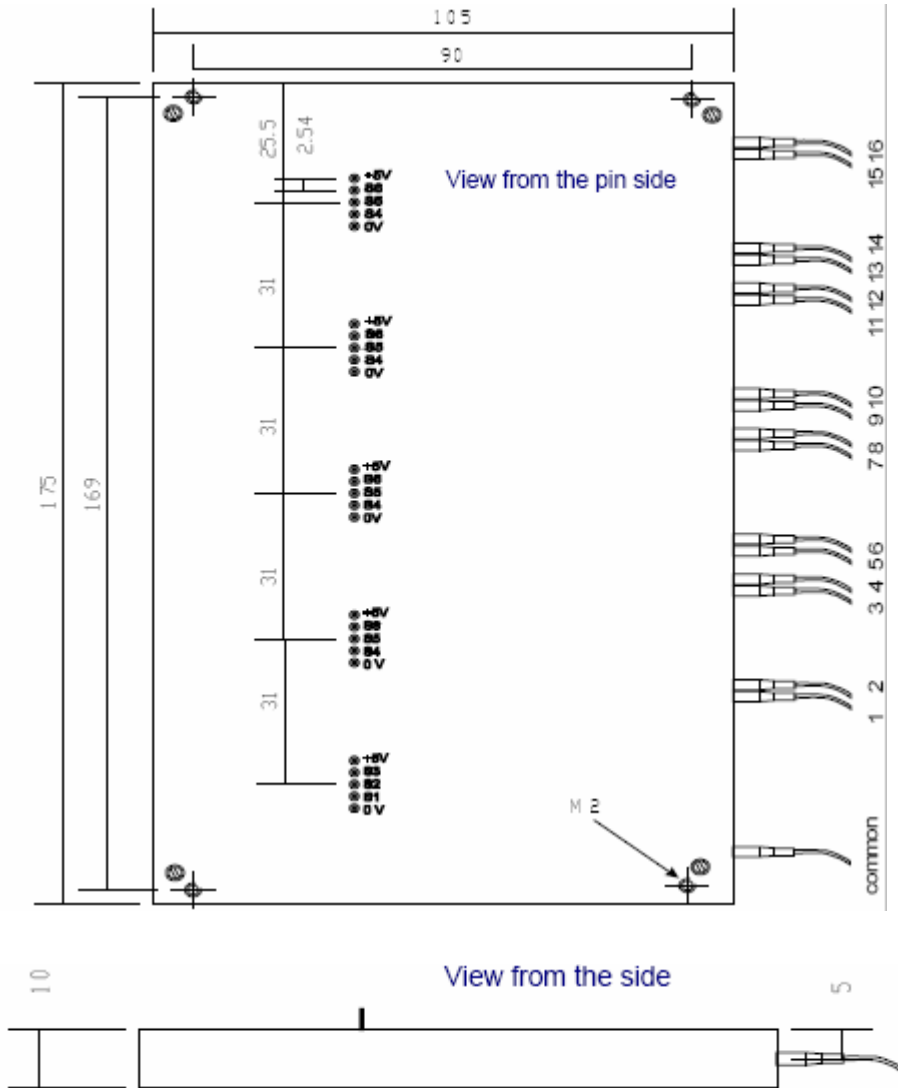| Parameter	Single mode	Multimode
Wavelength range (nm)	1240~1640	700~1700
Insertion loss (dB)	≤2.0 (Typ 1.3)	≤3.0 (Typ 1.5)
Polarization dependent loss (dB)	≤0.15	≤0.3
Return Loss (dB)	≥ 45 (Typ 55)	≥ 35 (Typ 45)
Cross talk (dB)	≥ 60 (Typ 75)	≥ 45 (Typ 55)
Switch speed (ms)	≤1, (Typ 0.5)	≤20, (Typ 2)
Repeatability (dB)	≤0.002	≤0.002
Durability (cycles)	no wear out	no wear out
Fiber type	SMF-28e	50/125, 62.5/125 MM
Operating Voltage (V)	<5	<5
Power Consumption (mW)	Typ. 190	Typ.75
Operation temperature( )	0~70 C	0~70 C
Storage temperature ( )	-40~85	-40~85
Package Size (L x W x H) (mm)	175 x 105 x 10	175 x 105 x 10

PIN Connection

PIN Port Selection

S1	S2	S3	S4	S5	S6	Port
0	5	x	0	0	x	1
0	5	x	5	x	5	2
0	5	x	5	x	0	3
0	5	x	0	5	x	4
5	x	0	0	0	x	5
5	x	0	5	x	5	6
5	x	0	5	x	0	7
5	x	0	0	5	x	8
5	x	5	0	0	x	9
5	x	5	5	x	5	10
5	x	5	5	x	0	11
5	x	5	0	5	x	12
0	0	x	0	0	x	13
0	0	x	5	x	5	14
0	0	x	5	x	0	15
0	0	x	0	5	x	16

0 = 0 V (TTL or CMOS level)
5 = 5 V (TTL or CMOSlevel)
x = 0 V or 5 V

View from the pin side

+5V
S6
S6
S4
0V

+5V
S6
S5
S4
0V

+5V
S6
S6
S4
0V

+5V
S6
S5
S4
0V

+5V
S3
S2
S1
0V

M 2

105
90
25.5
2.54
31
31
31
31
175
169
15 16
11 12 13 14
7 8 9 10
3 4 5 6
1 2
common

View from the side

10
5

Ordering Information

MSW	Port Type	Wavelength	Mode	Pigtail Type	Fiber Type	Length	Connector
	1x16	1240~1640 700~1700	N=Non-Latching	900=900um loose tube	1=SMF-28e 2=50/125 3=62.5/125	1=1.0m	NE=None FA=FC/APC FC=FC/PC SA=SC/APC SC=SC/PC ST=ST/PC LC=LC/UPC XX: Specify