DiCon Fiberoptics, Inc.

SPACE QUALIFIED MEMS 2X2 ADD/DROP OPTICAL SWITCH

Cylindrical Package, Polarization Maintaining Fiber

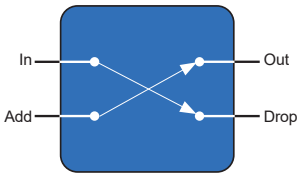
DiCon's **Space Qualified MEMS 2x2 Add/Drop Optical Switch** are two position devices that are commonly used in Optical Add/Drop Multiplexers. In the Bypass state, the Input and Output ports are connected to each other. In the Inserted state, the Input and Drop ports are connected to each other, while at the same time the Add and Output ports are connected to each other.

- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time
- Direct Voltage Control
- Space Qualified

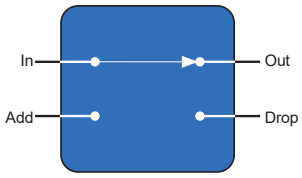
Applications

- Optical Communications
- Fiber Sensing
- Analog & Digital Signal Transmission
- Video Distribution

MEMS 2x2 Add/Drop OPTICAL SWITCH



Inserted State



Bypass State

ORDERING INFORMATION

MSQ - 2x2/AD - □ - □ - □ - □ - □ - □ - □

Switch Configuration

2x2/AD	2x2 Add/Drop

Fiber Type

PM13	Corning PM1310 Fiber
PM15	Corning PM1550 Fiber

**Other fiber options are available upon request*

Test Wavelength

O	1310 nm
C	1550 nm
L	1590 nm

**Use "/" to add multiple wavelengths (E.g., O/C or O/C/L)*

Fiber Jacket

9L	900 µm Loose Tube Fiber
2BF	250 µm Bare Fiber

**Other fiber options are available upon request*

Connector Type

N	None
FC	FC/UPC
FC/APC	FC/APC

**Other connector type are available upon request*

Connector Key Orientation

N	None
S	Slow axis
F	Fast axis

Pigtail Length

1	1 Meter
X	Specify X Meters

**Tolerance is +/- 0.1 m*

Pin Bending

S	Straight Pins
B	Bent Pins

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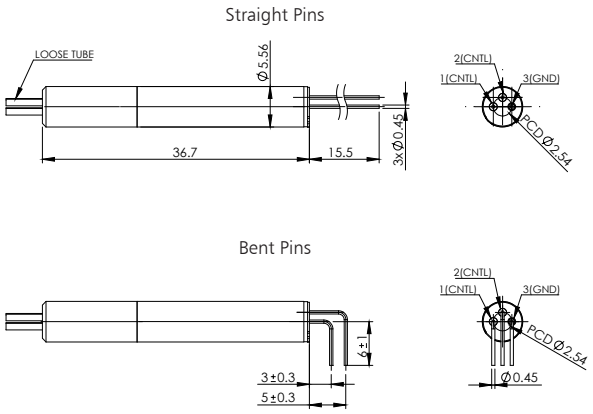
OPTICAL SPECIFICATIONS[1]

Insertion Loss[2,3,4]	1.0 dB max.
Crosstalk[5]	-50 dB max.
Back Reflection	-50 dB max.
TDL	0.30 dB max.
WDL[6]	0.30 dB max.
PER[7]	18 dB min.
Repeatability[8]	0.02 dB
Optical Power	500 mW max.
Durability	10^9 cycles min.
Optical Transition Time[9]	10 ms max.

1. Measured separately for each Test Wavelength at room temperature
2. Measured with 3-jumper method or equivalent. See TIA/EIA 526-7.
3. IL is for standard opaque model.
4. IL is for single-band. Dual-band adds 0.1 dB.
5. Power off isolation is same as crosstalk.
6. WDL is measured in a +/- 20 nm range at 23°C.
7. PER with connectors is 15 dB min.
8. Repeatability is defined after 100 cycles.
9. When using optimized voltage ramp.

MECHANICAL SPECIFICATIONS

Dimensions in mm



ELECTRICAL SPECIFICATIONS

Latching Type	non-latching
Control Type	Direct Voltage[1]
Vcc Voltage	0-30 VDC
Power Consumption	120 µW max.
Vcc Damage Threshold	40 VDC

1. Tolerance is +/- 10 mV to meet optical specifications.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-5 to 70°C
Storage Temperature	-40 to 85°C