

MEMS BIOMEDICAL MxN BLOCKING SWITCH

DiCon's MEMS Biomedical MxN Blocking Optical Switch allows one of M input fibers to connect to one of N output fibers, and blocks all other inputs. This allows one source from many to be selected and to connect to one desired output fiber. Based on DiCon's industry proven MEMS technology, DiCon uses proprietary techniques to optimize the performance of traditional telecommunications fiber optic switches for biomedical use.



FEATURES

- Proven MEMS Technology
- Lifetime > 1 Billion Switch Cycles
- Optimized for Biomedical Usage

APPLICATIONS

- Biomedical Research or OEM Usage
- Diffuse Optical Tomography
- Oximetry
- Source or Target Selection



MEMS BIOMEDICAL MxN BLOCKING OPTICAL SWITCH

OPTICAL SPECIFICATIONS^{1,2}

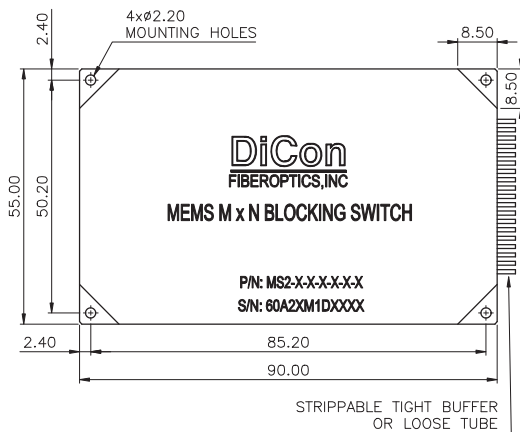
PARAMETER		RATING
Insertion Loss ³	2x8, 4x8	3.0 dB max.
	5x8, 7x8	3.5 dB max.
Crosstalk ⁴		-25 dB max.
Back Reflection		-20 dB max.
Switching Time		40 ms max.
TDL		0.4 dB max.
Repeatability ⁵		0.04 dB max.
Durability		10 ⁹ cycles min.
Optical Power		500 mW max.
Operating Temp		-5 to 70°C
Storage Temp		-40 to 85°C
Fiber Type		Multi-mode, Bare Fiber

- Specifications are without connectors.
- Aligned for broadband use. With parking state for Biomedical usage.
- IL is measured at 850 nm, 23°C.
- Power off isolation is same as crosstalk.
- Repeatability is defined after 100 cycles.

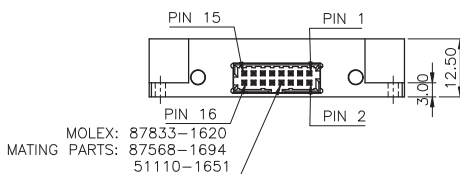
MECHANICAL DIMENSIONS

(Units: mm)

Top View



Left Side View



ORDERING INFORMATION

MS2 - □/BK - □ - □ - □ - □ - □

Product Code

MS2 MEMS Switch

Switch Configuration

MxN MxN
Specify 2≤M≤7, 2≤N≤8

Control Interface

I²C I²C
RS2 RS232
TTL TTL

Wavelength Range

7 680 - 850 nm
Other wavelengths available upon special request

Fiber and Jacket Type

50/LT 50um core, loose tube
62/LT 62.5um core, loose tube

Connector Type

FC/SPC FC/SPC
FC/UPC FC/UPC
N NONE
Also Available: SC, SC/UPC, ST, ST/UPC, LC

Pigtail Length

1 1 Meter
X Specify X Meters
Tolerance is +/- 0.05 m

ELECTRICAL SPECIFICATIONS

PARAMETER		RATING
Latching Type		non-latching
Control Type		I ² C, RS232 or TTL
Vcc Voltage	I ² C, RS232	12 VDC
	TTL	5 VDC
Power Consumption	I ² C, RS232	700 mW max.
	TTL	1.5 W max.
Connector Type		Molex 87833-1620