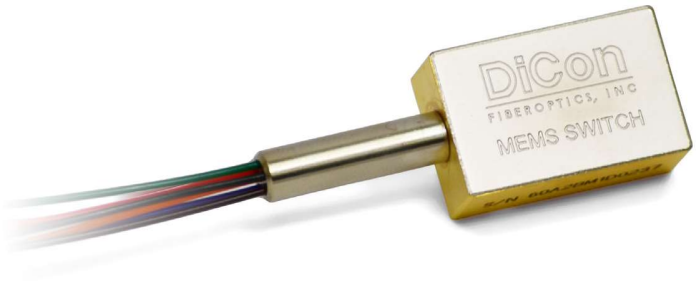
MEMS VISIBLE 1XN OPTICAL SWITCH

DiCon's MEMS Visible 1xN optical switch allows for the automated connection between one input fiber to anyone of N output fibers. The switch is bidirectional and can also be used in the reverse direction as a Nx1 selector switch. Based on DiCon's industry proven MEMS technology, DiCon uses proprietary techniques to optimize the performance in the visible wavelength region.



FEATURES

- Proven MEMS Durability and Reliability
- Lifetime > 1 Billion Switch Cycles
- Compact Size

APPLICATIONS

- Biomedical Instrumentation
- Diffuse Optical Tomography
- Source or Target Selector

DiCon
FIBEROPTICS

MEMS VISIBLE 1XN OPTICAL SWITCH

OPTICAL SPECIFICATIONS[1,2]

PARAMETER		RATING
Insertion Loss[3,4]	1x2	1.6 dB max.
	1x4[5]	1.8 dB max.
Crosstalk[6]	*50 µm*	-25 dB max.
	62.5 µm	-20 dB max.
Back Reflection		-20 dB max.
Switching Time		20 ms max.
TDL		0.20 dB max.
Repeatability[7]		0.02 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

1. Specifications are without connectors.
2. Aligned for broadband use. With parking state on channel (N+1)
3. IL is measured at 632 nm, 23°C.
4. IL is for standard opaque model.
5. Transparent model only for 62.5 µm core fiber.
6. Power off isolation is same as crosstalk.
7. Repeatability is defined after 100 cycles.

ORDERING INFORMATION

MS1 - □ - □ - □ - □ - □ - □

Product Code
MS1 MEMS Switch

Switch Configuration
1xN 1xN Switch
Specify N, where N≤4

Control Interface
TTL TTL
I2C I^2C

Wavelength Range
6 500 - 800 nm

Fiber and Jacket Type
50/LT 50 µm core, 900 um Loose Tube
62/LT 62.5 µm core, 900 um Loose Tube

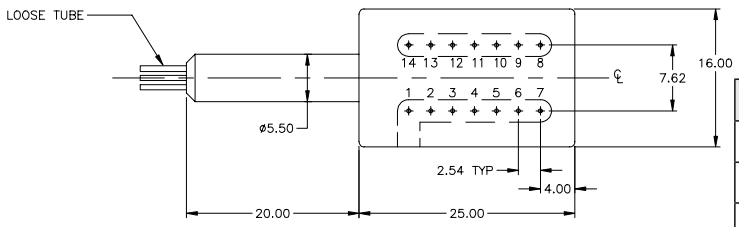
Connector Type
FC FC/PC
LC LC/PC
SC SC/PC
ST ST/PC
N NONE

Pigtail Length
1 1 Meter
X Specify X Meters
Tolerance is +/- 10 cm

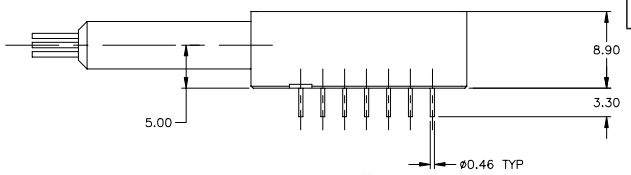
MECHANICAL DIMENSIONS

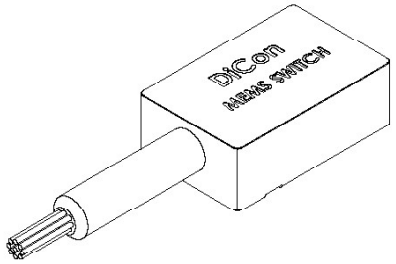
(Units: mm)

Top View



Side View





ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	non-latching
Control Type	I^2C and TTL
Vcc Voltage	12 VDC
Power Consumption	170 mW max.
Vcc Damage Threshold	15 VDC

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