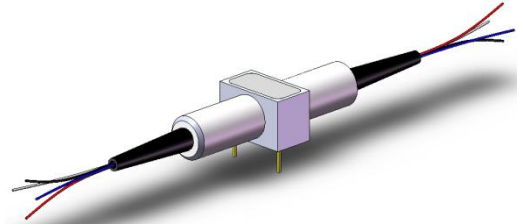


etMEMS™ Mini Dual Full 2x2 Multimode Fiberoptic Switch

(Protected by U.S. pending patents)

Product Description

The etMEMS™ Series Mini Dual Full 2x2 Fiberoptic switch connects optical channels by redirecting incoming optical signals into selected output fibers. This is achieved using a proprietary etMEMS™ configuration and activated via an electrical control signal. It uniquely features rugged thermal activated micro-mirror, moving in and out optical paths instead of rotating mirror. This novel design significantly simplify the control electronics, offering unprecedented high stability, ultra compact dimension and an unmatched low cost .



Performance Specifications

| etMEMS™ Mini Dual Full 2x2 Switch | Min | Typical | Max | Unit |
|-----------------------------------|--|---------|--------------------|-------|
| Operation Wavelength | Single band 820-880, 1260-1360 Dual band 820-880, 1260-1360 | | | nm |
| Insertion Loss ^[1, 3] | | 0.6 | 1.0 | dB |
| Wavelength Dependent Loss | | 0.2 | 0.3 ^[2] | dB |
| Return Loss ^[1] | 35 | | | dB |
| Cross Talk ^[1] | 35 | | | dB |
| Switching Time | | 10 | | ms |
| Repeatability | | | ±0.05 | dB |
| Repetition Rate | | | 20 | Hz |
| Durability | 10 ⁹ | | | Cycle |
| Switching Type | Non-Latching | | | |
| Operating Temperature | -5 | | 70 | °C |
| Storage Temperature | -40 | | 85 | °C |
| Optical Power Handling | | 300 | 500 | mW |
| Fiber Type | MM 50/125, MM 62.5/125, OM4 | | | |

[1]. Exclude connectors.

[2]. Dual band.

[3]. Measure at CPR≤15dB.

Features

- High Reliability
- Intrinsic tolerance to ESD

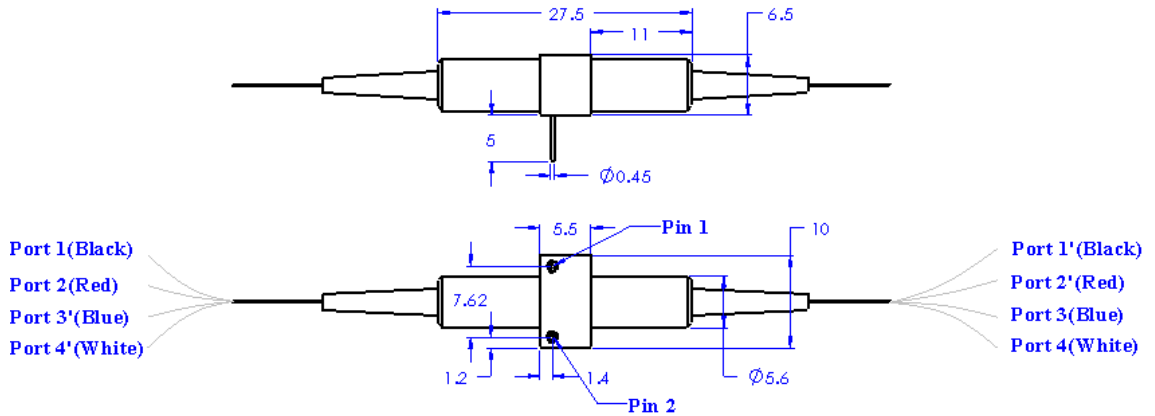
Applications

- Channel Routing
- Configurable Add/Drop
- System Monitoring
- Instrumentation



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Mechanical Dimensions (Unit: mm)

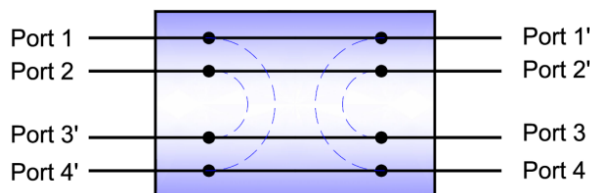


Electrical Driving Requirements

| Optical Path | | Pin 1 | Pin 2 |
|--|---------|-------|-------|
| Port 1→4', Port 2→3' Port 3→2', Port 4→1' | Default | L | GND |
| Port 1→1', Port 2→2' Port 3→3', Port 4→4' | | H | |

| Driving Voltage | Min | Typical | Max | Unit |
|-------------------|-----|---------|-----|------|
| H | 4.0 | 4.5 | 5.0 | V |
| L | | | 0.8 | V |
| Power Consumption | | 170 | | mW |

Functional Diagram



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Ordering Information

| MEDF*- | Type | Wavelength | Switch | Package | Fiber Type | Fiber Length | Connector | |
|--|----------------------|--|----------------|---------|--|---|--|---|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 9 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2x2=22 Special=00 | 1060=1 C+L=2 1310=3 1410=4 1550=5 780=7 850=8 850 & 1310=B Special=0 | Non-latching=2 | Mini=9 | MM50/125=5 MM62.5/125=6 OM4=7 Special=0 | Bare fiber=1 900um tube=3 Special=0 | 0.25m=1 0.5m=2 1.0m=3 Special=0 | None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Duplex LC=8 Special=0 |

* MEDF: MEMS Mini Dual Full Switch.

Recommend MEMS Non-Latching Switch Driver

