

Product Description

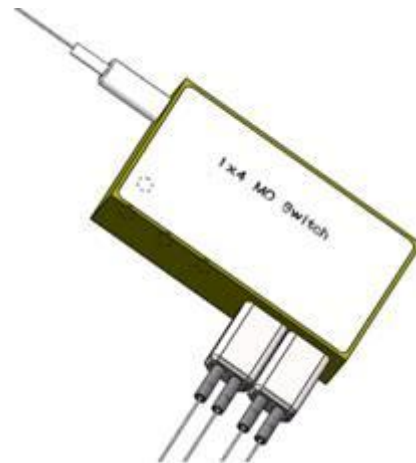
- The μ s-series 1x4PM solid-state fiber optical switch connects optical channels by redirecting an incoming optical signal into a selected output optical fiber. The switching of the optical light is realized by utilizing Faraday Effect.
- This is achieved using a patent protected non-mechanical configuration with solid-state all-crystal design which eliminates the need for mechanical movement. The μ s-series fiber optic switch is designed to meet the most demanding switching requirements of reliability, durability, response, and continuous high frequency switching operation.

Features

- No moving parts, best durability
- Ultra fast switching speed
- Extremely stable latching mode
- Easy to route - all fibers on same side
- Exceptional reliability and stability

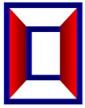
Applications

- Optical switching
- High speed protection
- System monitoring
- Test & measurement
- Fiber-optic sensing system



SPerformance

| Item | Unit | Parameters | | Notes |
|------------------|--------|--|----------------------|-------|
| | | Unidirectional | Bidirectional | |
| Wavelength Range | nm | 1525~1565 | | |
| Insertion Loss | dB | 1.0(Typ.); 1.5(Max.) | 1.0(Typ.); 1.8(Max.) | |
| Return Loss | dB | ≥ 40 (Typ.50) | ≥ 30 (Typ.40) | |
| Crosstalk | dB | ≥ 30 (Typ.40) | ≥ 30 (Typ.40) | |
| ER | dB | ≥ 18 | | |
| WDL | dB | ≤ 0.3 | | |
| TDL | dB | ≤ 0.3 | | |
| Repeatability | dB | ± 0.01 | | |
| Durability | cycles | Regular (>100Billions), Ultra-fast (>1000Billions) | | |



| | | | |
|-----------------------|----|-------------------------------------|--|
| Switching Speed | μs | Regular (50~200), Ultra-fast (2~20) | |
| Operating Temperature | °C | -5~70 | |
| Storage Temperature | °C | -40~85 | |
| Maximum Optical Power | mW | 500 | |
| Dimension(L×W×H) | mm | 37×21×7.5 | |

*.All the specifications are based on the devices without connector, and guaranteed over wavelength, polarization and temperature.

**Specifications are subject to change without notice.

Electrical Specifications

| Parameters | Specifications | | Unit |
|-------------------------|--------------------------|---------------|------|
| | Regular | Ultra-fast | |
| Switching Speed | 50~200 | 2~20 (Typ.5) | μs |
| Switching Voltage (VCC) | 3(+/-5%) | 3-7.5 | V |
| Switching Current | < 100 | < 350 | mA |
| Driving Mode | Voltage or Pulse Driving | Pulse Driving | NA |
| Pulse Width (typical) | 300(Typ.);500(Max.) | 20 | μs |
| Claim Frequency | <1000 | <3500 | Hz |

Bidirectional Pin Definition

| Pin No. | Pin1 | Pin2 | Pin3 | Pin4 | Pin5 | Pin6 | Pin7 | Pin8 |
|-----------|------|------|------|------|------|------|------|------|
| IN ↔ OUT1 | + | - | + | - | — | — | — | — |
| IN ↔ OUT2 | - | + | - | + | — | — | — | — |
| IN ↔ OUT3 | + | - | - | + | — | — | — | — |
| IN ↔ OUT4 | - | + | + | - | — | — | — | — |

Unidirectional Pin Definition

| Pin No. | Pin1 | Pin2 | Pin3 | Pin4 | Pin5 | Pin6 | Pin7 | Pin8 |
|---------|------|------|------|------|------|------|------|------|
| IN→OUT1 | + | - | + | - | — | — | — | — |
| IN→OUT2 | - | + | - | + | — | — | — | — |
| IN→OUT3 | + | - | - | + | — | — | — | — |
| IN→OUT4 | - | + | + | - | — | — | — | — |



Technical drawing of the O4 connector showing side and front views with dimensions.

Side View Dimensions:

- Overall width: 7.50
- Top flange thickness: 3.43
- Body diameter: 3.35
- Flange thickness: 5
- Bottom flange thickness: 4
- Bottom flange diameter: 1.60

Front View Dimensions:

- Overall width: 48
- Top flange width: 37
- Top flange thickness: 20.62
- Top flange hole diameter: 3
- Top flange hole spacing: 4.62
- Top flange hole offset: 10
- Top flange hole diameter: 8.50
- Top flange hole spacing: 7
- Top flange hole spacing: 3
- Top flange hole spacing: 8
- Top flange hole spacing: 1
- Top flange hole spacing: 2
- Top flange hole spacing: 6
- Top flange hole spacing: 3.50
- Top flange hole spacing: 15.50
- Top flange hole spacing: 1.58
- Top flange hole spacing: 31
- Top flange hole spacing: 21
- Top flange hole spacing: 15
- Top flange hole spacing: 4

Pin Labels:

- O4
- O3
- O2
- O1

| 14PM MN- | □ | □ | □ | □ | □ | □ | □ | □ |
|-------------|------------------------------|-------------------------------------|---|---|--|--|--|---|
| | Working Mode | Switching Speed | Operating Wavelength | Axis Type | Fiber Type | Fiber Tuber | Fiber Length | Connector Type |
| | 1.Regular 2.Bidirectional | 1.50~200us 2.2~20us 3. Others | 1.CBand 2. L Band 3. C & L Band 4. Others | 1.B(Both of axis working) 2.F (Fast axis blocked) | 1.PM15 2.PM98 3.PM13 4.Others | 1.250μm fiber 2. 900μm fiber 3. Others | 1.0.5 +/- 0.1 m 2. 1.0 +/- 0.1 m 3. Others | 0.None 1. FC/UPC 2. FC/APC 3. SC/UPC 4. SC/APC 5. LC/PC 6. MU/PC 7. Others |