

PM 1XN MEMS Optical Switch



1. DESCRIPTION

MEMS optical switch is based on micro-electro-mechanical system (MEMS) technology, which achieved low insertion loss and highly repeatability by rotating the mirror of MEMS chip.

MEMS optical switch is mainly used in optical cross and connection (OXC) system, optical add/drop system, measure instrument system and optical signal monitoring system.

The products are Telcordia GR-1073-CORE qualified, and RoHS compliant.

2.OPTIC SPECIFICATION

| No. | Parameters | Unit | Value |
|-----|------------------------------|-------|-----------------------------|
| 1 | Wavelength | nm | 460 ,532,700,850, 1310,1550 |
| 2 | Insertion Loss | dB | 1X4 |
| | | | 1X8 |
| | | | 1X16 |
| | | | 1X24 |
| | | | 1X32 |
| | | | ≤0.8 |
| | | | ≤1.0 |
| | | | ≤1.2 |
| 3 | Return Loss | dB | ≥50 (MM>40) |
| 4 | Repeatability | dB | ≤0.1 |
| 5 | Crosstalk | dB | ≥50 (MM>40) |
| 6 | PER | dB | ≥16 |
| 7 | Polarization Dependence Loss | dB | ≤0.10 |
| 8 | Wavelength Dependence Loss | dB | ≤0.2 |
| 9 | Temperature Dependence Loss | dB | ≤0.2 |
| 10 | Switch Time | ms | ≤10 |
| 11 | Durability | cycle | ≥1x10 ⁹ |
| 12 | Maximum optical Power | mW | ≤500 |
| 13 | Switch Mode | | Non-latching |
| 14 | Power Voltage | V | <60 |
| 15 | Power Consumption | mW | ≤500 |

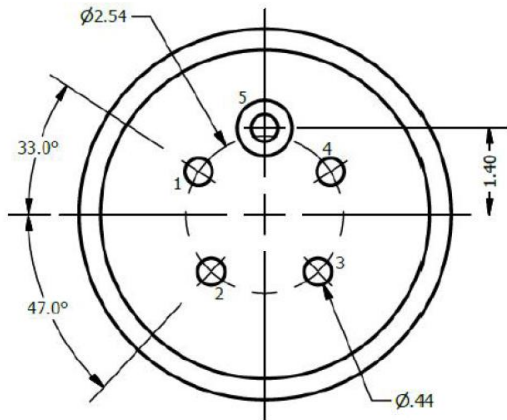
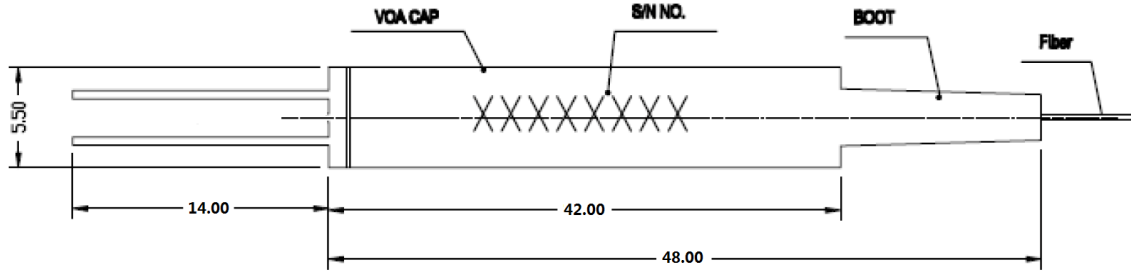
3. OPERATION/STORAGE TEMPERATURE/HUMIDITY

| NO | PARAMETER | SPECIFICATION | UNITS | NOTE |
|-----|-----------------------|---------------|-------|------|
| 3.1 | Operation Temperature | -5~65 | °C | |
| 3.2 | Storage Temperature | -40~85 | °C | |
| 3.3 | Operation Humidity | 5~95 | %RH | |
| 3.4 | Storage Humidity | 5~95 | %RH | |

4. PIGTAIL AND CONNECTOR

| NO | PARAMETER | SPECIFICATION | UNITS |
|-----|------------------------------|---------------|-------|
| 4.1 | Fiber Type | SM ,MM,PM | |
| 4.2 | Fiber Pigtail(All Ports) | 250um | |
| 4.3 | Fiber Length(All Ports) | 1±0.05 | m |
| 4.4 | Optical Connector (All port) | None | |
| 4.5 | Dimension | 5.5X42 | mm |

5. MECHANICAL DRAWINGS



| CONNECTOR PINOUT | |
|------------------|-------------|
| PIN | Description |
| 1 | X- |
| 2 | Y+ |
| 3 | X+ |
| 4 | Y- |
| 5 | GND |

6. Ordering Information: MSW - 1xN - A - B - C - D - E -F

| N | A | B | C | D | E | F |
|------|--|---|------------------------|----------------------------------|---|-----------------------|
| Port | Mode | Wavelength | Fiber Diameter | Fiber Length | Connector | Shell |
| 1~64 | SM: 9/125um M5: 50/125um M6: 62.5/125um PM: PMfiber | 85: 850nm 13: 1310nm 15: 1550nm 16: 1610nm | 25: 250um 90: 900um | 05: 0.5m 10: 1.0m 15: 1.5m | OO: None FP: FC/PC FA: FC/APC SP: SC/PC SA: SC/APC LP: LC/PC LA: LC/APC | T: TO46 M: Modular |

Note: When using multimode or PM fibers, only 20 ports can be reached.