

Small O-band MEMS tunable optical filter

1290-1320nm



- **Product Description**

MEMS tunable filters are based on the principles of MEMS (micro-electromechanical systems) technology and grating technology.

They have the characteristics of small size, fast speed, long life, high stability and reliability, and can cover the O-band, C-band or L-band

wavelength range. Device scanning range reaches 80nm

- **Product features**

High thermal stability and repeatability, long service life、 Excellent optical performance, low insertion loss, small size 、 3dB bandwidth 1.0-1.4nm(customizable) 、 Customizable (wavelength and attenuation range)

- **Part Number**

MP-WTF-1290-1-FA

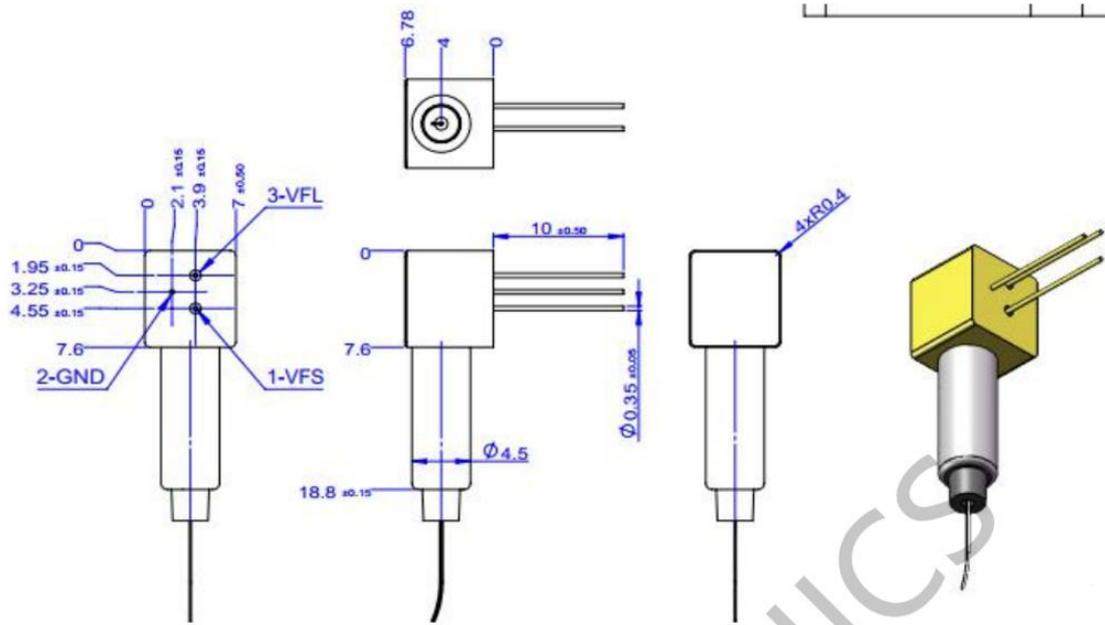
- **Application area**

Optical channel performance monitoring、 Spectral analysis、 ROADM、 Signal tracking

- **Core parameters**

| Bandwidth | Tuning Range | Connector Type |
|-----------|--------------|----------------|
| 1nm | 1290-1320nm | FC/APC |

● Dimension Drawing



● General Parameters

Technical Parameters

| Parameters | | Index | | Unit |
|---------------------|--------|-------------------|------|------|
| | | Max. | Min. | |
| Wavelength range | O-Band | 1270 | 1350 | nm |
| | C-Band | 1510 | 1590 | nm |
| | L-Band | 1550 | 1630 | nm |
| Insertion loss (IL) | | <4.5(typical<3.5) | | dB |
| Response time | | ≤20 | | ms |



| Parameters | Index | | Unit |
|---|-------------------|------|--------|
| | Max. | Min. | |
| Wavelength dependent loss (WDL) @0dB | <1.5 (typical<1) | | dB |
| Center frequency polarization dependent loss @0dB | <0.5 | | dB |
| Bandwidth @3dB | 1.0-1.4 | | nm |
| Bandwidth @20dB | 2.6-3.6 | | nm |
| Return loss (RL) | >40 | | dB |
| Side peak suppression ratio | ≤30 | | dB |
| Lifespan | 1*10 ⁹ | | cycles |
| Maximum input optical power | 20 | | dBm |
| Operating temperature | -5 | 70 | °C |
| Storage temperature | -40 | 85 | °C |
| ESD threshold (HBM) | 500 | | V |
| DC drive voltage | 0~50 | | V |

Gain characteristic

| | Definition | Description | Instructions |
|------|------------|---|--|
| PIN1 | VFS | Power on for filtering on the short-wave side | 1. Taking O-band TOF as an example: When PIN1&PIN2 is powered, the product works in the 1270nm-1310nm band; |
| | | | 2. Power-on range: 0-50V |
| PIN2 | GND | Grounding | |
| PIN3 | VFL | Power on for filtering on the long-wave side | 1. Taking O-band TOF as an example: When PIN3&PIN2 is powered, the product works in the 1310nm-1350nm band; |



2. Power-on range: 0-50V

Notes:

- 1. PIN1 and PIN3 cannot be powered at the same time:**
- 2. Please pay attention to electrostatic protection when storing and operating the product;**
- 3. The product damage voltage is 65V:**

Ordering Info

| Bandwidth | Tuning Range | Fiber Type | Fiber Length | Connector Type |
|-----------|--------------|------------|--------------|----------------|
| 1nm | 1290-1320nm | SM,9/125 | 0.5m±5cm | None |
| 1.2nm | 1528-1565nm | Others | 1.0m±5cm | C/PC |
| | 1575-1610nm | | 1.5m±5cm | FA/APC |
| | | | Others | SC/PC |
| | | | | SC/APC |
| | | | | LC/PC |
| | | | | LC/APC |
| | | | | Others |