# Polarization Maintaining Filter Splitter (PMFS)

## Description

   The Polarization Maintaining filter splitter is a 3 or 4 ports micro-optic device built with PM fiber. The PMFS transmits a signal from one of the input to two outputs with various ratios while maintaining the polarization of the signal. It is characterized with low insertion loss, high return loss, high extinction ratio and excellent environmental stability and reliability. There are two type of working axis, one is both axis working and another is Fast axis blocked.
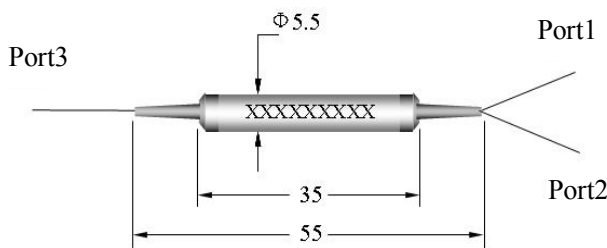
## Key Features

- Low insertion loss
- High extinction ratio
- Excellent stability and reliability
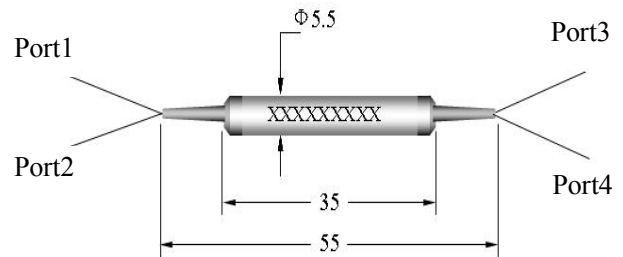
## Applications

- Fiber lasers
- Fiber amplifiers
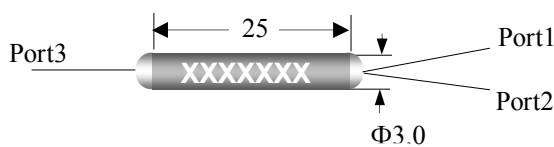- Fiber Sensors
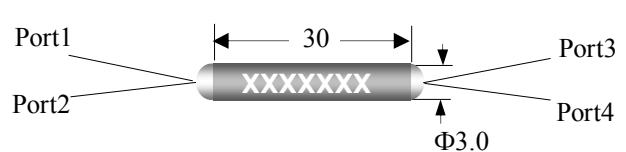- Optical Communications

## Mechanical Dimension



Normal Size



Normal Size



Mini Size



Mini Size

## Specifications

| Parameter \\ Type | | Unit | PM Filter Splitter | | | |
|---|---|---|---|---|---|---|
| | | | 1×2 | 2×2 | 1×2 | 2×2 |
| Center wavelength | | nm | 1064 | | 1310,1550 | |
| Operating bandwidth | | nm | ±20 | | ±40 | |
| Excess loss | | dB | ≤0.8 | ≤1.0 | ≤0.7 | ≤1.0 |
| Extinction ratio | Type F | dB | ≥22 | ≥20 | ≥22 | ≥20 |
| | Type B | dB | ≥20 | ≥18 | ≥20 | ≥18 |
| Tap ratio | | % | 1±0.2%, 2±0.4%, 5±1.0%, 10±2.0%, 20±2.5%, 30±3.0%, 40±4.0%, and 50±5.0% | | | |
| Return loss | | dB | ≥50 | | | |
| Handling power | | mW | ≤300 | | ≤500 | |
| Fiber type | | / | PM fiber Input / Output SMF-28e/Hi1060 or PM fiber for tap | | | |
| Operating temperature | | ℃ | -5~+70 | | | |
| Storage temperature | | ℃ | -40~+85 | | | |
| Dimensions | | mm | Φ5.5×L35 or Φ3.0× L25 (30) | | | |

* Type B: Both axis working, Type F: Fast axis blocked.

* IL is 0.3dB (1310~1550nm) or 0.5dB (1064nm) higher, RL is 5dB lower and ER is 2dB lower for each connector added. The default connector key is aligned to slow axis.

## Light Path Explanation

| 1x2 | Type F | Port3 to Port1 & 2, Port2 is tap port. |
|---|---|---|
| | Type B | Port1 to Port2 & 3, Port2 is tap port. |
| 2x2 | Type F | Port1 to Port3 & 4, Port4 is tap port. |
| | | Port3 to Port1 & 2, Port2 is tap port. |
| | Type B | Port1 to Port2 & 3, Port2 is tap port. |
| | | Port3 to Port1 & 4, Port4 is tap port. |

Type B: Both axis working, Type F: Fast axis blocked.

## Ordering Information

PMFS-XXX-XXXX-XX/XX-X-X-X-XX/XXX-XX

- Package Size: 5.5×35 etc.
- Input/Output Connector: FC/UPC, FC/APC etc.
- Fiber Code
- Pigtail Type: 0=250μm, 1=900μm, 4=others
- Working axis type: B= Both axis working, F= Fast axis blocked.
- Coupling Ratio: 01/99, 05/95, 50/50 etc.
- Operating Wavelength: 1550nm etc.
- Port Type: 1×2, 2×2