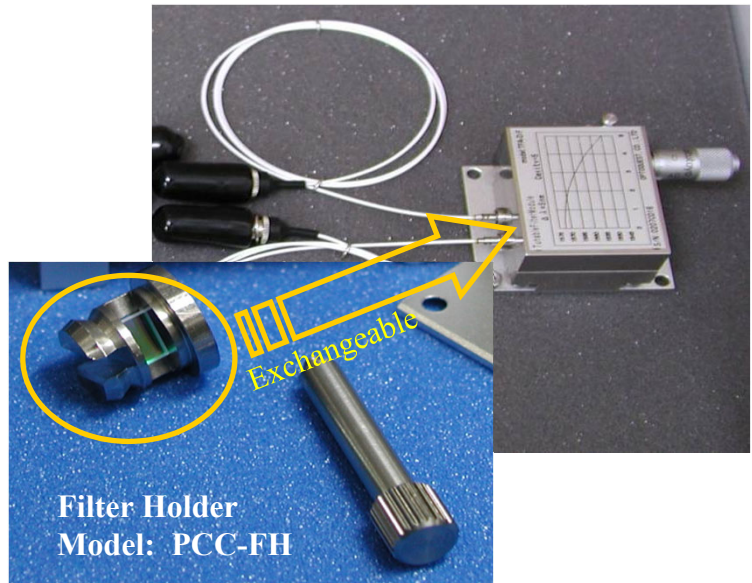


Angle Tunable Type Wavelength Tunable Filter Module

Wavelength can be tuned by changing the angle of an oxide dielectric bandpass filter. This module rotates oxide dielectric bandpass filters with a micrometer to control wavelength.

Features

- Capability to tune wavelength of multi-cavity bandpass filters
- Includes a chart of micro characteristics (refer to the photo)
- Exchangeable holder type filters
- Rack type filter holder with capability for common use with cartridge type



Typical Specifications

| | |
|---------------------------|------------------------------------|
| Model | TFA |
| Insertion Loss* | ≤ 1.0 dB (Typ) (@ Max. Wavelength) |
| Wavelength Tunable Range* | 30 nm (Typ) |
| Return Loss* | ≥ 50 dB |

*The values may vary depending on the characteristics of bandpass filters.

Ordering Instructions

+Wavelength Tunable Filter Module (Angle Tunable Type)

Order format: **TFA- (1) - (2) / (3) - (4) / (5)**

Order format example: PCA-1570-1/4-S/F

| | |
|------------------------|---|
| (1) Wavelength | Tunable Maximum Wavelength |
| (2) Half Bandwidth | 0.6, 1, 3, 5, 10, 15 and 20 nm * Otherwise, customizable. |
| (3) Number of Cavities | 2, 3, 4, 5, 6 and 7 cavities * Otherwise, customizable. |
| (4) Optical Fiber | S: SMF D: DSF P: PMF (φ0.9 fibers) |
| (5) Optical Connector | F: FC/SPC S: SC/SPC FA: FC/Angled PC SA: SC/Angled PC |

*Please refer to 21 page for filter characteristics to determine your selection.

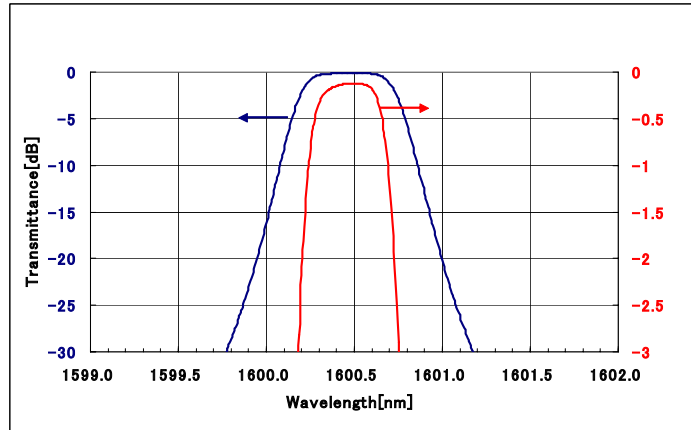
Filter Characteristics Reference (1) (Actual measured value)

Half Bandwidth: 0.6 nm

Number of Cavities: 4

Max. Wavelength: 1600 nm

| Typical Data | |
|----------------|---------|
| Peak Loss | 0.12 dB |
| -0.5 dB Width | 0.36 nm |
| Half Bandwidth | 0.58 nm |
| -25 dB Width | 1.21 nm |

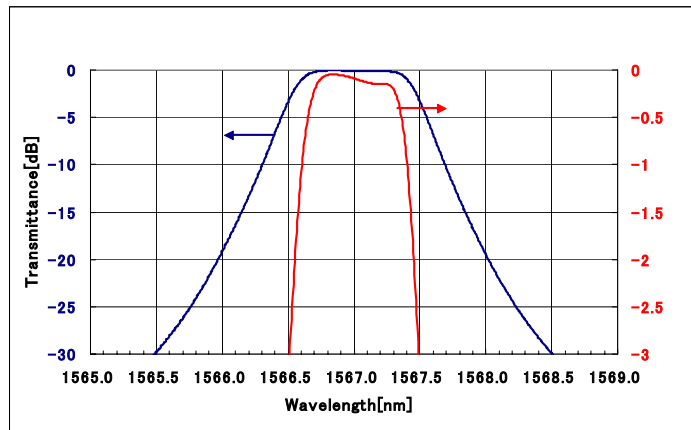


Half Bandwidth: 1 nm

Number of Cavities: 3

Max. Wavelength: 1565 nm

| Typical Data | |
|----------------|---------|
| Peak Loss | 0.09 dB |
| -0.5 dB Width | 0.67 nm |
| Half Bandwidth | 0.98 nm |
| -25 dB Width | 2.47 nm |

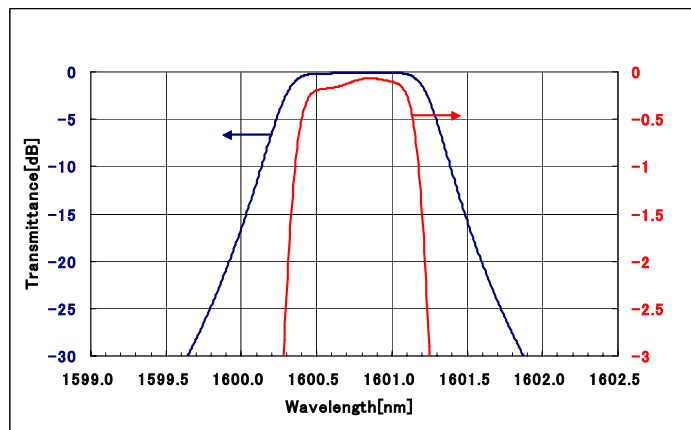


Half Bandwidth: 1 nm

Number of Cavities: 4

Max. Wavelength: 1600 nm

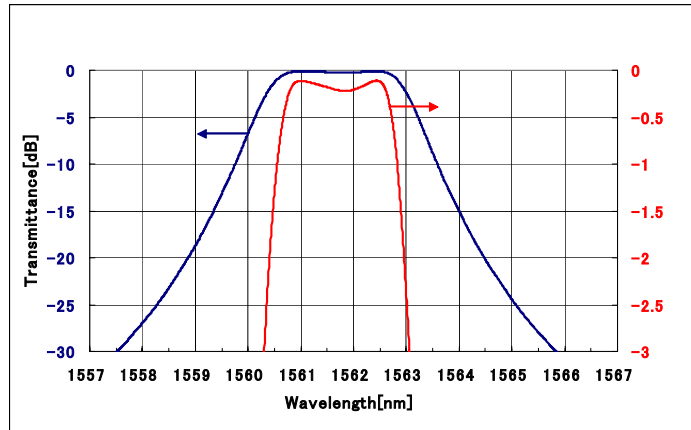
| Typical Data | |
|----------------|---------|
| Peak Loss | 0.09 dB |
| -0.5 dB Width | 0.70 nm |
| Half Bandwidth | 0.97 nm |
| -25 dB Width | 1.93 nm |



Filter Characteristics Reference (2) (Actual measured value)

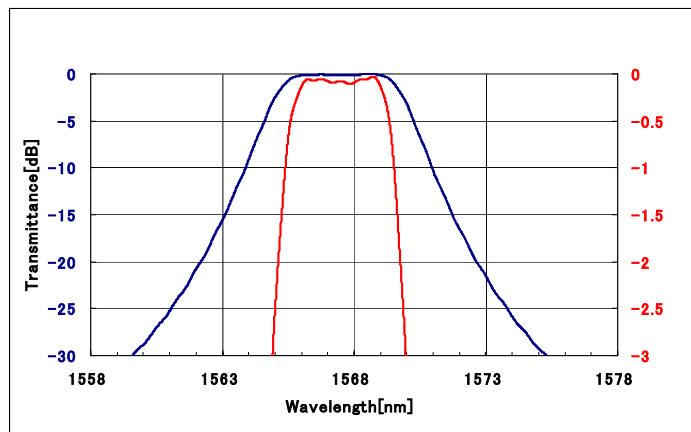
Half Bandwidth: 3 nm
Number of Cavities: 3
Max. Wavelength: 1560 nm

| Typical Data | |
|----------------|---------|
| Peak Loss | 0.21 dB |
| -0.5 dB Width | 2.00 nm |
| Half Bandwidth | 2.78 nm |
| -25 dB Width | 6.82 nm |



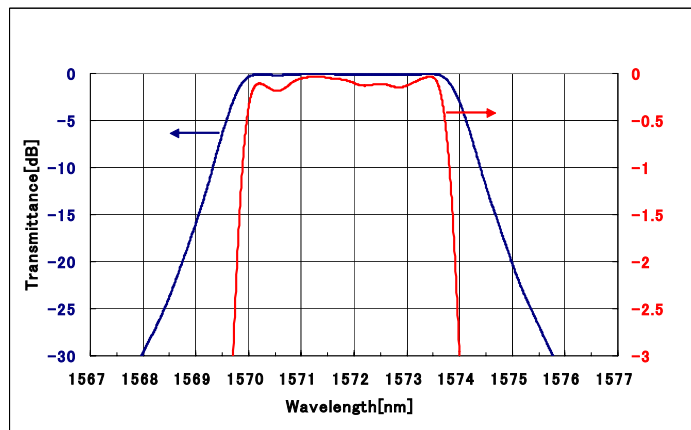
Half Bandwidth: 5 nm
Number of Cavities: 3
Max. Wavelength: 1565 nm

| Typical Data | |
|----------------|----------|
| Peak Loss | 0.08 dB |
| -0.5 dB Width | 3.50 nm |
| Half Bandwidth | 5.08 nm |
| -25 dB Width | 12.77 nm |



Half Bandwidth: 5 nm (4.4 nm)
Number of Cavities: 5
Max. Wavelength: 1570 nm

| Typical Data | |
|----------------|---------|
| Peak Loss | 0.07 dB |
| -0.5 dB Width | 3.77 nm |
| Half Bandwidth | 4.30 nm |
| -25 dB Width | 6.95 nm |



Ordering Instructions

Please specify these items for placing your order in the format explained in the following order form example: (1) Half Bandwidth, (2) Number of Cavities, (3) Max. Wavelength, for example below the part number.

+Filter Holder(for Filter cassette and Wavelength tunable filter module)

Order format: PCC- FH - (3) - (1) / (2)

Order format example: PCC-FH-1565-5/3

(Max. Wavelength: 1565nm, Half Bandwidth: 5nm, Number of Cavities: 3)

+Filter Cassette (for Cartridge Series shown to 4 pages)

Order format: PCC- F - (3) - (1) / (2)

Order format example: PCC-F-1565-5/3

(Max. Wavelength: 1565nm, Half Bandwidth: 5nm, Number of Cavities: 3)

* Coupling Modules of the Cartridge Series are separately required for use.

Filter List Reference

| (1): Half Bandwidth [nm] | Actual Half Bandwidth Measurement Value [nm] | (2): Number of Cavities | (3): Max. Wavelength [nm] |
|--------------------------|--|-------------------------|---------------------------|
| 0.6 | 0.58 | 4 | 1570 |
| 1 | 0.94 | 2 | 1575 |
| | 0.98 | 2 | 1600 |
| | 0.98 | 3 | 1565 |
| | 0.97 | 4 | 1550 |
| | 0.95 | 4 | 1570 |
| | 0.97 | 4 | 1600 |
| 3 | 2.8 | 3 | 1560 |
| 5 | 5.1 | 3 | 1565 |
| | 4.3 | 5 | 1570 |
| 7 | 7.5 | 5 | 1570 |
| 10 | 9.2 | 5 | 1570 |

*Actual half bandwidth measurement values are typical data.

*Please contact us for more information on other filters with special specifications.