

Fabry-Perot (F-P) etalon (25GHz finesse: 7.5)



- **Product Description**

Our Fabry-Perot etalons are free-space based Fabry-Perot etalons. They provide periodic wavelength comb transmission. They include 2-port transmission type, 3-port transmission/reflection type and 4-port transmission type. The 2-port type provides transmission spectrum, the 3-port type provides transmission and reflection spectrum, and the 4-port type provides a phase delay (when the same signal is input into the two



input ports, there is a phase delay at the two output ports). Our company's Fabry-Perot etalons can cover the C-band wavelength, including single-mode and polarization-maintaining fibers. The free-space range (FSR) and finesse (F) of the etalons can be customized according to customer requirements. They are widely used in optical communications, fiber Bragg grating sensors, and tunable fiber lasers.

● Product features

Available in X, O, S, C, and L bands、 Compact passive package、 Low insertion loss、 SM or PM fiber pigtails、 High optical power handling

● Part Number

MP-FPE-1550-2-25-7.5-SA

● Application area

Wavelength locker、 Wavelength division multiplexing telecommunication network、 Handheld spectrum analyzer、 Fiber Bragg grating sensing system、 Tunable filter laser、 Tunable filter

● Core parameters

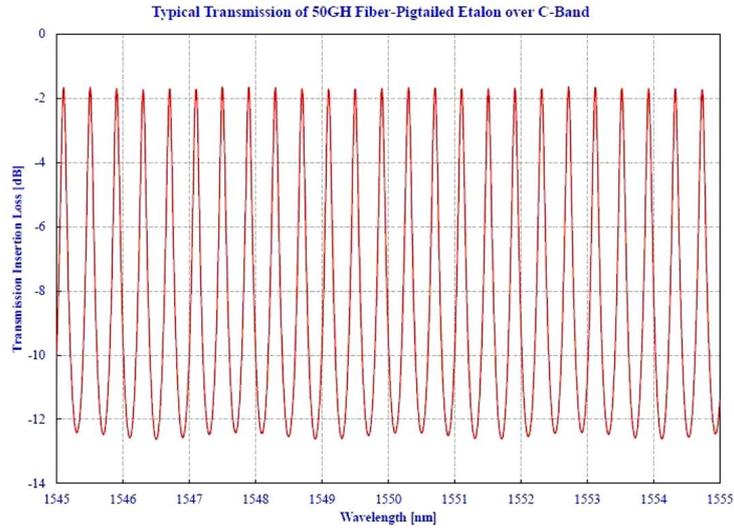
Center Wavelength	Connector
1550nm	FC/APC

● General Parameters

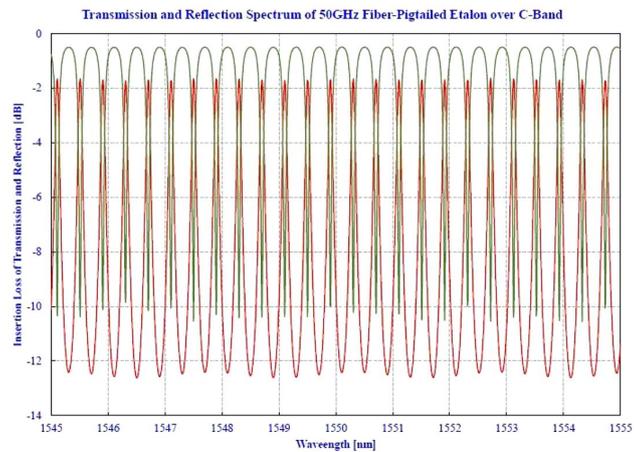
Parameters

Parameter	Value
Central wavelength	1550nm(customizable)
Spectral width	40nm
Typical FSR	25, 50, 100GHz (customizable)
Typical FSR tolerance	±0.005GHz for 100GHz FSR
Fineness	2.5~40
Insertion loss	<0.8dB
Polarization Dependent Loss (PDL)	<0.15dB
Extinction Ratio (ER)	>20dB (PM Fiber)
Return loss	>45dB
Phase delay	0 to $\lambda/4$ (for 4-port device only)
Maximum input power	500mW (CW)
Operating temperature	10 to 50 °C
Storage temperature	-20 to 75 °C
Dimension	Ø5.5 x 35mm (L) or 40mm (L)

Spectral shape



2-Port Pigtail Etalon Spectral Shape



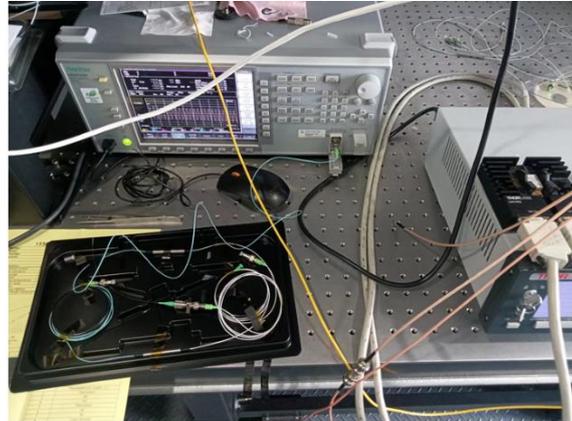
3-port pigtail etalon spectral shape

Test the frequency discrimination characteristics of the standard at 1572nm

Instruments used: 1550nm SLD, spectrometer, laser driver



Circuit connection diagram

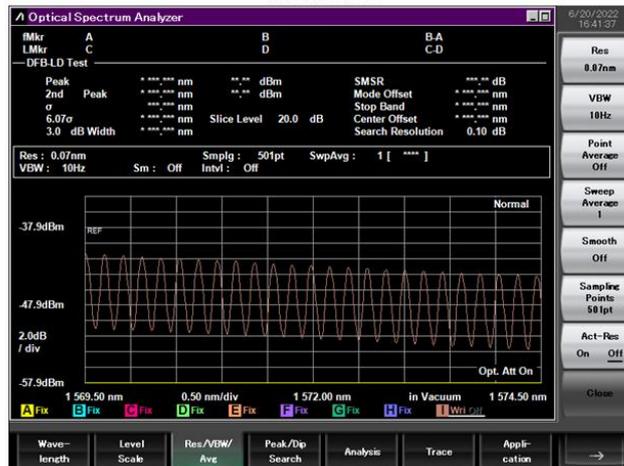


Spectrometer test results

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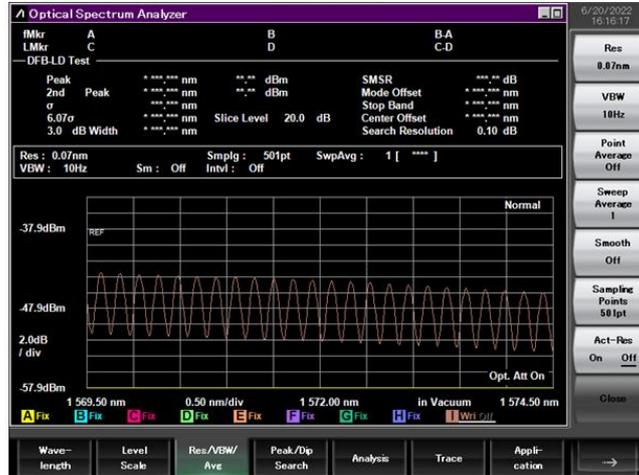


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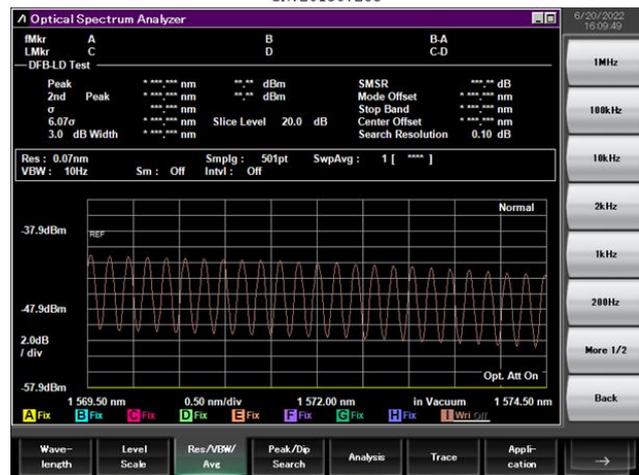




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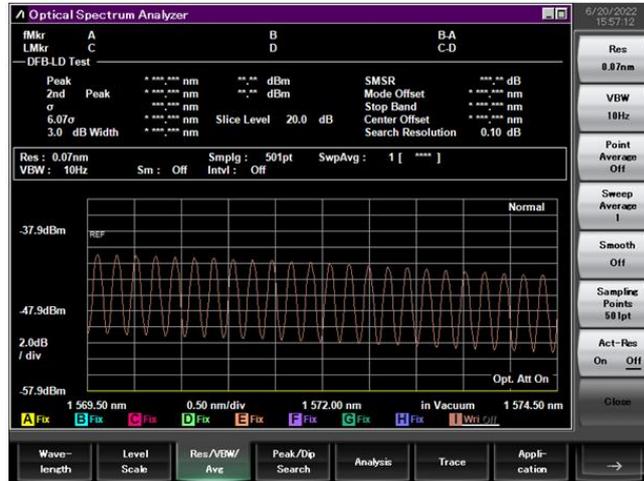


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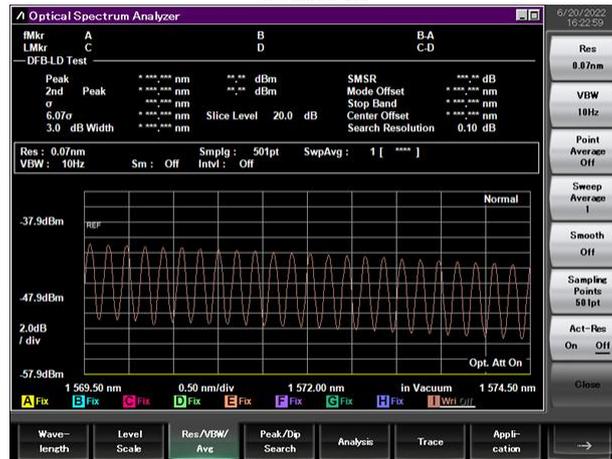




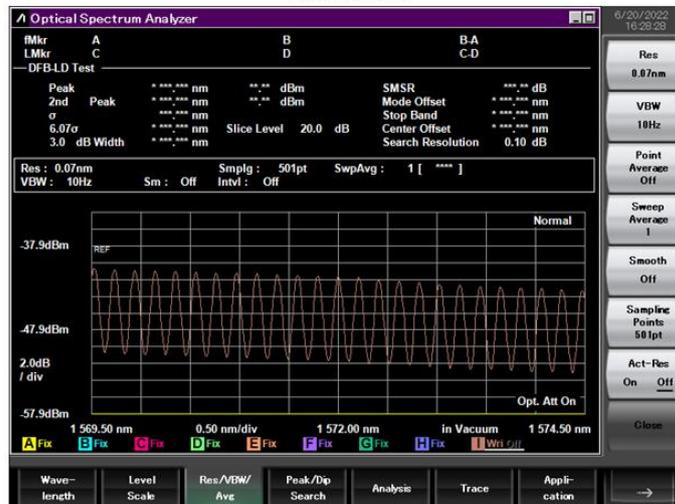
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Ordering Information

MP-FPE-A-B-C-D-E-F/G-H/I

A: Port type

2: 2 Port

3: 3 Port

4: 4 Port

B: Central wavelength

1550: 1550nm

C : Free space range of etalon in GHz (FSR)

25: 25GHz,

100: 100GHz.

D: Fineness

2.5 - 40

E: Fiber type

SM: Single mode Fiber

PM: Polarization-mode Fiber

F: Pigtail cable diameter (um)

0.9: 0.9um loose tube diameter

G: Pigtail length (m)

1: 1m



H/I: Connector type

FC/APC

FC/PC