

Fabry-Perot (F-P) etalon (100GHz finesse: 10)



- **Product Description**

Idealphotonics' Fabry-Perot etalons are based on free-space 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 a transmission spectrum, the 3-port type provides transmission and reflection spectra, 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 etalon wavelength can cover the C-band, including single mode and polarization-maintaining fiber. The free-space range (FSR) and finesse (F) of the etalon can be customized according to customer requirements. Widely used in optical communications, fiber grating sensors, and tunable fiber laser.

● 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-1550-2-100-10-SA

● Application area

Wavelength lockers、 Wavelength division multiplexing telecommunication networks、 Handheld spectrum analyzers、 Fiber Bragg grating sensing systems、 Tunable filter lasers、 Tunable filters

● Core parameters

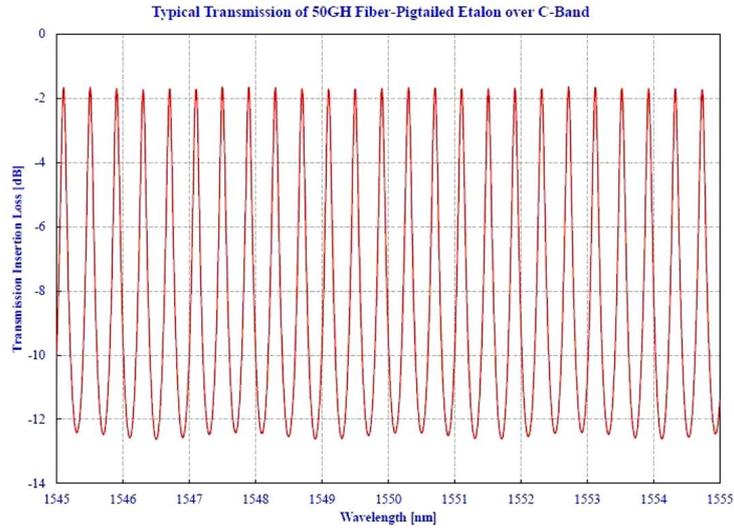
Center Wavelength	Connector
1550nm	FC/APC

● General Parameters

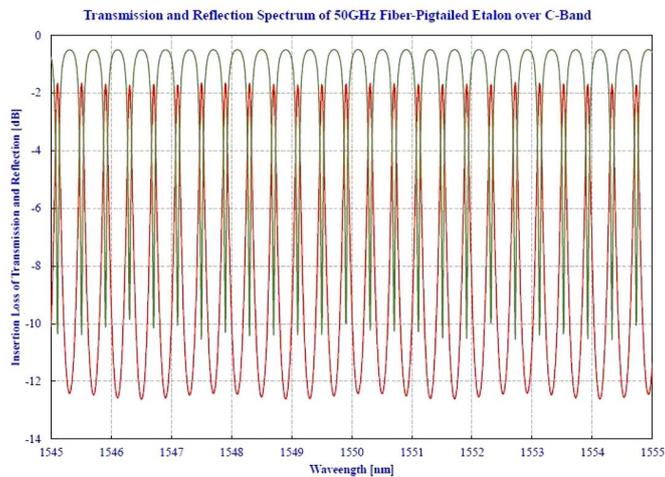
Parameters

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



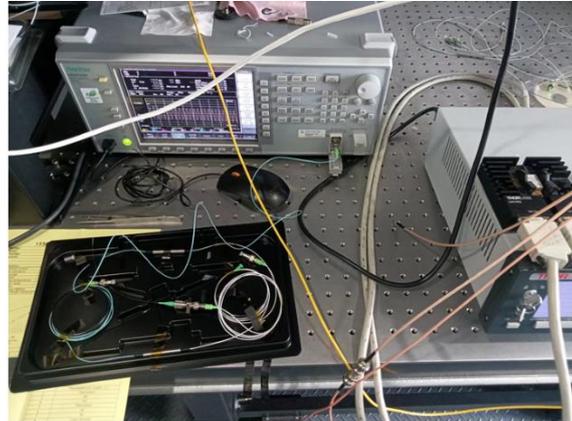
3-port pigtail etalon spectral shape

Test the frequency discrimination characteristics of the standard at 1572nm

Instruments used: 1550nm SLD, spectrometer, laser driver



Circuit connection diagram

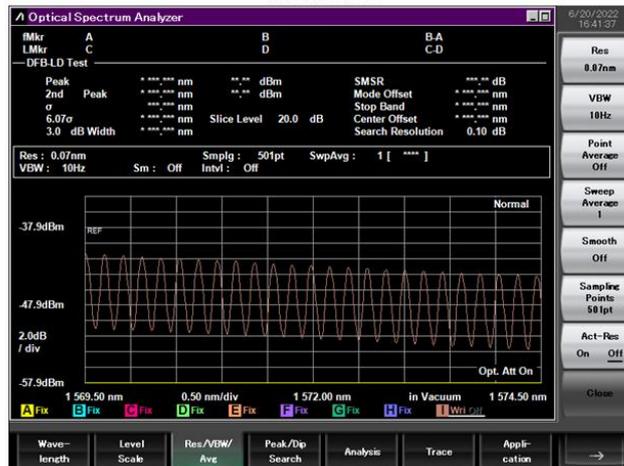


Spectrometer test results

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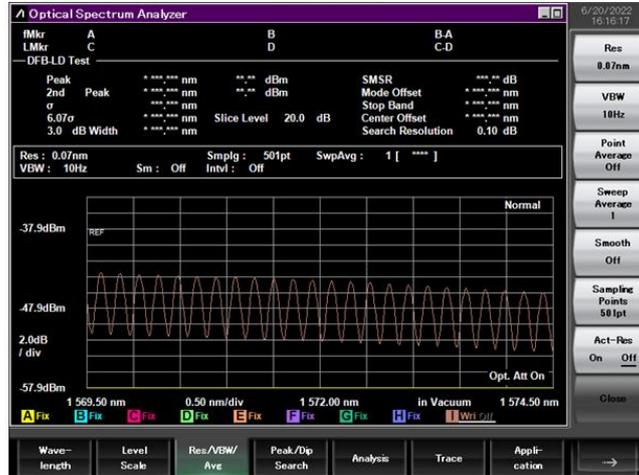


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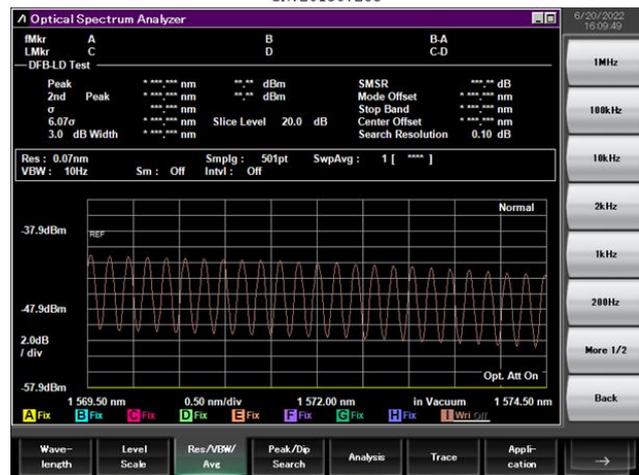




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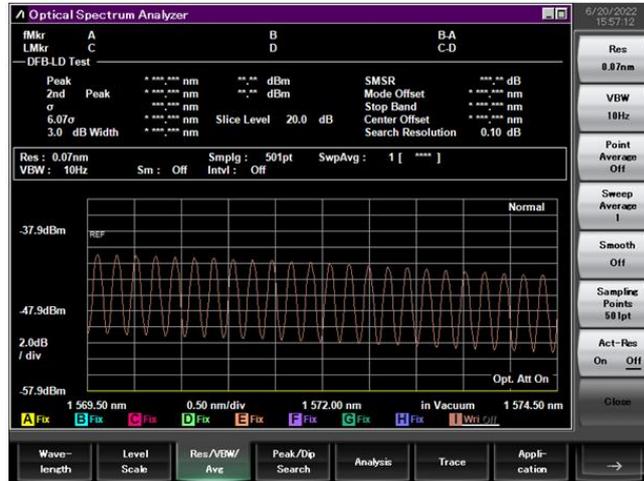


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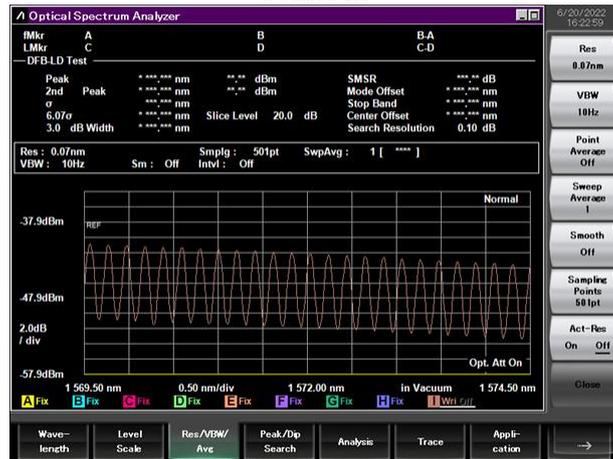




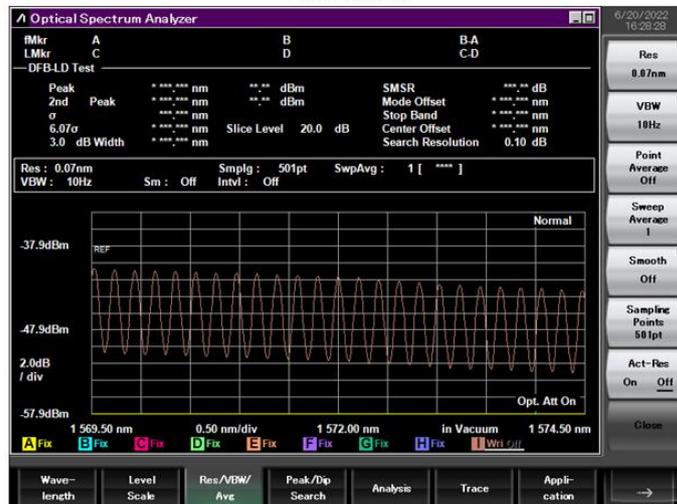
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Ordering Information

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