



## **FIBERA, INC.**

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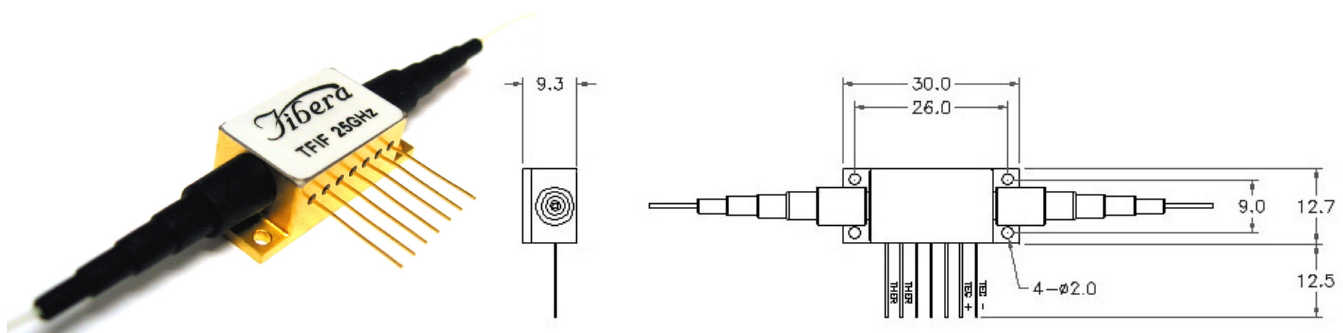
### **TUNABLE FABRY-PEROT ITU FILTER**

*\*Patents pending*

- **Multi-channel capability**
- **No-moving-part construction to ensure long term reliability**
- **Accurate passband location ( $\pm 2.5\text{GHz}$ )**
- **Typical temperature tuning range  $\pm 15\text{GHz}$**
- **Typical passband 3dB bandwidth  $2\text{GHz}$**
- **Compact, hermetically sealed butterfly package**

The Fibera **Tunable Fabry-Perot ITU Filter (TFIF)** series is a compact, high accuracy multi-channel tuning ITU filter with a very narrow ( $2\text{GHz}$ ) passband. This filter with no moving parts is based on a newly developed, proprietary temperature tuning technology to ensure high temperature control of  $\pm 0.1^\circ\text{C}$ . Typical tuning range is  $\pm 15\text{GHz}$ , available in  $200\text{GHz}$ ,  $100\text{GHz}$ ,  $50\text{GHz}$  and  $25\text{GHz}$  channel spacing. Larger tuning range is available.

The Fibera TFIF, because of its narrow passband with excellent repeatability, accuracy and reliability, is ideally suited for optical performance monitor, optical channel monitor, DWDM wavelength monitor, optical spectrum analyzer, and DWDM wavelength stabilization applications.



Mechanical Dimensions

## PRELIMINARY SPECIFICATIONS

Parameters	Units	Value
Technology		Temperature-tuned Etalon
Wavelength Range (ITU grid)	nm	1520-1620
Free Spectral Range	GHz	200, 100, 50, 25
Repeatability	GHz	$\pm 2.5$ *
Passband width (at -3dB)	GHz	2.0 – 2.5 **
Contrast	dB	> 28
Insertion Loss	dB	< 3
Polarization Dependent Loss	dB	< 0.5
Polarization Dependent Accuracy	GHz	0.1
Tuning Coefficient	GHz/°C	1.22 (typical)
Maximum Operating Power	mW	300
Operating Temperature	°C	0 to +50
Storage Temperature	°C	-40 to +85
Settling Time	Second	< 1 ***
Dimensions	mm	30.0 x 12.7 x 9.3
TEC Power	W	1 Amp x 1.5 Volt = 1.5

## ELECTRICAL PINS

Pin1	Thermistor
Pin2	Thermistor
Pin3	Not Used
Pin4	Not Used
Pin5	Not Used
Pin6	TEC Power (+)
Pin7	TEC Power (-)

\* Assuming temperature control of < 0.1°C

\*\* Other widths available

\*\*\* Assuming switching to another frequency

**Performance Spectrum of 100GHz TFIF**

