Tunable FBG Optical Filter

WTF-200

- FBG filter with both band-pass and band-rejection
- Over +/-10nm wavelength tuning（> +/-5nm at 0.1nm BW）
- High-power customization available

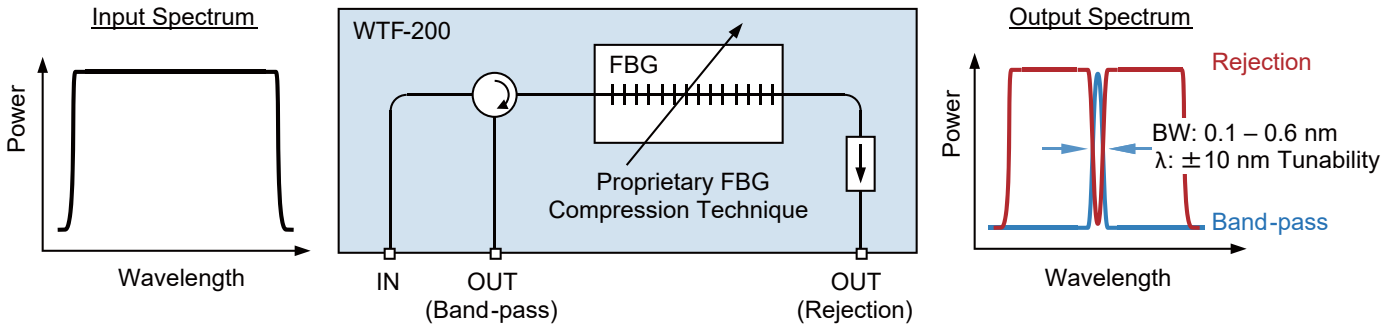


1000nm	1300nm	1550nm	Min. BW 0.1nm	Custom FBG

Wavelength-Tuning by FBG Compression

While wavelength-tuning is commonly achieved by stretching the FBG, here we use a proprietary compression technique that enables more than double the tuning range.

Principle of Operation

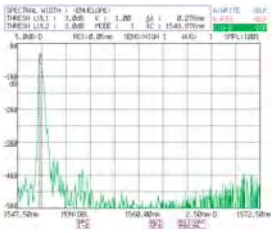


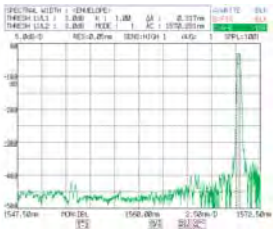
Specifications

	type: T01			type: T02 ~ 03			type: T04 ~ 06			
	min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	unit
Wavelength tuning range	10			20			20			nm
3dB bandwidth[1,3]	0.08	0.1*	0.16		0.2 - 0.3			0.4 - 0.6		nm
Peak insertion loss[2,3]		3.5	8		2.5	3.5		2.5	3.5	dB
Insertion loss variation[2,3]		0.2	0.5		0.2	0.5		0.2	0.5	dB
Out-of-band suppression[3]	23	26		23	26		23	26		dB
Notch depth[4] (band-rejection)		3 - 6			10			15		dB
Center wavelength	1030 - 1070 or 1280 - 1330 or 1520 - 1610									nm
Max. input power	0.5									W
Optical fiber	SMF or PMF									
Optical connector	FC or SC, SPC or APC									
Dimension (W x H x D)	120 x 50 x 205									mm
Weight	1									kg

1. The 3 dB bandwidth (band-pass) may change by up to +/-0.05 nm when wavelength-tuned, with a tendency to broaden when tuned to shorter wavelengths.
* The 3 dB bandwidth will stay between 0.08 and 0.12 nm if the wavelength tuning range is restricted to 5 nm (i.e. +/-2.5 nm).
2. Insertion loss for FBG at 1550 nm region. Values may increase slightly at other wavelength regions.
3. Specifications for band-pass port only. Values may vary for band-rejection port.
4. Notch depth of band-rejection port is mentioned as a guideline only, for filters based on SMF. This guideline may not apply if the rejection port option is added after manufacturing has begun. Please consult for specific needs of the notch depth.
The above specifications may change without prior notice.

Typical Performance (BW = 0.3nm)





Ordering Information

WTF - 200 - T□□ - □□□□ - □□ - □ - □□

Type Number | Center Wavelength | Fiber Type | Port Option | Connector Type

Type no.	
01 : T01 type	04 : T04 type
02 : T02 type	05 : T05 type
03 : T03 type	06 : T06 type

Fiber Type
SM : SMF
PM : PMF

Port Option
S : Standard, Band-Pass only
R : Band-Pass and Band-Rejection

Connector Type	
FS : FC/SPC	SS : SC/SPC
FA : FC/APC	SA : SC/APC

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