

Tunable FBG Optical Filter

WTF-200

- FBG filter with both band-pass and band-rejection
- Over $\pm 10\text{nm}$ wavelength tuning ($>\pm 5\text{nm}$ at 0.1nm BW)
- High-power customization available

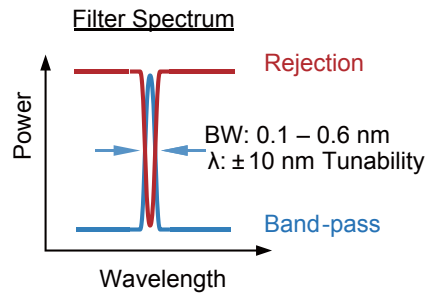
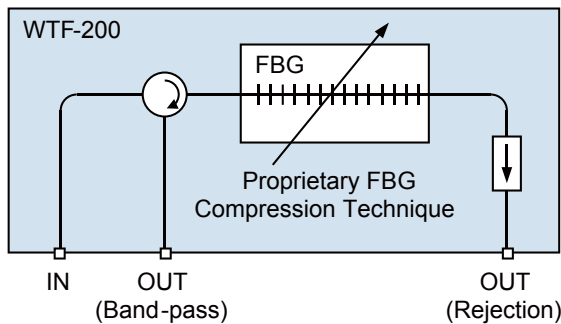
1000nm	1300nm	1550nm	Min. BW 0.1nm	Custom FBG
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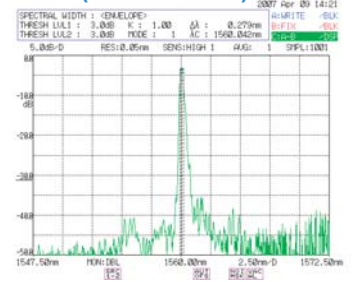
Wavelength-Tuning by
FBG Compression

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



Typical Performance (BW = 0.3nm)



Specifications

Parameter	Type: T01			Type: T02~03			Type: T04~06			Unit
	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
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, 1280-1330, 1520-1610									nm
Max. Input Power	0.5									W
Optical Fiber	SMF or PMF									
Optical Connector	FC or SC, SPC or APC									
Dimensions (W x H x D)	120 x 50 x 205									mm
Weight	1									kg

1. The 3dB bandwidth (band-pass) may change by up to $\pm 0.5\text{nm}$ when wavelength-tuned, with a tendency to broaden when tuned to shorter wavelengths. * The 3dB bandwidth will stay between 0.08 and 0.12nm if the wavelength tuning range is restricted to 5nm (i.e. $\pm 2.5\text{nm}$). 2. Insertion loss for FBG at 1550nm 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. Note: The above specifications may change without prior notice.

Ordering Information

WTF-200-T - - - - -

Type Number Center Wavelength Fiber Type Port Option Connector Type

Fiber Type	Port Option	Connector Type
SM : SMF	S : Standard, Band-Pass only	FS : FC/SPC SS : SC/SPC
PM : PMF	R : Band-Pass and Band-Rejection	FA : FC/APC SA : SC/APC