

## Tunable Grating Filter

The JDS Uniphase Tunable Grating Filter is designed for high-performance laboratory and production testing of single-mode fiber-based components and subsystems. It features fine adjustment with resolution of 0.01 nm, and narrow passbands are available from 0.22-1.4 nm. The filter attains much higher wavelength isolation roll-off than Fabry-Perot etalons or interference filters.

The filter can be used for amplified spontaneous emission (ASE) filtering in erbium-doped fiber amplifier (EDFA) applications or to remove spontaneous emission from distributed feedback lasers (DFBs) and tunable lasers in measurements of wavelength selective components.

Both single and double pass grating configurations are available to provide high rejection and narrow bandwidth.

Six standard models are available with different bandwidths and optical performance for specific applications. The Tunable Grating Filters can be controlled from the front panel keypad or by the GPIB and RS232 interfaces.



### Key Features & Benefits

*Grating-based optical filter*

*Full width at half maximum (FWHM)  
as low as 0.22 nm*

*High rejection*

*Single-mode fiber in and out*

*Parallel and serial interfaces*

*GPIB and RS232 remote control*

*Complies to CE requirements plus UL3101-1  
and CAN/CSA-C22.2 No. 1010.1*

### Applications

*Spontaneous emission suppression*

*Tunable laser based testing*

*ASE filtering in EDFAs*

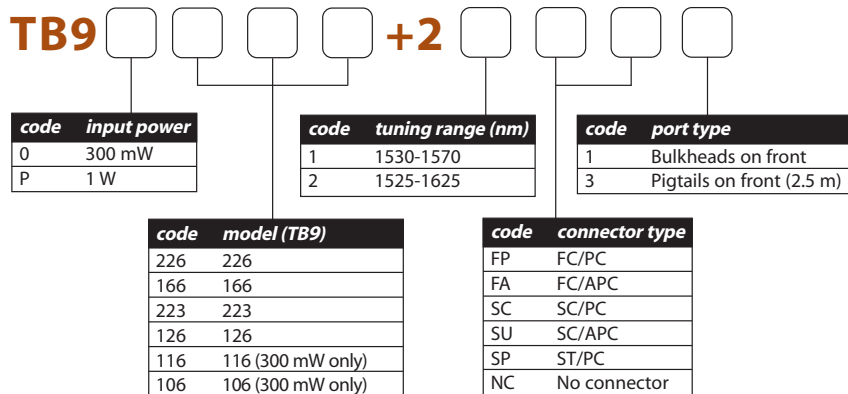
*WDM and DWDM component testing*

## Specifications

MODEL	226	166	223	126	116	106
Tuning range	yes	yes	yes	yes	yes	yes
	yes	yes	yes	yes	yes	yes
- 3 dB bandwidth (± 15 %)	0.22 nm	0.25 nm	0.55 nm	0.55 nm	1.1 nm	1.4 nm
- 20 dB bandwidth (± 15 %)	0.6 nm	0.7 nm	1.5 nm	1.5 nm	3.0 nm	4.0 nm
Insertion loss	≤ 6.0 dB	≤ 4.0 dB	≤ 5.5 dB	≤ 3.0 dB	≤ 3.0 dB	≤ 3.0 dB
	≤ 7.0 dB	≤ 4.0 dB	≤ 7.0 dB	≤ 3.0 dB	≤ 3.0 dB	≤ 3.0 dB
Polarization dependent loss						
1530-1570 nm	≤ 0.2 dB	≤ 0.6 dB	≤ 0.2 dB	≤ 0.6 dB	≤ 0.6 dB	≤ 0.6 dB
1525-1625 nm	≤ 0.5 dB	≤ 0.6 dB	≤ 0.5 dB	≤ 0.6 dB	≤ 0.6 dB	≤ 0.6 dB
Maximum input power	300 mW	300 mW	300 mW	300 mW	300 mW	300 mW
standard	300 mW	300 mW	300 mW	300 mW	300 mW	300 mW
high power	1 W	1 W	1 W	1 W	NA	NA
Resolution	0.01 nm					
Return loss	> 45 dB					
Repeatability	0.05 nm					
Accuracy <sup>3</sup>	± 0.2 nm					
Input voltage	100-240 V AC, 50-60 Hz					
Power consumption	80 VA maximum					
Dimensions W x H x D	21.2 x 8.9 x 35.5 cm/19 inch, 2U high, half-rack width					
Weight	4 kg					
Operating temperature	10 to 40 °C					
Storage temperature	0 to 50 °C					
Humidity	maximum 95 % RH up to 40 °C, non condensing					
Calibration period	1 year					

1. Can be used over the 1460-1575 nm wavelength range.
2. Can be used over the 1500-1625 nm wavelength range.
3. Specifications are valid after 1 hour of warm-up.

### Sample Order: TB90116+22FA1



Indicate your requirements by selecting one option from each configuration table. Print the corresponding codes in the available boxes to form your part number.



**If the configurations available do not meet your performance requirements, please contact our global sales and customer service team to discuss the potential for specialized solutions.**

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