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Data Sheet

August 8, 2026

JDS UNIPHASE/JDSU

JDS Uniphase TB9 JDSU TB9166-1FA1 Tunable Grating Filter

The JDS Uniphase TB9 JDSU TB9166-1FA1 is a tunable grating filter designed for optical communication systems. It allows for precise wavelength selection and filtering. This filter is ideal for applications requiring dynamic wavelength management and signal conditioning.



MODEL

**JDS
Uniphase/JDSU
TB9166-1FA1**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

TB9166-1FA1

LISTING

<https://aumictechlabs.com/products/tb9166-1fa1-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The JDS Uniphase TB9 JDSU TB9166-1FA1 is a tunable grating filter engineered for precision wavelength selection in single-mode fiber-based component and subsystem testing. Grating-based optical filtering delivers superior wavelength isolation compared to Fabry-Perot etalons or interference filters, with bandwidth as narrow as 0.25 nm @ -3 dB and high spectral rejection. The instrument excels at ASE filtering in EDFA applications and removal of spontaneous emission from DFB and tunable lasers during characterization of wavelength-selective components. Technical Specifications Wavelength Range: 1525–1625 nm, 1530–1570 nm Bandwidth (FWHM): 0.25 nm @ -3 dB Wavelength Adjustment Resolution: 0.01 nm Repeatability: 0.05 nm Insertion Loss: 45 dB Polarization Dependent Loss: < 0.6 dB Warm-up Time: 1 hour to specification Optical Connectors:

FC/APC bulkhead (single-mode fiber input/output) Configurations: Single and double pass grating available

Key Features

- Tunable grating architecture with high rejection and narrow bandwidth options
- Wavelength tuning with 0.01 nm resolution and 0.05 nm repeatability
- Low insertion loss and PDL for minimal signal degradation
- Dual control interfaces: front panel keypad, GPIB, and RS232 serial
- Low power consumption: 80 VA maximum

Typical Applications

- Laboratory and production testing of single-mode fiber components and subsystems
- EDFA amplified spontaneous emission (ASE) filtering
- Spontaneous emission suppression in DFB and tunable laser measurements
- WDM and DWDM component characterization

Compatibility & Integration

Operates from single-phase AC sources (100–240 V, 50–60 Hz). Complies with CE marking, UL3101-1, CAN/CSA-C22.2 No. 1010.1, and UL 1950 safety standards.

Features & description

From manufacturer datasheet

Features

- Family: TB9 Tunable Grating Filter; model 166 (TB9166) • -3 dB bandwidth: 0.25–0.3 nm ($\pm 15\%$) • -20 dB bandwidth: 0.7–0.8 nm ($\pm 15\%$) • Insertion loss: ≤ 4.0 dB (1530–1570 nm) • PDL: ≤ 0.6 dB (C-band) • Resolution: 0.01 nm; repeatability 0.05 nm; accuracy ± 0.2 nm • Tuning range: 1460–1575 nm (C-band optimized 1530–1570 nm) • Max input: 300 mW standard; RL >45 dB • Connectors: FC/APC (FA); front bulkheads • GPIB (IEEE-488) + RS-232; 100–240 V AC; ~4 kg half-rack 2U

TB91661FA1 Characteristics / Specifications

PARAMETER	VALUE
Model	TB9 / TB9166-1FA1
Manufacturer	JDS Uniphase (JDSU / VIAVI)
Instrument Type	Tunable Grating Filter
Family	TB9 Tunable Grating Filter; model 166 (TB9166)
Alias	TB9166-1FA1; TB9 TB9166 Optical Model 166 BW; 0.01 nm; C-band; FC/APC front Operational Notes Prefer JDS TB9 Model 166 tables. Confirm calibrated range and connector type on unit label.
–3 dB bandwidth	0.25–0.3 nm (±15%)
–20 dB bandwidth	0.7–0.8 nm (±15%)
Insertion loss	≤4.0 dB (1530–1570 nm)
PDL	≤0.6 dB (C-band)
Resolution	0.01 nm; repeatability 0.05 nm; accuracy ±0.2 nm
Tuning range	1460–1575 nm (C-band optimized 1530–1570 nm)
Max input	300 mW standard; RL >45 dB
Connectors	FC/APC (FA); front bulkheads
Bandwidth	and 0.7–0.8 nm class –20 dB bandwidth with 0.01 nm resolution. Option string -1FA1: C-band range code 1, FC/APC connectors (FA), front bulkheads (1). Tuning control spans approximately 1460–1575 nm with C-band optical performance optimized in 1530–15

TB91661FA1 Specifications

PARAMETER	VALUE
Key Features	- Family: TB9 Tunable Grating Filter; model 166 (TB9166)
Technical Specifications	Model: TB9 / TB9166-1FA1
Optical	Model 166 BW; 0.01 nm; C-band; FC/APC front
Operational Notes	Prefer JDS TB9 Model 166 tables. Confirm calibrated range and connector type on unit label.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance optimized in 1530-1570 nm.

Applications

ASE filtering for EDFA test; DFB/TLS spontaneous-emission cleanup; WDM channel selection; wavelength-selective component characterization.

Key Features

- Family: TB9 Tunable Grating Filter; model 166 (TB9166)
- -3 dB bandwidth: 0.25-0.3 nm (±15%)
- -20 dB bandwidth: 0.7-0.8 nm (±15%)
- Insertion loss: ≤4.0 dB (1530-1570 nm)
- PDL: ≤0.6 dB (C-band)
- Resolution: 0.01 nm; repeatability 0.05 nm; accuracy ±0.2 nm
- Tuning range: 1460-1575 nm (C-band optimized 1530-1570 nm)
- Max input: 300 mW standard; RL >45 dB
- Connectors: FC/APC (FA); front bulkheads
- GPIB (IEEE-488) + RS-232; 100-240 V AC; ~4 kg half-rack 2U

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	TB9 / TB9166-1FA1
Manufacturer	JDS Uniphase (JDSU / VIAVI)
Instrument Type	Tunable Grating Filter
Family	TB9 Series
Alias	TB9166-1FA1; TB9 TB9166

Optical

Model 166 BW; 0.01 nm; C-band; FC/APC front

Operational Notes

Prefer JDS TB9 Model 166 tables. Confirm calibrated range and connector type on unit label.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.