



## TFN FB-12 Optical Multi Meter - Portable Fiber Optic Test Solution



### Product Overview

The TFN FB-12 series is an innovative, portable test instrument combining an optical power meter and a stabilized light source . It revolutionizes the traditional, cumbersome practice of carrying two separate devices for fiber optic testing, providing unprecedented efficiency and convenience for fiber optic network installation, maintenance, and troubleshooting . Available in two models, the FB-12A (high sensitivity) and the FB-12C (wide dynamic range), the series meets the testing needs of diverse scenarios, from long-haul trunk lines to local area networks (LAN/FTTH), making it an ideal companion for optical communications engineers.

### Core Features

- Two-in-one integrated design : A single device integrates an optical power meter and a stabilized light source, greatly improving on-site work efficiency and reducing equipment procurement costs.
- Intelligent automatic wavelength recognition and switching : The power meter automatically recognizes and switches the calibration wavelength (850/1300/1310/1490/1550/1625nm), and the light source can switch between wavelengths such as 1310/1550nm, avoiding manual setting errors.
- High precision and high stability : The optical power meter uncertainty is  $\leq \pm 0.25\text{dB}$ , and the light source stability is  $< 0.1\text{dB}$ , ensuring accurate and reliable measurement results.
- Large-capacity data storage : It can store up to 1,000 test data and export them through the Mini USB interface for easy recording and analysis.
- Intelligent identification and portable and durable : Supports band-frequency light detection function and automatically identifies the modulation frequency (270Hz/1KHz/2KHz); compact and lightweight (only 200g), designed for field operations.

### Customer pain points & Product selling points



## Customer pain points

## FB-12 Series Solutions

Carrying multiple devices (power meter, light source) for testing is cumbersome and tedious

Two-in-one device : One device handles sending and receiving, leaving you light and more efficient.

Manually setting the wavelength is prone to errors, resulting in invalid test data

Intelligent automatic wavelength recognition and switching : The instrument automatically matches the optimal wavelength to eliminate human errors and ensure data accuracy.

Field test data is difficult to record and export, making reporting difficult

Thousands of data records can be stored and exported to USB : Easily record data for each link, making it easy to generate reports and provide documentation.

The light source output is unstable, affecting the loss measurement accuracy

Highly stable light source output : <0.1dB stability ensures every measurement is reliable.

Complex networks (such as PON) require testing multiple wavelengths, which makes the equipment inconvenient.

Multi-wavelength coverage and customization : Supports multiple wavelengths from 850nm to 1625nm, and can customize light source output, with a wide range of applications.

## Detailed technical parameters

Parameter Category	FB-12A Model	FB-12C Model
Optical Power Meter part		
Calibration wavelength	850, 1300, 1310, 1490, 1550, 1625 nm	
Measuring range	-70 dBm ~ +6 dBm	-50 dBm ~ +26 dBm
Display resolution	0.01 dB	
Uncertainty	< ±0.25 dB	



Parameter Category	FB-12A Model	FB-12C Model
Linearity	< $\pm 0.1$ dB	
Frequency recognition range	$\leq 10$ kHz	
	Laser Source part	
Working wavelength	1310 / 1550 nm (customizable)	
Typical output power	-5 dBm (customizable)	
Stability (30 minutes)	< 0.1 dB	
Modulation frequency	CW, 270Hz, 1KHz, 2KHz	
	General Parameters	
Power supply mode	3*AA batteries/Mini USB 5V adapter	
Automatic shutdown	10 minutes	
Battery life	Light source on: >50 hours	Light source on: >200 hours
Communication interface	Mini USB	
Operating temperature	$-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$	
size	175 mm $\times$ 90 mm $\times$ 44.5 mm	
Weight (without battery)	200 g	

#### Typical application scenarios

1. Fiber-to-the-home (FTTH) network installation and maintenance
2. Local Area Network (LAN/MAN) Fiber Optic Link Certification
3. Cable TV (CATV) fiber optic network testing
4. Telecommunications Network Engineering and Operations
5. Fiber optic connection testing within data centers
6. Fiber optic equipment production and R&D



#### **Why choose the TFN FB-12 Series Optical Power Meter & Light Source?**

1. **Extreme Efficiency** : A two-in-one design reduces equipment portability and operational steps, making testing more efficient.
2. **Intelligent Precision** : Automatic wavelength recognition and a highly stable light source ensure the accuracy and reliability of test data from the source.
3. **Powerful Data Management** : Thousands of records can be stored and exported to USB, making on-site management easy and simple.
4. **Flexible Power Supply, Ultra-Long Battery Life** : With dual power supply options, the FB-12C light source can last over 200 hours, meeting the needs of long-term operations.
5. Choose from the FB-12A for high-sensitivity measurements and the FB-12C for a wider dynamic range. There's always a model that suits your application.

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