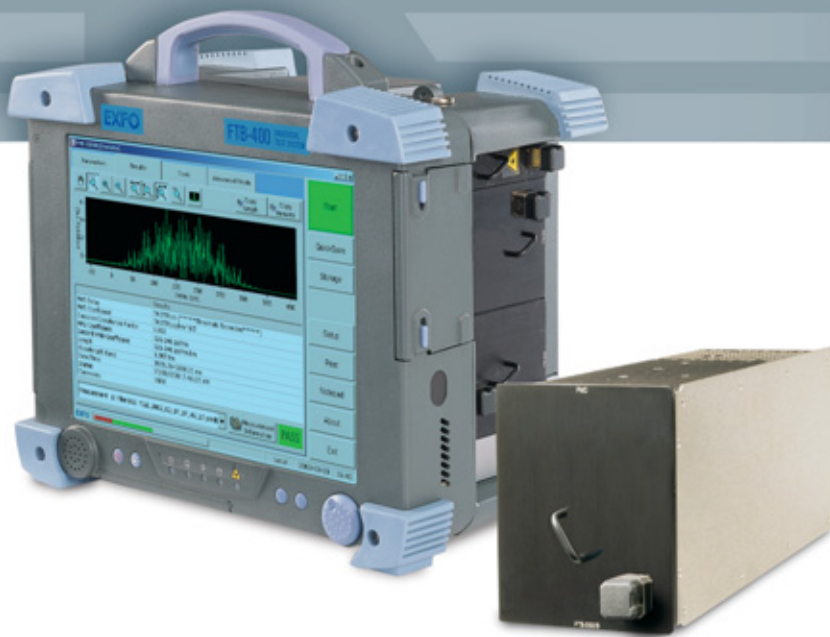


# PMD ANALYZER

# 5500B

FTB-5500B

NETWORK TESTING



- Less than 5-second testing time for any PMD range
- No auto-correlation peak, for enhanced accuracy
- NIST traceable
- Patented design\*: test through EDFAs

\* Patent pending, International PCT Publ. No. WO2004/070341.  
Measurement method approved by TIA-FOTP-124A

[www.exfo.com](http://www.exfo.com)

Telecommunications Test and Measurement

# EXFO

EXPERTISE REACHING OUT

# Measuring PMD the Fast Way

PMD represents a significant danger to both legacy and newly deployed networks. And as systems of 10 Gb/s and faster develop, PMD concern and awareness continue to grow. EXFO's FTB-5500B PMD Analyzer helps you get ahead in the field. Whether you need to verify the capacity of legacy fiber or maintain a network, the modular FTB-5500B is fast, reliable, and ready to go.

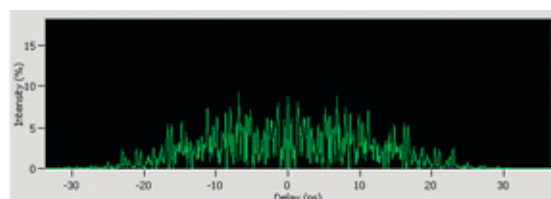


## Less than 5-Second Testing Time

The rugged FTB-5500B features a market-leading PMD measurement time of less than five seconds—for any PMD value. Improve your testing efficiency. Reduce testing costs. Test more fiber, and test it faster.

## A Unique Approach to Testing Through EDFAs and Removing Auto-correlation Peaks

The FTB-5500B's unique technology allows for both the auto-correlation and cross-correlation to be known. Therefore, any spectral shape of source can be used. The auto-correlation peak is thus removed, and higher accuracy and resolution are obtained. PMD of 0 ps can be measured. In addition, a signal transmitted through EDFAs can be analyzed for total link PMD. Calibration is traceable to NIST.



### KEY FEATURES

- No auto-correlation peak, for increased accuracy and resolution
- Testing through EDFAs (above 120 EDFAs)
- Under five-second testing time for any range
- Minimum measurable PMD: 0 ps

## Field-Proof, Advanced Technology

### The FTB-400 UTS Advantage

Housed in the tough, light-magnesium-shell and rubber-bumpered FTB-400 Universal Test System, the FTB-5500B PMD Analyzer will survive knocks, bumps and drops. Combine up to seven single-slot, field-interchangeable modules in the powerful FTB-400 for simultaneous support of multiple testing applications (CD analyzer, OTDR and OLTS, among others).

### The FLS-5800 CD/PMD Analyzer Source Advantage

A single light source, the FLS-5800 CD/PMD Analyzer Source, can help you characterize both chromatic dispersion (CD) and polarization mode dispersion (PMD)—reducing testing time and minimizing the potential for human error.

## Second-Order PMD

Particularly important in multichannel transmission, second-order PMD is derived from the measured PMD value. EXFO's software provides second-order PMD delay and coefficient values for telecom fibers. These values allow you to characterize fibers and cables more precisely than simple PMD and better control the transmission quality of high-speed systems.

### ToolBox Software Solutions

#### PMD Touch and Go

EXFO's ToolBox software suite runs the FTB-400's test module applications. The user-friendly touchscreen provides easy access to menus and functions, for highly productive, yet simple testing in the field.

#### Simple Step-by-Step Measurements

Step-by-step instructions make testing easy and virtually error-free. Both new users and experts can obtain fast, accurate and efficient PMD measurements with minimal training. The analysis software calculates and displays a fiber's total PMD and coefficient, as well as the second-order PMD value and coefficient.

#### Multiple Measurement Possibilities

Check for long-term stability. Make several PMD measurements over long time periods with the Multiple Measurement mode, and monitor PMD changes over an extended time.

#### Statistical Result Tables

View your results quickly and easily. After completing multiple tests, the FTB-5500B PMD Analyzer automatically compiles the results in a table and provides statistical analysis:

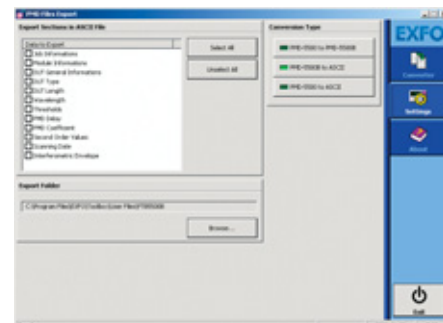
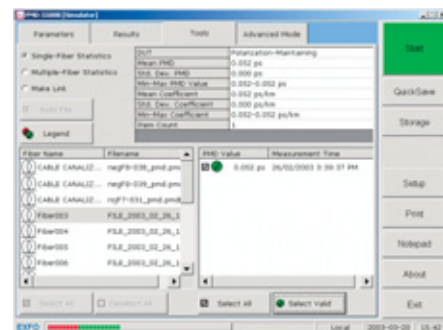
- Mean PMD delay and coefficient
- Standard deviation PMD delay and coefficient
- Minimum and maximum PMD delay and coefficient

Benefit from powerful statistical analysis for

- Averaging multiple tests on one fiber
- Averaging sets of pre-averaged fibers to produce cable stats
- Gathering data from end-to-end fibers and calculating of total PMD (link creation)

#### Data Management Features

Manage all your data with ease. EXFO's software includes various data management features, such as automatic file naming and statistical and table management, as well as custom report generation and batch printing. The software also comes with a file converter, which transforms PMD files into text files.



## SPECIFICATIONS

|   |                            |
|---|----------------------------|
| Wavelength range (nm)                             | 1260 to 1675 (O to U band) |
| Measurement range (ps)                            | 0 to 115                   |
| Sensitivity (dBm)                                 | -45 <sup>1</sup>           |
| Measuring time (s)                                | 4.5 (for any PMD value)    |
| Absolute uncertainty (accuracy) <sup>2</sup> (ps) | ± (0.020 + 2 % of PMD)     |
| Allows measurement through EDFA                   | Yes (above 120 EDFAs)      |

### GENERAL SPECIFICATIONS

|                                |           |                            |                               |
|--------------------------------|-----------|----------------------------|-------------------------------|
| Temperature                    | operating | 0 °C to 40 °C              | (32 °F to 104 °F)             |
|                                | storage   | -40 °C to 70 °C            | (-40 °F to 158 °F)            |
| Relative humidity              |           | 0 % to 93 % non-condensing |                               |
| Size (H x W x D) (module only) |           | 9.6 cm x 7.6 cm x 26.0 cm  | (3 3/4 in x 3 in x 10 1/4 in) |
| Weight (module only)           |           | 1.5 kg                     | (3.4 lb)                      |

#### Note:

1. Typical, for C-band. May be increased with averaging. With the FLS-5800, the typical dynamic range is 47 dB.
2. For C-band, assuming averaging over all states of polarization.

## ORDERING INFORMATION

### PMD Analyzer

#### FTB-5500B-XX

##### Connector \*

EI-EUI-28 = UPC/DIN 47256  
 EI-EUI-76 = UPC/HMS-10/AG  
 EI-EUI-89 = UPC/FC narrow key  
 EI-EUI-90 = UPC/ST  
 EI-EUI-91 = UPC/SC  
 EI-EUI-95 = UPC/E-2000  
 EA-EUI-28 = APC/DIN 47256  
 EA-EUI-89 = APC/FC narrow key  
 EA-EUI-91 = APC/SC  
 EA-EUI-95 = APC/E-2000

Example: FTB-5500B-EI-EUI-89

\* EXFO Universal Interface is protected by US patent 6,612,750.

### CD/PMD Analyzer Source

#### FLS-58XX-XX

##### Model

FLS-5803 = 1550 nm SuperLED  
 FLS-5804 = 1625 nm SuperLED  
 FLS-5834 = 1550 nm and 1625 nm SuperLEDs

##### Connector \*

EI-EUI-28 = UPC/DIN 47256  
 EI-EUI-76 = UPC/HMS-10/AG  
 EI-EUI-89 = UPC/FC narrow key  
 EI-EUI-90 = UPC/ST  
 EI-EUI-91 = UPC/SC

EI-EUI-95 = UPC/E-2000  
 EA-EUI-28 = APC/DIN 47256  
 EA-EUI-89 = APC/FC narrow key  
 EA-EUI-91 = APC/SC  
 EA-EUI-95 = APC/E-2000

Example: FLS-5803-EI-EUI-89

### Polarized Light Source

#### FLS-110-XXP-XX

##### Model

FLS-110-02P = 1310 nm LED  
 FLS-110-03P = 1550 nm LED

##### Connector \*

58 = FC/APC narrow key  
 89 = FC/UPC narrow key  
 91 = SC/UPC  
 EI-EUI-28 = UPC/DIN 47256  
 EI-EUI-76 = UPC/HMS-10/A  
 EI-EUI-89 = UPC/FC narrow key  
 EI-EUI-90 = UPC/ST

EI-EUI-91 = UPC/SC  
 EI-EUI-95 = UPC/E-2000  
 EA-EUI-28 = APC/DIN 47256  
 EA-EUI-89 = APC/FC narrow key  
 EA-EUI-91 = APC/SC  
 EA-EUI-95 = APC/E-2000

Example: FLS-110-02P-EI-EUI-89

### Safety

21 CFR 104.10  
 IEC 60825-1: 2001

Class I Laser Product  
 Class 1 Laser Product

### Standard Accessories

User Guide, Certificate of Calibration, connector cleaners.

Find out more about EXFO's extensive line of high-performance portable instruments by visiting our website at [www.exfo.com](http://www.exfo.com).



#### Rugged Handheld Solutions

- OLTS
- Power meter
- Light source
- Talk set



#### Optical Fiber

- OTDR
- OLTS
- ORL meter
- Switch

#### DWDM Test Systems

- OSA
- PMD analyzer
- Chromatic dispersion analyzer
- Multiwavelength meter

#### Transport/Datacom

- 10/100 and Gigabit Ethernet
- SONET/SDH (DS0 to OC-192c)
- SDH/PDH (64 kb/s to STM-64c)
- SAN

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|                   |   |                                    |                          |                         |
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EXFO is certified ISO 9001 and attests to the quality of these products. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. **Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.** For the most recent version of this spec sheet, please go to the EXFO website at <http://www.exfo.com/specs> In case of discrepancy, the Web version takes precedence over any printed literature.

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