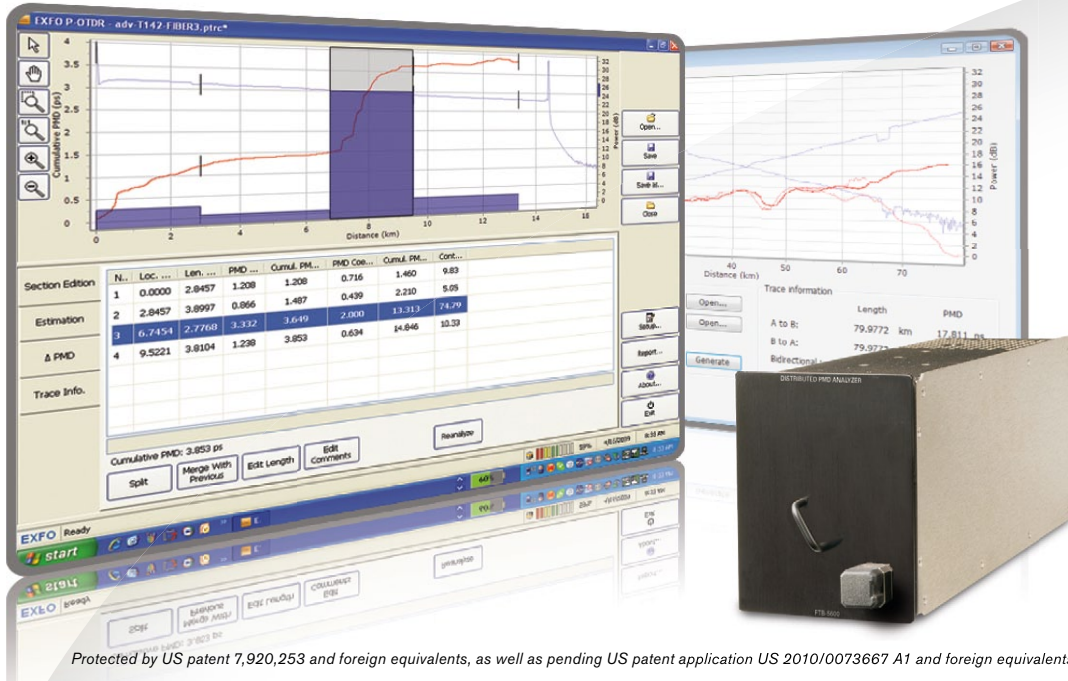


FTB-5600

DISTRIBUTED PMD ANALYZER



Protected by US patent 7,920,253 and foreign equivalents, as well as pending US patent application US 2010/0073667 A1 and foreign equivalents.



The first distributed PMD analyzer to appear on the market, and offering simplified PMD assessment for enhanced identification of faulty sections on links.

KEY FEATURES

Locates fiber sections that are large contributors to the total PMD of a link

Makes it possible to isolate and repair only the worst PMD sections of the fiber cable

Allows the cost-effective upgrade of a fiber network otherwise limited in speed by PMD

Helps identify small changes that can boost the entire network's performance

INCLUDES

One-day, on-site training



PLATFORM COMPATIBILITY

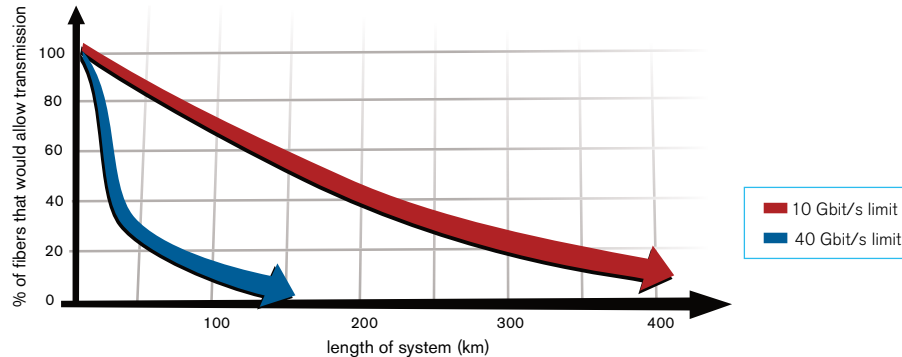


Platform
FTB-500



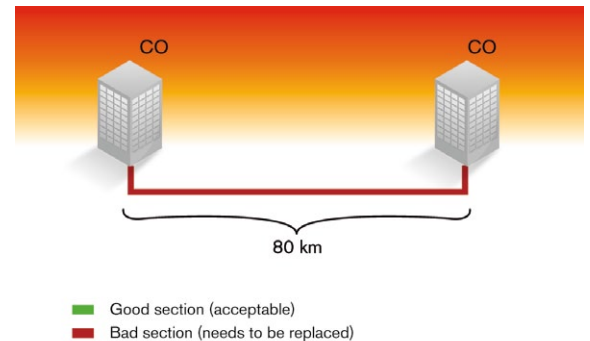
SHEDDING NEW LIGHT ON PMD

With ever-rising demand for bandwidth-intensive services and higher transmission speeds, as well as fierce competition among telcos and multiservice operators (MSOs), network operators are now, more than ever before, carrying out massive bandwidth upgrades. Although required from a commercial and service-availability standpoint, these upgrades can nonetheless trigger major PMD issues, as fiber that was suitable for low-speed applications is not always fit for high-speed transmission.



Fiber suitable for low-speed transmission can exhibit excess PMD at higher speeds.

Since traditional PMD measurement techniques only provide a total end-to-end value compared against pass/fail thresholds, it used to be impossible to determine what caused a link to “fail” its PMD test, i.e., the whole link, or only localized sections. The distributed PMD analysis approach was developed to avoid such grey areas, and to help network operators tackle the PMD assessment challenge.

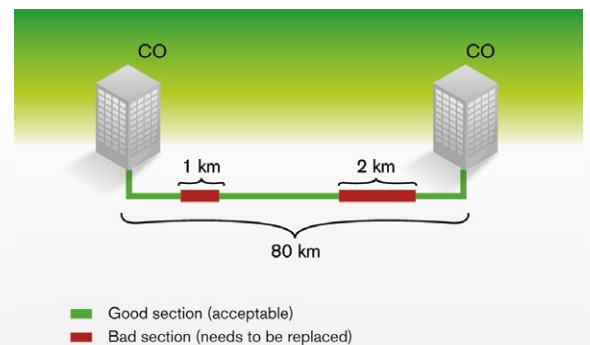


Traditional PMD measurement techniques provide a total link PMD value, but do not provide insight into which spans are causing the link to fail the test.

Measuring PMD as a function of the distance

EXFO’s FTB-5600 is the very first quantitative distributed PMD analyzer on the market. The technological breakthrough on which it is based provides operators with a cost-effective, time-efficient alternative to costly network upgrades. By breaking down the PMD measurement results, distributed PMD analysis pinpoints high-PMD sections and accurately qualifies them.

The example to the right details a real-world network upgrade scenario, and shows the type of results generated by the FTB-5600 in such situations.



Contrary to the traditional approach, distributed PMD analysis breaks down the measurement results, effectively pinpointing the high-contributing sections of the link.

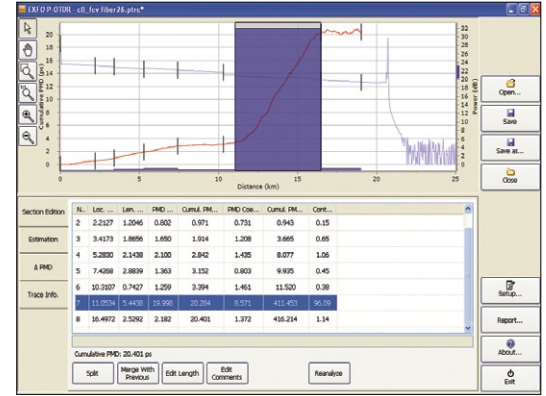


One-day, on-site training

To ensure that this powerful tool is used to its maximum capacity, EXFO offers a one-day, on-site training provided by one of our certified trainers.

Better insight, better decisions

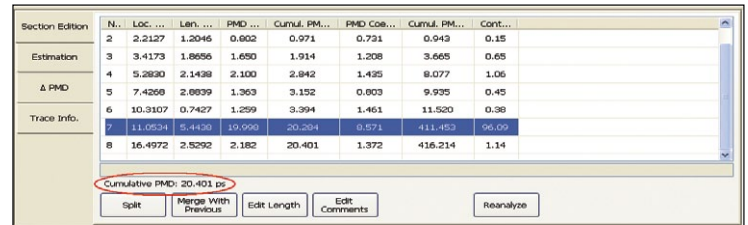
When confronted by the high costs involved in deploying high-PMD-tolerant systems or new fiber, network operators often hesitate before making the move toward high-speed transmission. But now, thanks to distributed PMD analysis, they can choose another path: identifying the high-PMD spans and performing local face-lifts on the link to effectively extend the life of their legacy networks.



PMD contribution histogram

PMD contribution histogram

The FTB-5600's PMD contribution histogram immediately reveals whether one or several sections account for the bulk of the PMD. In the example to the right, the faulty 5 km section accounts for more than 96 % of the total PMD.

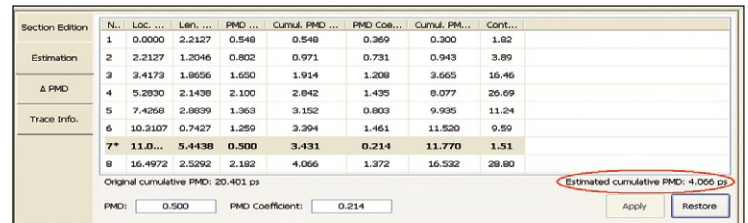


Before fixing the faulty 5 km fiber span (section 8).

PMD estimation feature

PMD estimation feature

The estimation feature enables you to simulate the effect that replacing any of the high-contributing sections would have on total PMD directly from the interface, helping you make better decisions in less time.



After replacing it.

Value tools

Value tools

► Bidirectional Analysis

Bidirectional traces are analyzed automatically to increase the usable dynamic range or boost the accuracy of the measurement.

► Import Sections

Create section templates with either another POTDR trace, a standard OTDR trace, or a text file.

► Intermediate Data Remover

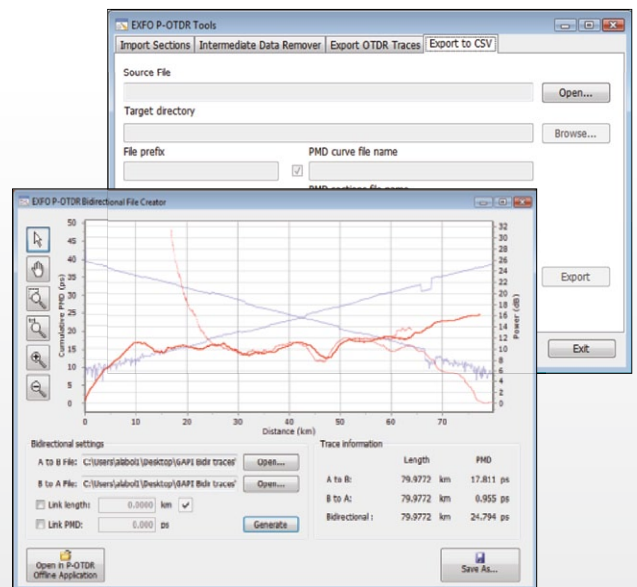
Test and save in full Data Keeping mode to facilitate intervention by our experts in the event of odd fiber behavior. Then, use this tool to "shrink" the data to smaller sizes.

► Export OTDR Trace

For in-depth OTDR analysis in any of our off-line viewers such as FastReporter, save only the OTDR trace shot of the FTB-5600.

► Export to .csv

Use comma-separated value files to create your own custom analysis in tabular software such as Excel. As an example, this will enable you to compare fibers within the same cable.



SPECIFICATIONS^a

Wavelength range (nm)	1520 to 1580	
Maximum cumulative PMD (ps)	≥20	
Minimum measurable cumulative PMD (ps)	0.1 ^b	
Cumulative PMD uncertainty (ps)	± (0.1 + 5 % x PMD) ^c	
PMD dynamic range (dB)	15 ^d	
Distance uncertainty (OTDR) (m)	±10 ^e	

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 % noncondensing ^f		
Size (H x W x D)	96 mm x 75 mm x 281 mm	(3 3/4 in x 3 in x 11 in)	
Weight	2 kg	(4.4 lb)	

LASER SAFETY

Class 1 laser product in compliance with standards IEC 60825-1: 2007 and 21 CFR 1040.10. Laser radiation may be encountered at the output port.

Notes

- All specifications are typical and at 23 °C ± 2 °C, on buried fibers.
- With the lowest PMD resolution.
- For 100 SOP, 100 ns pulse and 2 km spatial smoothing filter. Based on a single strong-coupling PMD emulator.
- For 275 ns pulse, 2000 averages, 4 km spatial smoothing filter, fiber-dependent.
- Does not include contribution of the fiber index uncertainty.
- Up to 40 °C.

ORDERING INFORMATION**FTB-5600-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-5600-EI-EUI-89

* Feature(s) of this product is/are protected by one or more of US patents 6,612,750 and 8,373,852.

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