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Test & Measurement

- > sales
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- > calibration
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Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

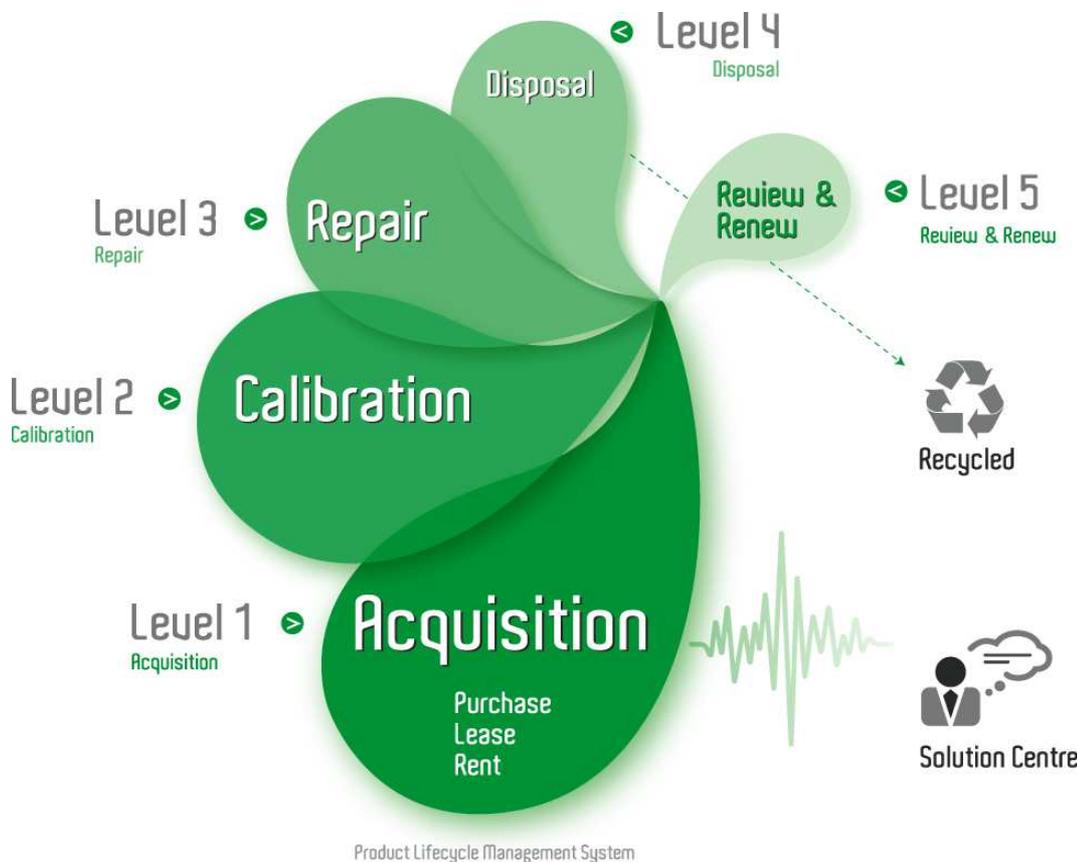
If you click on the "Click-to-Call" logo below, you can call us for FREE!

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Product Lifecycle Management System

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CHROMATIC DISPERSION ANALYZER

FTB-5800

NETWORK TESTING—OPTICAL



Platform Compatibility

FTB-400 Universal Test System

- Complete CD characterization
- Approved phase-shift method
- No communication between source and receiver
- Test through EDFAs

Characterize Chromatic Dispersion in the Field

The ongoing race to develop high-speed transmission systems and to increase available bandwidth is facing certain limitations. Chromatic dispersion (CD) measurements are becoming more and more critical for carriers and service providers looking to improve their systems by upgrading to 10 or 40 Gb/s (OC-192/STM-64 and OC-768/STM-256). EXFO's FTB-5800 CD Analyzer* offers high performance in a field-ready unit for all chromatic dispersion testing situations.

KEY FEATURES

- Suitable for all fiber types
- Rugged and ready for the field
- Intuitive software



FTB-5800 CD Analyzer

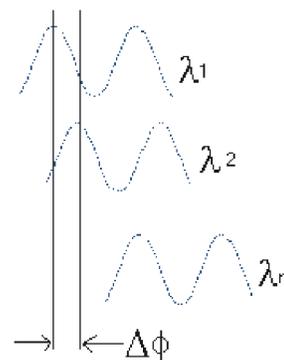
*Protected by US patent 6,429,929 and foreign equivalents.

CD AFFECTS SYSTEM PERFORMANCE

CD occurs because different wavelengths travel at slightly different speeds in optical fiber, resulting in elongated, and thus ineffective, light pulses. DWDM systems are particularly sensitive to CD. Too much CD results in cross-modulation and signal loss; however, a small, controlled amount of CD is needed to reduce unwanted non-linear phenomena, such as four-wave mixing.

THE PHASE-SHIFT METHOD

The FTB-5800 uses the approved phase-shift method, which works as follows: To transmit a signal, modulated light is sent through the fiber. At the end of the fiber, different wavelengths have different phase shifts. The measurement of these different phase delays in the frequency domain relates to a delay in the time domain and, therefore, to CD.



Different wavelengths have different phase shifts.
The measurement of these different phase delays relates to CD.

Field-Proof Advanced Technology

THE FTB-400 UTS ADVANTAGE

To survive knocks, bumps and drops, the FTB-5800 CD Analyser is housed in the lightweight magnesium shell of the tough, splashproof FTB-400 Universal Test System. Combine up to seven single-slot, field-interchangeable modules in the powerful FTB-400 UTS for simultaneous support of multiple testing applications (PMD, OTDR and OLTS, among others). The FTB-400 provides a unique and advantageous testing environment. The FTB-5800 is a truly field-portable CD test set, so you no longer need to be in-house to perform accurate measurements. The CD analyzer operates in the FTB-400's PC environment, eliminating the need to bring a laptop in the field. The FTB-5800 is a four-slot module for the FTB-400 seven-slot platform. This means that in a single, rugged, battery-operated unit, both a CD and PMD analyzer can be housed and used simultaneously.

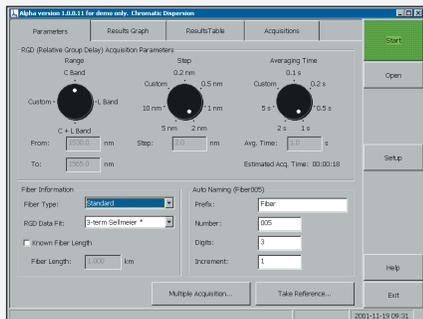
THE NO-COMMUNICATION ADVANTAGE

Now you can test whole links instead of only sections, reducing manipulation, error and testing time. EXFO's patent-pending technology offers a truly unique advantage—no communication between the source and the receiver. Because filtering is done at the receiver end and not at the source, transmission through one-way devices such as isolators and EDFAs is possible. Tests have been performed through as many as 30 amplifiers.

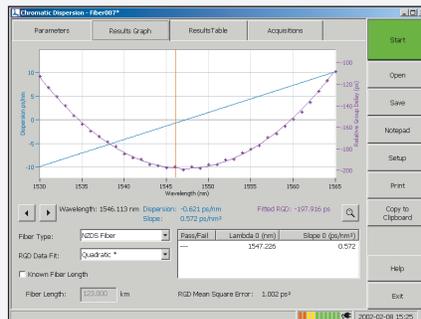
UNIVERSAL RECEIVER

Equipped with a broadband detector, EXFO uses the same receiver for both C- and L-band testing. Although one band may be adequate for today's testing, EXFO makes it easy to handle possible future expansions. Should your testing needs change, you can simply purchase additional sources without having to purchase another receiver.

POWERFUL SOFTWARE FEATURES AT THE TOUCH OF A BUTTON



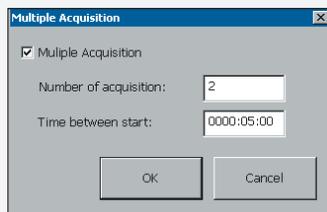
Simple test setup parameters for error-free testing.



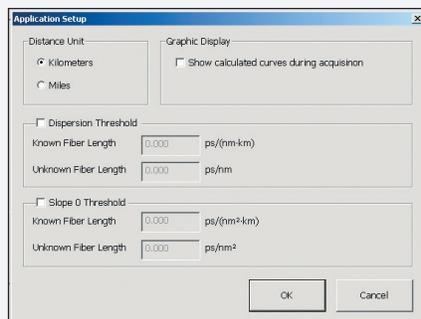
Large graphic display of both the dispersion and the relative group delay.

The screenshot shows the 'ResultsTable' tab. It contains a table with columns: 'Used', 'Pass/Fail', 'Wavelength (nm)', 'RGD (ps)', 'RGD Deviation (ps)', 'Dispersion (ps/nm)'. The table lists multiple data points with their corresponding values and pass/fail status.

Personalized data management for clear, customized report creation.



Multiple measurement capabilities for testing over long time periods.



Threshold detection for dispersion and slope at λ_0 .

SPECIFICATIONS^a

Model		FTB-5800		
Wavelength range (nm)		1530 to 1625 1200 to 1700 ^b		
Wavelength step (nm)	Minimum	0.1		
Measurement points	Maximum	950, user-definable		
Dynamic range ^c (dB)		42		
Wavelength uncertainty ^d (accuracy) (nm)		0.1		
Dispersion uncertainty ^d (accuracy) (ps/nm)	20 km of G.652	1.6		
	120 km of G.652	3.1		
	20 km of G.655	1.9 (guaranteed)		
Dispersion repeatability ^d (ps/nm)		20 km	80 km	120 km
Zero-dispersion wavelength λ_0 repeatability ^d (nm)		0.1	0.14	0.8
Dispersion slope repeatability λ_0 ^d (%)		0.03	0.05	0.25
Minimum fiber length (km)		< 1		
Maximum fiber length (km) ^e		> 5400		
Measurement time per point ^e (s)	Minimum	< 1		

NOTES

- a. All specifications are typical with 4 seconds averaging time per point (where applicable), at a temperature of 23 °C ± 1 °C, with FC connectors and after warmup time.
 b. Displayed range. Values may be extrapolated.
 c. Dynamic range is defined as the difference between the strongest signal and the

weakest signal the receiver can detect. Extra averaging may be required. Uncertainty (accuracy) is not guaranteed at limits of range.

d. C+L band.

e. Including EDFAs.

f. Additional gain setting time may be required prior to the first point of each band.

GENERAL SPECIFICATIONS

Size (H x W x D) (module)	9.6 cm x 10 cm x 26 cm	(3 3/4 in x 3 15/16 in x 10 1/4 in)
Weight (module)	2 kg	(4.5 lb)

ORDERING INFORMATION

CD ANALYZER

FTB-5800-XX

Connector

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

Example: FTB-5800-EI-EUI-89

CD/PMD ANALYZER SOURCE

FLS-58XX-XX

Model

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

Example: FLS-5834-EI-EUI-89

SAFETY

THIS PRODUCT COMPLIES WITH
IEC 60825-01: 1993 + A2: 2001
CLASS 1M LED PRODUCT



Rugged Handheld Solutions

OPTICAL	COPPER ACCESS
- OTDRs	- ADSL/ADSL2+, SHDSL, VDSL test sets
- OLTSs	- VoIP and IPTV test sets
- Power meters	- Ethernet test sets
- Light sources	- POTS test sets
- Talk sets	



Platform-Based Solutions

OPTICAL FIBER	DWDM TEST SYSTEMS	TRANSPORT AND DATACOM
- OTDRs	- OSAs	- Next Generation SONET/SDH and OTN testers
- OLTSs	- PMD analyzers	- SONET/DSn (DS0 to OC-192) testers
- ORL meters	- Chromatic dispersion analyzer	- SDH/PDH (64 kb/s to STM-64) testers
- Variable attenuators		- T1/T3, E1 testers
		- 10/100M and Gigabit Ethernet testers
		- Fibre Channel testers
		- 10 Gigabit Ethernet testers

Find out more about EXFO's extensive line of high-performance portable instruments by visiting our website at www.EXFO.com.

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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. All of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit www.EXFO.com/recycle. 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.

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