

## OPTICAL SPECTRUM ANALYSER

# FTB-5230

NETWORK TESTING—OPTICAL



### Platform Compatibility

FTB-400 Universal Test System

### Designed for first-class cost-effectiveness

- Characterization of down to 50 GHz DWDM systems
- Built-in functionalities for CWDM testing
- Key feature: wavelength and power drift measurements
- Wide wavelength range of 1250 nm to 1650 nm
- Versatile and powerful

## Built for xWDM Test Applications

The FTB-5230 Optical Spectrum Analyzer (OSA) is designed for testing both DWDM and CWDM systems within metro/access links and long-haul networks.

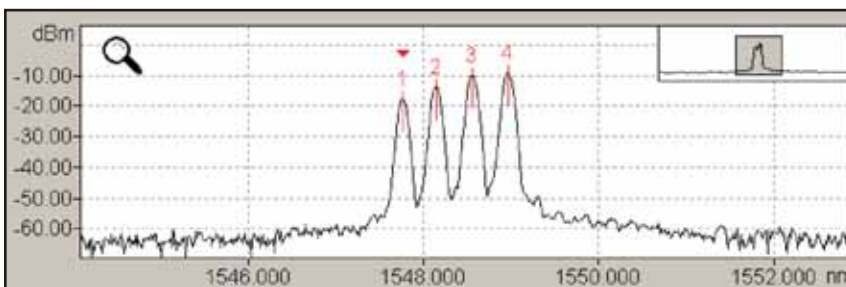
This cost-effective module is housed in the FTB-400 Universal Test System, EXFO's tough, portable test platform. What's more, the FTB-5230 covers the entire transmission wavelength range, from 1250 nm to 1650 nm.

### IDEAL FOR DWDM TESTING

With a commonly used resolution bandwidth of 0.1 nm, the FTB-5230 is ideal for characterizing DWDM networks with a channel spacing of down 50 GHz. Thanks to user-friendly features such as pass/fail analysis and trace comparison, this modular OSA helps you ensure high-quality transmission.



The FTB-5230 Optical Spectrum Analyzer is a three-slot module contained inside EXFO's FTB-400 field-testing platform.



### OPTIMIZED FOR COST-EFFECTIVENESS

EXFO's FTB-5230 OSA was developed with a no-frills approach. It only includes essential OSA functionalities, delivering first-class cost-effectiveness. Its key features include:

- Drift mode
- Excellent optical specifications
- Wide wavelength range of 1250 nm to 1650 nm
- First-class ruggedness, fitting the most severe test conditions



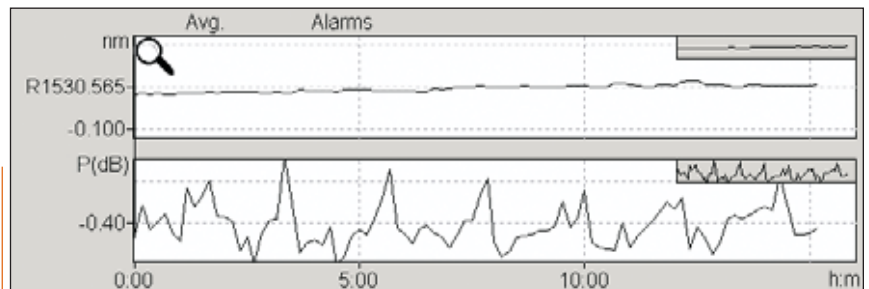
### THE FTB-400 PLATFORM'S MULTITASKING ADVANTAGE

The FTB-400 Universal Test System offers rapid, powerful multitasking with simultaneous acquisitions and post-processing. Combine up to seven single-slot field-interchangeable modules for hundreds of versatile combinations.

Combine the three-slot FTB-5230 CWDM OSA, the short-dead-zone FTB-7200D OTDR and the highly versatile FTB-3930 MultiTest Module to certify fiber and signal quality by characterizing entire networks. Optimize CAPEX thanks to the advantage of combining an OSA, an OTDR, a power meter, an OLTS and many other instruments inside a single platform.

## ||| The Choice for CWDM OSA Testing

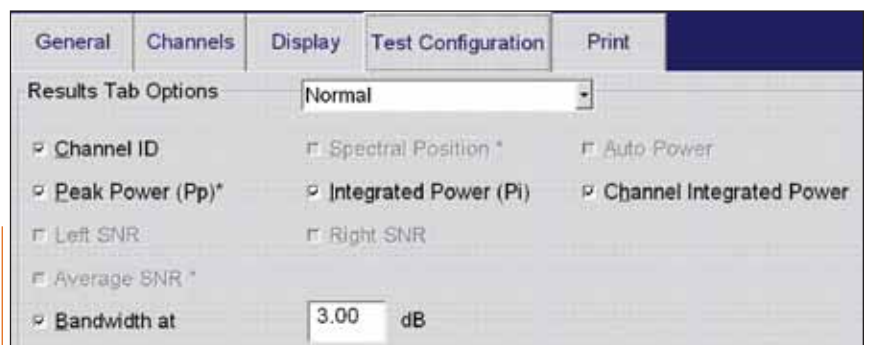
Since CWDM systems generally use uncooled lasers, whose typical wavelength drift is 0.1 nm per degree Celsius, it is critical to track the evolution and drift of the lasers' central wavelength. And since path attenuation can significantly vary within a single channel, passband drift also creates power drift. This is why it becomes extremely important to monitor—simultaneously for all CWDM channels—the evolution of peak power and wavelength over time. The FTB-5230 Optical Spectrum Analyzer's Drift mode functionalities makes this an easy task.



Monitoring wavelength and power drift is essential in CWDM systems.

### TOTAL IN-CHANNEL POWER MEASUREMENT

With channels as wide as CWDM channels, monitoring peak power is not enough. The chosen OSA must be able to track the total in-channel power—a feature only offered by EXFO's FTB-5230.



Measuring peak power, integrated power as well as total in-channel power enables an extremely tight control of the network.

### RUGGEDNESS AND OPTICAL PERFORMANCE

The FTB-5230 Optical Spectrum Analyzer is truly optimized for DWDM/CWDM applications, and ready for the field-testing challenges they bring. Like all of EXFO's OSAs, it comes with high-end optical specifications, as well as the added and unique advantage of being rugged, portable and battery-operated.

### THE TOOLBOX ADVANTAGE

EXFO's exclusive ToolBox software suite runs the test module applications on the FTB-400 Universal Test System. Easy-to-read graphics and clear instructions simplify testing and increase productivity in the field.

All applications supported by the FTB-400 have a common graphical user interface.

### ONE-BUTTON TESTING

Simplify testing and stay on schedule with one-button testing and the FTB-5230's integrated software. If your deadline is tomorrow, the last thing you need is software that will slow you down. Turn on the unit and the last settings are ready for CWDM system characterization. Press Start, and within seconds, you receive your data.



Either in the field or at the central office, the FTB-5230 gets the job done.

## SPECIFICATIONS <sup>a</sup>

Wavelength range (nm)	1250 to 1650	
Resolution bandwidth FWHM <sup>b, c</sup> (nm)	≤ 0.1	
Wavelength uncertainty <sup>d, e</sup> (nm)	± 0.1 ± 0.02 <sup>f</sup>	
Measurement range <sup>d</sup> (dBm)	10 <sup>e</sup> to -60	
Power uncertainty <sup>e, g</sup> (dB)	± 0.4	
Optical rejection ratio <sup>d, e</sup> at 100 GHz (dBc)	45	
Optical rejection ratio <sup>d, e</sup> at 50 GHz (dBc)	40	
Scanning time <sup>e</sup> (s)	4 (35 nm span, multiple-peak analysis)	
PDL <sup>c, e</sup> (dB)	± 0.1	
ORL (dB)	≥ 40	

## NOTES

- At 23 °C ± 2 °C, after warm-up.
- Full width at half maximum.
- At 1550 nm.
- From 1520 nm to 1610 nm.
- Typical.
- After user calibration in the same test session, within 10 nm from each calibration point.
- At 1550 nm, -10 dBm.

## GENERAL SPECIFICATIONS

Temperature	operating	0 °C to 40 °C	(32 °F to 104 °F)
	storage	-20 °C to 50 °C	(-4 °F to 120 °F)
Relative humidity	0 % to 95 % non-condensing		
Connectors	EI (EXFO UPC Universal Interface) EA (EXFO APC Universal Interface)		
Size (H x W x D) (module)	960 mm x 760 mm x 260 mm		(3 3/4 in x 3 in x 10 1/4 in)
Weight (module)	2 kg		(4 lb)

## ORDERING INFORMATION

### FTB-5230-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
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- EA-EUI-91 = APC/SC
- EA-EUI-95 = APC/E-2000

Example: FTB-5230-EI-EUI-89

#### Rugged Handheld Solutions

<b>OPTICAL</b>	<b>COPPER ACCESS</b>
- OLTs	- ADSL/ADSL2+, SHDSL, VDSL test sets
- Power meters	- VoIP and IPTV test sets
- Light sources	- Ethernet test sets
- Talk sets	- POTS test sets

#### Platform-Based Solutions

<b>OPTICAL FIBER</b>	<b>DWDM TEST SYSTEMS</b>	<b>TRANSPORT AND DATACOM</b>
- OTDRs	- OSAs	- Next Generation SONET/SDH and OTN testers
- OLTs	- 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
		- 10/100 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](http://www.EXFO.com).

EXFO Corporate Headquarters > 400 Godin Avenue, Quebec City (Quebec) G1M 2K2 CANADA | Tel.: 1 418 683-0211 | Fax: 1 418 683-2170 | [info@EXFO.com](mailto:info@EXFO.com)

Toll-free: 1 800 663-3936 (USA and Canada) | [www.EXFO.com](http://www.EXFO.com)

<b>EXFO Montreal</b>	2650 Marie-Curie	St-Laurent (Quebec) H4S 2C3 CANADA	Tel.: 1 514 856-2222	Fax: 1 514 856-2232
<b>EXFO Toronto</b>	160 Drumlin Circle	Concord (Ontario) L4K 3E5 CANADA	Tel.: 1 905 738-3741	Fax: 1 905 738-3712
<b>EXFO America</b>	3701 Plano Parkway, Suite 160	Plano, TX 75075 USA	Tel.: 1 800 663-3936	Fax: 1 972 836-0164
<b>EXFO Europe</b>	SOUTHAMPTON > Omega Enterprise Park, Electron Way		Chandlers Ford, Hampshire S053 4SE ENGLAND	Tel.: +44 2380 246810 Fax: +44 2380 246801
<b>EXFO Asia</b>	151 Chin Swee Road, #03-29 Manhattan House	SINGAPORE 169876	Tel.: +65 6333 8241	Fax: +65 6333 8242
<b>EXFO China</b>	No.88 Fuhua, First Road	Shenzhen 518048, CHINA	Tel.: +86 (755) 8203 2300	Fax: +86 (755) 8203 2306
	Central Tower, Room 801, Futian District			
	Beijing New Century Hotel Office Tower, Room 1754-1755	Beijing 100044 P. R. CHINA	Tel.: +86 (10) 6849 2738	Fax: +86 (10) 6849 2662
	No. 6 Southern Capital Gym Road			

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 Unions WEEE directive. For more information, please visit [www.EXFO.com/recycle](http://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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