

## 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.

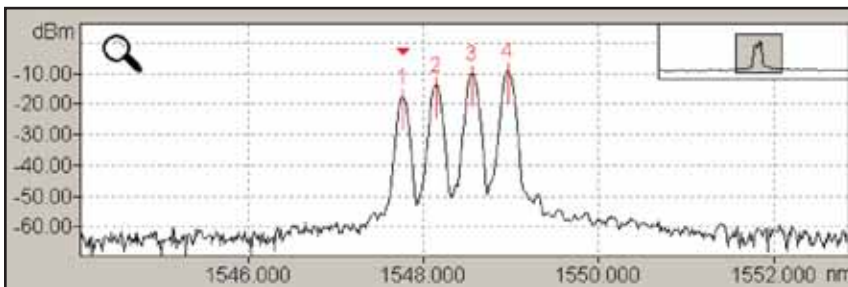
This cost-effective module is housed in the FTB-400 Universal Test System, EXFO's tough, portable test platform. What's more, the FTB-5230 covers the entire transmission wavelength range, from 1250 nm to 1650 nm.

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



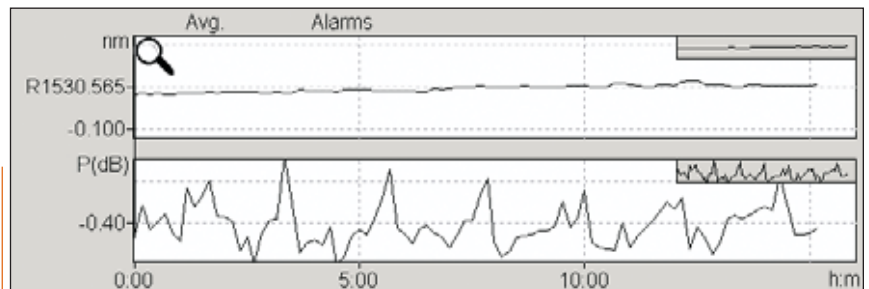
### THE FTB-400 PLATFORM'S MULTITASKING ADVANTAGE

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

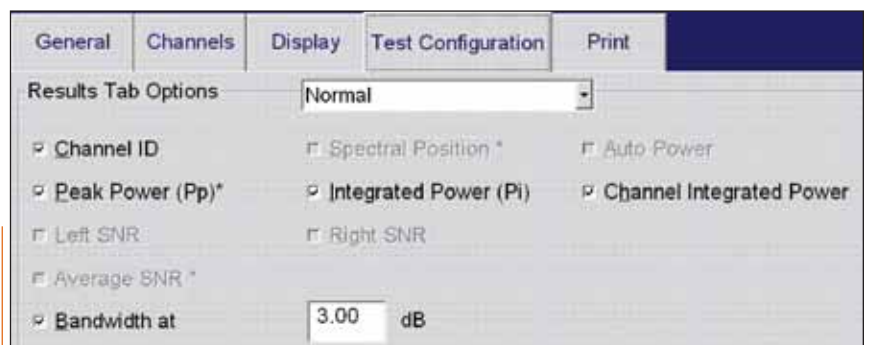
Since CWDM systems generally use uncooled lasers, whose typical wavelength drift is 0.1 nm per degree Celsius, it is critical to track the evolution and drift of the lasers' central wavelength. And since path attenuation can significantly vary within a single channel, passband drift also creates power 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<br>± 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)<br>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  
EA-EUI-89 = APC/FC narrow key  
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               |



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