

SPECIFICATIONS¹

Spectral measurement		
Wavelength range (nm)	1250 to 1650	
Resolution bandwidth FWHM ² (nm)		
typical ³	0.065	
Wavelength uncertainty (nm) ^{4,9}	±0.05	
Wavelength repeatability (nm) ⁵	±0.003	
Wavelength linearity (nm) ⁴	±0.01	
Amplitude measurement		
Dynamic range ⁶ (dBm)	+15 to -75	(Typical +18 to -75 dBm)
(with averaging)		
Power uncertainty ⁷ (dB)	±0.4	
Optical rejection ratio (dBc)		
at 50 GHz (±0.4 nm)	typical	50
	minimum	45
at 25 GHz (±0.2 nm)	typical	40
	minimum	35
PDL (dB) ⁴	typical	±0.07
	maximum	±0.15
Scanning time (ms)	<3000 (50 nm span, full resolution multi-peak analysis)	
ORL (dB)	>35 dB	

GENERAL SPECIFICATIONS⁸

Temperature		
operating	0° to 40°C	32° to 104°F
storage	-20° to 50°C	-4° 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) (mainframe)	22.9 x 30.5 x 10.1 cm	9 x 12 x 4 in.
Weight (mainframe and module)	9 kg	20 lb.

NOTES

1. All specifications are for a temperature of 23°C (±2°C) with a FC/UPC connector unless otherwise specified, after warm-up.
2. Full width at half maximum.
3. Within the C-band.
4. Specified within the C- and L-bands.
5. Over 1 minute real mode.
6. Linearity may be degraded above +15 dBm.
7. Reference power: -10 dBm, wavelength: 1550 nm.
8. The FTB-300 platform requires 32 MB RAM for optimal performance.
9. User offset adjustment may be required.

ORDERING INFORMATION

Optical Spectrum Analyzer	FTB-5240-XX-XX
Monitor Output Port Option	FTB-5240-XX-XX-MP1 ¹ -XX
Connector code	
EI = EXFO UPC Universal Interface	
EA = EXFO APC Universal Interface	
Connector adapter ²	
The fixed base-plate (EI or EA) must be ordered with a removable universal connector adapter (EUI-XX). Please specify one EUI from the following list:	
EUI-28 = DIN 47256	
EUI-76 = HMS-10/AG (EI only)	
EUI-89 = FC	
EUI-90 = ST (EI only)	
EUI-91 = SC	
EUI-95 = E-2000	

NOTES

1. The monitor output port is only available with an EA connector type.
2. The input and monitor output ports are independent; different adapter types can be chosen.

EXFO is certified ISO 9001 and attests to the quality of its products. These products are accompanied by a 12-month warranty and an excellent after-sales support service.

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.

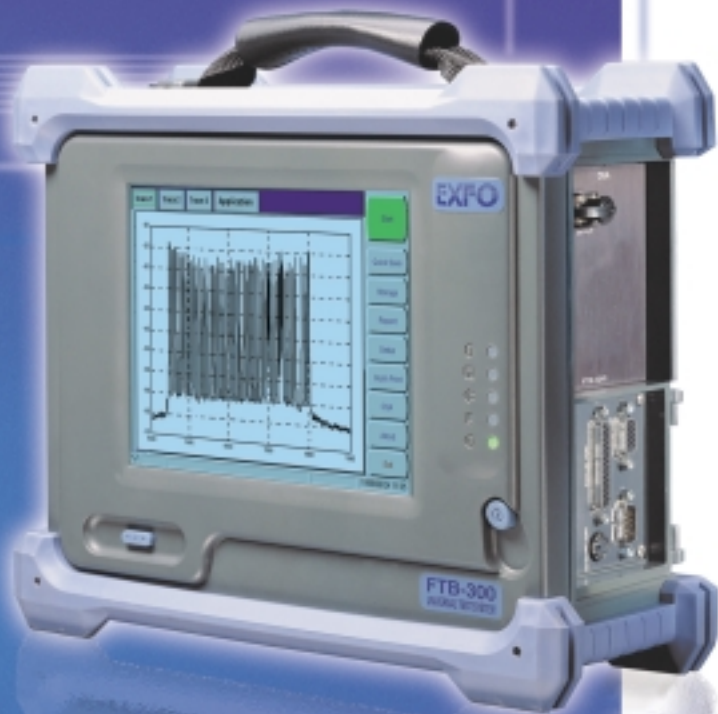
EXFO has made every effort to ensure that the information contained in this brochure is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics, and products at any time without obligation.

Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.

FTB-5240

Optical Spectrum Analyzer

- NEW TECHNOLOGY
OPTICAL SPECTRUM ANALYZER
- WIDE SPECTRAL RANGE
From 1250 nm to 1650 nm
- HIGH OPTICAL PERFORMANCE
50 dBc ORR at 0.4 nm and ±0.05 nm wavelength accuracy
- MONITOR OUTPUT PORT
Drop one channel to an external port
- SYSTEM PERFORMANCE MONITORING
Trace system behavior and perform fast Pass/Fail testing



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Take Your Lab-Quality Instrument into the Field

High-End OSA for Field Testing

EXFO has built its reputation on its field-oriented test instruments. But field-oriented does not mean settling for limited performance. In fact, with its laboratory-quality specifications, the portable FTB-5240 OSA is setting new standards in the field.

- High optical rejection ratio: 50 dBc ORR at 0.4 nm
- Top-of-the-line wavelength accuracy: ± 0.05 nm
- Impressive dynamic range: +18 dBm to -75 dBm
- Wide wavelength scanning range: 1250 nm to 1650 nm
- Monitor output port
- Drift monitoring capability
- Sharp resolution bandwidth: 0.065 nm (C-band)

Ruggedness and Optical Performance

To support the latest improvements in DWDM technology, EXFO is launching the new FTB-5240 Optical Spectrum Analyzer (OSA) module for the FTB-300 Universal Test System platform.

This new OSA is the state-of-the-art in portable field equipment. Even when testing the latest systems, with channel spacing as small as 50 GHz, the FTB-5240 fully characterizes channels in the C-band, L-band, and even the S-band.

Just like the rest of the FTB product line, this new instrument has been built from the ground up to be rugged, easy to use, and modular.



The right tool for today's DWDM challenge.

The DWDM Testing Challenge



The EXFO Advantage

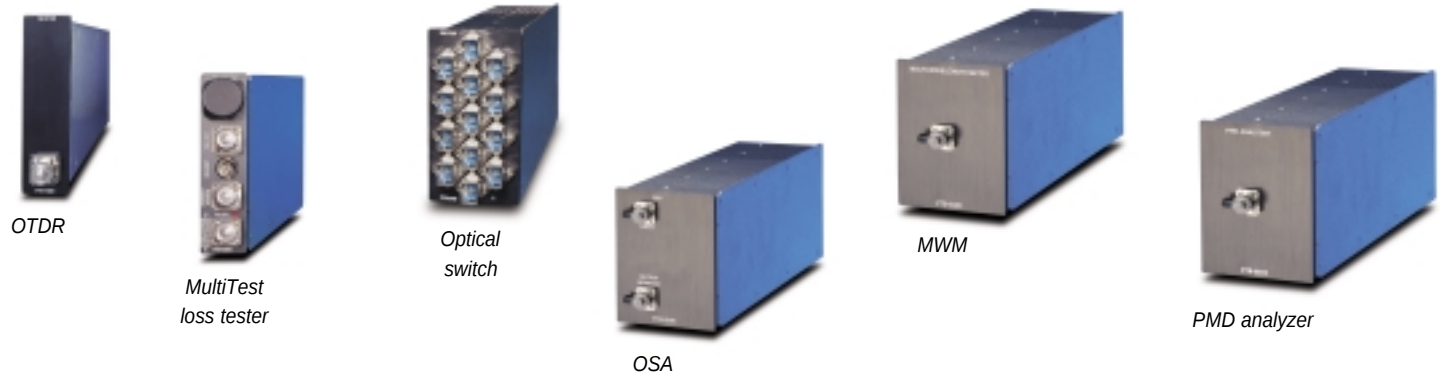
If you're involved in dense wavelength division multiplexing (DWDM), you know that this technology delivers benefits at all levels—from network planning through operation to eventual upgrades. But because DWDM technology is on the cutting edge, the industry has a lot of learning ahead. Network and service planners are reaching for new levels of creativity and understanding. Furthermore, monitoring and maintaining these networks and services require new skills and equipment.

Over the past 15 years, EXFO has emerged as a global leader in the fiber-optic test and measurement industry. How did we get here? By delivering innovative, accurate, and durable instruments quickly and efficiently. As a pioneer in developing PC-based modular test platforms,

EXFO creates test systems to keep you at the leading competitive edge of your field. For instance, our FTB-300 Universal Test System delivers modular, platform-based equipment for multiple, advanced outside plant testing and monitoring tasks.

In fact, the FTB-300 now delivers advanced testing for DWDM systems. So, if you're looking for test gear that is tailored to this evolving, challenging environment, EXFO has the answer: the FTB-5240 Optical Spectrum Analyzer.

Get More Performance From a Single Platform



Modules For All Testing Needs

For portable, module-based testing, the FTB-300 Universal Test System delivers across-the-board performance. The following optical test modules are available:

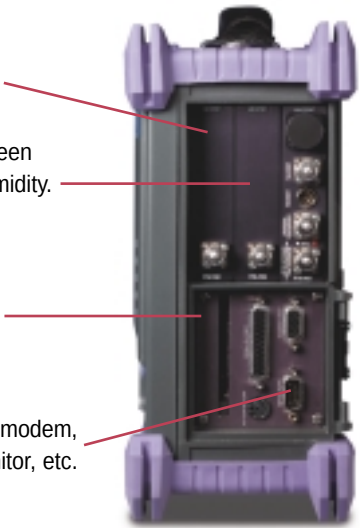
- OTDR
- MultiTest loss tester (power meter, light source, ORL, talk set, visual fault locator)
- Optical switch
- Optical spectrum analyzer
- Multi wavelength meter
- PMD analyzer

The FTB-300 UTS hosts up to three field-interchangeable test modules.

Rubber seals around and between modules keep out dust and humidity.

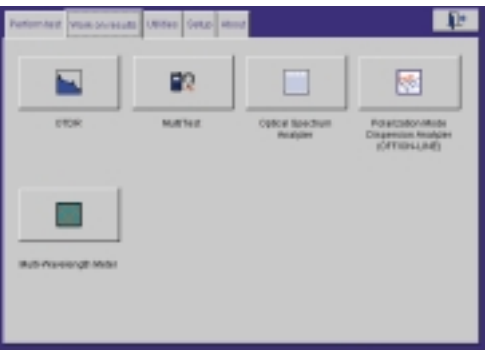
PCMCIA slot for modem cards, memory cards, and more.

Support for peripherals: printer, modem, mouse, external keyboard, monitor, etc.



The ToolBox 5 Advantage

EXFO's exclusive ToolBox 5 software suite runs the test module applications on the FTB-300 Universal Test System. We've put a lot of thought into designing ToolBox 5. For instance, at the most basic level, easy-to-read graphics and clear instructions simplify testing and increase productivity in the field. In addition, all applications have a common graphical user interface (GUI)—once you've grasped one ToolBox application, learning another is smooth and simple. And to keep you in sync with the latest technology, we release frequent updates, upgrades, and new applications.

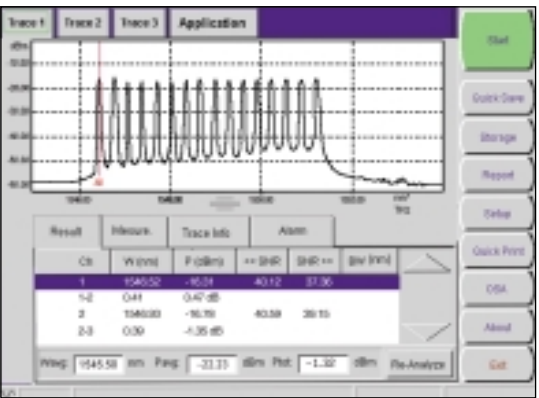


Intuitive, Efficient Software

WDM System Analysis

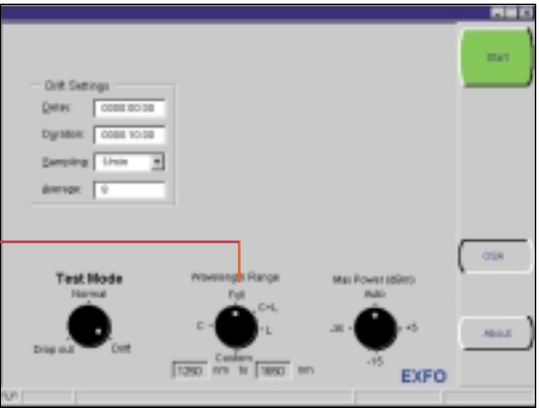
In the WDM testing mode, the unit can analyze systems with up to 200 channels. Use tabs to gain quick access to functions and test results:

- **Results tab:** speed up reporting with this complete table of results.
- **Measurements tab:** isolate trace details using a set of markers and zoom functions.
- **Trace info tab:** view trace ID information, including all parameters in the active measurement; check back later for future reference.
- **Alarm tab:** track system behavior through a table of threshold alarm details.



Adjustable Scanning Range

Thanks to an adjustable wavelength scanning range, the FTB-5240 OSA lets test operators focus on a specific band. The result? Improved acquisition time. EXFO's OSA covers all telco bands and all potential optical supervisory channels (OSCs).



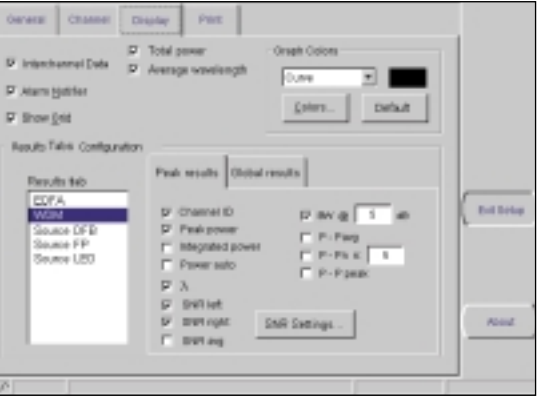
One-Button Testing

If your deadline is tomorrow, the last thing you need is software that will slow you down. With one-button testing to simplify test procedures, the OSA software helps you stay on-schedule. When you turn on the unit, the default settings are ready for WDM system characterization. All setups are on automatic, and the scanning range will cover the

entire wavelength range. Just press **Start** then, in seconds, you'll get all the data you need. FTB-5240 OSA software suits all experience levels, from novice users to DWDM experts. An experienced user can adjust default settings and override the Auto mode to fine-tune an acquisition or concentrate on a specific parameter.

User-Adapted Interface

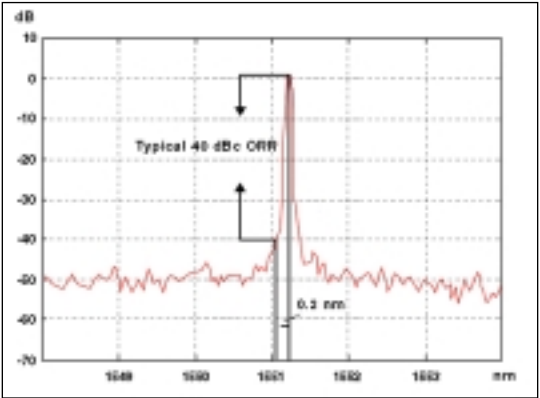
EXFO's OSA software can be tailored to your individual work needs. For instance, customize the results table to report just the parameters of interest. Organize the columns of the results table to match your specific reporting needs. All report parameters can be set before testing begins.



FTB-5240 Optical Spectrum Analyzer: High-End Performance in a Field-Ready Unit

High Optical Rejection Ratio

With an impressive ORR specification, the FTB-5240 can measure optical signal-to-noise ratios (OSNR) up to 50 dBc at 0.4 nm from the peak. With this feature, the EXFO OSA delivers reliable, accurate measurements from one end of your system to the other.

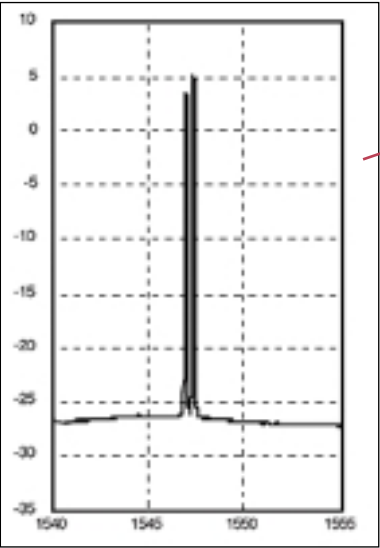


Get a clear picture of your channels

Sharp Bandwidth Resolution

The FTB-5240 can characterize systems with 25, 50, or 100 GHz channel spacing down to a wavelength accuracy of ± 0.05 nm. This is the kind of result you can expect from a high-end product.

Its resolution bandwidth of 0.065 nm allows the FTB-5240 to detect very closely spaced events.



50 GHz channel spacing

High Dynamic Range

With maximum input power of +18 dBm and sensitivity down to -75 dBm, the FTB-5240 delivers an impressive 93 dB dynamic range. With this high dynamic range and 0.4 dB power accuracy, you'll be able to test your system in detail.

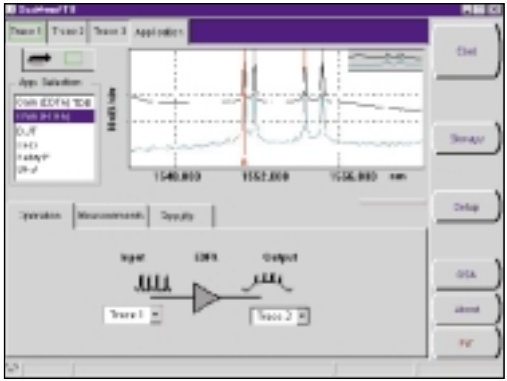
Monitoring Optical Performance

Set upper and lower thresholds for power, as well as for wavelength thresholds for every channel in the system. When limits are exceeded, the software generates, registers, and tabulates alarms.

Ch	Date & Time	Wave Status	Power Status
ITU3	11:31:12	Exceed Max	
ITU5	11:45:22		Exceed Min
ITU5	12:31:45	Recover	
ITU3	12:45:32		Recover

Rugged Mainframe

The FTB-300 Universal Test System houses the FTB-5240 OSA module in a splash-resistant, rugged mainframe. Our mainframe has passed all Bellcore-specified drop tests.



Automated Single-Component Testing

The step-by-step procedure from the Application tab guides you through testing for a variety of component types. Results are then displayed in a table customized for each component. The automated process includes assigned templates for the following frequently tested components:

- EDFA
- DFB laser
- Fabry-Perot laser
- Couplers and filters

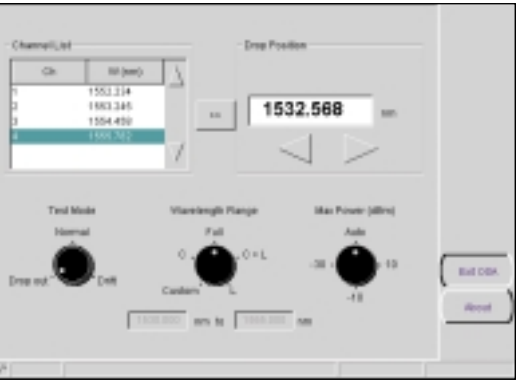
Result	Ch	W (nm)	P (dBm)	OSNR	SNR	OSNR
	18	1548.58	-22.38	23.27	22.78	
	18-19	0.81	0.27 dB			
	19	1548.31	-22.83	23.83	22.44	
	19-20	0.76	-0.04 dB			

Clear-Cut Results Quick

View a complete table of measurement data by accessing the Results tab. Default parameters are channel ID, central wavelength, peak power, and OSNR. You can also customize the table to focus on specific parameters.

Field-Ready Unit

Battery operation, a resilient touchscreen, and sealed buttons deliver enhanced ruggedness and portability.



Monitor Output Port Option

The OSA can be fitted with an output port. Use the tuning mechanism to select an optical channel to be dropped to the output port. From there, you can analyze the channel without affecting the rest of the system.