FTB-5235

OPTICAL SPECTRUM ANALYZER

SPEC SHEET

Compact optical spectrum analyzer (OSA) for DWDM, CWDM, and DWDM over CWDM networks

KEY FEATURES

- Compact, entry-level OSA for any type of WDM rollout
- Handheld OSA with the largest screen in the industry
- Portable and lightweight
- Ideal for cable operators
- Intuitive user interface
- Housed in the FTB-1v2 platform
- Highly reliable (made by No.1 handheld OSA vendor worldwide)*

PLATFORM COMPATIBILITY

Platform
FTB-1v2/FTB-1 Pro

** Frost & Sullivan, Fiber Optic Test Equipment Market study*

Specifications and descriptions are subject to change without prior notice.

überreicht durch:
Opternus

Opternus GmbH Optische Spleiss- & Messtechnik
Bahnhofstr. 5
D-22941 Bargteheide
Tel. +49(0)4532-20 44-0
Fax +49(0)4532-20 44-25

Büro Süd:
Katharinenstr. 57
D-73728 Esslingen
Tel. +49(0)711-3 10 59 99-0
Fax +49(0)711-3 10 59 99-99

E-Mail: info@opternus.de - www.opternus.de - www.opternus-shop.de

©Opternus GmbH
November 2017

NEW FTB-5235: A SINGLE OSA FOR ALL WDM TECHNOLOGIES

The FTB-5235 is a compact, entry-level optical spectrum analyzer that is ideal for a variety of field applications, including DWDM and CWDM network commissioning and troubleshooting. It includes all the typical OSA capabilities:

- Power and wavelength measurements
- WDM and drift mode
- OSNR testing according to IEC 61280-2-9 (interpolation method)
- Offline post-processing

Users can quickly learn to operate the FTB-5235 because it features an intuitive Windows 8.1 interface. The FTB-5235 can also handle a lot of power, up to 23 dBm per channel, ideal for modern cable operator networks.

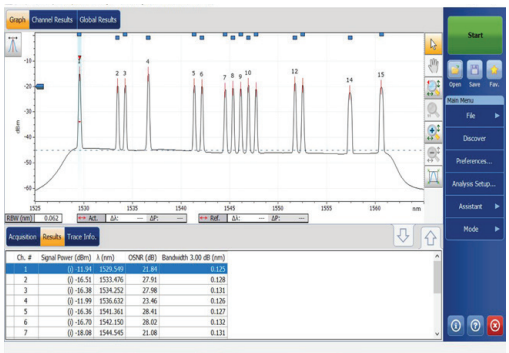
THE FTB-5235: A CABLE OPERATOR'S BEST FRIEND

Cable operators are not just rolling out CWDM and DWDM, they are deploying hybrid networks, where DWDM wavelengths are overlaid onto CWDM wavelengths, as well as Remote PHY. EXFO's new and compact FTB-5235 addresses all these applications with a single product, for maximum convenience.

The FTB-5235 displays channel power, channel wavelength and OSNR. Above: example of CWDM network OSA display. Below: example of DWDM network OSA display.

CFP POWER MEASUREMENT

100 GigE deployments are now commonplace, triggering a transition from 10G and lower rate service (SFP/SFP+XFP) to 40G/100G using CFPs and QSFP28. This is in turn leading to multiwavelength client-side communications instead of single-wavelength transmissions. Since CFPs/QPSF28 have longer reaches (up to 10 km for LR4), meeting the loss budget is more challenging than ever before. Moreover, CFPs and QPSP28 greatly vary in quality, and sizable quantities of pluggables are simply defective. All these trends are calling for CFP/QPSF28 power measurements at the network element, where the client-side signals are converted to line-side signals. The FTB-5235 is perfectly designed to assess the quality of pluggables in today's context of rapid network transformation.



Specifications and descriptions are subject to change without prior notice.

überreicht durch: Opternus

Opternus GmbH Optische Spleiss- & Messtechnik
Bahnhofstr. 5
D-22941 Bargteheide
Tel. +49(0)4532-20 44-0
Fax +49(0)4532-20 44-25

Büro Süd:
Katharinenstr. 57
D-73728 Esslingen
Tel. +49(0)711-3 10 59 99-0
Fax +49(0)711-3 10 59 99-99

E-Mail: info@opternus.de - www.opternus.de - www.opternus-shop.de

©Opternus GmbH
November 2017

SPECIFICATIONS [a]

SPECTRAL MEASUREMENT

Wavelength range (nm)	1250 to 1650
Wavelength uncertainty (nm) [b]	±0.06 [d] ±0.02 [c, d]
Reference	Internal [e]
Resolution bandwidth (FWHM) [f] (nm)	≤ 0.10 [d, g]
Wavelength repeatability 2σ (nm)	±0.005 [h]
Analysis modes	WDM and drift

POWER MEASUREMENT

Dynamic range (dBm) (per channel)	−65 [d, i] to 23 dB
Maximum total safe power (dBm)	29
Absolute power uncertainty (dB) [j]	±0.6
Power repeatability 2σ (dB) [h]	±0.1

OPTICAL MEASUREMENT

Optical rejection ratio at 1550 nm (dB) at 0.2 nm (25 GHz) at 0.4 nm (50 GHz)	 31 (35 typical) 40 (45 typical)
Channel spacing	33 to 200 GHz CWDM
PDL at 1550 nm (dB)	±0.1 [d]
ORL (dB)	>40
Measurement time (s) [d, k] (includes scanning, analysis and display)	<1.2

GENERAL SPECIFICATIONS

Temperature storage	0 °C to 40 °C (32 °F to 104 °F) −40 °C to 50 °C (−40 °F to 120 °F)
Connectors	EI (EXFO UPC Universal Interface) EA (EXFO APC Universal Interface)
Size, module only (H x W x D)	51 mm x 159 mm x 185 mm (2 in x 6 $^{5}/_{16}$ in x 7 $^{5}/_{16}$ in)
Size, module with FTB-1v2 (H x W x D)	97 mm x 210 mm x 254 mm (3 $^{13}/_{16}$ in x 8 $^{5}/_{16}$ in x 10 in)
Weight (module only)	1. 2 kg (2.6 l
Weight (module with FTB-1v2)	3. 6 kg .9 lb)

LASER SAFETY

21 CFR 1040.10 AND IEC 60825-1
CLASS 1 LASER PRODUCT

Notes

a. All specifications are for a temperature of 23 °C ± 2 °C with an FC/UPC connector unless otherwise specified, after warm-up.
b. From 1520 to 1610 nm.
c. After user calibration in the same test session within 10 nm from each calibration point.
d. Typica
e. Integrated and wavelength-independent self-adjustment.
f. Full width at half maximum.
g. From 1300 to 1590 nm.
h. At 1550 nm, in drift mode. Single scan every 2 seconds, over 2 minutes. With DFB laser.
i. With averaging.
j. At 1550 nm, −10 dBm input power.
k. 45 nm span, full resolution, 20 peak. On FTB-1v2.

Specifications and descriptions are subject to change without prior notice.

überreicht durch: Opternus

Opternus GmbH Optische Spleiss- & Messtechnik
Bahnhofstr. 5
D-22941 Bargteheide
Tel. +49(0)4532-20 44-0
Fax +49(0)4532-20 44-25

Büro Süd:
Katharinenstr. 57
D-73728 Esslingen
Tel. +49(0)711-3 10 59 99-0
Fax +49(0)711-3 10 59 99-99

E-Mail: info@opternus.de - www.opternus.de - www.opternus-shop.de

©Opternus GmbH
November 2017

ORDERING INFORMATION

FTB-5235-XX

Model
FTB-5235 = Optical Spectrum Analyzer

Connector adapter
EI-EUI-28 = UPC/DIN 47256
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST
EI-EUI-91 = UPC/SC
EI-EUI-95 = UPC/E-2000
EI-EUI-98 = UPC/LC
EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000
EA-EUI-98 = APC/LC

Example: FTB-5235-EI-EUI-89

EXFO Headquarters > Tel.: +1 418 683-0211 | Toll-free: +1 800 663-3936 (USA and Canada) | Fax: +1 418 683-2170 | info@EXFO.com | **www.EXFO.com**

EXFO serves over 2000 customers in more than 100 countries. To find your local office contact details, please go to **www.EXFO.com/contact**.

EXFO is certified ISO 9001 and attests to the quality of these products. EXFO has made every effort to ensure that the information contained in this specification sheet 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. Units of measurement in this document conform to SI standards and practices. In addition, all of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit www.EXFO.com/recycle. **Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.**

For the most recent version of this spec sheet, please go to the EXFO website at www.EXFO.com/specs.

In case of discrepancy, the Web version takes precedence over any printed literature.

SPFTB5235.1AN
© 2017 EXFO Inc. All rights reserved.
Printed in Canada 17/11

Specifications and descriptions are subject to change without prior notice.

überreicht durch: **Opternus GmbH** Optische Spleiss- & Messtechnik **Büro Süd:**
Bahnhofstr. 5 Tel. +49(0)4532-20 44-0 Katharinenstr. 57 Tel. +49(0)711-3 10 59 99-0
D-22941 Bargteheide Fax +49(0)4532-20 44-25 D-73728 Esslingen Fax +49(0)711-3 10 59 99-99
E-Mail: info@opternus.de - www.opternus.de - www.opternus-shop.de
©Opternus GmbH November 2017