SPEC SHEET

LTK-1

BENCHTOP OPTICAL KITS

- Compact and flexible test kits in the new LTB-1 lab benchtop platform.

40G 100G

KEY FEATURES

- High-performance power meter with choice of one, two or four detectors
- Wide selection of LED, laser or SLED light sources
- Singlemode and multimode variable attenuator
- Easy-to-use web-based user interface
- The FIP-400B fiber inspection scope can be added as an option
- IVI-compliant drivers for fast and simple integration into automated test systems

RELATED ACCESSORIES

Fiber inspection scope
FIP-400B (USB)

EXFO

FLEXIBILITY TO FIT YOUR NEEDS

The LTK-1 benchtop optical kits have been designed to provide the flexibility you need to build and configure your benchtop test instrument to your precise requirements. You can select simple power meter, light source or variable attenuator versions, or combine multiple modules into a single platform.

Choose your factory-configured kit

LTK-1-1 + FTB-1750 or

LTK-1-1 + FTB-3500 or

LTK-1-1 + FTB-2150 or

LTK-1-1 + FTB-2250 or

LTK-1-1 + FTB-2850 or

LTK-1-2 + FTB-1750 + FTB-3500 or

LTK-1-2 + 2 × FTB-1750 or

LTK-1-2 + 2 × FTB-3500 or

LTK-1-2 + FTB-1750+ FTB-2150

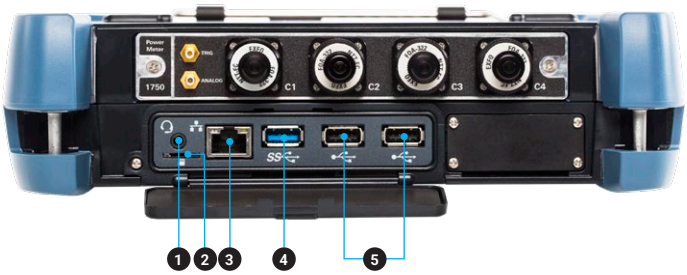
FIP-430B
(available with various tips and nozzles, each sold separately)

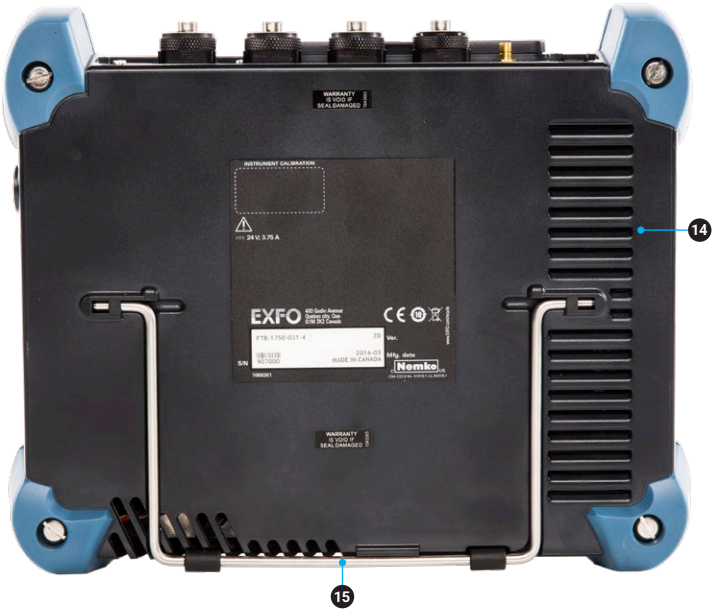
THE LTB-1 LAB BENCHTOP PLATFORM—COMPACT, YET POWERFUL

The new Windows-based LTB-1 lab benchtop platform offers maximum efficiency and flexibility with its powerful processor, touchscreen display and Ethernet remote control port. It is also compatible with the industry's leading and fully automated fiber inspection scope—the FIP-400B.

DESIGNED FOR EFFICIENCY

1. Microphone/headset jack
2. Micro SD card slot
3. 1 GigE port
4. USB 3.0 port (1)
5. USB 2.0 ports (2)
6. AC adapter
7. Kensington security lock slot
8. Speaker
9. Brightness control
10. Keyboard/screen capture
11. Switch application
12. Power on/off
13. Battery LED
14. Module back
15. Stand support





GET FAST, HIGH-PERFORMANCE MEASUREMENTS WITH THE FTB-1750 HIGH-PERFORMANCE POWER METER

The FTB-1750 high-performance power meter is EXFO's answer to meeting your power measurement requirements. Designed for the LTB-1 lab benchtop platform, this power meter delivers speed, accuracy and flexibility in a compact form-factor.

High-speed acquisition with an extended range

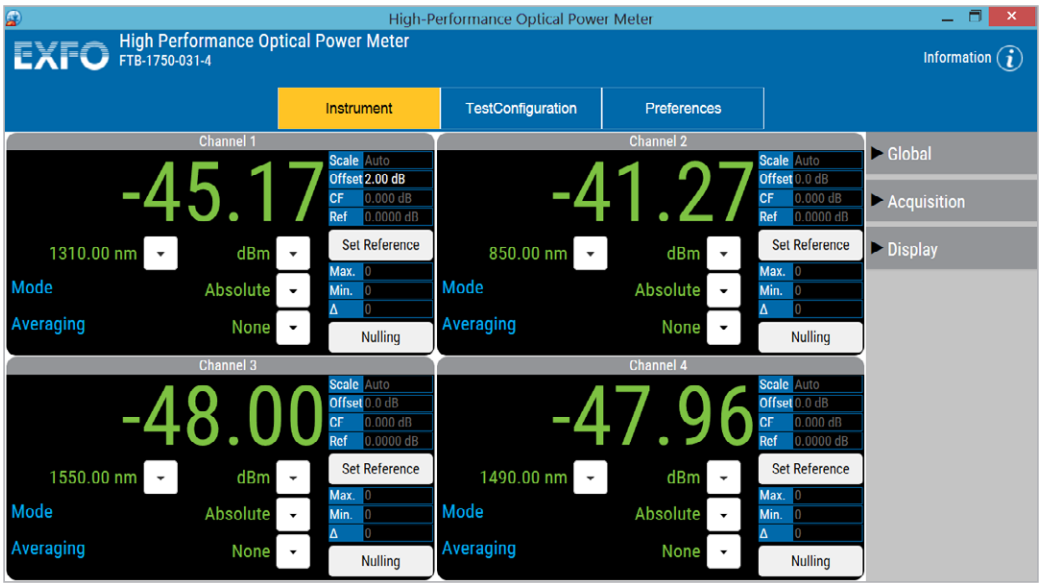
The FTB-1750's unique and patented design helps you save time and cut costs while significantly enhancing throughput with a continuous-mode peak-acquisition speed of 5208 samples per second. With its dynamic range greater than 88 dB and fast stabilization time, this power meter lets you simultaneously measure low and high signals on up to four channels.

Data acquisition

Perform acquisitions on a single-channel, or on all four channels simultaneously, and save all test results in a file on the LTB-1 platform or on your network.

Easy-to-use interface

The web-based graphical user interface (GUI) is optimized for use with the LTB-1 touchscreen display and allows for easy configuration of the power meter. The GUI also gives a clear view of power readings and settings.



Test four channels simultaneously and easily with the user-friendly interface.

FTB-2150 OPTICAL LIGHT SOURCES

High-performance optical light sources

Advanced testing environments require a high-performance, stable light source to guarantee accurate and reliable test results. Designed for optimal stability, the modular FTB-2150 offers this and more. Steady drive circuitry maximizes optical output power and maintains excellent stability, while precision optical components ensure low-loss, narrow-beam, truly efficient output coupling.

The FTB-2150 optical light source features variable output power over range of 9 dB for singlemode with power level setting resolution of 0.1 dB.

Applications

- Insertion loss measurements
- Return loss measurements
- Spectral attenuation measurements in fibers
- FTTx component characterization
- Splicing test stations
- Stability measurements
- Polarization-dependent loss measurements

Encircled Flux compliance

Using the FTB-2150-0012C-1 (50 µm output) with EXFO's 50 µm output mode conditioner will guarantee Encircled Flux compliance as per IEC-61280-4-1 Ed.2.

Compatible part numbers:

- FTB-2150-0012C-1-EI-EUI-89 with MC-FC-50-N
- FTB-2150-0012C-1-EI-EUI-91 with MC-SC-50-N
- FTB-2150-0012C-1-EI-EUI-91 with MC-SC-LC-50-N
- FTB-2150-0012C-1-EI-EUI-89 with MC-FC-62-N
- FTB-2150-0012C-1-EI-EUI-91 with MC-SC-62-N
- FTB-2150-0012C-1-EI-EUI-91 with MC-SC-LC-62-N

ORL measurements

Since the FTB-2150 singlemode light sources have been designed using DFB lasers which have narrow spectral width, ORL optimized modulation needs to be used when performing ORL measurements.

FTB-2250 BROADBAND SOURCES

Broad spectral range, impressive power

The high-power, SLED-based FTB-2250 broadband source family covers the bands needed for telecommunications applications. The highly stable FTB-2250 is ideal for broadband applications, coarse wavelength-division multiplexing (CWDM) network testing, and passive optical networks (PON) component manufacturing and testing, as well as fiber-optic sensing and spectroscopy.

Single output source

For CWDM testing, the SCLi option, covering the S, C and L bands, enables accurate characterization of fiber links and their passive components, with a very cost-effective test setup. Presence of an optical isolator makes the output of the SCLi source highly stable.

Designed for component testing

EXFO's FTB-2250 offers enough power along the spectrum to measure high-level insertion loss. By combining the FTB-2250 with an optical spectrum analyzer (OSA), you can efficiently qualify your components during development or perform pass/fail testing during production.

High spectral-density stability

High spectral density stability is essential to ensure that the test setup produces accurate measurements, time and again. The more stable the spectrum, the less often a reference trace has to be acquired. This translates into better productivity.

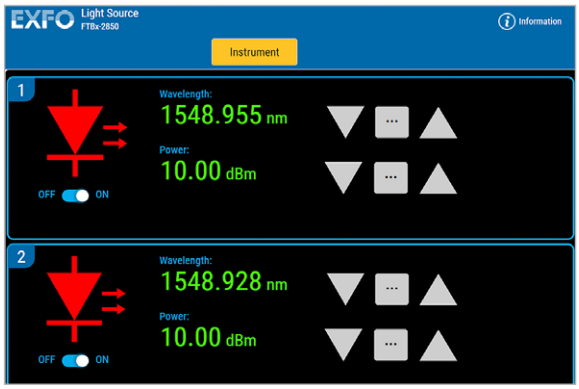
After a reference trace is acquired with the OSA, it can be subtracted to all subsequent traces. With no device under test (DUT) in the system, the resulting traces, centered around the averaged value, present the typical spectral fluctuations of the source.

FTB-2850 µITLA TUNABLE LIGHT SOURCE

Integrated tunable laser assembly

The FTB-2850 is a continuous wave (CW) tunable laser with a high-power output, narrow 100 kHz linewidth and 1 pm resolution tunability over the C- or L-bands. This laser is a cost-effective and versatile solution for various applications, including coherent/OFDM transmission and WDM network emulation.

The LTB-1 benchtop kit can house a single FTB-2850 instrument and operate it using dedicated software.



Easy-to-use software

The FTB-2850 light sources are controlled locally using a software application with which operators can easily control multiple lasers. The software's graphical interface allows users to quickly and easily access the system status and control lasers. Users can control each laser.

FTB-3500 VARIABLE ATTENUATOR

Network equipment manufacturers and transceiver manufacturers know that variable attenuators are essential components of their test systems. They look for performance, user-friendliness, complete control of test parameters and advanced programming capability. EXFO's FTB-3500 variable attenuator combines innovative design techniques, high-quality components and meticulous calibration procedure.

Option: automatic power monitoring

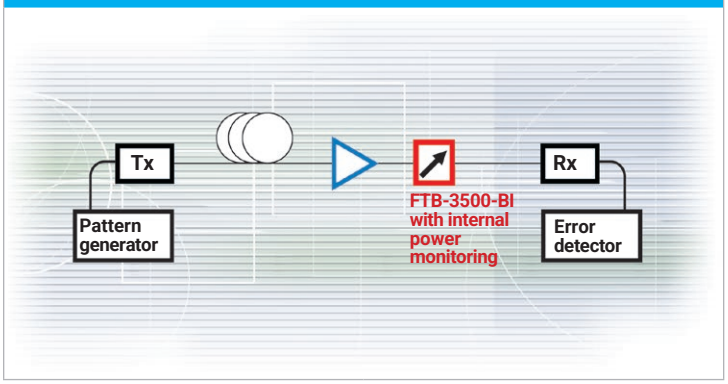
The power monitoring option allows the attenuator output power level to be set directly. When enabled, this function ensures power stability, even if the source power fluctuates. This option also simplifies test setups, eliminating the need for an external power meter.

Rugged and reliable

Flexible, fully programmable and built for both singlemode and multimode applications, the FTB-3500 features an extremely rugged design allowing 24/7 operation for years without maintenance.

The attenuating filter technology used in the FTB-3500 makes it ideal for multimode BER and transceiver testing.

RECEIVER SENSITIVITY TESTING



Typical receiver sensitivity setup

Featuring integrated power monitoring, the FTB-3500-BI allows you to precisely control the amount of power your receiver (Rx) under test detects, thereby enabling you to achieve proper BER measurements. The FTB-3500-CI or FTB-3500-DI enable similar characterization for multimode applications.

When calibrating your system, you can choose between two offsets. The first is wavelength-independent and can be used to account for loss in the test setup, if applied to the attenuation or power setting. The second offset acts as a calibration factor, ensuring wavelength-specific correction levels and compensating for loss due to patchcords and connectors.

LOCALLY, REMOTELY OR AUTOMATED–THE CHOICE IS YOURS

Control your FTB-1750, FTB-2150, FTB-2250 and FTB-3500 locally using the LTB-1 touchscreen display or access the same application remotely via any web browser by connecting the LTB-1 to your network.

The FTB-1750, FTB-2150, FTB-2250 and FTB-3500 can also be easily integrated into an automated test station using the IVI-compliant drivers or SCPI commands available. Remote control is easily performed using Telnet over the LTB-1 lab benchtop platform's built-in Ethernet port.

FIBER CONNECTOR INSPECTION AND CERTIFICATION—THE ESSENTIAL FIRST STEP

100%
automated [a]

1-step
process [a]

57%
shorter test time [b]

Taking the time to properly inspect a fiber-optic cable can prevent a slew of problems down the line–saving you time, money and headaches.

FIP-430B | The first fully automated fiber inspection scope for the field
Housing a unique automatic focus adjustment system, the FIP-430B automates each operation in the connector endface inspection sequence, transforming this critical process into one quick and easy step that can be performed by technicians of all skill levels.

Three models to fit your budget

FEATURES	Basic **FIP-410B**	Semi-automated **FIP-420B**	Fully automated **FIP-430B**
Three magnification levels	•	•	•
Image capture	•	•	•
Five-megapixel CMOS capturing device	•	•	•
Automatic fiber image-centering function		•	•
Automatic focus adjustment			•
Onboard pass/fail analysis		•	•
Pass/fail LED indicator		•	•

Read the FIP-400B specification sheet or visit EXFO.com/keepthefocus for more information.

SOFTWARE TEST TOOLS

This set of platform-based software testing tools enhances the value of the LTB-1 platform, providing additional testing capabilities without the need for additional modules or units.

Software applications

ConnectorMax

Providing lightning-fast results in the first step of fiber-link testing, ConnectorMax2 is a powerful platform-based, automated inspection application; it delivers quick pass/fail assessment of connector endfaces and is specifically designed to save both time and money in the field and in the lab.

a. Model FIP-430B only.
b. Data sourced from EXFO`s case study, with calculation based on typical analysis time.

LTB-1 LAB BENCHTOP PLATFORM SPECIFICATIONS

TECHNICAL SPECIFICATIONS	
Mainframe	Quad-core processor / 8 GB RAM / Windows 10 IoT Enterprise LTSC 2021
Display	Multitouch, wide-screen, color, 1280 × 800 TFT 203 mm (8 in)
Interfaces	RJ45 LAN 10/100/1000 Mbit/s USB 2.0 ports (2) USB 3.0 port (1) Micro SD card slot 3.5 mm headset/microphone port
Storage (internal flash memory)	128 GB
Batteries (optional)	Rechargeable Li-ion smart battery
Power supply	AC/DC adapter, input: ∼ 100 V – 240 V; 50/60 Hz; 2.5 A max, output: ⎓ 24 V; 3.75 A

GENERAL SPECIFICATIONS		
Size (H × W × D)		With single-depth module: 210 mm × 254 mm × 66 mm (8 ¼ in × 10 in × 2 $^{5}/_{8}$ in) With double-depth module: 210 mm × 254 mm × 96 mm (8 ¼ in × 10 in × 3 $^{13}/_{16}$ in)
Weight	Minimum [a] Maximum [b]	1.91 kg (4.21 lb) 3.25 kg (7.17 lb)
Temperature (operating)		0 °C to 40 °C (32 °F to 104 °F)
Temperature (storage) [d]		−40 °C to 70 °C (−40 °F to 158 °F)
Relative humidity		0 % to 80 % non-condensing
Instrument drivers		IVI drivers and SCPI commands
Remote control		GPIB (IEEE-488.1, IEEE-488.2) and Ethernet
Standard accessories		User guide, certificate of compliance and certificate of calibration

ACCESSORIES			
GP-2016	RJ45 LAN cable (10 ft)	GP-2253	Li-ion smart battery (quantity: 1)
GP-2137	USB to RS-232 DB9 male serial converter (5 m)	GP-2258	USB to GPIB adapter
GP-2219	Compact USB keyboard	GP-3024	USB mouse
GP-2233 [c]	90 W, AC adapter with power cord	GP-3025	External USB keyboard
GP-2235	Stylus (quantity: 5)		

a. Single instrument (FTB-1750) and excluding battery.
b. Dual instrument (FTB-3500) and excluding battery.
c. Specify country power cord: A = North America, C = China, E = Europe, G = Argentina, I = India J = Japan, S = Australia and New Zealand, U = United Kingdom
d. For the FTB-2150-0012C, the storage temperature is −30 °C to 70 °C (−22 °F to 158 °F).

MODULE SPECIFICATIONS [a]

FTB-1750 HIGH-PERFORMANCE POWER METER		
	FTB-1750-031-1/2/4	**FTB-1750-02X-1/2/4**
Number of detectors	1/2/4	1/2/4
Detector type	InGaAs	GeX
Detector size	1 mm	3 mm
Wavelength range (nm)	800 to 1700	800 to 1660
Power range (dBm), typical [b, c]	8 to −80 (9 to −84)	22 to −53 (22 to −60)
Uncertainty	±(5 % + 10 pW) [c, d]	±(5 % + 5 nW) [c, e]
Polarization-dependent responsivity (dB) [f, g]	±0.015 typical	±0.015 typical
Linearity [h]	±0.015 dB (5 dBm to −55 dBm)	±0.015 dB (5 dBm to −37 dBm)
Wavelength resolution (nm)	0.01	0.01
Stabilization time (ms), typical	0.4	1.0
Sampling rate (sample/s/channel)	Up to 5208	Up to 5208
Trigger input voltage (Vdc)	0-5 (TTL-type)	0-5 (TTL-type)
Analog output voltage (Vdc), typical	0-5	0-5
Fiber type (µm)	5/125 to 62.5/125	5/125 to 62.5/125

a. Unless otherwise specified, all specifications are valid at 1550 nm, 23 °C ± 1 °C, after a 20-minute warm-up.
b. From 18 °C to 28 °C.
c. Averaging time of 1 s, after nulling.
d. At 23 °C ± 1 °C with an FOA-322 and an FC non-angled connector, between 1290 nm and 1340 nm, and between 1420 nm and 1640 nm. Add 1 % to uncertainty below 1000 nm, and 6 % over 1640 nm.
e. At 23 °C ± 1 °C with an FOA-322 and an FC non-angled connector, between 1000 nm and 1570 nm. Add 1 % to uncertainty below 1000 nm, and 3 % over 1570 nm.
f. At 23 °C ± 3 °C, constant wavelength (1550 nm), constant power and with an FC non-angled connector.
g. Calculated from “(Max-Min)/2”.
h. At constant temperature in the 0 °C to 40 °C range; nulling required.

MODULE SPECIFICATIONS [a]

FTB-3500 VARIABLE ATTENUATOR			WITHOUT POWER MONITORING	WITH POWER MONITORING
Singlemode configurations			**FTB-3500-B**	**FTB-3500-BI**
	Fiber type (µm)		9/125	9/125
	Wavelength range (nm)		1250 to 1650	1250 to 1650
	Maximum attenuation [b] (dB)		≥ 65	≥ 65
	Insertion loss [c, d] (dB)	Typical Maximum	1.0 1.5	1.5 2.2
	Attenuation setting resolution (dB), typical		0.002	0.002
	Attenuation linearity [e] (dB)		±0.1	±0.1
	Attenuation repeatability [f] (dB), typical		±0.01	±0.01
	Spectral uniformity, 1510 nm to 1605 nm [g] (dB)		±0.05	±0.05
	Spectral uniformity, 1450 nm to 1630nm [g] (dB)		±0.09	±0.09
	Power meter linearity [h] (dB)		N/A	±0.03
	Power setting repeatability [f] (dB), 2σ		N/A	±0.035
	PDL [i] (dB) peak-to-peak		0.15	0.2
	Return loss [c, j] (dB), typical		60	60
	Max. input power (dBm)		23	23
	Transition speed (ms), typical [k]	1 dB 10 dB	≤ 160 ≤ 515	≤ 160 ≤ 515
	Shutter isolation (dB), typical		≥ 100	> 100
Multimode configurations			**FTB-3500-C, D**	**FTB-3500-CI, DI**
	Fiber type (µm)		50/125, 62.5/125	50/125, 62.5/125
	Wavelength range (nm)		700 to 1350	700 to 1350
	Maximum attenuation (dB), typical		≥ 60	≥ 60
	Insertion loss [c,d] (dB)	Typical Maximum	1.3 2.0	1.5 3.0
	Attenuation setting resolution (dB), typical		0.002	0.002
	Attenuation linearity [e] (dB)		±0.1	±0.1
	Attenuation repeatability [f] (dB), typical		±0.01	±0.01
	Power meter linearity [l] (dB)		N/A	±0.03
	Power setting repeatability [f] (dB), 2σ		N/A	±0.035
	Return loss [c, j] (dB), typical		40	40
	Max. input power (dBm)		20	20
	Transition speed (ms), typical [k]	1 dB 10 dB	≤ 160 ≤ 515	≤ 160 ≤ 515
	Shutter isolation (dB), typical		> 100	> 100

a. At 23 °C ± 1 °C.
b. At 1550 nm and below.
c. Measured at 1310 nm and 1550 nm for singlemode units, measured at 850 nm for multimode units.
d. Excluding connectors.
e. Measured at 1310 nm and 1550 nm (up to 40 dB) for singlemode units and at 850 nm and 1300 nm (up to 45 dB) for multimode units, with non-polarized light.
f. Up to 40 dB attenuation.
g. For 20 dB attenuation, relative to 0 dB attenuation.
h. At 1550 nm, after a 30-minute warm-up and an offset nulling, for an input power between 20 dBm and −40 dBm.
i. Up to 20 dB attenuation at 1550 nm.
j. For FC/APC connectors.
k. Including platform processing time.
l. At 1300 nm, after a 30-minute warm-up and an offset nulling, for an input power between 17 dBm and −40 dBm.

MODULE SPECIFICATIONS [a]

FTB-2150 OPTICAL LIGHT SOURCE

		0023B-1	2346B-1
IL/ORL optimized DFBs	Wavelength (nm)	1310 ± 6.5 1550 ± 6.5	1310 ± 6.5 1490 ± 6.5 1550 ± 6.5 1625 ± 10
	Spectral width (nm)	< 1	< 1
	Output power (dBm) [b]	≥ 1	≥ 1
	Stability (dB) [b, c] 15 minutes	±0.07	±0.07
	Attenuation range (dB)	> 9	> 9
	Modulation	None, 270 Hz, 330 Hz, 1 kHz, 2 kHz, ORL optimized	None, 270 Hz, 330 Hz, 1 kHz, 2 kHz, ORL optimized
LED light sources		0012C-1	
	Wavelength (nm)	850 ± 25 1300 −20/30	
	Spectral width (nm) 850 nm 1300 nm	 30 to 60 100 to 140	
	Output power (dBm) [b]	≥ −25.0	
	Stability (dB) [b, c] 15 minutes	±0.06	
	Modulation	None, 270 Hz, 330 Hz, 1 kHz, 2 kHz	
	Launching conditions [d]	Controlled launch condition to be typically within IEC 61280-4-1 Ed.2 Encircled Flux template limits	

FTB-2250 BRODBAND SOURCE

		SCLI-1
SLED source	Mean wavelength (nm)	1550 ± 25
	Output power (dBm)	≥ 3
	Peak spectral density (dBm/nm) [f]	−23
	Minimum spectral density (dBm/nm) [f]	−27
	Total power stability (dB) [c] 15 minutes 8 hours	 ±0.017 ±0.02
	Spectral density stability (dB) [c, g] 15 minutes 8 hours	 ±0.035 (typical) ±0.046 (typical)
	Ripple (dB) [g]	0.35
	Fiber type (µm)	9/125

a. Specifications are valid at 23 °C ± 1 °C, at maximum power after 30-minute warmup period with an FC/APC connector (except for multimode sources, for which a PC connector is used), with power cord plugged in.

b. Only when source modulation is set to none (CW).

c. Stability is expressed as ± half the difference between the maximum and minimum values measured in the period.

d. At output connector for 850 nm.

e. Specifications are valid at 23 °C ± 1 °C, at maximum power after warmup time, with isolator, for return loss of ≥ 30 dB.

f. Between 1460 nm and 1625 nm.

g. Measured in a 0.1 nm resolution bandwidth. Between 1490 nm and 1590 nm.

MODULE SPECIFICATIONS [a]

FTB-2850 µITLA TUNABLE LIGHT SOURCE			
Wavelength tuning	C band	Operating wavelength range (nm)	1527.605 – 1568.772
		Operating frequency range (THz)	191.100 – 196.250
	L band	Operating wavelength range (nm)	1568.772 – 1611.787
		Operating frequency range (THz)	186.000 – 191.10
	Laser type	Thermally tuned external cavity diode laser (ECDL)	
		Frequency tuning resolution (wavelength)	100 MHz (1 pm) [b]
		Tuning time (s)	< 30
	Spectral characteristics	Linewidth (FWHM), instantaneous [d] (kHz)	< 100
		Side-mode suppression ratio (dB)	40 (55 typical)
		Frequency uncertainty (wavelength)	± 2.5 GHz (± 22 pm) [b, c]
		Frequency stability (wavelength)	± 0.3 GHz (± 3 pm) [b] over 24 hours
	Optical power	Maximum optical output power	S: ≥ 12.5 dBm H: ≥ 14.5 dBm (C-band only)
		Minimum optical output power	S: ≤ 8 dBm H: ≤ 11 dBm (C-band only)
		Optical power uncertainty after calibration (dB) [e]	± 0.6
		Power stability	± 0.1 dB over 24 hours (2 σ)
		Output power tuning resolution (dB)	0.01
		Power flatness, peak-to-peak	0.5 dB over entire wavelength range
		Polarization extinction ratio	> 18 dB at the polarization maintained fiber output
		Relative intensity noise RIN (for 13 dBm)	−140 dB/Hz (10 MHz – 40 GHz)
		Power monitoring	Built-in

a. Specifications are valid at 23 °C ± 3 °C.
b. Varies slightly according to wavelength.
c. Frequency uncertainty includes frequency linearity.
d. The laser uses a small FM dithering as part of its wavelength-locking mechanism. The instantaneous linewidth is measured with a 1 ms integration time.
e. At maximum output power

LASER SAFETY

The test modules that you use with your unit may have different laser classes.
Refer to the module's documentation for exact information.

ACCESSORIES

MC-FC-50-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm FC connector at both ends of mode conditioner
MC-FC-50-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm FC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon Serial Number
MC-FC-50-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm FC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon Serial Number
MC-SC-50-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm SC connector at both ends of mode conditioner
MC-SC-50-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm SC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon Serial Number
MC-SC-50-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm SC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon Serial Number
MC-SC-LC-50-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm SC connector at input of mode conditioner and LC connector at output of mode conditioner
MC-SC-LC-50-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm SC connector at input of mode conditioner and LC connector at output of mode conditioner Certificate of conformance, attached to ModCon Serial Number
MC-SC-LC-50-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 50/125 µm SC connector at input of mode conditioner and LC connector at output of mode conditioner Certificate of conformance and test report, attached to ModCon Serial Number
MC-FC-62-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm FC connector at both ends of mode conditioner
MC-FC-62-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm FC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon Serial Number
MC-FC-62-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm FC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon Serial Number
MC-SC-62-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm SC connector at both ends of mode conditioner
MC-SC-62-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm SC connector at both ends of mode conditioner Certificate of conformance, attached to ModCon Serial Number
MC-SC-62-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm SC connector at both ends of mode conditioner Certificate of conformance and test report, attached to ModCon Serial Number
MC-SC-LC-62-N	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm SC connector at input of mode conditioner and LC connector at output of mode conditioner
MC-SC-LC-62-N-CERT	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm SC connector at input of mode conditioner and LC connector at output of mode conditioner Certificate of conformance, attached to ModCon Serial Number
MC-SC-LC-62-N-TEST	Condition output of FTBx/FTB-2150-0012C-1 to be EF compliant with fiber diameter of 62.5/125 µm SC connector at input of mode conditioner and LC connector at output of mode conditioner Certificate of conformance and test report, attached to ModCon Serial Number

ORDERING INFORMATION

Single-instrument models **LTK-1-1-XX-XX-XX-XX**

Battery
00 = Without battery
BTY = Li-Ion smart battery

Inspection scope model
00 = Without scope
FP410B = Digital video inspection scope
Triple magnification
FP420B = Analysis digital video inspection scope
Automated pass/fail analysis
Triple magnification
Autocentering
FP430B = Automated analysis digital video inspection scope
Automated focus
Automated pass/fail analysis
Triple magnification
Autocentering

Base tips [a]
APC = Includes FIPT-400-U25MA and FIPT-400-SC-APC
UPC = Includes FIPT-400-U25M and FIPT-400-FC-SC

Instrument
Select ONE of the instruments below

XX-XX-XX-XX

Power meter
FTB-1750 = With FTB-1750 high-performance power meter

Detector
02X = 3 mm GeX detector
031 = 1 mm InGaAs detector

Number of channels
1 = Single channel
2 = Two channels
4 = Four channels

Connector adapter
FOA-316 = SMA 906 ultra-low-reflection
FOA-322 = FC ultra-low-reflection: FC (PC/SPC/UPC/APC), NEC-D3
FOA-328 = DIN 47256 (LSA) ultra-low-reflection: DIN 47256 (PC/APC)
FOA-332 = ST ultra-low-reflection: ST (PC/SPC/UPC)
FOA-340 = Diamond HMS-0, HFS-3 (3.5 mm) ultra-low-reflection
FOA-354 = SC ultra-low-reflection: SC (PC/SPC/UPC/APC)
FOA-376 = FSMA HMS-10/AG, HFS-10/AG ultra-low-reflection
FOA-384 = Diamond HMS-10, HFS-13 ultra-low-reflection
FOA-397 = LX.5 ultra-low-reflection
FOA-398 = LC ultra-low-reflection
FOA-399 = MU ultra-low-reflection

XX-XX-XX

Variable attenuator
FTB-3500 = With FTB-3500 variable attenuator

Configuration
B = Singlemode 9/125 µm
BI = Singlemode 9/125 µm with power monitoring
C = Multimode 50/125 µm
CI = Multimode 50/125 µm with power monitoring
D = Multimode 62.5/125 µm
DI = Multimode 62.5/125 µm with power monitoring

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 [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
EA-EUI-98 = APC/LC [b]

XX-XX-XX

Light source
FTB-2150 = With FTB-2150 light source

Model
0012C-1 = Single output LED source, 850/1300 nm, 50/125 µm fiber type, multimode model
0023B-1 = Single output IL/ORL optimized DFB, 1310/1550 nm, 9/125 µm fiber type
2346B-1 = Single output IL/ORL optimized DFB, 1310/1490/1550/1625 nm, 9/125 µm fiber type

Other wavelengths and configurations may be available upon request. Please call factory.

Connector
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 [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
EA-EUI-98 = APC/LC [b]

XX-XX-XX

Broadband source
FTB-2250 = With FTB-2250 broadband source

Model
SCLI-1 = Single output SLED, 1460 nm to 1625 nm SLED

Other wavelengths and configurations may be available upon request. Please call factory.

Connector
EI-EUI-28 = UPC/DIN 47256
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST (EI only)
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

XX-XX-XX-XX-XX

µITLA tunable light source
FTB-2850-1 = With FTB-2850 µITLA tunable light source

Number of lasers
1 = 1 laser
2 = 2 lasers

Wavelength band
C = C band
L = L band
CL = C&L band [c]

Output power
S = Standard (12.5 dBm)
H = High (14.5 dBm) [d]

Connector type
EI-EUI-28 = UPC/DIN 47256
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST (EI only)
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: LTK-1-1-BTY-FP430B-UPC-FTB-3500-B-EI-EUI-89

a. Available only if scope option is selected.
b. Available for singlemode models only.
c. Available for 2 lasers configuration only.
d. Available for C-band models only.

ORDERING INFORMATION

Dual-instrument models

LTK-1-2-XX-XX-XX-XX-XX

Battery
00 = Without battery
BTY = Li-Ion smart battery

Inspection scope model
00 = Without scope
FP410B = Digital video inspection scope
Triple magnification
FP420B = Analysis digital video inspection scope
Automated pass/fail analysis
Triple magnification
Autocentering
FP430B = Automated analysis digital video inspection scope
Automated focus
Automated pass/fail analysis
Triple magnification
Autocentering

Base tips [a]
APC = Includes FIPT-400-U25MA and FIPT-400-SC-APC
UPC = Includes FIPT-400-U25M and FIPT-400-FC-SC

Instrument 1

Instrument 2

Instruments—Select TWO of the instruments below [c]

XX-XX-XX-XX

Power meter
FTB-1750 = With FTB-1750 high-performance power meter

Detector
02X = 3 mm GeX detector
031 = 1 mm InGaAs detector

Number of channels
1 = Single channel
2 = Two channels
4 = Four channels

Connector adapter
FOA-316 = SMA 906 ultra-low-reflection
FOA-322 = FC ultra-low-reflection: FC (PC/SPC/UPC/APC), NEC-D3
FOA-328 = DIN 47256 (LSA) ultra-low-reflection: DIN 47256 (PC/APC)
FOA-332 = ST ultra-low-reflection: ST (PC/SPC/UPC)
FOA-340 = Diamond HMS-0, HFS-3 (3.5 mm) ultra-low-reflection
FOA-354 = SC ultra-low-reflection: SC (PC/SPC/UPC/APC)
FOA-376 = FSMA HMS-10/AG, HFS-10/AG ultra-low-reflection
FOA-384 = Diamond HMS-10, HFS-13 ultra-low-reflection
FOA-397 = LX.5 ultra-low-reflection
FOA-398 = LC ultra-low-reflection
FOA-399 = MU ultra-low-reflection

XX-XX-XX

Variable attenuator
FTB-3500 = With FTB-3500 variable attenuator

Configuration
B = Singlemode 9/125 µm
BI = Singlemode 9/125 µm with power monitoring
C = Multimode 50/125 µm
CI = Multimode 50/125 µm with power monitoring
D = Multimode 62.5/125 µm
DI = Multimode 62.5/125 µm with power monitoring

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 [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
EA-EUI-98 = APC/LC [b]

XX-XX-XX

Light source
FTB-2150 = With FTB-2150 light source

Model
0012C-1 = Single output LED source, 850/1300 nm, 50/125 µm fiber type, multimode model
0023B-1 = Single output IL/ORL optimized DFB, 1310/1550 nm, 9/125 µm fiber type
2346B-1 = Single output IL/ORL optimized DFB, 1310/1490/1550/1625 nm, 9/125 µm fiber type

Connector
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 [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
EA-EUI-98 = APC/LC [b]

Example: LTK-1-2-BTY-FP430B-UPC-FTB-1750-031-4-FOA-322-FTB-3500-B-EI-EUI-89

a. Available only if scope option is selected.
b. Available for singlemode models only.
c. FTB-2150 instrument can only be paired with FTB-1750 power meter. Dual light source instrument is not offered. Combo with variable attenuator is not offered.

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