



LS-1310/1550

Laser Source

Instruction Sheet

The LS-1310/1550 Laser Source provides 1310 nm or 1550 nm laser power for testing singlemode fiber optic cable. The source is designed for use with all Fluke Networks fiber optic power meters and fiber test adapters.

You can also use the source with other optical power meters that can measure 1310 nm and 1550 nm wavelengths.

The following accessories are included with your laser source:

- Two ST/ST singlemode patch cables
- One ST/ST singlemode adapter

Precautions and Safety Information

- Always clean the fiber optic connections before use.
- Before testing, let the source stabilize for 2 minutes after you turn it on.

  **Warning: Class I Laser Product**

To avoid possible exposure to hazardous laser radiation and to prevent eye damage

- **Never look directly into the source connector.** Though the laser radiation is invisible, it can damage your eyes.
- **Do not open the case (except to open the battery cover to change the battery); no user-serviceable parts are inside.**
- **Do not modify the source.**
- **Do not magnify or otherwise modify the laser output. Use only approved connectors and adapters.**
- **Do not use controls, adjustments, or procedures not documented or approved by Fluke Networks.**

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Using the Laser Source

Figure 1 shows the source's features, and the following text describes how to use them.

- ① Connect an appropriate ST patch cable to the ST connector.
- ② Select a 1310 nm or 1550 nm wavelength for the source's output. To move the switch, pull out on the switch arm.
- ③ Verify that the SOURCE ACTIVE LED is on.
- ④ The LOW BATTERY LED flashes briefly when you turn on the source. If the LED remains on, replace the 9 V battery.
- ⑤ For optical loss or output power measurements, select the CW (continuous wave) output. For identifying fiber cables with a fiber identifier, select the MOD (2 kHz modulated) output. To move the switch, pull out on the switch arm.
- ⑥ If needed, you can adjust the source for a reference level of -10 dBm, as follows:
 - a. Connect the source and power meter to set the reference. Set the source and the power meter to the wavelength to be adjusted. If the source is set to 1310 nm, use the 1300 nm setting on the power meter if 1310 nm is not an option.
 - b. Use a small, flat-blade screwdriver to turn the 1310 nm or 1550 nm adjustment screw until the power level reads -10 dBm.

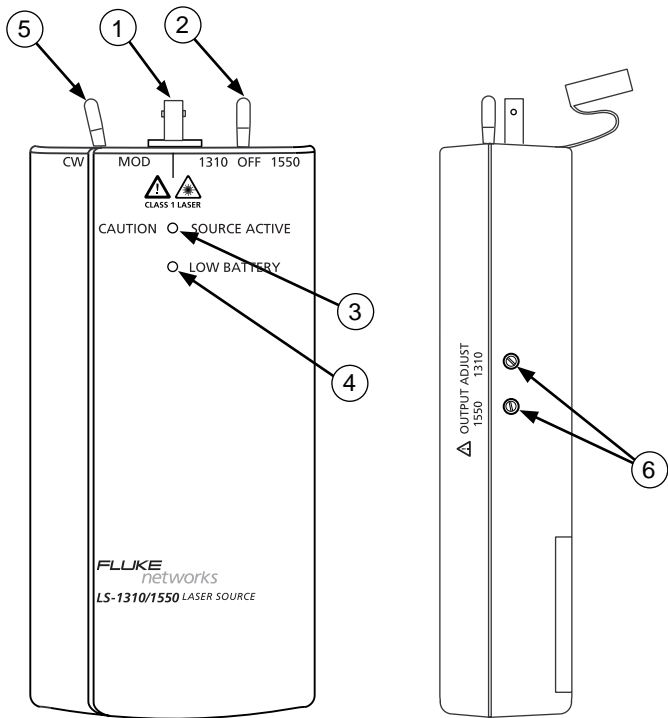


Figure 1. Laser Source Features

Measuring Optical Loss

For specific instructions on measuring optical power loss, refer to the documentation included with your fiber optic power meter. For some Fluke Networks products, such as the OneTouch™ Network Assistant and 68x LANMeter® test tool, instructions for measuring loss are given in the appendix of the product's users manual.

Maintenance

Clean the case with a soft cloth and mild detergent. Do not use abrasives or solvents.

Periodically clean the source connector with optical-grade tissue and optical-grade alcohol or with filtered, compressed air. Protect the connector with the dust cap when the unit is not in use.

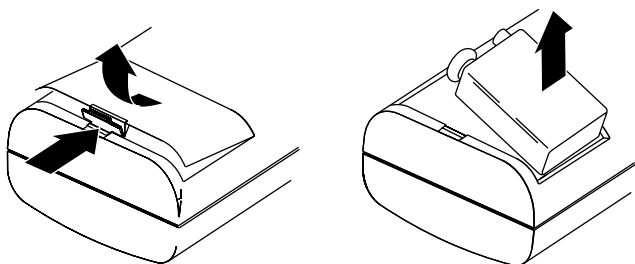
Periodically inspect the connector with a fiber microscope, such as the Fluke Networks FT300 FiberInspector Video Microscope.

Calibration and Service

To ensure optimal performance, have the laser source calibrated every 12 months. The source must be serviced only by a qualified technician.

Battery Replacement

Figure 2 shows how to replace the battery.



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Figure 2. Battery Replacement

Contacting Fluke Networks

Visit the Fluke Networks website at www.flukenetworks.com.
Send email to fluke-assist@flukenetworks.com.

To order accessories or get the location of the nearest Fluke Networks distributor or service center, call:

- USA: 1-888-993-5853
- Canada: 1-800-363-5853
- Europe: +31-402-675-200
- Japan: +81-3-3434-0181
- Singapore: +65-738-5655
- Anywhere in the world: +1-425-446-4519

For operating assistance in the USA, call 1-800-283-5853.

Replacement Parts and Accessories

Description	Fluke Networks Number
Battery cover	938451
9 V battery	614487
Fiber optic cable assembly, ST/ST, singlemode	NF100SM
Fiber optic cable assembly, ST/SC, singlemode	NF110SM
Fiber optic cable assembly, ST/FC, singlemode	NF120SM
Fiber optic adapter, ST/ST, singlemode	NF300SM
Fiber optic adapter, SC/SC, singlemode	NF310SM
Fiber Optic Cleaning Kit	NF430
Fiber Optic Reference Guide	NF460

For the most recent list of accessories, visit the Fluke Networks website at www.flukenetworks.com.

Specifications

Emitter type	Laser
Laser classification	Class 1
Safety	Complies with ANSI/ISA S82.01-1994, CSA C22.2 No. 1010.1-92, EN61010.1: 1993
Output wavelengths	1310 nm \pm 20 nm 1550 nm \pm 30 nm
Output connector	Singlemode ST
Output power	CW: -10 dBm (100 μ W) adjustable
Output level stability	At 25 °C after a 15 minute warmup period: \pm 0.2 dB over 1 hour \pm 0.4 dB over 8 hours
Temperature range	Operating: 0 °C to 40 °C Storage: -10 °C to +60 °C
Power source	9 V battery
Battery life	16 hours typical (alkaline)
Indicators	SOURCE ACTIVE (power on) LED LOW BATTERY LED

Fluke Networks Statement of Calibration

Fluke Networks hereby certifies that this product was verified and calibrated in accordance with applicable calibration procedures during the manufacturing process.

Fluke Networks further certifies that the measurement standards and instruments used during the calibration of this product are traceable to the United States National Institute of Standards and Technology (NIST). At planned intervals, the measurement standards are calibrated by comparison to or measurement against the standards at NIST. This is not a certificate of calibration or traceability.

To obtain a certificate of calibration, send the product to any Fluke Networks Service Center. A nominal fee is charged for this service.

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke Networks product will be free from defects in material and workmanship for one year from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke Networks' behalf. To obtain service during the warranty period, contact your nearest Fluke Networks authorized service center to obtain return authorization information.

Fluke Networks' warranty obligation is limited, at Fluke Networks' option, to refund of the purchase price, or free of charge repair or replacement of a defective product that is returned to an authorized Fluke Networks Service Center within the warranty period.

Warranty service is available outside the United States only if product was purchased through a Fluke Networks Authorized Sales Outlet in the country of use or the applicable Fluke Networks international price was paid.

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