Datasheet: SimpliFiber® Pro

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SimpliFiber Pro makes testing simple

Fluke Networks' SimpliFiber® Pro Optical Power Meter incorporates new and innovative features to give technicians a tool that performs and reports test results like no otherfirst-line fiber test tool can.

The only way to accurately test and verify the performance of your fiber-optic network is with test equipment designed for the job. The SimpliFiber® Pro Optical Power Meter and Fiber Test Kits is a suite of affordable and easy-to-use fiber verification test solutions. Today's high bandwidth premise networks heavily rely on fiber-optic infrastructure. Proper installation and maintenance of fiber cabling is imperative to improve technician productivity and ensure cabling system performance.

See how Fluke Networks' suite of innovative installation and test solutions improves technician productivity and ensures cabling system performance.

SimpliFiber Pro is an improved fiber test set that simplifies and shortens the front-line testing process by:

- Reducing the multiple steps and using a simultaneous dual-wavelength testing feature to measure the range of power levels in just half the time
- Allowing for a non-touch solution to check for a live fiber without having to plug into ports
- Enabling a network technician to do time-consuming procedures that normally require a team

SimpliFiber Pro Optical Fiber Test Kits provide you with all the tools you need to help you verify proper installation and maintain fiber-optic cabling systems. Available in kits or a la carte, these tools are simple and effective and provide you with the capability to measure loss and power levels, locate faults and polarity issues, and inspect connector end-faces.

A system approach

SimpliFiber Pro is a product suite that allows you to match products and functionality to your needs. SimpliFiber Pro is made up of five unique fiber platforms: the power meter, the multimode source, two singlemode sources, and the FindFiber™ Remote ID source. Each platform has uniquely competitive features, bundled in convenient kits, to meet the needs of today's technicians.

The optical power meter is included in all kits and is calibrated for accuracy at six different wavelengths (850, 1300, 1310, 1490, 1550, 1625). The meter features the ability to save a reference power level, allowing a direct display of fiber loss. It also has an intuitive four-button panel, a large LCD display screen, and a serial port. The meter's single connector permits simple network connection and straightforward reference power measurement. Interchangeable connector adapters are available in the most popular connector styles.

The multimode source is a dual wavelength 850/1300 source and incorporates an 850 nm LED and a 1300 nm LED, perfect for multimode fiber testing. You can add an optional singlemode 1310/1550 and/or 1490/1625 source to any kit as your testing needs evolve. These laser sources are ideal for all singlemode fiber testing. All sources are compatible with the SimpliFiber Pro optical power meter.

User-friendly

Although they are effective as separate tools, the SimpliFiber Pro optical power meter and sources are engineered to work together. The automatic wavelength-sensing feature of the meter identifies the source wavelength and sets itself appropriately so you do not have to. This simplifies multi-wavelength tests and saves at each wavelength to prevent costly measurement errors. The compact SimpliFiber Pro optical power meter and sources are durable and rugged. They feature impact-resistant covers and a compact, ergonomic shape for a comfortable and secure grip. Long battery life assures hours of trouble-free operation.

Verify optical loss and power levels

The SimpliFiber Pro optical power meter is calibrated for accuracy at 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1625 nm. The meter features the ability to save a reference power level, allowing a direct display of fiber loss. It has an intuitive four-button panel, a large LCD display screen, and a USB port to upload test results to a PC running LinkWare™ Cable Test Management Software. SimpliFiber Pro sources include a dual-wavelength 850/1300 nm source, a dual-wavelength 1310/1550 nm source, and a dual-wavelength 1490/1625 nm source. The FindFiber Remote ID sources transmit at 1310 nm.

Conduct pre-testing with minimal resources

The FindFiber Remote ID source is a new platform in the Fluke Networks family. When used with the optical power meter, these remote ID sources allow for quick and easy cable-routing identification.

The FindFiber remote ID sources allow you to identify the physical location of cabling runs to ensure polarity and the correct location on each fiber drop (Figure 1 and Figure 2). This time-saving feature enables a single technician to quickly perform double-ended testing – ideal for pre-testing a job site before any adds, moves, or changes.
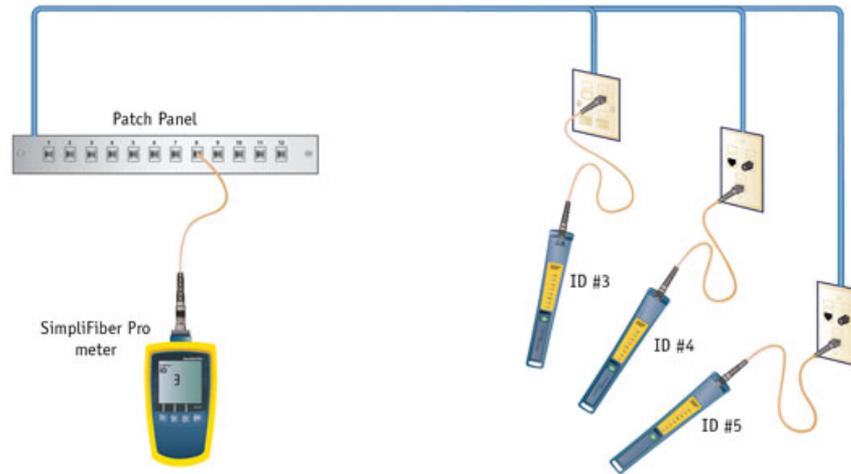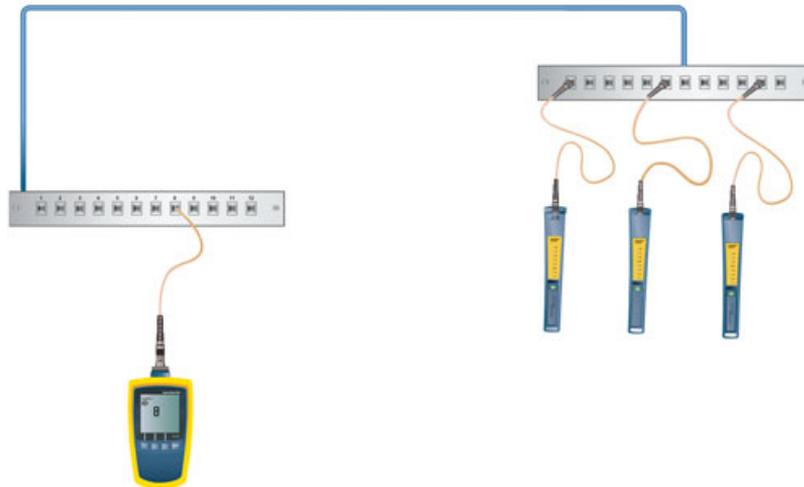

Figure 1 – Using FindFiber mode to locate fobers – patch panel to wall outlet

Ensure smooth, clean fiber connections

The FI-500 FiberInspector™ Micro removes the hassle associated with inspecting fiber end faces, especially in low light and high cable density situations. It is very simple to use: Simply plug the cable into the FI-500 and touch the AF button. Within seconds, the fiber endface comes into sharp, clear view. And if you're working in a difficult to reach place or you can't get the image to stand still, just touch the pause button to freeze the image.- PortBright™ illumination to see ports in dark and dense panels.

- Autofocus for stable images in a few seconds
- Large display to view single mode and multimode fiber end faces
- Auto-center moves the fiber ferule clearly into the frame for precision inspection
- Includes 4 UPC tips (LC, SC, 1.25 mm and 2.50 mm). APC and ARINC 801 tips are also available

Verify and locate faults

Diagnose and repair simple fiber link problems with Fluke Networks' VisiFault™ Visual Fault Locator (VFL). The laser-powered VisiFault locates fibers, verifies continuity and polarity, and helps find breaks in cables, connectors, and splices. Continuous and flashing modes make for easier identification. Compatible with 2.5 mm and 1.25 mm (with optional adapter) connectors for easy connection.

Reporting made simple

Manage test results, print professional reports, or export data into spreadsheet formats. SimpliFiber Pro can internally store up to 1000 test results which can then be uploaded to your PC using the included LinkWare™ Cable Test Management Software.

Features

- Dual-wavelength testing
- CheckActive™
- FindFiber Remote ID
- Auto wavelength
- USB port
- Saves 1000 results
- Min/max
- Six calibrated wavelengths

Feature	Description	Benefit
Dual-wavelength testing	Simultaneously test and save records from two wavelengths	Cuts testing time in half by eliminating the need to test at each wavelength separately
CheckActive™	Connect to a fiber without any setup and show with a **simple icon** and an **audible tone** whether that fiber is active.	Know for sure if connectors and ports are live. Allows quick visual and audible identification of a live link or port on a switch
FindFiber Remote ID	Identify the physical location of cabling runs to ensure polarity and the correct location on each fiber drop. Encoded source signal 1-8	Allows for quick and easy cable-routing identification and reduces confusion. **Allows double-ended testing with only 1 technician.** Ideal for pre-testing a job site before any adds, moves, or changes. Allows for mapping verification and easy documentation.
Auto wavelength	Automatic identification of wavelength being transmitted	Eliminates time-consuming mistakes by automatically detecting which source wavelength is transmitting. Allows measurements from both wavelengths at to be saved in one record
USB port	Data connectivity via USB 2.0	Download results faster – no specialty cables required
Saves 1000 results	Save and label each test conducted	Collects test results from multiple building sites in a day and **requires only one download**
Min/max	Allows immediate access to power range highs and lows in a testing session	**Precisely identifies intermittent power fluctuations.** Eliminates unreliable and inaccurate guesswork.
Six calibrated wavelengths	Calibrated to extend from typical enterprise wavelengths to two new popular wavelengths	Power meter can be used for broader applications, including FTTx testing

FTK1000

FTK2000

FTK2100

FTK1200

FTK1375

FTK1475

![Fluke networks]

Copper and Fiber Basic Technician's Kit

As project requirements grow to include both copper and fiber cabling, the Copper and Fiber Basic Technician's Kit (MS2-FTK) provides the right set of tools to manage your network and keep it running smoothly. Along with the features of the Simplifiber Pro, the MS2-FTK provides the copper testing instruments needed to:

- Graphically display wiremap, cable ID, and distance to fault on one screen
- Length of each pair
- Built in Analog and Intellitone digital toner
- Test all common copper media types including RJ11, RJ46, Coax, with no need for adapters
- Locate virtually any cable or wire pair with IntelliTone™ digital and analog toning
- Verify today's media services, including 10/100/1000 Ethernet, POTS, and PoE

MS2-FTK

Copper and Fiber Basic Technician's Kit

	FTK1000	FTK2000	FTK2100	FTK1200	FTK1375	FTK1475	MS2-FTK
Power Meter	X	X	X	X	X	X	X
850/1300 Multimode Source	X			X	X	X	X
1310/1550 Singlemode Source		X	X			X	
1490/1625 Singlemode Source			X				
Visifault VFL				X	X	X	
FI-500 FiberInspector Micro					X	X	
Inspection Probe Tips (LC,SC,1.25mm and 2.5mm Universal)					X	X	
Findfiber Remote ID Source				X	X	X(2)	
SC Power Meter Adapter	X	X	X	X	X	X	X
ST Power Meter Adapter				X	X	X	
LC Power Meter Adapter				X	X	X	
Magnetic Strap Attachment	X(2)	X(2)	X(3)	X(2)	X(3)	X(4)	X(3)
Carrying Case	X	X	X	X	X	X	X
NFC-KIT-BOX Fiber Cleaning Kit						X	
Microscanner 2							X

General Specifications

Temperature range	Operating: -10 °C to 50 °C Storage: -20 °C to 50 °C
Humidity range	95% (10 °C to 35 °C) non-condensing; 75% (35 °C to 40 °C) non-condensing; uncontrolled <10 °C
Certifications	CE, CSA, N10140, Class 1 laser-safe
Dimensions	Power meter: 6.4 in x 3.2 in x 1.5 in (16.5 cm x 8.0 cm x 3.9 cm) MM/SM sources: 5.6 in x 3.2 in x 1.6 in (14.2 cm x 8.1 cm x 4.1 cm)
Weight	Power meter: 11.5 oz (325 g) MM/SM sources: 9.8 oz (278 g)

Optical Sources

Optical output connector	Fixed SC
Emitter type	850/1300: LED 1310/1550: FP Laser FindFiber: Laser
Emitter wavelengths	850, 1300, 1310, 1490, 1550, 1625
Power output (minimum)	MM: ≥ -20 dBm; SM: ≥ 8 dBm minimum; -7 dBm nominal
Power output stability (8 hours)	MM: +/- 0.1 dB over 8 hours; SM: +/- 0.25 dB over 8 hours
MM battery life (2 x AA IEC LR6)	40 hours typical
SM battery life (2 x AA IEC LR6)	30 hours typical
FindFiber battery life (2 x AA IEC LR6)	80 hours typical

Optical Power Meter

Power measurement accuracy	+/-0.25 dB
Optical connector	Removable adapter; SC adapter standard; Optional adapters include LC, ST
Detector type	InGaAs
Calibrated wavelengths	850, 1300, 1310, 1490, 1550, 1625
Power measurement range	850: 10 to -52 dBm 1300, 1310, 1490, 1550, 1625: 10 to -60 dBm
Power measurement linearity	850 nm: +/- 0.2 dB; +/- 0.2 dB for power from 0 dBm to -45 dBm, +/- 0.25 dB for power < -45 dBm; 1300 nm, 1310 nm, 1490 nm, 1550 nm, 1625 nm: +/- 0.1 dB; +/- 0.1 dB for power from 0 dBm to -55 dBm, +/- 0.2 dB for power > 0 dBm and < -55 dBm
Resolution	0.01 dB
Battery life	>50 hours typical
Memory	1000 loss or power measurements
Serial communication physical interface	USB

Microscanner2 Specifications (Included in MS2-FTK kit)

Test Connectors	Twisted-pair: UTP, FTP, SSTP 8-pin modular jack accepts RJ45 and RJ11 Coax: F-connector for 75 Ω, 50 Ω, 93 Ω cables
Cable Tests	Tests for open circuits, short circuits, cross-wired pairs, wiremap to TIA-568A/B standards, remote ID locators
Length Measurement	Length (up to 460 meters or 1,500 feet) using Time Domain Reflectometry (TDR) Technology
Tone Generator	IntelliTone digital tone: [500 KHz]; analog tones:[400Hz, 1KHz]
PoE Detection	Solicits and detects the presence of 802.3af compatible PoE devices
Ethernet Port Test	Advertised speed of 802.3 Ethernet ports (10/100/1000)
Power Source	Battery type: 2 AA alkaline batteries
Dimensions	3 in x 6.4 in x 1.4 in (7.6 cm x 16.3 cm x 3.6 cm)
Weight	13 ounces; 363 grams (batteries included)
Warranty	One year

M12/ RJ45 Cable Specifications:

Cable type	Ethernet cable, Cat5e, 6, 6a, shielded, 2 Pair AWG 26 stranded (7 wire), RAL 5021 (water blue), M12 4 pos. D- coded on RJ45 connector
Number of positions	4
Fixed cable length	2m
Volume resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Ambient temperature	-20 oC to 50 oC
Inflammability class acc to UL 94	V0
Surge voltage category	II
Pollution degree	3
Degree of protection	IP20/IP67
External cable diameter	6.7 mm
Transmission characteristics	Cat 5 (IEC 11801:2002), Cat 5e (TIA 568B:2001)

SimpliFiber Pro Kit Ordering Information

Model	Description
SFPOWERMETER	SimpliFiber Pro optical power meter
SFMULTIMODESOURCE	SimpliFiber Pro multimode 850/1300 source
SFSINGLEMODESOURCE	SimpliFiber Pro singlemode 1310/1500 source
SFSINGLEMODE2	SimpliFiber Pro singlemode 1490/1625 laser light source
FTK1000	Multimode Fiber Verification Kit: Includes SimpliFiber Pro optical power meter, 850/1300 multimode source, VisiFault VFL, FT120 FiberViewer, FindFiber Remote ID sources, Magnetic Strap attachments, and carrying case; ST and LC adapter
FTK1200	Multimode Verification Kit: Includes Simplifiber Pro Optical power meter, 850/1300 multimode source, VisiFault VFL, FindFiber Remote ID sources, Magnetic Strap attachments, and carrying case; ST and LC adapter
FTK1375	Multimode Fiber Verification Kit with FI-500 FiberInspector Micro – Includes SimpliFiber Pro optical power meter, 850/1300 multimode source, VisiFault VFL, FI-500 FiberInspector, FindFiber Remote ID source, Magnetic Strap attachments, and carrying case; SC, ST, and LC power meter adapters.
FTK1475	Complete Fiber Verification Kit with FI-500 FiberInspector Micro – Includes SimpliFiber Pro optical power meter, 850/1300 multimode source, 1310/1550 singlemode source, VisiFault VFL, FI-500 FiberInspector, two (2) FindFiber Remote ID sources, Magnetic Strap attachments, and carrying case; SC, ST, and LC power meter adapters, NFC-KIT-BOX fiber optic cleaning kit.
FTK2000	Singlemode Fiber Verification Kit: Includes SimpliFiber Pro optical power meter, 1310/1550 singlemode source, Magnetic Strap attachments, and carrying case
FTK2100	Singlemode Fiber Verification Kit: Includes SimpliFiber Pro optical power meter, 1310/1550 and 1490/1625 singlemode sources, Magnetic Strap attachments, and carrying case
MS2-FTK	Includes MicroScanner2 Cable Verifier with main wiremap adapter, Simplifiber Pro optical power meter, 850/1300 multimode source, SC power-meter adapter, multi-language Getting Started Guide, batteries, Magnetic Strap Attachments, and carrying case
FindFiber	One (1) FindFiber Remote ID source
FindFiber-6	Set of six (6) FindFiber Remote ID sources

SimpliFiber Pro Accessories Ordering Information

Model	Description
NFK1-SMPLX-SC/td>	62.5 uM simplex reference cord set (SC/SC x 2); special patented damage-resistant end-faces
NFK1-SMPLX-LC	62.5 uM simplex reference cord set (SC/LC, LC/LC); special patented damage-resistant end-faces
NFK1-SMPLX-ST	62.5 uM simplex reference cord set (SC/ST, ST/ST); special patented damage-resistant end-faces
NFK2-SMPLX-SC	50 uM simplex reference cord set (SC/SC x 2); special patented damage-resistant end-faces
NFK2-SMPLX-LC	50 uM simplex reference cord set (SC/LC, LC/LC); special patented damage-resistant end-faces
NFK2-SMPLX-ST	50 uM simplex reference cord set (SC/ST, ST/ST); special patented damage-resistant end-faces
NFK3-SMPLX-SC	SM simplex reference cord set (SC/SC x 2); special patented damage-resistant end-faces
NFK3-SMPLX-LC	SM simplex reference cord set (SC/LC, LC/LC); special patented damage-resistant end-faces
NFK3-SMPLX-ST	SM simplex reference cord set (SC/ST, ST/ST); special patented damage-resistant end-faces
NFA-SC-SINGLE	SC interchangeable adapter
NFA-LC-SINGLE	LC interchangeable adapter
NFA-ST-SINGLE	ST interchangeable adapter
MS2-MAG-KIT	Magnetic Strap Attachment and spare holster

Optical Power Meter and Fiber Test Kits