

FiberMeter™

Fiber Certification System

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SERIES

FiberMeter is the most complete system for field testing of premise-wiring multimode and singlemode fiber. For testing multimode fiber, FiberMeter is the first portable test system to provide automated measurement of optical loss and cable length, Pass/Fail certification against industry standards, detailed certification reports, and the convenience of a built-in talk set. FiberMeter will even test singlemode fiber, providing two separate precision power meters for measuring singlemode optical power and loss.

Multimode Fiber Test Features:

- ❖ Tests two multimode fibers with one setup.
- ❖ Automatic bi-directional loss measurements at 850 and 1300 nm
- ❖ Automated loss budget calculation
- ❖ Loss margin analysis
- ❖ Cable length
- ❖ Propagation delay
- ❖ Pass/fail certification against cabling standards and network requirements.
- ❖ Stores up to 2000 link reports.
- ❖ Uploads test reports to PC for archiving and printing.
- ❖ Built-in talk set.

❖ Time Savings

FiberMeter will significantly reduce the time you spend setting up and performing tests and quickly pays for itself with productivity improvements. With FiberMeter, pairs of multimode fiber cable are simultaneously measured for bi-directional loss at both 850 and 1300 nm wavelengths with one test setup. Use of FiberMeter for multimode fiber certification can cut testing time up to 80 percent or more compared to manual loss measuring methods. For solo-operator testing, FiberMeter saves additional time spent in test setup, for tests can be initiated from either end of the fiber link using either FiberMeter handset.

❖ Fiber Certification Based On Industry Standards

With FiberMeter, certification of multimode fiberoptic links is easier than ever and eliminates the need for interpretation of raw test results. Simply choose from a library of fiber cabling standards, such as TIA 568A or ISO 11801, or network standards such as 10BASE-FL or Gigabit Ethernet 1000BASE-SX. FiberMeter calculates an optical loss budget (loss Pass/Fail limits) based upon the specified number of connections and splices in the optical link, plus the measured length.

Autotests on a pair of multimode fibers can be completed in less than 6 seconds. Test results include: Pass/Fail indication, loss measurements at 850 nm and 1300 nm, margin between the measured loss and the established loss budget, cable length, and propagation delay. Up to 1000 Autotest reports may be stored in each handset (2000 total) along with the test date, selectable company/customer name, and link identification number. Special auto-incrementing Link ID naming mode facilitates the naming of sequential tests.

❖ Certification Reports

Stored Autotest certification reports can be output to a serial printer or uploaded to a PC using the included Report Manager Software (RMS). RMS, a Windows 95/NT 4.0 based utility program provides a simple, intuitive interface for summarizing, sorting and printing test reports.



DATA COM **TEXTRON**

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❖ *Test and Talk With One Instrument*

LinkTalk™ provides voice communications over the multimode fiber under test. The integrated talk set keeps you talking even in buildings that prevent use of 2-way radios. LinkTalk includes built-in microphones, individual earphones, volume controls, and a Call Alert signal. Standard miniature audio jacks on the FiberMeter handsets accept any conventional headset.

❖ *Tests Singlemode Fiber (Available December 1999)*

Each FiberMeter handset can be used as a precision optical power meter for measuring loss on singlemode fiber at both 1310 nm and 1550 nm wavelengths using a separate laser source (available separately). Reference levels at both wavelengths may be saved with a push of a button. Test results may be saved for later printing or uploading to a PC using Report Manager Software.

❖ *Product Updates and Upgrades*

Flash ROM keeps FiberMeter current by allowing updates for new test standards and requirements. Product firmware updates are made available periodically on the Datacom Textron Web site, and are easily downloaded to the FiberMeter handsets from a PC using the supplied RMS software.

❖ *Ra Series of Fiberoptic Testers*

FiberMeter is part of the Ra Series of fiberoptic testers, a complete range of innovative products for testing, certifying and maintaining fiberoptic cabling. For more information on other Ra Series fiber optic testers, contact Datacom Textron or visit the Datacom Web site.

Supported Cabling and Network Standards

- TIA 568A Backbone
- TIA 568A Horizontal
- ISO 11801/EN50173 Backbone
- ISO 11801/EN50173 Horizontal
- 1000BASE-SX (Gigabit Ethernet)
- 1000BASE-LX (Gigabit Ethernet)

Wavelengths

- 850 nm, 1300 nm, 1310 nm, 1550 nm

Multimode Fiber Length

- Range: 1-6600 ft (1-2000 m)
- Resolution: 1 ft (1 m)
- Accuracy:
 - 0-1000 ft (0-305 m):
+/- 2 ft (0.6 m) +/- 2% +/- IOR Uncertainty
 - 1001 - 6600 ft (305 m - 2000 m):
+/- 2 ft (0.6 m) +/- 3% +/- IOR Uncertainty

Multimode Fiber Propagation Delay

- Range: 10-10,000 ns
- Resolution: 1ns

Datacom Textron

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www.datacom.textron.com

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Multimode/Singlemode Loss

- Dynamic Range: +3 dBm to -50 dBm
- Resolution: 0.01 dB/dBm
- Accuracy: +/- 0.3 dB @ -20 dBm

Photodiode Detector

- Indium Gallium Arsenide (InGaAs)

Source

- LED

Connectors (each handset)

- ST Connectors (2)

Physical Characteristics (each handset)

- Dimensions: 31 x 9.9 x 6.3 cm (12.0 x 3.9 x 2.5 in)
- Weight: 1.08 kg (2 lb. 6 oz.)

Power (each handset)

- Batteries: 8 AA alkaline batteries
- AC/Battery eliminator
- Nickel Metal Hydride (NiMH) rechargeable battery pack (optional)
- Adjustable power-saving "power-down" time
- Low battery indicator

Display (each handset)

- Backlighted, graphical LCD

Environmental

- Operating Humidity (non-condensing): 10% to 90%
- Operating Temperature Range: 0 to 50° C (32 to 122°F)
- Storage Temperature Range: -20 to 60° C (4 to 140°F)

FiberMeter Contents:

- FiberMeter handset (2)
- Handset impact cases with suspension straps (2)
- LinkTalk™ earphones (2)
- Report Manager Software
- ST Launch cables (4)
- AA alkaline batteries (16)
- AC/Mains battery eliminator and charger (2)
- PC interface cable
- System carrying case
- User manual

