

mini-OTDR

FiberRanger3

Description

The Wilcom FiberRanger3 is a lightweight, hand-held **mini-OTDR** in a rugged enclosure that is impact-resistant and waterproof. The fast easy-to-use Optical Time Domain Reflectometer with core functions required to measure optical fiber from one end during installation, repair and verification. This unit is ideal for field and maintenance of new or existing fiber networks.

The mini-OTDR is very fast, producing a scan within one second of pressing the scan button. It also features an easy to use Zoom function that enables the user to observe the entire link, or zoom in on defects. This unit is available in multimode or singlemode with single, dual, tri, or quad wavelengths making it ideal for LAN, Metro or Fiber-to-the-Home (FTTH) applications.



Each unit is capable of measuring splice loss, link attenuation and distance. The singlemode and or multimode output port(s) use high powered pulsed lasers. The QVGA monochrome display provides a powerful yet simple set of fiber parameters and control indications to view an entire fiber link or zoom in and analyze a splicing point or a defect in the fiber. The display shows fiber loss versus distance in its large central graph as well as individual and dual cursor measurements, and important instrument parameters such as Index of Refraction, pulse width, scanning speed, and a battery gauge.

The FiberRanger3 is a full-function Certifying OTDR when used with the Certification Software. View and store traces in the field, then download traces to a PC for further analysis and printing of the certifying documents.

Features and Benefits

✓ Rugged Plastic Enclosure

With the lid closed and locked, and the purge port tightened, this enclosure is air and water-tight.

✓ Internal Data Storage and Data Output

The ability to store 255 traces and export them to a printer or PC for future analysis are additional useful features of the FiberRanger3.

✓ One Button SCAN Operation

This is complimented by cursor keys and "soft-keys", allowing the user to observe the entire link loss or zoom in on defects.

✓ Economical

The rugged FiberRanger3 is a fraction of the size, weight, and cost of most mini-OTDRs.

✓ OTDR Trace Viewing

The OTDR trace viewing capability enables a highly versatile troubleshooting tool in a cost-effective package.

✓ Certification Software

The mini-OTDR is a full-function Certifying OTDR when used with the Certification Software. View and store traces in the field, then download traces to a PC for further analysis and printing of the certifying documents.

"C" Series

Distance Range	1Km/3.3Kft (SP) 4Km/13Kft (MP) 16Km/53Kft (LP)	4Km/13.3Kft (XSP) 16Km/53Kft (XMP) 64Km/215Kft (XLP)
Pulsewidths	Short Pulse (SP) 4m/13ft Medium Pulse (MP) 50m/164ft, Long Pulse (LP) 100m/330ft	
Dead Zone	6m/20ft typical (SP)	
Distance Interval	1m/3.3Kft (SP) 4m/13ft (MP) 16m/53ft (LP)	2m/6ft (XSP) 8m/25ft (XMP) 32m/105ft (XLP)
Horizontal Expansion	4Km/8Kft, 2Km/4Kft, 1Km/2Kft, 500m/1Kft / div (LP) 1Km/2Kft, 500m/1Kft, 256m/512ft, 128m/256ft / div (MP) 256m/512ft, 128m/256ft, 64m/128ft, 32m/64ft / div (SP) 16Km/32Kft, 8Km/16Kft, 4Km/8Kft, 2Km/4Kft/ div (XLP) 4Km/8Kft, 1Km/2Kft, 512m/1Kft, 256m/512ft/ div (XMP) 1Km/2Kft, 512m/1Kft, 256m/512ft, 128m/256ft/ div (XSP)	
Loss Modes	2 Point, Splice Loss, dB/km	
Optical Connection	ST or FC/UPC	
CDRH Laser Classification	Class I	
Wavelength of Operation	850 ,1300, 1310, 1490, & 1550 nm +/- 20nm	
Dynamic Range	23 dB Typical (LP)	
Distance Accuracy	+/- (1meter + .01% x distance)	
Units of Measure	Meters/Kilofeet	
Group IOR Range	1.024 - 2.048	
Vertical Expansion	0.5, 1, 2, 4 dB/div	
Vertical Resolution	0.01dB	
Data Acquisition Method	N-Point Averager	
Averaging Time	0.25 seconds (Real Time) up to 1 min. (Scanning)	
Data Storage	255 traces	
Computer/Printer Interface	RS-232	
Power	8 NiMH AA cells, or 120VAC charger	
Battery Life	12 hrs. typical	
Size	8.25 x 6.5 x 3.5 in. (20.96 x 16.51 x 8.89cm)	
Weight w/ batteries	2.75 lbs (1.25 Kg)	
Operating Temperature	0°C to +50°C	
Storage Temperature	-40°C to +60°C	
CE	Compliant	

Warranty

The Wilcom FiberRanger3 is warranted for a period of one year to be free of defects in material and workmanship.

ISO-9001:2000 Registered

Specifications and prices are subject to change without notice.
01/06
813-141-011

Ordering Information

Model	Description	Part No
FR3-S-C ⁽¹⁾⁽²⁾	1310nm - Singlemode	30500040
FR3-M-C ⁽¹⁾⁽²⁾	1300nm - Multimode	30500035
FR3-SD-C ⁽¹⁾⁽²⁾	1310/1550nm - Singlemode	30500045
FR3-S1-C ⁽¹⁾⁽²⁾	1550nm - Singlemode	30500050
FR3-M1-C ⁽¹⁾⁽²⁾	850nm - Multimode	30500055
FR3-MD-C ⁽¹⁾⁽²⁾	850/1300nm - Multimode	30500060
FR3-TRI-C ⁽¹⁾⁽²⁾	1310nm / 1490nm / 1550nm - Singlemode	30500095
FR3-QUAD-C ⁽³⁾	850nm / 1300nm / 1310 nm/ 1550nm	30500100
110 VAC Adapter	Charger for 110VAC operation	30500110
220 VAC Adapter	Charger for 220VAC operation	30500220

Notes: (1) adding -05 after the unit part numbers indicates an FC/UPC connector

(2) adding -06 after the unit part numbers indicates an ST/UPC connector

(3) The FR3-QUAD-C has two output ports, one for M/M and one for S/M. Both port connector styles have to be specified using Notes 1 & 2 above. **Part # Example: 30500100-06-05** which translates to an ST connector on the M/M port and a FC connector on the S/M port.

Model	Description	Part No
FR3 Cert. S/W	Certification Software	30000310

The screenshot shows the Mini-OTDR certification software interface. At the top, it displays 'Mini-OTDR certification software v2.0'. Below this, there are menu options: Project Documentation Screen, Operational Settings, Print Screen, and Help. The main window is divided into several sections:

- Load Trace From OTDR:** Source Trace File: C:\Documents and Settings\John.Adams\WILCOMINC\Desktop\wilcom\trace\am; Job ID: []
- Load Trace From File:** Current Trace Name: SampleTrace-255; OTDR type / version: LanOTDR v. 1.5; Cable ID: []
- Distance Units:** Meters (selected), Feet []
- Distance (m):** A= 0, B= 1,016
- Losses:** 2-point = -3.20 dB
- Loss Modes:** 2-point (selected), dB/Km [], Splice []
- Wavelength:** 1300nm
- # Averages:** 65280
- Fiber Index:** 1.486
- Pulse Width:** 4 meters
- Number of Traces:** 7
- Trace List:** SampleTrace-001, SampleTrace-002, SampleTrace-003, SampleTrace-004, SampleTrace-005, SampleTrace-006, SampleTrace-255 (selected)

The central graph, titled 'Loss vs. Distance', shows a red trace line on a grid. The y-axis is 'Loss (dB)' ranging from 0 to 25. The x-axis is 'Distance (m)' ranging from 0 to 1016.49. The trace shows a relatively flat line around 15-16 dB with several sharp upward spikes, indicating loss events at various distances.

Example of trace display with Certification Software

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