

# Micro OTDR Module

MTT-35E

Data Sheet



The Micro OTDR Module is part of a family of plug-in modules for the MTT® and xDSL test sets

The MTT-35E Micro OTDR Module, part of the Modular Test Toolkit (MTT) family of products, is a rugged, battery-operated handheld test solution for the installation and maintenance of fiber optic cable.

The Micro OTDR module is the first in its class to provide an optical time domain reflectometer in a compact module that measures fiber optic cables for events such as connectors, splices, breaks, and insertion loss.

The Micro OTDR is available for testing single-mode fiber. Even in such a compact platform, advanced features such as dual wavelength testing are

standard features, as well as auto and manual mode configuration. One button 'Auto Mode' simplifies testing for even the most inexperienced user, and characterization includes event location and other anomaly detection for the fiber under test.

## KEY FEATURES

- OTDR with dual wavelengths
- Auto and manual mode configuration
- Up to 28 dB dynamic range
- VFL, LS, and OPM
- Automatic event table generation
- Standardized .sor file output
- 500 trace storage capacity

## BENEFITS

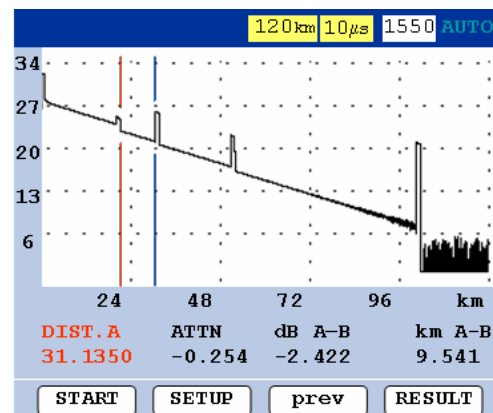
- Lightweight
- Handheld
- Leverages existing MTT platform
- Cost-effective and future-proof
- Portable design for easy site-to-site transport
- Reduce CAPEX with modular platform
- Expand test functions with extensive list of plug and play modules, including: optical power meters, light sources, channel monitors, gigabit ethernet
- One-button configuration and measurement simplifies and shortens testing time

## HIGHLIGHTS

- Measure and view dual wavelength traces on high-resolution color display
- Intuitive user interface simplifies testing
- PC software for comprehensive analysis

## PHYSICAL LAYER APPLICATIONS

- SONET/SDH
- 1 Gbps and 10 Gbps Ethernet
- FTTx, PONS
- Campus and Fibre Channel



## SPECIFICATIONS<sup>1</sup>

### OTDR

Wavelength: 1310 ± 20 nm, 1550 nm ± 20 nm  
Dynamic Range<sup>2</sup>: 28 dB @ 1310 nm, 26 dB @ 1550 nm  
Event Dead Zone<sup>3</sup>: < 5 m  
Attenuation Dead Zone<sup>3</sup>: < 25 m  
Pulse Width: 10, 30, 100, 300, 1000, 3000, 10000 ns  
Distance Range: 10, 20, 40, 80, 120 km  
Linearity: 0.05 dB/dB  
Sampling Resolution: 0.6 to 7.6 m, depending upon selected distance range  
Sampling Points: 16000  
Distance of Uncertainty  
 $\Delta L = 1 \text{ m} + \text{sampling resolution} + 5 \times 10^{-5} \times L$   
Measurement Time  
User defined: 30 sec to 10 min, Auto configuration < 3 min  
Group Refraction Index: 1.4000 to 1.5999

### VFL, OPM, LS

#### Visual Fault Locator

Wavelength: 650 nm ± 15 nm  
Output Power: 500 to 1000 µW  
Operation Mode: CW, 2 Hz

#### Optical Power Meter

Wavelength Range: 800 to 1700 nm  
Calibrated Wavelengths: 850 nm, 1310 nm, 1550 nm  
Measuring Range  
850 nm: +3 to -60 dBm  
1310 nm, 1550 nm: +3 to -65 dBm  
Resolution: 0.01 dB  
Relative Accuracy  
850 nm: 0.33 dB  
1310 nm, 1550 nm: 0.22 dB  
Display Units: dBm, µW, dBr

#### Light Source<sup>4</sup>

Wavelength: 1310 ± 20 nm, 1550 ± 20 nm  
Output Power: > -5 dBm  
Stability over time (15 min): 0.05 dB  
Modulation Frequency: CW, 2 kHz

## PRODUCT DESCRIPTION

Module Size (W × L × H): 12.6 × 9 × 2.2 cm (5.0 × 3.5 × 0.9 in)  
Optical Connector: FC/UPC, SC/UPC  
Operating Temperature: 0° to 50°C (32° to 122°F)  
Storage Temperature: -20° to 70°C (-4° to 158°F)  
Humidity: 5% to 85% noncondensing

## ORDERING INFORMATION

SSMTT-35E-FCU	Micro OTDR Module - 1310/1550 nm, VFL, OPM, LS, FC/UPC connector
SSMTT-35E-SCU	Micro OTDR Module - 1310/1550 nm, VFL, OPM, LS, SC/UPC connector

*Note: The Micro OTDR module series is exclusively supported on the following chassis: SSMTT-C, SSMTT-ACM, SSMTT-ACM II*

### Optical Accessories

SA501	Optical Patch Cord, SMF, FCUPC to FCUPC, 2 m
SA502	Optical Patch Cord, SMF, FCUPC to SCUPC, 2 m
SA503	Optical Patch Cord, SMF, FCUPC to STUPC, 2 m
SA511	Optical Patch Cord, SMF, SCUPC to SCUPC, 2 m
SA512	Optical Patch Cord, SMF, SCUPC to STUPC, 2 m
SA513	Optical Jumper, SMF, FCUPC to FCUPC, 1 ft
SA514	Optical Jumper, SMF, SCUPC to SCUPC, 1 ft

#### Notes:

1. All specifications measured at 25°C and are typical values, unless otherwise specified.
2. At 3 min average time at SNR=1, 10 µs pulse.
3. At pulse width 10 ns, reflectance below -40 dB.
4. Maximum operating temperature 40°C.