

Optical Test Toolkit Module

MTT-33

Data Sheet

The Optical Test Toolkit Module is part of a family of plug-in modules for the SunSet MTT® and xDSL test sets



The Optical Test Toolkit module set is the first in its class to provide a loss test set (LTS) in a palm-sized module. Use the built-in OPM to measure the launch and receive powers of your optical transmitters. The LTS provides end-to-end insertion loss and optical return loss measurements. The LTS is used as the portable field tester. A visual fault locator (VFL) is available.

KEY FEATURES

- Light source and OPM for telecom and broadband insertion loss measurements
- Automatic end-to-end insertion loss measurement

BENEFITS

- Portable design for easy site-to-site transport
- Reduce CAPEX with modular platform
- Extensive list of plug and play modules: optical power meters, channel monitors, gigabit ethernet
- Easy configuration and measurement shortens testing time

HIGHLIGHTS

- Intuitive user interface simplifies testing
- Save data as .csv files

PHYSICAL LAYER APPLICATIONS

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

SPECIFICATIONS

Loss Test Set

Light Source

- Wavelength: 1310/1550
- Wavelength Tolerance: ± 20 nm
- Output Power: -10 to -2.5 dBm
- Stability over time: 0.15 dB
- Stability over temperature: 0.5 dB (0°C to 50°C)
- Modulation Frequency: 270 Hz, 1 kHz, 2 kHz ($\pm 1\%$ square wave)

OPM

- Wavelength Range: 800 to 1700 nm
- Calibrated Wavelengths: 850, 1310, 1490, 1550, 1625 nm
- Measurement Range
 - 850 nm: -60 to +10 dBm
 - Other wavelengths: -65 to +10 dBm
- Damage Level: 20 dBm
- Total Accuracy: ± 0.3 dB²

- Resolution: 0.01 dB
- Detector: InGaAs
- Modulation Frequency Detection: 150 Hz to 10 kHz
- Wavelength Sensitivity over 30 nm
 - Typical: 0.3 dB
- Display Unit: dBm, dB R, uW

Autotest

- Dynamic Range: 60 dB
- Accuracy: ± 0.2 dB (for $0 < \text{Insertion Loss} \leq 45$ dB),
 ± 0.35 dB (for $\text{Insertion Loss} > 45$ dB)
- Stability over time: ± 0.2 dB
- Stability over temperature: ± 0.25 dB

Optical Return Loss Test (Software Option for Loss Test Set)

- Wavelength: 1310/1550 nm
- Wavelength Tolerance: ± 20 nm
- Measurement Range: 0 to 70 dB
- Resolution: 0.05 dB
- Uncertainty³
 - ± 0.5 dB (0-55 dB)
 - ± 1.5 dB (55-65 dB)

Visual Fault Locator (Hardware Option)

- Wavelength: 650 nm
- Spectral width at 20°C: 3 nm
- Output Power: 1 mW
- Modulation: CW, 2 Hz

PRODUCT DESCRIPTION

- Module Size (W x L x H): 12.6 x 9 x 2.2 cm (5.0 x 3.5 x 0.9 in)
- Optical Connector: FC/UPC, SC/UPC
- Operating Temperature: 0° to 50°C (32° to 122°F)
- Storage Temperature: -20° to 60°C (-4° to 140°F)
- Relative Humidity: 0% to 95% noncondensing

ORDERING INFORMATION

Loss Test Set

MTT-33LTS1XXX Loss Test Set

Please select an optical connector:

- XXX = FCA (FC/APC)
- XXX = SCA (SC/APC)

Hardware Option

MTT-33-VFLXX VFL Hardware Option
(available for any SSMTT-33 module)

Please select an optical connector:

- XX = FC
- XX = SC

Software Option

SWMTT-33ORL ORL Software Option
(to be ordered with MTT-33LTSXXXX)

Recommended Cables

- 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
- SA504 Optical Patch Cord FCUPC to FCAPC, 2 m
- SA519 Optical Patch Cord FCAPC to SCUPC, 2 m
- SA520 Optical Patch Cord FCAPC to FCAPC, 2 m
- SA523 Optical Patch Cord FC (F)-PC to SC (F)-PC

Notes:

- Specification at room temperature 25°C.
- Typical for -60 to 0 dBm (OPM1).
For power outside these ranges, the accuracy is better than ± 1.0 dB. Using FC/PC connectorized patchcord. For 850 nm, accuracy is ± 0.5 dB (at -50 to 0 dBm).
- After averaging more than 10 consecutive measurements over 3 minutes. Right after reference zero calibration. Using APC connector in optimal optical condition.

For more information or a directory of sales offices: info@sunrisetelecom.com | www.sunrisetelecom.com