

SUNRISE TELECOM

STT[®] DTM

CD and PMD Measurements

Data Sheet



The STT DTM is part of a family of test modules for the STT Platform

The STT Dispersion Test Module (DTM) system, consisting of a DTM receiver and DTM light source, is a highly accurate and robust test solution for the Scalable Test Toolkit (STT). It is a field portable and easy-to-use dispersion analyzer for single-mode optical fibers, capable of measuring both Chromatic Dispersion (CD) and Polarization Mode Dispersion (PMD) according to ITU-T recommendations. The CD measurement achieves high dynamic range with excellent measurement precision. PMD measurements are seamlessly built into the system for a one-button combined CD & PMD measurement.

The STT DTM system can be operated either as a self-contained portable instrument, with integrated touch screen user interface and battery-powered option, or as a standalone module with an external computer. Its user-friendly graphical interface processes and stores measurement data. The STT DTM system is based on ITU-T recommended test methods—Fixed analyzer for PMD (ITU-T G.650.2) and Direct time-of-flight for CD (ITU-T G.650.1). Its small, lightweight, battery-operated light source is entirely independent and connects to the instrument using the fiber under test for end-to-end testing.

FEATURES

- High dynamic range
- Measure through optical amplifiers for increased measurement range
- Accurate CD measurements in C and L bands
- User-friendly GUI
- Single-button CD & PMD measurements
- Histogram PMD measurements
- Fully independent, portable light source

PHYSICAL LAYER APPLICATIONS

- 10 Gbps SONET/SDH installation and maintenance
- 10 Gbps Ethernet installation and maintenance
- 10.7 Gbps OTN installation and maintenance
- Older installed fiber dispersion compliance testing for high data rate networks

BENEFITS

- Lower equipment costs by correctly measuring CD compensation needed for your fiber system
- Reduce CAPEX for combined CD and PMD measurements
- Save time with setup & measurement in < 10 minutes
- Measure > 180 km of fiber in a single measurement; measure > 200 km of fiber using existing network amplifiers
- Quickly determine whether older installed optical fiber meets high data rate PMD specifications
- Measure higher accuracy and sensitivity CD based on digital technology



SPECIFICATIONS

Measurement Wavelength Range

C-band: 1526 to 1570 nm

C+L-band: 1526 to 1610 nm

Extrapolated Display Range: 1500 to 1650 nm

Dynamic Range: 40 dB

CD Measurement

Range: -4 ns/nm to + 4 ns/nm

Temporal Precision: 5 ps

Wavelength Precision: 0.1 nm

Typical Reproducibility of the results

Dispersion coefficient D: 0.02 ps/nm-km (for a 25 km long G652 SMF)

Zero dispersion wavelength: 0.1 nm (for a 25 km-long DSF)

Measuring Time (typ.): < 30 sec

Measurement with a variable (user selected) number of points

PMD

Range

CD/PMD Light Source: 0.2 to 8.5 ps

High PMD Source: > 60 ps

Accuracy: 0.2 ps or 10% (whichever is higher)

Measuring Time (typ.): < 60 sec

Broadband Light Source

CD/PMD: High Power LED (Class 1 Laser)

Output: 1 to 2 mW

High PMD: High Power Laser (Class 1 Laser)

Output: 1 to 2 mW

Battery operated

PRODUCT DESCRIPTION

Operating Temperature: 32° to 104°F (0° to 40°C)

Storage Temperature: -4° to 140°F (-20° to 60°C)

Humidity: 5% to 90% noncondensing

STT Platform

Microsoft® Windows-based interface

Color touch screen: 26.4 cm [10.4 in], SVGA

Upgrades: SW options upgradeable via Internet connection, USB flash memory or PCMCIA memory card

Power Rating: 30W

Power Input

AC operation with 100 to 240 VAC, 50/60 Hz universal adapter or attached power supply

Battery operated option

STT DTM Receiver

Module Size: 320 x 220 x 65 mm (12.6 x 8.7 x 2.5 in)

Module Weight: 2.5 kg (5.5 lb)

Instrument Size/Weight (with controller and power supply)

Size: 330 x 180 x 250 mm (13 x 7.1 x 9.8 in)

Weight: 7 kg (15.4 lb)

STT DTM Light Source

Power Input: AC operation with 100 to 240 VAC, 50/60 Hz universal adapter

Internal Battery

Source Size: 170 x 170 x 55 mm (6.7 x 6.7 x 2.2 in)

Source Weight: 1 kg (2.2 lb) including battery

ORDERING INFORMATION

Test Module

STT-9011 Complete Dispersion Test System (C-Band only)
Includes one Dispersion Test Module Receiver (STT-9101) and one Light Source (STT-9202)

STT-9012 Complete Dispersion Test System (C & L-Band)
Includes one Dispersion Test Module Receiver (STT-9102) and one Light Source (STT-9202)

STT-9101 Dispersion Test Module Receiver (C-Band only)

STT-9102 Dispersion Test Module Receiver (C & L-Band)

STT-9202 Dispersion Test Module Standard Light Source

Optical Connectors

STT-9951 Fixed FC Optical Connectors

STT-9952 Fixed SC Optical Connectors

STT-9953 Universal Connectors (with FC and SC adapters)

Optical Accessories

SA501 Optical Patch Cord, SMF, FCUPC to FCUPC, 2 m

SA502 Optical Patch Cord, SMF, FCUPC to SCUPC, 2 m

SA511 Optical Patch Cord, SMF, SCUPC to SCUPC, 2 m

SA513 Optical Jumper, SMF, FCUPC to FCUPC, 1 ft

SA514 Optical Jumper, SMF, SCUPC to SCUPC, 1 ft

SA521 Optical Attenuator; FC, -10 dB

SA527 Replacement FC adapter for STT-9953

SA528 Replacement SC adapter for STT-9953

SA530 ST adapter for Universal Optical connector

SA531 Optical Attenuator; SC, -10 dB

SA541 Optical Splitter; FC, 90/10

SA545 Optical Splitter; FC, 50/50

SA551 Optical Splitter; SC, 90/10

SA555 Optical Splitter; SC, 50/50

Electrical Accessories

SA420 Standalone Accessory Package

Includes AC adapter, cables, and accessories for use with a PC.

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