

T-BERD®/MTS-6000, -6000A, and -8000 Platforms Chromatic Dispersion/OTDR Module



Key Features

- Fast, single-end measurement with sectional analysis capability
- CD analyzer and four-wavelength OTDR (1310/1480/1550/1625 nm)
- Pulse delay method complies with TIA/EIA FOTP-168, ITU-T G.6501 IEC 60793-1-42
- Full fiber tests performed in only 45 seconds
- Test requires operator only at one end of link

Applications

- Metro network characterization
- Full wavelength range CD measurement for CWDM network qualification
- Qualify a section of fiber within an entire link

Advanced optical module for the chromatic dispersion and OTDR analysis

The combination of a T-BERD/MTS platform and a chromatic dispersion (CD) analyzer offers a lightweight, handheld, and rugged field instrument suitable for any CD measurement situations.

Rugged reliable field solution

Housed in a rugged, weatherproof T-BERD/MTS platform, the CD analyzer is completely shockproof (drop tested as standard) with no moving parts.

Fast testing times and accurate results

With the CD analyzer, the T-BERD/MTS platforms can perform full chromatic dispersion tests in only 45 seconds. Testing time is further expedited because test functions are sequenced automatically through test scripts and results stored without operator action. This eliminates mistakes from improper manipulation of functions or missed operations.



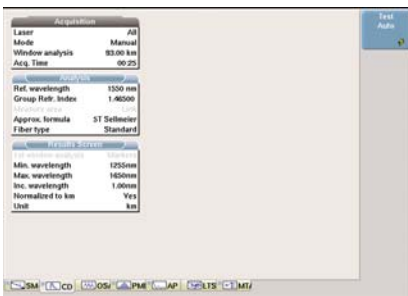
T-BERD/MTS-6000 Compact Optical Test Platform



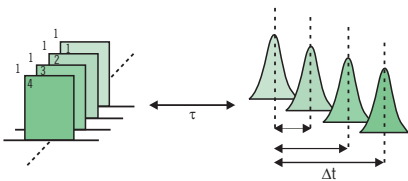
T-BERD/MTS-8000 Scalable Optical Test Platform



Single menu for Chromatic Dispersion trace and table display



Easy to configure with Test Auto function



Time difference (time delay) measurements between wavelengths

Full-band metro network coverage

In one operation, the CD analyzer quickly and easily collects comprehensive data, performing a full 1255 to 1650 nm band fiber characterization at an optimized dynamic range of 35 dB. This capability eliminates the need to make further CD measurements if network wavelengths are expanded at a later date.

Multiple measurement capability

With an option of four continuous wave (CW) lasers that can measure 1310, 1480, 1550, and 1625 nm fibers, the CD unit serves as a CD test instrument, an optical time domain reflectometer (OTDR), and CW source for insertion loss when combined with the T-BERD/MTS platform power meter.

One-button testing

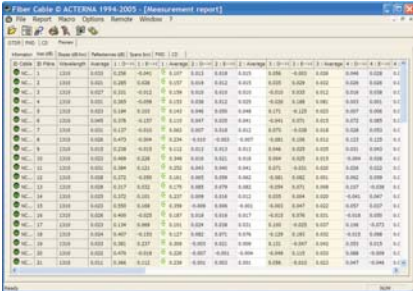
At the press of the start key, link length, delay, CD coefficient, and slope are automatically measured. This one-button testing capability means that novice as well as expert technicians can conduct CD testing without training.

Sectional analysis

The CD analyzer allows link dispersion analysis measuring intermediate connection. This capability can be used for further investigation to locate problems without moving the tester.

The pulse delay method

Measurement of time difference (time delay) between the various wavelengths at the end of the link. Chromatic dispersion is calculated using Sellmeier Approximation Equation that are based on the type of fiber under test.



Example of cable report

Error-free professional report generation

A complete PC-based software application within a Microsoft Windows environment offers detailed generation of professional chromatic dispersion reports.

- Proof-of-performance reports with a high degree of customization capabilities
- Out-of-range value summaries
- Complete fiber characterization reports, including OTDR, CD, polarization mode dispersion (PMD), and spectral attenuation

Enhanced testing solution

With the scalable design of the T-BERD/MTS platforms, field technicians can quickly and easily plug-in the appropriate test module to perform precise measurement from the outside plant to the central office. The optical test platforms offer a full range of fiber characterization test modules with OTDR, CD, and spectral attenuation measurement, as well as dense wavelength division multiplexing (DWDM) testing capabilities.

The CD test module can be combined with additional measurement capabilities in the JDSU optical test platforms, so that technicians can fully characterize the fiber network with an all-in-one solution:

- Optical insertion loss
- Optical return loss
- OTDR
- CD
- PMD
- Spectral attenuation profile



T-BERD/MTS-8000 platform



T-BERD/MTS-6000 platform

Specifications
Technical
8183 Chromatic Dispersion Plug-In
OTDR Mode

Central wavelength	1310/1480/1550/1625 nm
Wavelength accuracy ¹	±5 nm
RMS dynamic range ²	39/38/37/37 dB
Event dead zone ³	6 m max
Attenuation dead zone ⁴	30 m

Chromatic Dispersion Mode

Wavelength range	1255 to 1650 nm
Dynamic range	Up to 120 km
Wavelength absolute accuracy	±0.1 nm
Dispersion range	0.1 to 100 ps/nm ⁵ km
Zero dispersion wavelength repeatability	±0.5 nm ⁵
Dispersion coefficient repeatability ⁶	±0.2 ps/nm ⁵ km
Dispersion slope repeatability ⁶	±1%
Measurement time	From 40 s

Optical Source Mode

Wavelength range	Typical 1310/1480/1550/1625 nm ±5nm
Spectral width	<10 pm
Power stability in 24 hours	±0.1 dB
Calibrated output power	1.5/3/3/3 dBm
Variable output power	-10 dB to calibrated power

¹ DFB lasers

² The one way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level, after 3 minutes averaging

³ Measured at ±1.5 dB down from the peak of an unsaturated reflective event

⁴ Measured at ±0.5 dB from the linear regression using a FC/PC type reflectance

⁵ For 25 km G.655 link

⁶ For a 75 km G.625 link, at 1550 nm

Ordering Information
Product Code
Description

E5083CD	Medium range 1310/1480/1550/1625 nm OTDR/CD module
E508XLS	1310/1480/1550/1625 nm DFB sources option

Test & Measurement Regional Sales

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