

T-BERD®/MTS-6000/-6000A/-8000 Platforms

8100-Series integrated FiberComplete™/Broadband Source EVO modules



Key Benefits

- Supports fiber characterization with six essential tests in one module
- Reduces fiber handling 3x, increases test productivity 60%
- Characterizes links faster using automated or manual testing
- Cuts the time spent testing, analyzing results, and generating reports—decreasing deployment costs

Key Features

- Single connector port integrates FiberComplete test functions (IL/ORL/OTDR) and a broadband source supporting CD/PMD/AP tests
- OTDR features 45 dB dynamic range and a 2-meter attenuation dead zone at 1310/1550/1625 nm
- Continuous wave light source (1310/1550/1625 nm) and single-mode power meter
- 1460 – 1640nm (SCL bands) broadband source function for CD/PM/AP testing

Applications

- Metro and long-haul fiber characterization
- 4G/LTE backhaul high-speed upgrades
- Fiber network bit rate upgrades to 10/40/100 G

The JDSU 8100-Series integrated FiberComplete/Broadband Source module is part of the new EVO family that revolutionizes fiber characterization testing.

This unique module combines FiberComplete testing and broadband source functions with only one fiber connection. It supports the characterization of optical link commissioning as well as network upgrades, ensuring efficient testing and an optimal workflow.

This new EVO module is a key member of the new T-BERD/MTS portfolio of fiber characterization solutions. It enables a smaller test form factor by integrating multiple test functions into one module.

Standard module testing features include:

- Multi-wavelength FiberComplete (IL/ORL/OTDR)
- Broadband Source supporting advanced testing (CD/PMD/AP)
- Automatic OTDR macrobend detection
- Automatic Pass/Fail analysis
- Bi-directional OTDR testing and analysis

Platform Compatibility

T-BERD/MTS-6000/-6000A



Modular platform for fiber and multiple-services testing

T-BERD/MTS-8000 V2



Scalable platform for multiple-layer and multiple-protocol testing

Specifications (Typical at 25°C)

General

Weight	approx. 500 g (1.1 lb)
Dimensions (w x h x d)	213 x 124 x 32 mm (8.38 x 4.88 x 1.26 in)
Fiber type	Single-mode fiber
Laser safety	Class 1M

8100C Fiber Characterization series

OTDR

Wavelength ¹	1310 ±20 nm; 1550 ±20 nm; 1625 ±10 nm
Pulsewidth	2 ns to 20 µs
Dynamic range ²	45/45/44 dB
Event dead zone ³	0.6 m
Attenuation dead zone ⁴	2 m

Bi-Directional Loss Test Set

Wavelength ¹	1310 ±20 nm; 1550 ±20 nm; 1625 ±10 nm
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Insertion Loss

Reference methods	Loopback + side-by-side
Dynamic range	42 dB
Uncertainty ⁵	±0.2 dB
Repeatability ⁶	<0.05 dB

Optical return loss (ORL) including manual ORL

Measurement range ⁷	Up to 55 dB
Uncertainty ⁸	±0.9 dB
Repeatability ⁶	<0.1 dB

Broadband Source

Wavelength range	1460 to 1640 nm
Output power level	>5 dBm
Spectral power density ⁹	>-48 dBm/0.1 nm
Operating modes	Modulated, polarized, or continuous

Power Meter

Calibrated wavelengths	1310, 1490, 1550, 1625 nm
Power range	-3 to -55 dBm
Uncertainty ¹⁰	±0.5 dB @-30 dBm

Optical source

Wavelength	1310, 1550, 1625 nm
Output power level	-3.5 dBm
Stability	±0.1 dB @25°C over one hour
Operating modes ¹¹	CW, 270/330 Hz, 1/2 kHz, Twintest

1. Laser at 25°C and measured at 10 µs.
2. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS (SNR=1) noise level after three-minutes averaging and using the largest pulsewidth.
3. Measured at ±1.5 dB down from the peak of an unsaturated reflective event using the shortest pulsewidth.
4. Measured at ±0.5 dB from the linear regression using a FC/UPC reflectance and using the shortest pulsewidth.
5. With side by side referencing.
6. 10 consecutive measurements without disconnection.
7. With APC connector.
8. From 10 to 45 dB.
9. From 1480 to 1620 nm.
10. At calibrated wavelengths.
11. Subtract 3 dB when used in modulation mode (270/330 Hz, 1/2 kHz)

Ordering Information

8100C Fiber Characterization Modules

Part Number	Description
E8126C-FCHAR	1310/1550 nm FiberComplete™ (IL/ORL/OTDR) and Broadband Source module
E8136C-FCHAR	1310/1550/1625 nm FiberComplete™ (IL/ORL/OTDR) and Broadband Source module

Interchangeable Optical Connectors

Part Number	Description
EUNIPFCF, EUNIP CSC, EUNIP CST, EUNIP CDIN, EUNIP CLC	Ultra-polished flat connectors (UPC)
EUNIA PCFC, EUNIA PCSC, EUNIA PC DIN, ENIA PC LC	Ultra-polished 8° angled connectors (APC)

For more information on the T-BERD/MTS-6000/-6000A and T-BERD/MTS-8000 V2 test platforms, refer to their respective datasheets and brochure.

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