

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

OSA-110M: Compact Full-Band OSA



OSA-110M

Key Benefits

- **Most field-optimized full-band OSA**
 - 25-percent smaller than the smallest full-band OSA available
- **Economical OSA solution**
 - Optimize your CapEx with a 40-percent savings over average OSA solutions
 - One-stop solution covering all applications from CWDM to DWDM
- **Increase productivity and operation efficiency**
 - One-touch test with auto Pass/Fail analysis
 - Consistent graphical user interface across multiple test applications
- **Speed up test time and be prepared for 40/100G testing**
 - Scanning time of 1s for fast measurements
 - Future-proof signal analysis for 40/100G testing and new modulation formats
 - Works with T-BERD/MTS-6000, -6000A, and -8000

Applications

- Deploy and maintain DWDM Metro and Core networks
- Install and maintain CWDM systems in CATV, Access, and Mobile Backhaul networks
- Test and troubleshoot WDM-PON
- Verify high-speed 40G/100G interfaces



Compact, Full-band Optical Spectrum Analyzer for testing xWDM networks

The compact OSA-110M is the next generation of JDSU optical spectrum analyzer (OSA) modules dedicated for field testing with unmatched size, weight, price, and performance.

Housed inside the T-BERD/MTS-6000 and -6000A series platforms, it offers the smallest full-band OSA solution on the market.

Key features for the OSA-110M are:

- Full-band measurement range: 1260 and 1650 nm
- High optical resolution bandwidth to measure coarse wavelength division multiplexing (CWDM) systems at channel spacing down to 33 GHz
- High filter rejection ratio for accurate measurement of power level and optical signal-to-noise ratio (OSNR)
- Built-in wavelength calibration guarantees ± 0.05 nm wavelength accuracy
- New setup parameters for testing 40GBase-LR4 and 100GBase-LR4/ER4 interfaces according to IEEE802.3 standards
- Works with T-BERD/MTS-6000, -6000A, and -8000 platforms

The combination of a high optical resolution using innovative free-space optics, together with the full-band measurement capability, make the OSA-110M the ideal solution for testing various wavelength division multiplexing (xWDM) systems during provisioning, maintenance, and upgrade phases.

Specifications
Optical

Modes	
Analysis	WDM, Drift
Display	Graph, WDM Table, Graph + Table
Spectral Measurement	
Wavelength range	1260 to 1650 nm
Abs. wavelength accuracy ^{2,5}	± 0.05 nm
Wavelength reference	internal
Resolution bandwidth(FWHM) ²	typ 0.1 nm
Readout resolution	0.001 nm
Scanning time (including WDM analysis)	
full band	<5 s
C-band	1 s
Measurement samples	111,000
Power Measurement	
Dynamic range ³	-60 to +23 dBm
Absolute accuracy ^{2,4}	typ ± 0.6 dB
Total safe power	+23 dBm
Readout resolution	0.01 dB
Optical Measurement	
Optical rejection ratio (ORR) ²	
at ± 0.2 nm (for 50 GHz ch-spacing)	typ 35 dBc
at ± 0.4 nm (for 100 GHz ch-spacing)	typ 40 dBc
WDM Measurement	
Channel spacing	33 to 200 GHz, CWDM
Max no. of channels	256
Data signals	up to 1 TBps
Modulation formats (for example, NRZ/RZ-OOK, DB, PSBT, CSRZ, DPSK, BPSK, QPSK, and PM QPSK)	all formats supported

General

Optical port	universal SM-PC, universal SM-APC
Connectors	FC, SC, ST, LC, DIN
ORL	>35 dB
Size (module)	122 x 235 x 26 mm (4.8 x 9.3 x 1.0 in)
Weight (module)	0.6 kg (1.3 lbs)
Temperature	
Operating	+5 to +40°C (41 to 104°F)
Storage	-20 to +60°C (-4 to 140°F)
Relative humidity	0 to 95% non-condensing

Ordering Information

Part Number	Description
OSA Modules	
2304/91.02	OSA-110M, PC-version
2304/91.12	OSA-110M, APC-version
Accessories	
C8200	T-BERD/MTS-8000 Dual module carrier required for use in T-BERD/MTS-8000
Application software for report generation	
EOFS100	Optical fiber trace software
EOFS200	Optical fiber cable software

Notes:

- All specifications are for a temperature of 23°C ± 2°C with an FC/PC connector unless otherwise specified, after warm-up.
- Typical for 1520 to 1565 nm at 18° to 28°C
- Max. power per channel +15 dBm
- At -10 dBm, including PDL
- Recommended period for recalibration is 2 years

Test & Measurement Regional Sales

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