

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

**OSA-610B High-Resolution OSA for 400 G
Flex-Grid/Nyquist DWDM**

The innovative VIAVI Solutions High-Resolution Optical Spectrum Analyzer (OSA-610B) test solution for T-BERD/MTS-8000 (V2) and -6000A mainframes can fully analyze the optical performance of current 10/40/100 G and future 400 G and higher optical transmission signals.

Based on coherent detection techniques, it provides unprecedented frequency resolution to precisely characterize optical signals (power level and frequency) and to analyze details never seen with previous field OSAs.

This is the industry's first solution that brings lab-type performance to a field-form-factor for testing future high-speed DWDM systems.

Platform Compatibility

T-BERD/MTS-6000A



Compact network test platform for network installation and maintenance

T-BERD/MTS-8000 (V2)



Scalable platform for multiple-layer and multiple-protocol testing



BENEFITS

- Industry's first field OSA that fully analyzes 400 G Nyquist WDM signals
- It separates and analyzes narrow guard-bands in compressed super-channels enabling 400 G deployments
- The smallest and lightest highperformance 400 G ready OSA available
- Field optimized, rugged and durable design with no moving parts

FEATURES

- Extended C-band acquisition range
- Measures frequency, power level, and OSNR
- Patented design (US patent 8,693,512) provides industry leading optical performance in resolution bandwidth, noise floor wavelength accuracy
- Can measure side-mode suppression ratio

APPLICATIONS

- Qualify 10/40/100/400 G components and systems
- Validate and deploy 100 G and 400 G Flex-Grid DWDM
- Characterize and verify center wavelength of optical transmitters
- Qualify Flex-Grid wavelength selective switches and ROADMs with a high granularity (3.125 GHz and below)

Specifications (typical at 25°C)

Optical Interfaces	
Input	SMF9/125 µm single-mode fiber
Interchangeable optical connectors	FC, SC, DIN
General	
Weight	500 g (1.1 lb)
Dimensions (w×h×d)	213x124x32mm (8.38x4.88x1.26 in)
Environmental	
Temperature	
Operating	0°C to +40°C (32°F to 104°F)
Storage	-20°C to +60°C (-4°F to 140°F)
Humidity	95% without condensing
EMI/ESD	CE compliant
EOSA610	
Optical frequency (wavelength) range	196.65 - 190.7 THz (1524.5 - 1572.06 nm)
Absolute uncertainty of frequency (wavelength) ^{1,2}	±370 MHz (±3 pm)
Frequency resolution	300 MHz (2.4 pm)
Minimum signal separation	2 GHz (16 pm)
Input power range (in 300 MHz bandwidth) ³	-65 dBm to +10 dBm
Max. safe total input power ⁴	+17 dBm
Close-in dynamic range	>40 dB at ±8 pm (±1 GHz) >50 dB at ±16 pm (±2 GHz)
Noise floor	-84 dBm
Spurious-free dynamic range	>45 dB
Absolute uncertainty of power level ^{1,2,5}	±0.5 dB
Display resolution	0.01 dB
Return loss	>50 dB
Measurement time ⁶	minimum 1 s (per channel)
Measurement statistics	Delta wavelength, delta power, delta OSNR

1. Over the entire frequency range. Coarse mode disabled
2. Average of 5 consecutive sweeps
3. Power of unmodulated single-frequency laser or peak power of modulated signal in 300 MHz optical bandwidth
4. Total power for all input signals
5. At -20 dBm input power
6. Over 50 GHz sweep range, no averaging

Ordering Information

Description	Part Number
High-resolution spectrum analysis module with extended C band - PC	EOSA610B-PC
High-resolution spectrum analysis module with extended C band - APC	EOSA610B-APC