

## Nano OSA™ Modules (4100 Series)

### OSA-4100 Optical Spectrum Analyzer Module and OCV-4100 Optical Channel Verifier Module for T-BERD®/MTS-2000 V2, -4000 V2, -5800, CellAdvisor 5G, OneAdvisor 800 and OneAdvisor 1000 Platforms

As CWDM and DWDM technology adoption for broadband services continue to grow in Access Networks, technicians require comprehensive and lightweight xWDM test tools. VIAVI OSA-4100 Optical Spectrum Analyzer and OCV-4100 Optical Channel Verifier modules are designed to speed up deployment, maintenance and trouble shooting of passive and active CWDM and DWDM fiber networks. The module's optical performance, combined with the platform's suite of testing features, ensures that comprehensive testing is performed right – the first time.

OCV-4100 scans any optical CWDM or DWDM system over the full wavelength range and automatically records all channels with the ITU-T channel (ch) number, wavelength or frequency, offset and the related power level.

OSA-4100 provides an addition measurement of the optical signal to noise ratio (OSNR) per channel to qualify amplified links.

An integrated SFP/SFP+ slot can drive fixed or tunable pluggables to validate or program transceivers in the field to activate links faster and improve first time turn-up rate.

#### Features and Benefits

- Turn up and verify any new WDM service with confidence (CWDM, DWDM, MWDM, LWDM)
- Field ready, light, compact and robust
- Measures ch-power, wavelength, offset and OSNR
- Drift test application for ch-power and ch-wavelength
- High input power range for testing CATV signals
- SFP/SFP+ slot for fixed or tunable transceivers



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### Optical Specifications (typical at 23°C ±5°C)

<b>Modes</b>	
Operating modes	WDM, OO-OSNR <sup>1</sup> , Drift <sup>2</sup>
Display modes	Graph (trace + overview) WDM table and graph + table
Measurement parameters	Ch- #, Ch-power, Ch-wavelength, Ch-OSNR <sup>1</sup> , Ch-offset, Drift <sup>2</sup>
SFP functions <sup>3</sup>	SFP info (type, Ch-#, tuning range) SFP tuning and programming
<b>Spectral Measurement Ranges</b>	
Wavelength range	1260 nm to 1650 nm
Wavelength uncertainty <sup>4,6</sup>	±0.150 nm (±18.75 GHz)
Wavelength reference	Internal
Readout resolution	0.01 nm
Res. bandwidth (FWHM <sup>4</sup> )	0.1 nm
Channel spacing <sup>5</sup>	37.5 GHz to 200 GHz, CWDM
Number of channels	Max 256
<b>Power Measurement Ranges</b>	
Dynamic range	-55 to to +23 dBm (per channel)
Total safe power	+25 dBm
Noise floor RMS	-60 dBm
Absolute accuracy <sup>4</sup>	±0.8 dB
Readout resolution	0.01 dB
Scanning time	< 5 s (full band)
<b>Optical Measurements</b>	
Optical Rejection Ratio (ORR) <sup>7</sup>	
- at 0.2nm (25 GHz)	25 dB
- at 0.4nm (50 GHz)	30 dB
OSNR measurement range	up to 25 dB
In-Band OSNR measurements	up to 30 dB with On/Off OSNR
<b>Optical Port</b>	
Input port	SM/APC and SM/PC
Switchable optical adapters	SC mounted (FC, LC and ST on request)
Optical return loss	>35 dB

<sup>1</sup> Enables out-of-service in-band OSNR measurements  
Included with OSA-4100, OCV-4100 requires OSNR SW-option

<sup>2</sup> Included with OSA-4100, OCV-4100 requires Drift SW-option

<sup>3</sup> Requires SFP SW-option

<sup>4</sup> Typical at -5 dBm between 1520 and 1565 nm including PDL

<sup>5</sup> Two channels at equal power level

<sup>6</sup> Typical at 23°C ±5°C

<sup>7</sup> Typical for 1520 to 1565 nm at 18 to 23°C

### Optical Specifications (typical at 23°C ±5°C) continued

<b>SFP/SFP+ Bay</b>	
Can host one SFP/SFP+ transceivers or one tunable laser (not included)	
<b>General</b>	
Weight	0.45 kg (1 lb)
Dimensions (W X H X D)	128 x 134 x 40 mm (5.04 x 5.28 x 1.57 in)
<b>Temperature</b>	
Operation	+5 to +40°C (41 to 104°F)
Storage	-20 to +60°C (-4 to 140°F)

### Ordering Information

<b>Modules</b>	<b>Part Number</b>
OCV-4100 Optical Channel Verifier APC	410CV-APC
OCV-4100 Optical Channel Verifier PC	410CV-PC
OSA-4100 Optical Spectrum Analyzer APC	410SA-APC
OSA-4100 Optical Spectrum Analyzer PC	410SA-PC
<b>SW-Options</b>	<b>Part Number</b>
<i>When ordered together with mainframe</i>	
OCV Drift SW Option (for OCV-4100)	41DRIFT
OCV OSNR SW Option (for OCV-4100)	41OSNR
SFP SW Option	41SFP
<i>When ordered as an upgrade, without mainframe</i>	
OCV Drift SW Option (for OCV-4100)	41DRIFT-UPG
OCV OSNR SW Option (for OCV-4100)	41OSNR-UPG
SFP SW Option	41SFP-UPG
<b>Accessories: Adapters</b>	<b>Part Number</b>
Switchable ST adapter	2155/00.32
Switchable FC adapter	2155/00.05
Switchable SC adapter	2155/00.06
Switchable LC adapter	2155/00.07



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