

## Datasheet

# Optical Spectrum Analyzer (OSA) Modules

EM316OSA-40DC21



## Features

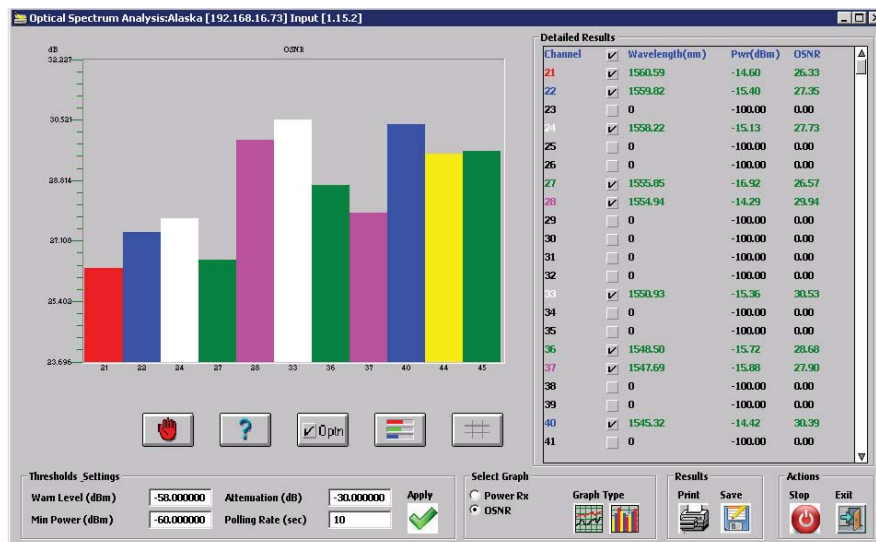
- Full C-Band scanning coverage
  - 100GHz spacing
  - DWDM channels 21-60
- Separate channel data
  - Wavelength and frequency
  - Optical power
  - Optical signal-to-noise ratio (OSNR)
- Fiber Driver management compatibility
- Local USB interface for PC-based optical performance monitor application
- High reliability technology - no moving parts and GR-63/1209/1221 qualified
- Fiber Driver chassis compatibility
- Fiber optic (98%/2%) splitter cable (ordered separately)

## Overview

The Optical Spectrum Analyzer (OSA) module complements the Fiber Driver® DWDM transport solution by providing real-time optical performance analysis for any DWDM aggregated optical link. The single-slot module operates as a standalone device or as a fully integrated and managed Fiber Driver system component.

The module provides the optical channel monitoring (OCM) functionality of an advanced Optical Spectrum Analyzer (OSA). The OSA monitors signal status and delivers precise optical performance information including wavelength, frequency, signal power, and estimated optical signal-to-noise ratio (OSNR) for each individual wavelength channel in an optically multiplexed C-Band DWDM link. These parameters are important for the proper evaluation, deployment, management, and maintenance of optical transports systems.

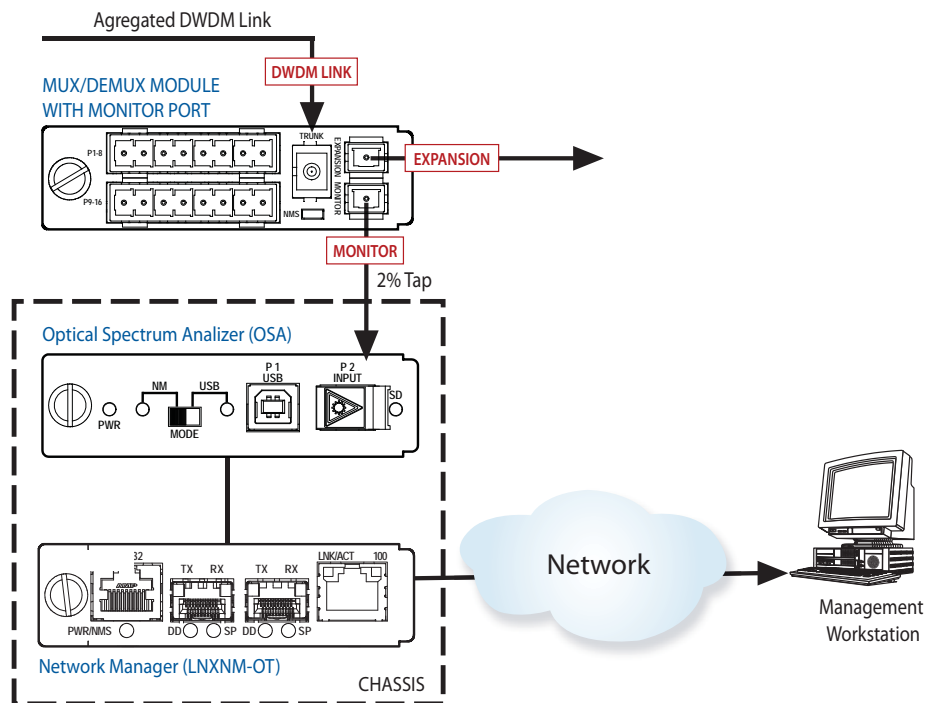
When integrated in a managed Fiber Driver system, the spectrum analysis information is accessible through the Fiber Driver network manager (LNXNM-OT). It provides secure local serial and remote Ethernet interfaces for complete management access to the OSA analysis data either in text-based windows or graphically through MRV's MegaVision Pro.



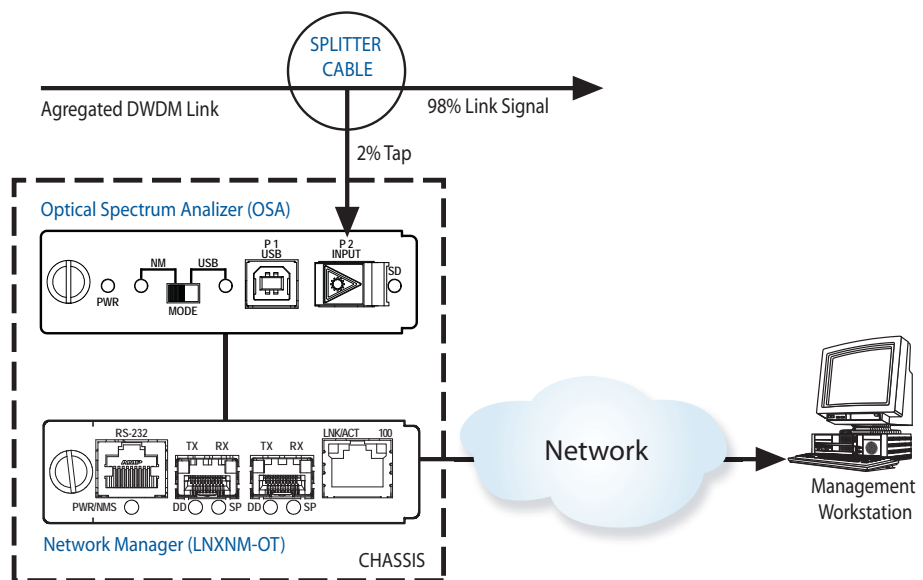
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The 1-slot module can also connect to a PC application through a USB interface. The PC-based optical performance monitoring application monitors and graphically displays the same module information as through the management module.

### Application Diagram 1



### Application Diagram 2





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## Optical Specifications

<b>Wavelength Range</b>	C-band (DWDM channels 21-60)
<b>Number of Channels</b>	40
<b>Channel Spacing</b>	100 GHz
<b>Absolute Wavelength Accuracy</b>	± 50 pm
<b>Relative Wavelength Accuracy</b>	30 pm
<b>Input Power Range</b>	- 60 to -10 dBm
<b>Channel Power Accuracy</b>	± 0.5 dB
<b>Power Resolution</b>	0.1 dB
<b>PDL</b>	0.3 dB
<b>Response Time</b>	<10 ms (raw data only)
<b>OSNR</b>	Minimum: 25 dB; Typical: 30 dB
<b>OSNR Accuracy</b>	± 2 dB

## Physical Specifications

<b>Operating Temperature:</b>	-0°C to 50°C (32°F to 122°F)
<b>Storage Temperature</b>	-40°C to 85°C (-40°F to 185°F)
<b>Relative Humidity</b>	85% maximum, non-condensing
<b>Physical Dimensions (W x H x D)</b>	25 mm x 75 mm x 175 mm deep (1" x 3" x 7" deep)
<b>Approximate Weight</b>	450 grams (16 oz)
<b>Regulatory Compliance</b>	FCC Part 15 (Class A); IC (Class A); EMC Directive: Emission (Class A) and Immunity; RoHS Directive; China RoHS; WEEE Directive

## Ordering Information

<b>Model</b>	<b>Description</b>
<b>EM316OSA-40DC21</b>	Optical Spectrum Analyzer, DWDM, C-band (ITU channels 21-60)
<b>10610054-0001R</b>	Optical splitter cable, 98% and 2% signal outputs

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