

MEMS Optical Spectrum Analyzer Module

Optoplex's near-infrared optical spectrum analyzer module (NIR OSA) is a high performance optical spectral engine for Process Analytical Technology (PAT) and Fiber Optic Test Equipment (FOTE) applications. Based on proprietary MEMS and micro-optic technologies, Optoplex's OSA module offers higher spectral resolution than those available in the market, which is demanding in today's increasing spectroscopy applications. Moreover, the MEMS tunable filter provides high-speed tuning that is highly demanded in many applications. Full range scanning is less than 1 sec for our standard C, L, C+L and O-band OSA and less than 2 sec for our full-band OSA.

Other features include: compact, light-weight, low power consumption and wide wavelength coverage. With a dimension of 100x70x10 mm, Optoplex's compact OSA modules are suitable for a variety of handheld, portable, bench-top and inline OSA/spectrometer applications.

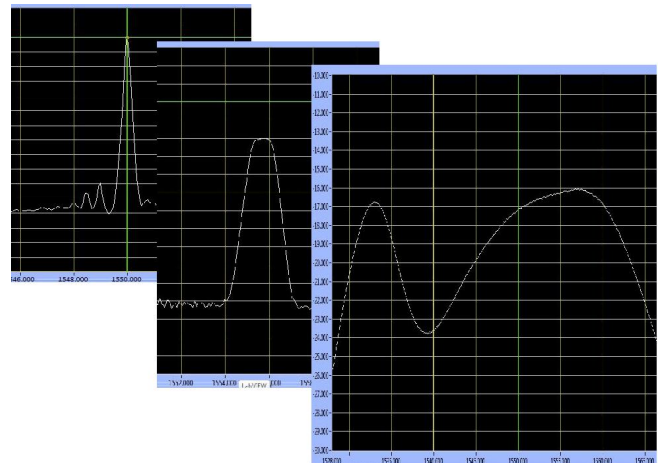


Applications

- Optical spectral analyzing
- Analytical spectroscopic instrumentation
- Optical testing in optical communications
- Optical channel/performance monitoring (OPM)
- Portable OSA in T&M and field test
- Biomedical optics, i.e., OCT imaging
- Fiber sensing
- Portable OSA in defense /military applications

Key Features and Benefits

- Super spectral measurement performance
 - Extraordinary spectral resolution, and
 - High wavelength accuracy
- High power sensitivity
- High power accuracy
- Compact size, light weight
- Fast scan speed
- Software upgradeable
- Cost-effective



Optical Spectrum Analyzer Modules - Product Datasheet

Part Number	Unit	OM-1C2MM353	OM-2T2MM301	OM-2O2MM302	OM-2AFOE304
Spectral Measurement					
Wavelength Range	<i>nm</i>	1527 – 1567	1521 - 1611	1260 – 1360	1250 - 1650
Resolution Bandwidth (FWHM)	<i>nm</i>	0.15	0.3	0.4	3
Wavelength Accuracy	<i>nm</i>	0.04	0.05	0.08	1
Wavelength Repeatability ^{1,2)}	<i>pm</i>	± 10	± 15	± 20	± 100
Wavelength Readout Resolution	<i>pm</i>	1	1	1	1
Wavelength Linearity ¹⁾	<i>nm</i>	± 0.01	± 0.01	± 0.01	± 0.01
Power Measurement					
Dynamic Range ¹⁾	<i>dB</i>	+10 ~ -55	+10 ~ -55	+10 ~ -55	+10 ~ -55
Power Accuracy ¹⁾	<i>dB</i>	± 0.5	± 0.5	± 0.5	± 1.0
Power Repeatability ^{1,2)}	<i>dB</i>	± 0.1	± 0.1	± 0.1	± 0.1
Power Readout Resolution	<i>dB</i>	± 0.01	± 0.01	± 0.01	± 0.01
Power Linearity ¹⁾	<i>dB</i>	± 0.1	± 0.1	± 0.1	± 0.1
Optical Rejection Ratio (ORR) ¹⁾					
@25GHz (0.2nm)					
@50GHz (0.4nm)		25			
@100GHz (0.8nm)		40	25	25	
@200GHz (1.6nm)		50	40	40	25
General Specifications					
Scanning Time	<i>s</i>	0.5	1	1	2
Power Consumption	<i>W</i>	< 2.5			
Electronics Interface	-	UART			
Fiber Length	<i>m</i>	1.0 ± 0.1			
Optical Connector	-	LC/UPC			
Dimension	<i>mm</i>	A or B	A or B	A or B	A or B
		A: 100 x 70 x10; B: 100 x 70 x20			
Operating Temperature Range	<i>°C</i>	0 ~ +65			
Storage Temperature Range	<i>°C</i>	-40 ~ +85			

Notes:

- 1) Operation in the Standard Resolution Mode.
- 2) 15 minutes short term.