



matrIQ-OSA-1001

# matrIQ-OSA™ 1000 Series Optical Spectrum Analyzer

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## PRELIMINARY SPEC SHEET

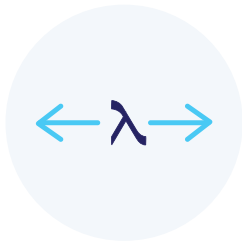
Coherent Solutions' matrIQ-OSA enables cost-effective spectral test and measurement in a compact and versatile benchtop form factor.

The matrIQ-OSA is grating-based and is designed for efficient, space saving performance where space and time are critical. It is an excellent fit for testing of optical sources, amplifiers, transceivers and passive optical components.

matrIQ-OSA is available in a range of wavelengths for different applications, so you pay only for the capabilities you need.

  
coherent  
solutions  
complexity made simple.

# Features and Benefits



## Range of wavelengths

Choose the model that meet your requirements and pay for only the capabilities you need. matrIQ-OSA can also be customized to other customer specified wavelength range.



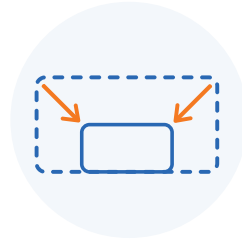
## Grating-based architecture

Accurate measurement of optical spectrum without artifacts: good dynamic range, high optical throughput, high spectral resolution and high wavelength accuracy.



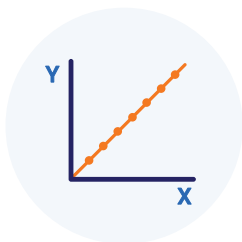
## Simple, intuitive operation with cohesionUI

cohesionUI makes it simple to control matrIQ-OSA from your PC or mobile device. Its cutting-edge design offers a sleek modern interface, cross device compatibility, customizable views and remote network access.



## Ultra-compact form factor

Housed in a compact and robust metallic case, its small footprint helps you utilize your bench space. No more bulky and heavy OSAs occupying the entire workbench with the super-portable matrIQ-OSA.



## Excellent measurement correlation with our optical PXI modules

Shared product architecture lets you validate your system and test requirements in the lab with matrIQ-OSA, and scale up to high-volume automated production testing with the OSAPXIe module.



## USB or LAN operation

Connect to matrIQ-OSA with USB or LAN for simple setup and operation.

## matrIQ-OSA spectral measurement in cohesionUI

MATRIQ-OSA | 0000 CSL-180000 HW1.00FW0.03

REPEAT IS OFF SINGLE SWEEP

TOTAL POWER  dBm

SWEEP ANALYSIS

HORIZONTAL SETTINGS

START  THz

STOP  THz

POINTS

APPLY

ZOOM

RESET ZOOM

MIN  THz

MAX  THz

SHOW/HIDE ZOOM SLIDER

NUMBER	FREQUENCY (GHz)	LEVEL (dBm)
1	191101.375	-13.461335
2	191397.734375	-3.794399
3	191700.5	-10.437739

# Target Applications

- Power and wavelength measurements
- Spectral analysis on optical components
- WDM Channel monitoring
- Optical Signal to Noise Ratio (OSNR) measurements
- Side-mode Suppression Ratio (SMSR) measurements
- Passive component spectral response characterization
- Data modulation analysis
- Modulator bias adjustments
- General purpose spectral analysis R&D labs
- Gain equalization

# Technical Specifications

General Specifications	matrIQ-OSA				
Bus connection	USB and Ethernet				
Fiber type	SMF28				
Optical connector type	FC/APC, FC/PC, SC/PC, SC/APC				
Number of channels	1				
Dimensions (H x W x D)	45 x 114 x 212 mm   1.7 x 4.5 x 8.3 inch				
Weight	~ 1.1 kg   ~ 2.4 lbs				
Operating temperature range	5 °C to 45 °C   41 °F to 113 °F				
Storage temperature range	-40 °C to 70 °C   -40 °F to 158 °F				
Model Number	1001	1002	1004	1005	1006
Wavelength range	1265-1355 nm	1355-1445 nm	1525-1615 nm	1510-1570 nm	1565-1625 nm
OSA type	Grating				
Resolution bandwidth [FWHM]	0.20 nm	0.21 nm	0.24 nm	0.17 nm	0.17 nm
Wavelength linearity	15 pm				
Wavelength repeatability <sup>1</sup>	± 20 pm				
Wavelength accuracy <sup>1</sup>	± 25 pm (Typical) ± 70 pm (Max)				
Optical rejection @ 0.3 nm from peak	>25 dB	>21 dB	>16.5 dB	>37 dB	>37 dB
Damage input power	+30 dBm				
Max power	+10 dBm				
Absolute power accuracy <sup>1,2</sup>	± 0.6 dB				
Relative power accuracy <sup>1,2</sup>	± 0.5 dB				
Power repeatability <sup>2</sup>	± 0.1 dB				
Polarization dependence	< 0.3 dB				
Dynamic range	60 dB				
Return loss	>30 dB				

PRELIMINARY SPECS AS OF JANUARY 2019

Notes  
 1 Input power range -40dBm to -10dBm.  
 2 With unpolarized source.

# Ordering Information

OSAMatrIQ - XXXX - XX

## Configuration number

**1001** = 1265 - 1355 nm

**1002** = 1355 - 1445 nm

**1004** = 1525 - 1615 nm

**1005** = 1510 - 1570 nm

**1006** = 1565 - 1625 nm

## Connector type

FC = FC/PC

FA = FC/APC

SC = SC/PC

SA = SC/APC



## Product Warranty

This product comes with a 3 year warranty.

## About Coherent Solutions

Coherent Solutions is a world-leader in photonics test and measurement. Our portfolio of benchtop and modular test instruments is rapidly expanding to meet the needs of scientists, engineers and manufacturers around the world. No matter where you are, we'll work with you to solve complex problems with simple, intuitive solutions.

**To find out more, get in touch with us today.**

### Coherent Solutions Ltd

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