



INSTRUMENTATION NEWS

Spring 2023

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- >10 Hz filter update rate

WaveAnalyzer™ 400A OSA

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WaveMaker™ 4000A

Optical Spectrum Synthesizer



Tradeshaw Events

OFC 2023 in San Diego

EXAT 2023 in Matsue / Japan

Laser Munich 2023

COMNEXT in Tokyo / Japan

Introducing WaveShaper® 1000B and 4000B covering the Super C-Band

Coherent introduces the WaveShaper 1000B and 4000B covering the Super C-Band. The 1000B has a 1x1 and the 4000B a 1x4 port configuration. Both units support arbitrary spectral filter shapes of attenuation and phase across the entire operating range from 1523.142 nm to 1573.301 nm. A minimum filter bandwidth of 10 GHz (FWHM) is available. When selecting the “High Resolution” mode – which applies a double pass configuration inside the instrument – the minimum bandwidth reduces to 8 GHz.



The WS 1000B and 4000B offer a filter update rate of more than 10 uploads per second!

The units include a web server and can also be controlled through Coherent's WaveShaper App package.

The instrument comes with a RESTful Application Programming Interface (API) so it can be integrated in automated systems using various programming and operating environments.

This new WaveShaper is demonstrated at OFC 2023 and starts shipping in March 2023.

New: WaveAnalyzer™ 400A covering the Super C-Band

The family of the WaveAnalyzer 400A is growing! Newest member is the WA 400A covering the Super C-Band from 190.623 THz to 196.727 THz (1523.9 nm to 1572.7 nm). This unit comes in addition to the existing C-Band unit and C+L Band unit. All WA 400A units offer a 500 MHz (4 pm) resolution bandwidth and an update rate of 2 Hz for a sweep across the entire range.



E-mail inquiries to:

WaveShaper@finisar.com

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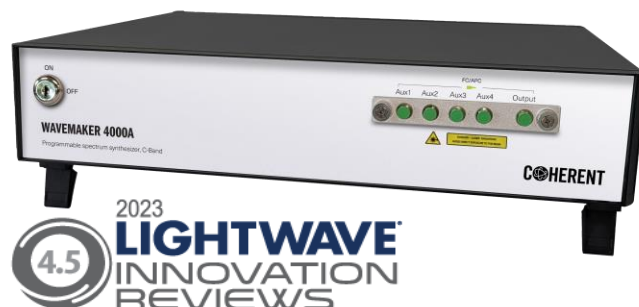
The WA 400A offers a small footprint of only half a rack-width and 1U height.

The WaveAnalyzer 400A includes a web server and is also supported by the Coherent WaveAnalyzer Application Software package which offers various measurement capabilities like DWDM Analysis, several OSNR measurement methods and Side-Mode Suppression Ratio (SMSR) measurement. All measurement and analysis functions are also accessible through the RESTful Application Programming Interface.

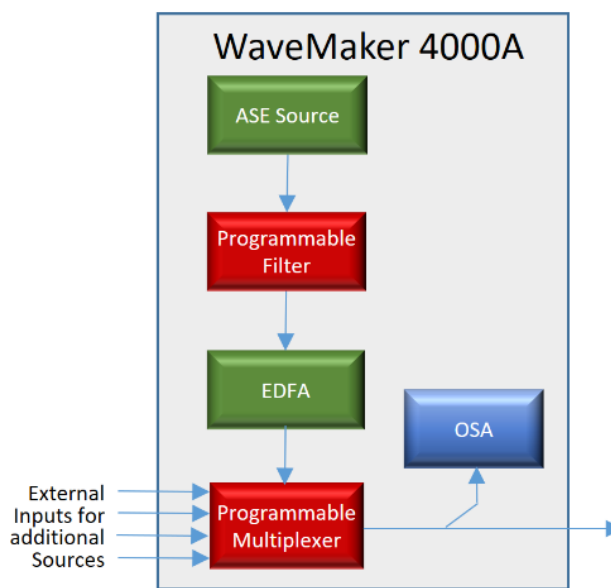
The new instrument is demonstrated at OFC 2023 and will start shipping in March 2023.

WaveMaker™ 4000A Programmable Optical Spectrum Synthesizer

The WaveMaker 4000A has been awarded 4.5 out of 5 points in the 2023 Lightwave Innovation Review! This result recognizes its innovative approach to generate spectrally shaped optical multi-channel signals for communication component and system test applications.



The internal setup of the WaveMaker 4000A is shown in the figure below. The unit includes an ASE Source plus a programmable filter for shaping the ASE – typically carving out the desired channels. An EDFA ensures that sufficient output power is available. The programmable Multiplexer removes remaining undesired ASE (for example between channels) and also supports multiplexing additional channels from external sources into the signal. As a last step the output signal is measured with an internal Optical Spectrum Analyzer module.



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With this configuration, shapes with widths (FWHM) as narrow as 10 GHz and slopes as steep as 600 dB/nm can be generated. Extinction ratios exceeding 60 dB can be achieved.

Programming of the WaveMaker is done either through a GUI or using the RESTful Application Programming Interface (API).

The WaveMaker will be demonstrated at OFC in March 2023. Please come along and discuss your requirements with us! You are also welcome to provide your comments and questions by email to waveshaper@finisar.com!

Upcoming Trade Show Events

[OFC 2023 in San Diego / California \(7 to 9 March\)](#)

Coherent will be exhibiting at OFC booth 3815 at the San Diego Convention Center, San Diego, California, USA. The product demonstrations will include the following solutions and concepts from the test instrument group:

- The newly introduced **WaveShaper 4000B** and **WaveAnalyzer 400A**, both covering the Super C-Band.
- The **WaveMaker 4000A** demonstrating generation of arbitrary spectra for system test applications.

[EXAT 2023 in Matsue / Japan \(17 to 19 May 2023\)](#)

Our Japanese partner Sevensix attends this Symposium on future trends in optical communications with an exhibition of Coherent test equipment.

[Laser World of Photonics in Munich / Germany \(27 to 30 June\)](#)

Coherent will exhibit at the Laser World of Photonics exhibition in Munich, Germany from 27 to 30 June. The product demonstration will include instruments for filtering and shaping of ultra-short laser pulses.

[COMNEXT in Tokyo / Japan \(28 to 30 June\)](#)

Our Japanese partner Sevensix displays Coherent products in the Fiber Optics Exhibition (FOE) section of this