

BOSA 400

The true high resolution optical spectrum analyzer

Aragon Photonics produces the most advanced and versatile Optical Spectrum Analyzer, the BOSA. Thanks to our unique optical filtering and full spurious free dynamic range the BOSA achieves reliable measurements avoiding artifacts and undesired effects on your measurements.

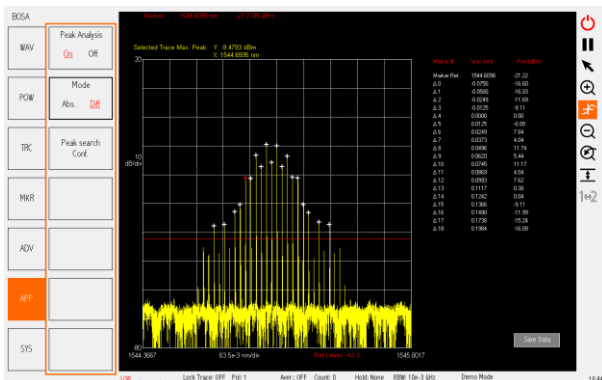
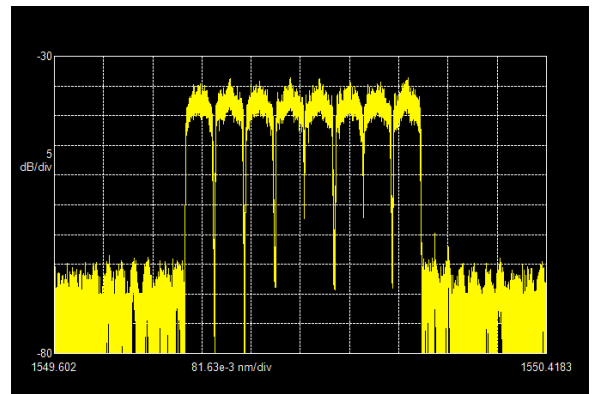


BOSA 400 key features

- ✓ 10 MHz pure optical resolution
- ✓ Unique >80 dB spurious free dynamic
- ✓ Best wavelength accuracy 0.5 pm
- ✓ 20 nm/s measurement speed
- ✓ C, L & O bands available
- ✓ Easily automated
- ✓ Versatile with add-on options
- ✓ Modern & intuitive

The BOSA 400 is our latest model. It brings a good range of measurement possibilities to the optical domain thanks to the combination of all the key features. It reveals the optical spectra of the signals with a **detail and precision** that enables direct measurement of performance parameters and dynamic effects of, among others:

- **Advanced modulation formats: Nyquist-WDM, OFDM, 100G, 400G**
- Optical communication systems
- **Lasers: VCSEL, DFB, DML**
- Comb/pulsed sources



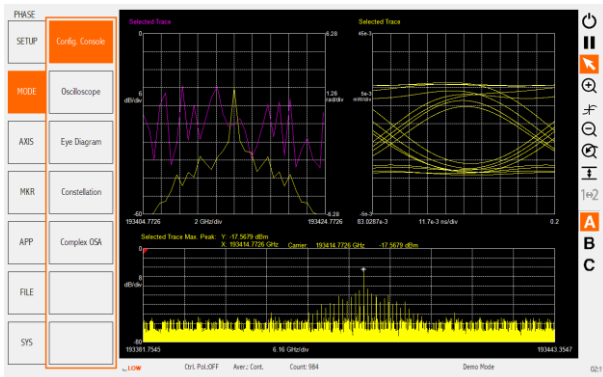
The new BOSA 400 series can be made possible only thanks to the **high quality components** inside and the careful control of all of them. Besides, all the graphic interface has been redesigned to be faster and more operative than ever.

Take most of your measurements with some of the **advanced functions**:

- | | |
|----------------------------------|----------------------------|
| <i>Peak analysis</i> | <i>Variable resolution</i> |
| <i>ONSR app</i> | <i>Multiple traces</i> |
| <i>Trace-locking</i> | <i>Power integral</i> |
| <i>Dual-channel polarization</i> | <i>Macro editor tool</i> |

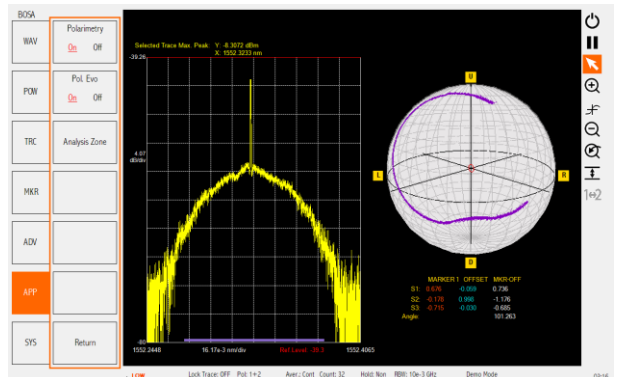
Phase measurement

Turn the BOSA 400 into an **Optical Complex Spectrum Analyzer (OCSA)** taking advantage of the Brillouin effect to obtain the optical phase of modulated signals with only $\pm 1^\circ$ accuracy. Working with a PPG or AWG and within a range of **70 MHz to 2 GHz of pattern frequency** BOSA Phase retrieves the time domain information – **eye-diagram**, constellation, time-resolved chirp – without the need of demodulation and independent of the modulation format.



Polarimetry extension

Turn your BOSA 400 into the most advanced tool for polarization analysis and measure the **state of polarization (SOP) spectrally-resolved**. Use markers to measure polarization differences between different light sources or different spectral components or plot the evolution of the SOP with wavelength to measure DGD. Besides, this option enables **PDL** measurement for passive devices.



Component analyzer

You can turn your BOSA 400 into a **passive component** analyzer. Including a high-dynamic range measurement port synchronized with the TLS sweep, the response of optical filters or Bragg gratings can be measured with high precision: **± 0.2 dB**, fast speed: **100 nm/s** and great sensitivity: **-70 dBm (IL) & -45 dBm (RL)**.

Tunable Laser Source

Use the high quality external cavity tunable laser source inside the BOSA for your own applications. You'll enjoy the performance of our laser: **high accuracy** < 2 pm, **narrow linewidth** < 1 MHz, fast scanning speed up to 100nm/s, output power **> 1 mW**. Remote control or trigger synchronization are provided.

BOSA 400 ¹ main specifications	C band	C+L band	O band
Model Parameters			
Wavelength Range	1525 – 1565 nm	1525 – 1615 nm	1265 – 1345 nm
Optical Resolution ²	10 MHz		
Wavelength Accuracy	± 0.5 pm		
Spurious free Dynamic Range ²	> 80 dB		
Calibrated Input Power Range	+13 to -70 dBm		
Close-in Dynamic range	> 40 dB @ ± 0.2 pm	> 60 dB @ ± 0.4 pm	
Max. Safe Input Power	+20dBm		
Sensitivity ²	-70dBm/0.1pm		
Power accuracy ²	± 0.5 dB		
Polarization Measurement	Two orthogonal polarization channels. Full state-of-polarization with polarimetry extension		
Measurement time	1 sec. for 20 nm		1 sec. for 10 nm

¹ BOSA 400 uses an internal TLS, please contact support@aragonphotonics.com for more information
² Typical values, measured at 0 dBm @ 1550 nm.