



T&M EQUIPMENT
OPTICAL
COMMUNICATIONS

The current demand on high bandwidth data services and applications is growing at high speed. Data centers can already reach 400G thanks to the latest optical modules. The optical network architectures are more and more adaptive, and the capacity and reach is directly related with the spectrum utilization of the channels. Therefore, the future network architecture needs **extremely precise characterization of the optics and photonics elements involved**.

Today, **optical communication technologies require a precise portrait of the signals, components and subsystems**. And that includes the optical spectra. Although a regular optical spectrum analyzer (OSA) can provide good spectral information for many applications, most of optical technologies require much higher resolution in order to see further, to analyze in depth and even save time when exploring new ideas and launching new devices.



CONVENTIONAL USERS & APPLICATIONS



THE CUSTOMER



THE APPS



OUR SOLUTION

1

Educational & Universities

Optical sources
characterization

Optical engineering departments at Universities around the world can take advantage of Aragon Photonics high precision solutions to confirm their investigations.

2

Research & development

Optical communications
Quantum photonics

R&D labs invest huge amounts of money in new developments and equipment. High end products such as BOSA and HDCA help companies make the invest profitable .

3

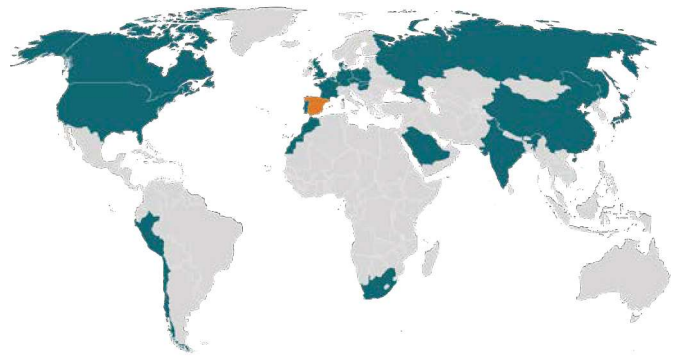
Manufacturers

Transceivers
FBGs
PICs

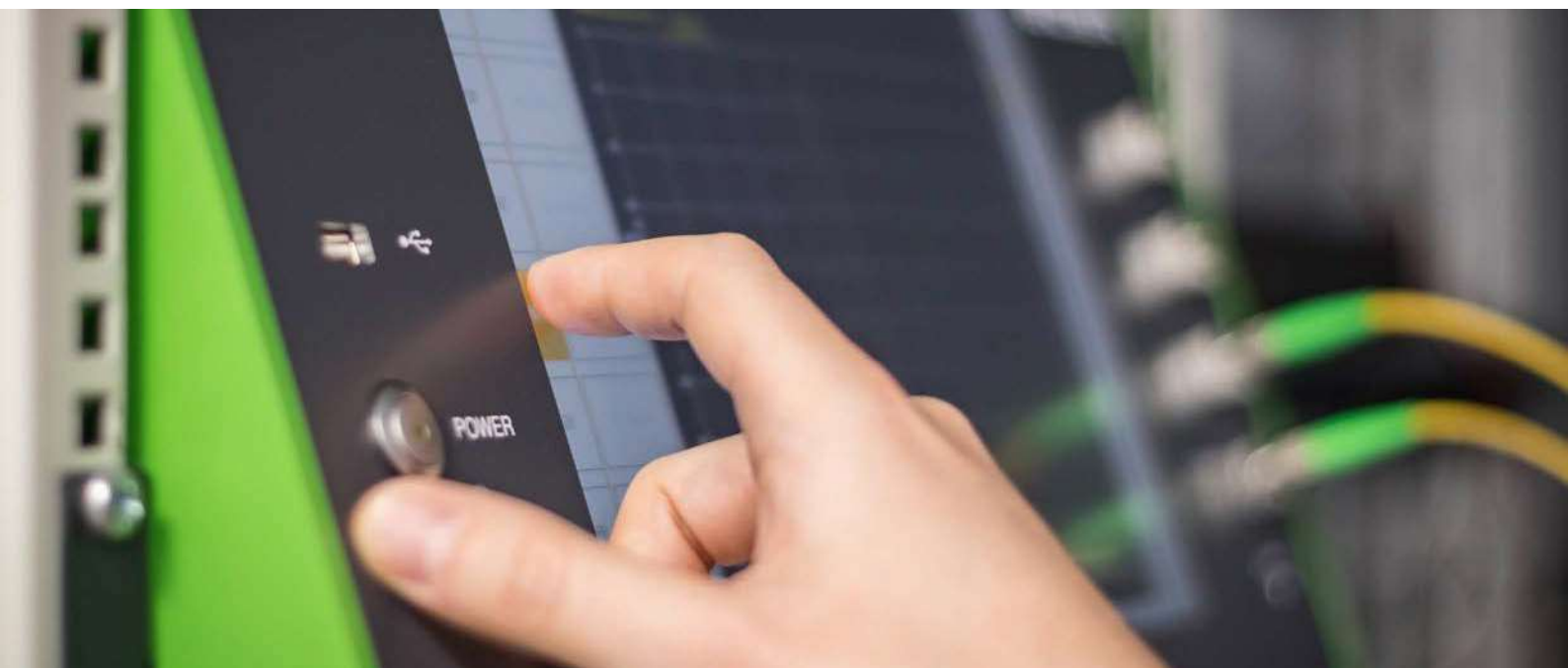
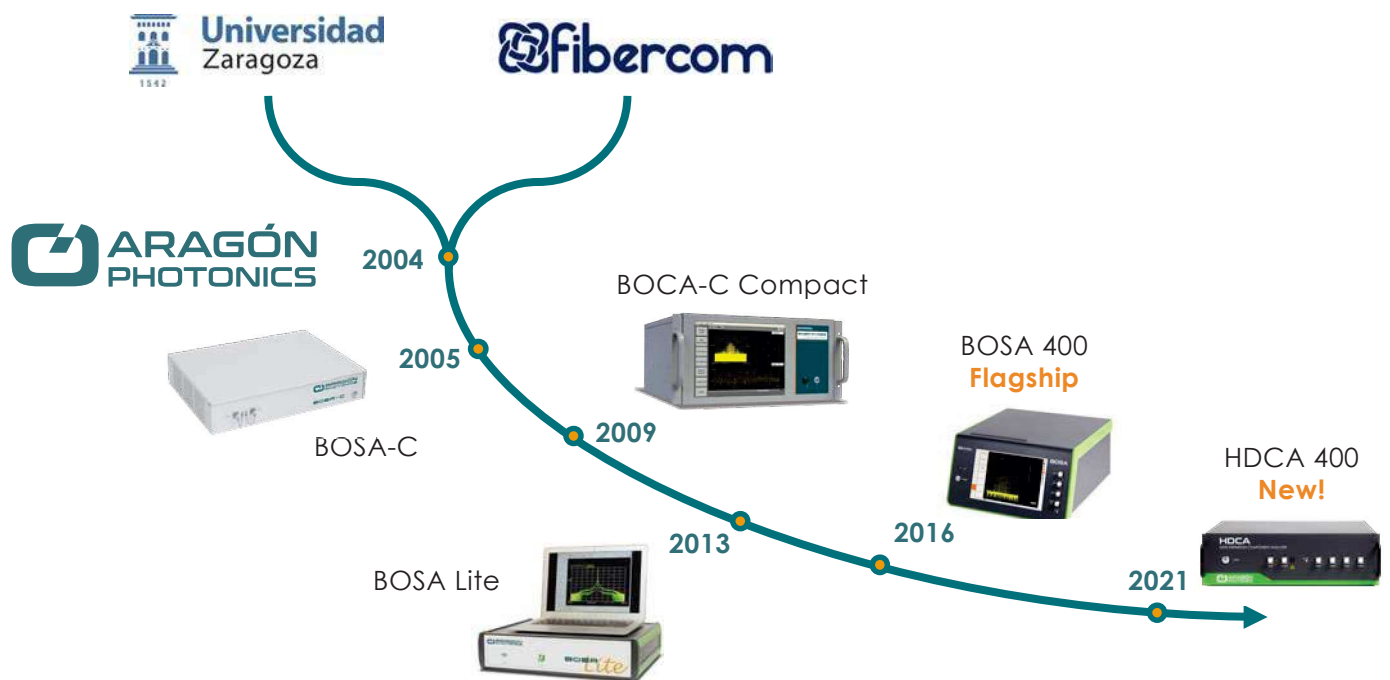
Only the fastest and most accurate instruments are reliable for working on a 24/7 basis, thus saving time and money in production.

OUR JOURNEY IN OPTICAL COMMUNICATIONS

Aragon Photonics was created in 2004 as a result from the collaboration between Fibercom and University of Zaragoza to develop and market a recently discovered spectroscopy technology based in Brillouin scattering: the BOSA.



Since then, Aragon Photonics has been evolving this product to adapt it to the needs of the market. Thanks to all this, it has been possible to develop a portfolio of products that meet the requirement of our customers.



HDCA

The new High Definition Component Analyzer (HDCA) from Aragon Photonics lands to **characterize passive optical devices with the highest resolution and wavelength accuracy**, the fastest measurement time and largest dynamic range. The spectra profile of insertion losses (IL), return losses (RL) and polarization dependent losses (PDL) of passive optical devices can be measured with femtometric resolution and fully automated.



KEY FEATURES

- Real time measurement: 0.4 sec.
- Resolution down to 2.4 fm
- Dynamic range: >85 dB in a single sweep
- Wavelength repeatability: ± 0.15 pm
- Wavelength accuracy: ± 0.5 pm
- Wavelength range:
 - O band (1265-1345 nm)
 - C+L band (1510-1620 nm)
- TE/TM spectra characterization
- Configurable total data points (up to 10 million points)
- Referenced measurements using NIST traceable absorption lines
- External TLS compatible (100 series)
- HDCA performance can be included in BOSA 400 as option 21

APPLICATIONS

- Quantum photonics (chips)
- Ring resonators
- Fiber Bragg gratings (FBG)
- Photonic integrated circuits (PICs)
- Wavelength selective switches (WSS)
- Ultra-DWDM network components

TECHNOLOGY

Based on the technology developed for the passive optical component analysis for the BOSA 400 option 20, the HDCA is **capable of measuring devices under test (DUTs) with extraordinary wavelength accuracy, repeatability and unmatched resolution.**

MODELS

HDCA 400

- Fully standalone
- The fastest HDCA

HDCA 100

- Compatible with external lasers.
Contact us for further information



High Definition Component Analyzer

TECHNICAL SPECIFICATIONS

		HDCA 400	HDCA 100
Measure bands		C+L, O	C+L, O
Performance			
Wavelength range		1510-1620 nm (C+L) 1265-1345 nm (O)	Depends on TLS model
Wavelength accuracy		±0.5 pm (Typ.)	Depends on TLS model
Wavelength repeatability		±0.15 pm (Min.) ±0.35 pm (Typ.)	Depends on TLS model Highest performance (option)
Resolution		0.3 MHz (0.0024 pm) (Min.) 1 MHz (Typ.)	Depends on TLS model
Number of channels		1 to 4	
Calibrated Input Power Range		+10 to -90 dBm	
Dynamic range	IL	>85 dB @ 100 nm/s	
	RL	> 55 dB	
Power accuracy	IL	±0.1 dB (Typ.)	
	RL	±0.5 dB (Typ.)	
Power resolution		0.001 dB	
Polarization Measurement		Two orthogonal polarizations PDL measurement as option	
PDL accuracy		±0.04 dB	
PDL repeatability		±0.02 dB	
Output power		0 dBm (Min.) 0 to 30 dB attenuation (option)	Depends on TLS model 0 to 30 dB attenuation (option)
Sweep speed		1 to 400 nm/s 100 nm/s (Typ.)	Depends on TLS model 100 nm/s (Typ.)
Data points		10 Million (Max.) Configurable	
Measurement time		0.4 sec @ 400nm/s C+L band	<1 sec (Typ.)
Referenced measurement		Yes	
Wavelength Calibrator		Yes	

OTHER SPECIFICATIONS

Physical & electrical		
Dimensions (mm)	445 x 470 x 140 (3 UA)	
Weight	9 kg	7 kg
Operating Temperature	+15 °C to +35 °C	
Power requirements	110/220V; 50/60Hz Máx. 200W.	
Optical Connections	FC/APC Others on request	
Available interfaces	Ethernet, USB, GPIB	

INDUSTRIES & PRODUCTS



HDAS

High Fidelity Distributed Acoustic Sensor



BOSA

High Resolution Optical Spectrum Analyzer

HDCA

High Definition Component Analyzer



CONDOR

Portable solar reflectometer

INCUS

Receiver tube spectrophotometer



Contact distributeur : WAVETEL
sales@wavetel.fr | +33(0)2 99 14 69 65 | www.wavetel.fr



Aragon Photonics Lasb S.L.U. C/ Prado 5, local 50009 Zaragoza, Spain +34 976 35 99 72

www.aragonphotonics.com

info@aragonphotonics.com