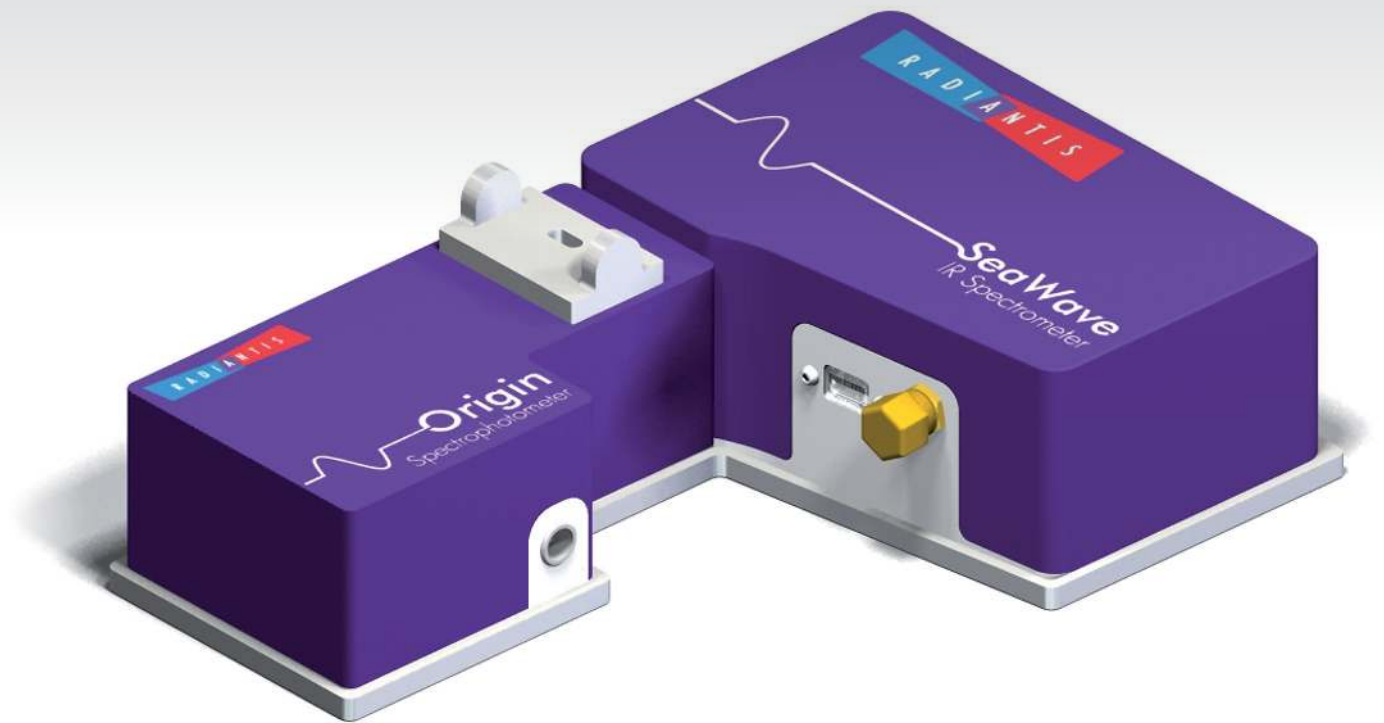


Origin™ IR Spectrophotometer

Compact, Cost-Effective IR Spectrophotometer



Key Features

- All-in-one portable spectrophotometer, suitable for both, in-line and off-line analysers
- Affordable and rugged, with no moving parts, based on uncooled linear diode array technology and long-life Tungsten-Halogen light sources
- Compatible with solid, liquid and gas samples as well as transmission and reflection spectroscopy
- Wide spectral response in the IR (900 – 1700 nm) and fast readout speed (>1000 spectra/second)
- High resolution (1 – 12 nm) for specific slits and detectors
- Customised and OEM versions available upon request

Applications

- Food industry analysers
- Agricultural product qualification
- Monitoring of petrochemical manufacturing processes
- Remote and industrial process control
- Medical non-invasive assessments
- Photovoltaic material quality control
- Pollution monitoring

Origin™, in combination with the Radiantis® SeaWave™ IR spectrometer, provides a compact and cost-effective spectrophotometer across the IR (900 – 1700 nm). Origin™ incorporates a Tungsten Halogen lamp, a sample holder and a versatile optical layout which delivers light into the uncooled linear diode array spectrometer, the SeaWave™.

The combined product enables reflection, transmission and absorption spectroscopy without any changes to the layout. It can handle solid, liquid and gas samples and can be used in both, in-line and off-line analysers. For off-line analyser applications, Origin™ incorporates a sample holder which can be easily manipulated by the user to position the required sample. For in-line analysers, Origin™ replaces the sample holder with an open path which enables the flow of the production line samples.

High resolution and fast readout response are both key features of the Origin™- SeaWave™ product. A simple user interface and driver software is included which is compatible with Linux and Windows (XP and higher).

Origin™'s compact design combined with the reduced footprint high performance SeaWave provide an ideal tool for IR spectroscopy applications in many markets, including the food, agriculture, pharmacy and petrochemical sectors.



Specifications¹

Characteristics	Origin™/SeaWave™
Origin™	
Light source	Tungsten-Halogen lamp
Wavelength range	900 – 2500 nm
Sample compatibility	Solid, liquid, gas
Power supply	12 V
Dimensions (W x L x H)	54.0 x 35.0 x 96.5 mm (2.12 x 1.38 x 3.8 inch)
SeaWave™	
Detector	Hamamatsu InGaAs linear array (256/512 pixels)
Spectral response range	900 – 1700 nm (default) 900 – 2000 nm (optional) 900 – 2500 nm (optional)
Spectral resolution (FWHM) ⁽²⁾ for complete spectral response range	512 pixels (3 nm – 12 nm) 256 pixels (6nm – 12 nm) Slit size dependent
Signal/Noise Ratio at full signal	4500:1 at 20 ms / 3000:1 at 100 ms (default) Low noise ratio (optional)
Dark noise	10 counts (typical at 20 ms)
Integration time	6 µs to 1 s
Readout speed	>1000 spectra/second
Dynamic range	16 bit (4 MHz A/D converter)
Interface	USB 2.0 Hi-speed
Cooling	Uncooled
Dimensions (W x L x H)	70.5 x 104.0 x 40.0 (2.77 x 4.09 x 1.57 inch)
Software	
Control Software	Dedicated user interface
Driver software	Linux and Windows HP and higher

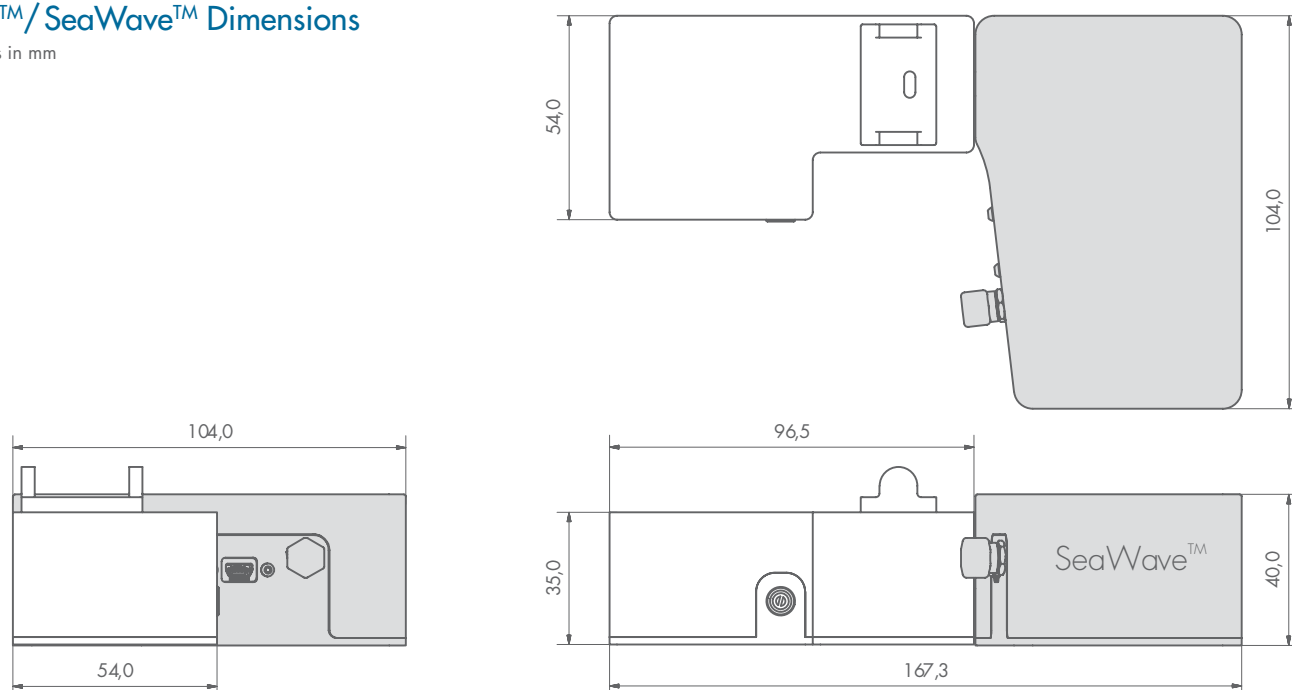
Footnotes

¹ Specifications are subject to change without notice

² Higher resolution available for reduced spectral ranges (grating dependent)

Origin™/SeaWave™ Dimensions

Dimensions in mm



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Address: Carrer Copènic, 2-4, Polígon Industrial Camí Ral, 08850 Gavà, Barcelona (Spain)

Phone: +34 936 389 763 | E-mail: info@radiantis.com | Web: www.radiantis.com

