



ODIN

Deep UV Raman Spectrometer

Technical Specifications

Contact Details

Correspondence
Address:

IS-Instruments Ltd
Pipers Business Centre
220 Vale Road
Tonbridge
Kent
TN9 1SP
UK

Email:

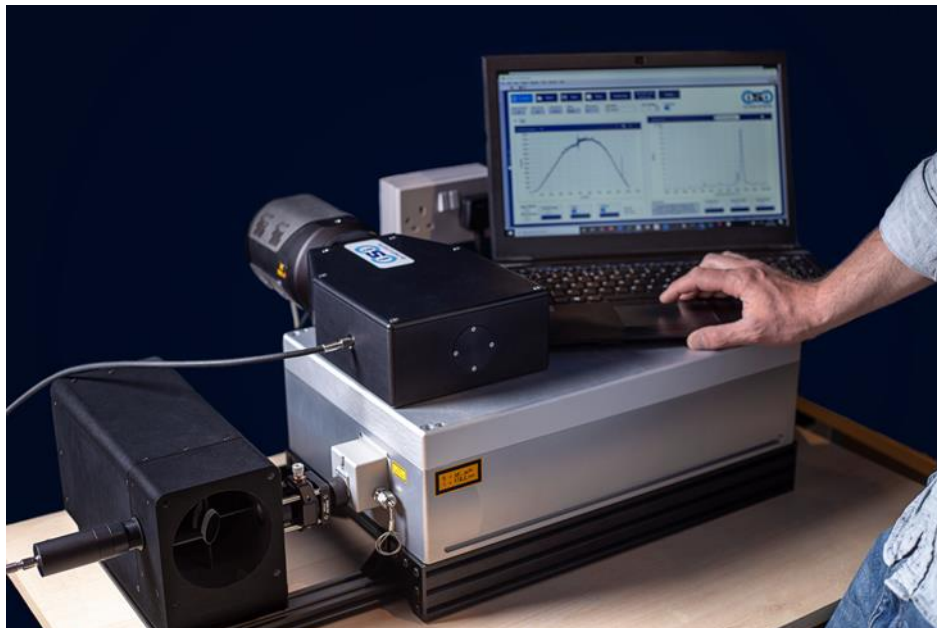
info@is-instruments.com

Phone:

+44 (0) 1732 373 020

Fax:

+44 (0) 1732 373 001



Technical Specifications

This document shows the technical specifications of the ODIN spectrometer range. Further information can be found on the IS-Instruments website, where you can download gold standard scientific articles of the instrument performance. The ODIN system is specifically designed to operate in the deep UV. The spectrometer can be adjusted to operate with any laser system from 220 – 266 nm. The default option is to use a 228.5 nm excitation source; however the system can be adjusted to the end user needs as required.

Below are specifications of a typical configuration.

Model	ODIN (228.5 nm)
Configuration	SHS
Wavelength range of operation Range can be adjusted for high resolution observation if required	220 – 270 nm laser dependent 500-2500 cm^{-1}
Resolution (per Fourier bin) < 1 cm^{-1} (also available on request)	< 5 cm^{-1}
Slit	No Slit
Fibre Input	SMA FC/PC
Fibre diameter	0.6 mm
Fibre NA	0.22
Linearity	> 99 %
Detector Type	Andor IDUS CCD
Supply Voltage	Spectrometer & probe 220 V, 13 Amp Laser (228.5 nm) 220 V 13 Amp
Dimensions	Spectrometer & probe 727 × 344 × 339 mm Laser head (228.5 nm) 506 × 275 × 135 mm
Laser type	Diode laser
Wavelength	228.5 nm
Laser line width	< 1MHz
Laser M^2	< 1.3
Sample interface	12.5 mm focal length Moving stage

Example spectra

Below are examples of Raman spectra observed with an ODIN instrument (228.5 nm).

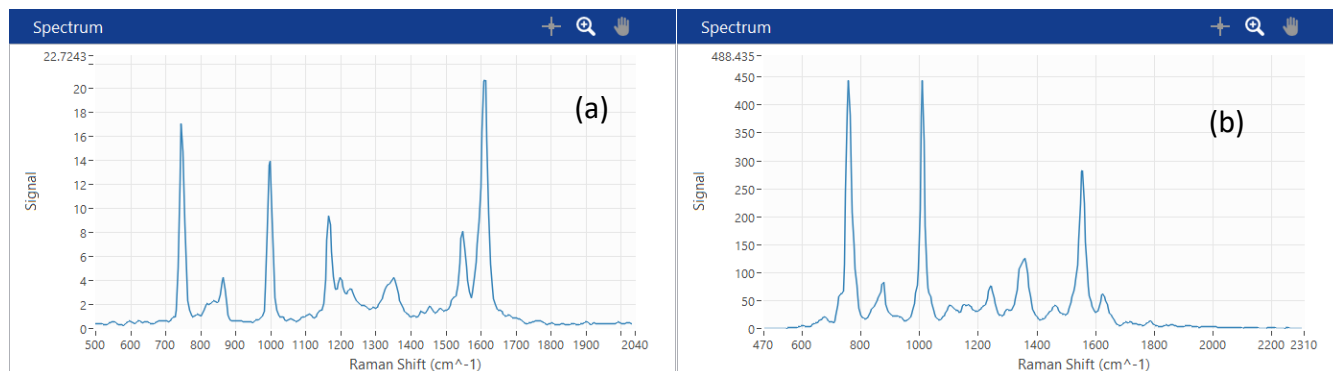


Figure 1: Raman spectra: (a) Domain Antibody fragment and (b) Tryptophan.

Detector

The Odin range of instruments can be constructed with any detector, however ISI's detector of choice is a Cooled CCD from Andor. The IDUS BU coated detector is the current preferred camera of choice. The Quantum efficiency of these detectors as a function of wavelength is given below.

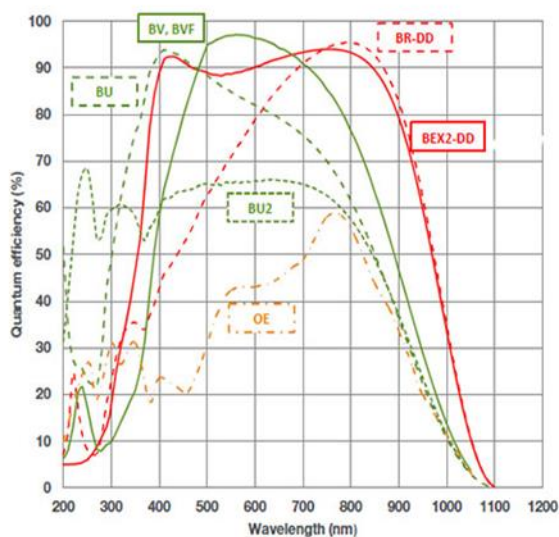
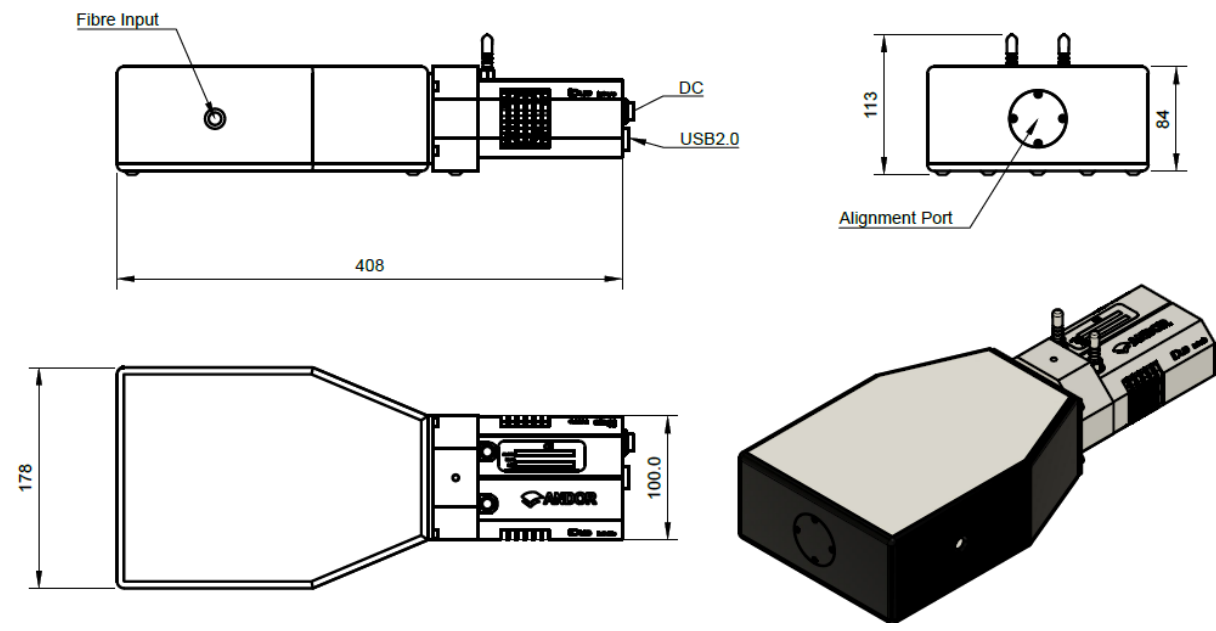
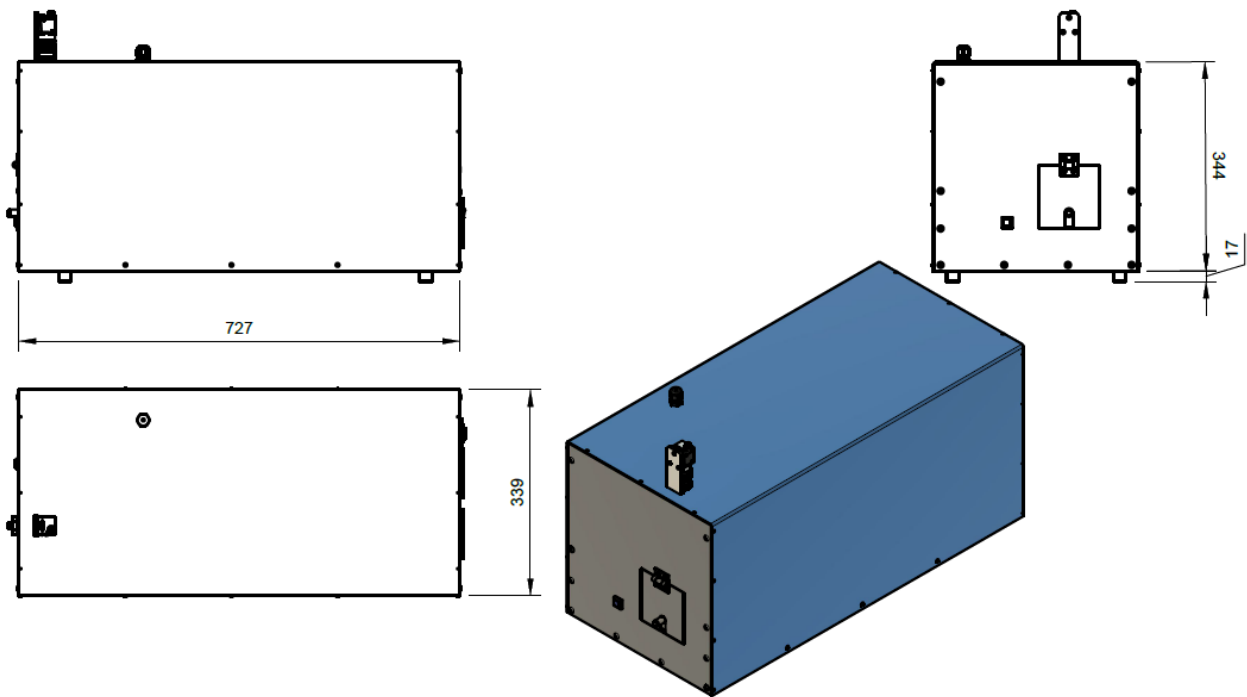


Figure 2: Quantum efficiency of the cooled CCD

Dimensions



Disclaimer

THE INFORMATION CONTAINED HEREIN IS PROVIDED "AS IS" WITHOUT WARRANTY, CONDITION OR REPRESENTATION OF ANY KIND, EITHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL IS-INSTRUMENTS BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHERWISE HOWSOEVER CAUSED WHETHER ARISING IN CONTRACT TORT OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THE USE OF THE INFORMATION PROVIDED HEREIN.

COPYRIGHT AND PROTECTIVE NOTICES:

The copyright in this document and the associated drawings are the property of IS-Instruments Ltd. and all rights are reserved. This document and the associated drawings are issued on condition that they are not copied, reprinted or reproduced, nor their contents disclosed. The publication of information in this documentation does not imply freedom from any patent or proprietary right of IS-Instruments or any third party.

TRADEMARKS & PATENT INFORMATION:

IS-Instruments and the ISI logo are trademarks of IS-instruments Ltd. All other marks are property of their owners.