

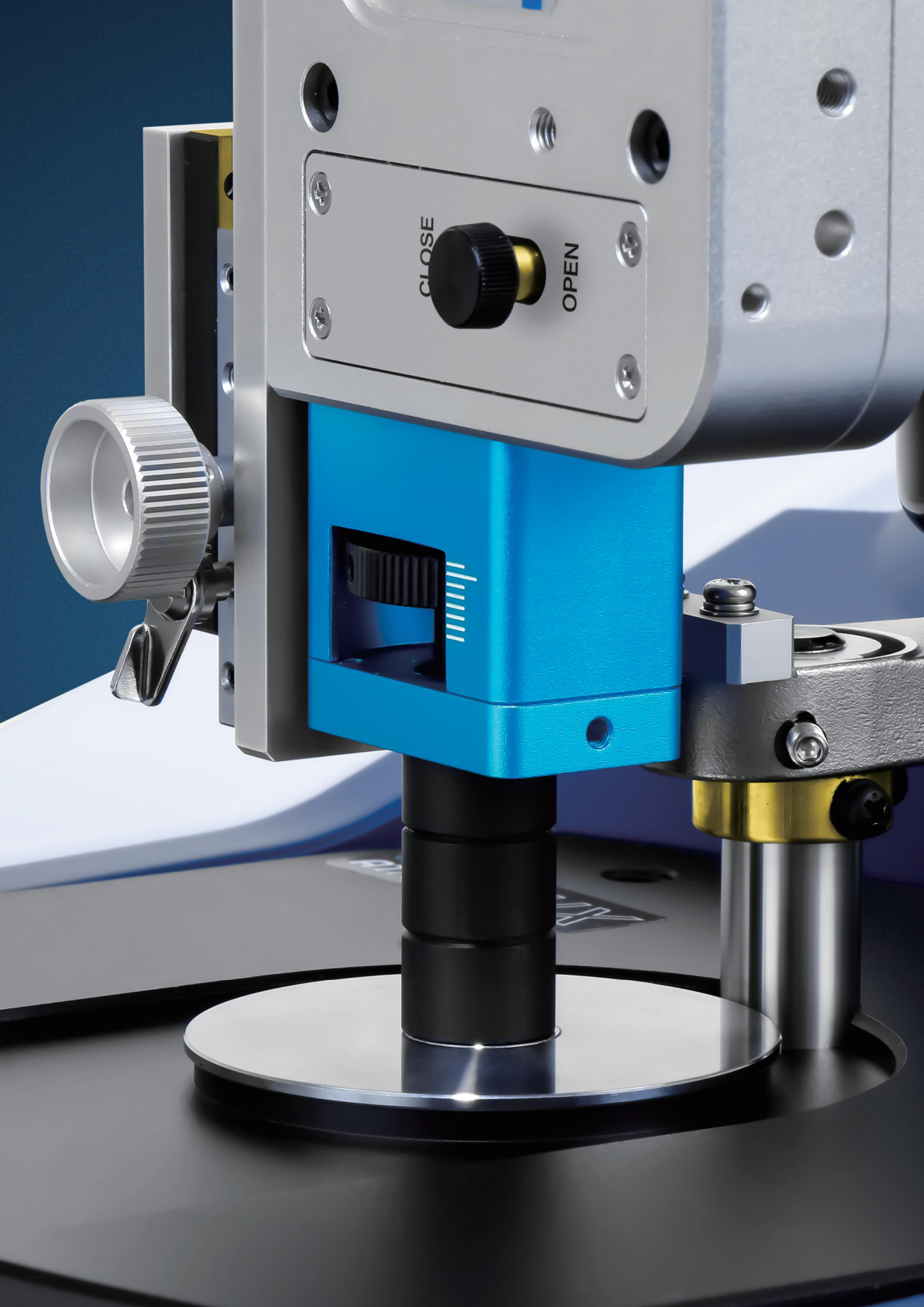
PR-1W

Palmtop Raman Spectrometer



JASCO

Performance
Innovation
Reliability



Raman spectroscopy is used to analyze molecular structure from molecular vibrations, similar to IR spectroscopy, and has become a key analysis technique in many applications.

PR-1w is the user-friendly Raman spectrometer that everyone can use immediately after delivery, and measurements can be made in only 2 to 3 minutes after the start of preparation.

Features of PR-1w

Simple design

- Contact the sample, then start measurement with one click.
- Dial-type focusing mechanism

Optics

- Raman spectrometer with 785 nm laser.
- Uncooled CMOS detector.
- All optics built into a compact housing.



Performance

- Nondestructive measurement of solids, powders and solution.
- Available for qualitative and quantitative analysis.
- Measurement inside the plastic bag, the vial etc.
- Compact housing but capable of measurements from 3000 to 200 cm^{-1} .

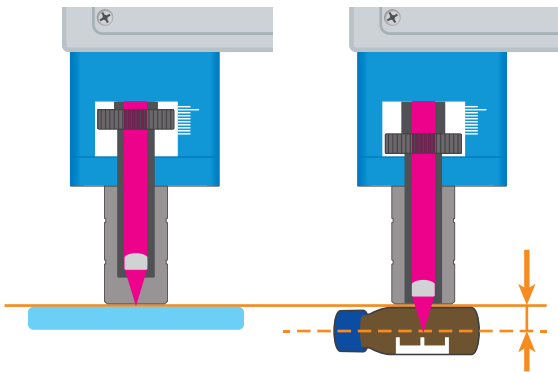
Software

- Works with Spectra Manager, common for FT/IR, Raman etc.
- Optional programs are available (Imaging-model analysis, Advanced Spectra Search etc).

Reliable and flexible hardware

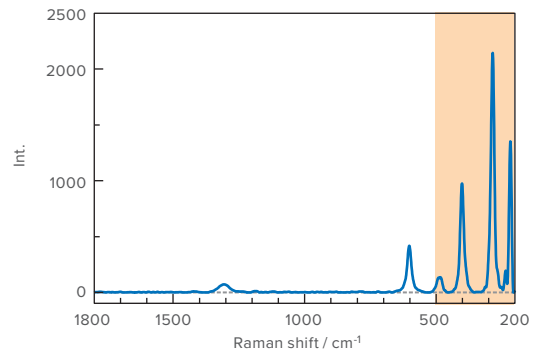
Small-size hardware with high performance

Adjustable focus position



Adjustable focus position enables to vary the measurement position from the sample surface to the inside of the bottle.

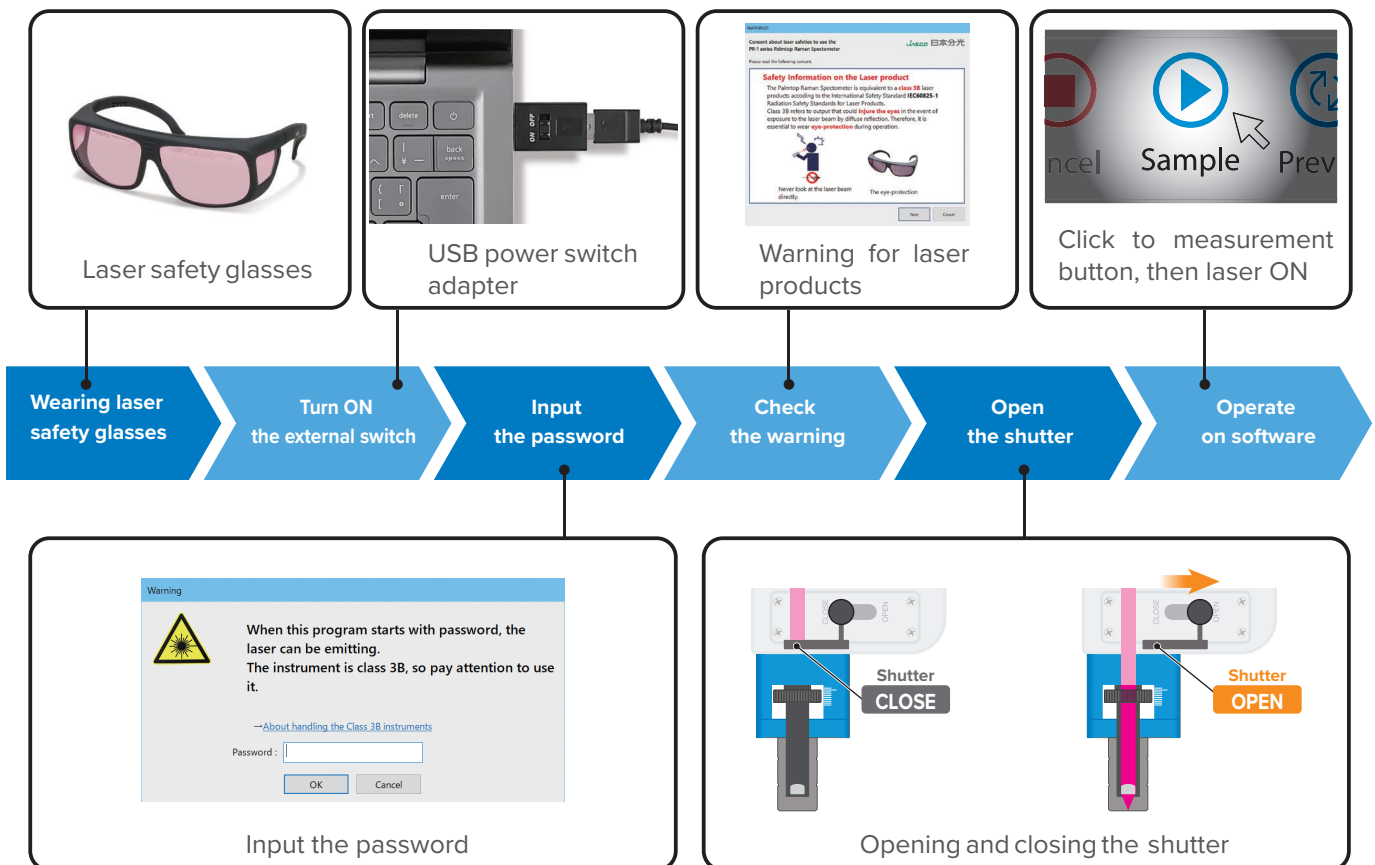
Low wavenumber measurement



PR-1w allows to perform the low wavenumber measurement down to 200 cm^{-1} .

Safety design for protecting the operator

Since PR-1w is a laser safety class 3B product, it has a safety mechanism so that the laser is not turned on until five actions has to be performed intentionally.

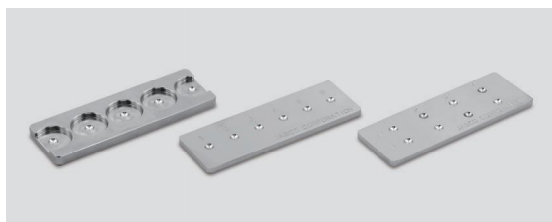


Various optional accessories



PR-1-V Vial holder

PR-1-V is capable to hold the 2 mL vial, which can be measured directly.



Small volume liquid/powder sample holder

Three types of holder for liquid/powder sample are available; five wells (PR-1-SP-5), six wells (PR-1-DC-6) and eight wells (PR-1-DC-8).



PR-1-Z Z stage unit

With PR-1-Z, it is possible to perform Raman measurement of the wide sample and the thick one (up to 25 mm).



PR-1-DS Dedicated sample compartment

With PR-1-DS, it is possible to perform Raman measurement under high shading and safety. It is useful when the guide of PR-1w cannot be pressed against the sample.



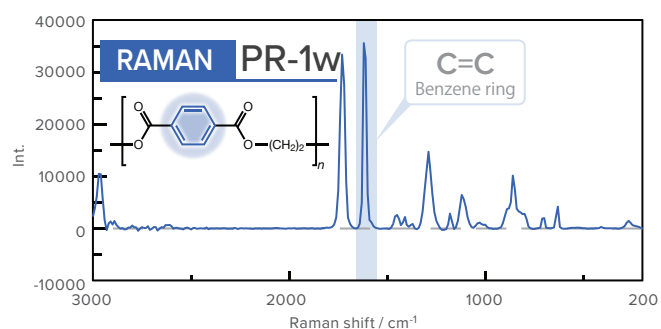
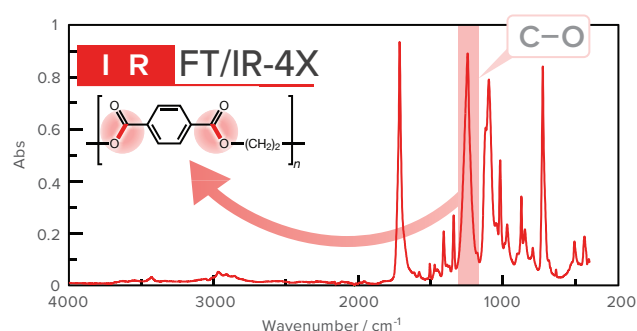
PR-1-ATR Attachment for ATR accessory

The PR-1-ATR, which can be used with ATR PRO 4X/ATR PRO ONE X/ATR PRO ONE, enables to perform the orthogonal analysis (IR and Raman).

Combined analysis by Raman and IR

Applications

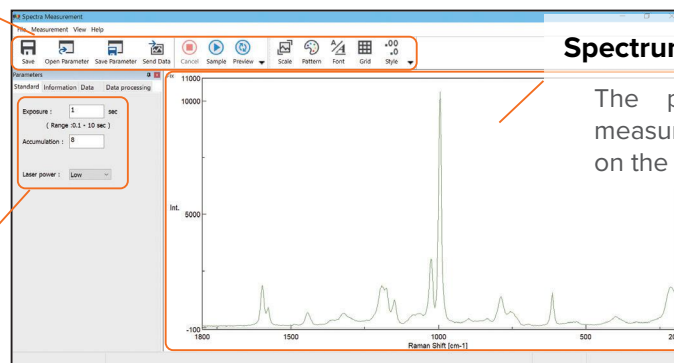
Raman spectroscopy is a popular technique for the analysis of the molecular structure and is considered complementary to IR spectroscopy. Combining PR-1w with FTIR spectrometer enables to get more information than the one obtained from an instrument.



Simple operation

Tool buttons

Graphical buttons make it possible to perform the operation easily (save the file, start the measurement, display setting, etc.).

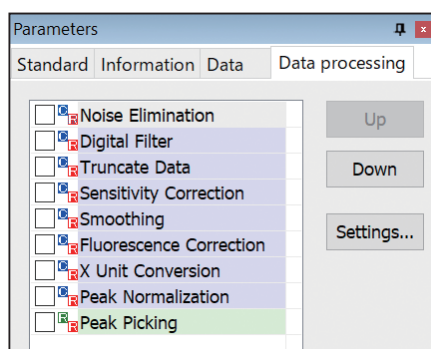


Spectrum view

The preview result and the measurement result are displayed on the window.

Measurement parameters

Three measurement parameters should be input on the window; exposure time, accumulation and laser power.



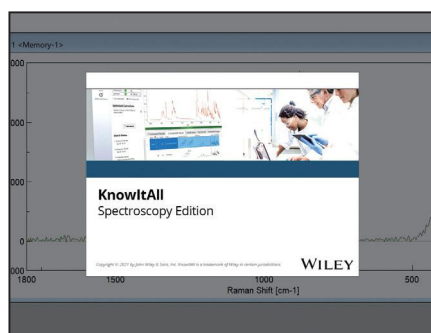
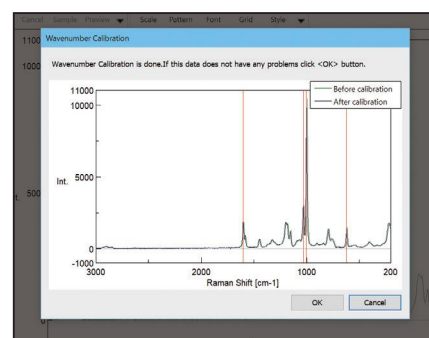
Real time data processing

Measurement program has the function to perform the data processing in real time. Its function allows comparison with the following data.

- Data measured by Palmtop Raman
- Data measured with other Raman spectrometer
- KnowItAll Database
- ADSS (Advanced Spectra Search) Database

Wavenumber correction

Wavenumber correction is available by using the standard polystyrene sample.



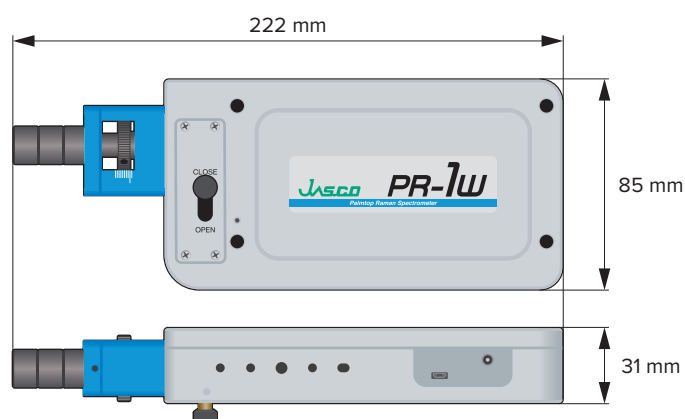
Spectral search

Wiley KnowItAll® is available as option, and the database libraries including 25,000 Raman spectra is also available as option.

Specifications

Model		PR-1W
Laser	Wavelength	785 nm
	Power	50 mW
	Power setting	Low/Middle/High (5 mW/25 mW/50 mW)
Detector		CMOS image sensor
Wavenumber range		3000 to 200 cm⁻¹
Resolution (@ 1000 cm⁻¹)		3 cm⁻¹/pixel
Dimensions (W × D × H)		85 × 31 × 222 mm
Weight		800 g
System requirements		Windows 10 Pro 64 bit Spectra Manager 2.5
Power supply port		USB cable and DC-USB cable* (Necessary connect two power supply cables)

Dimensions



*Installation space of PC is required separately.



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