

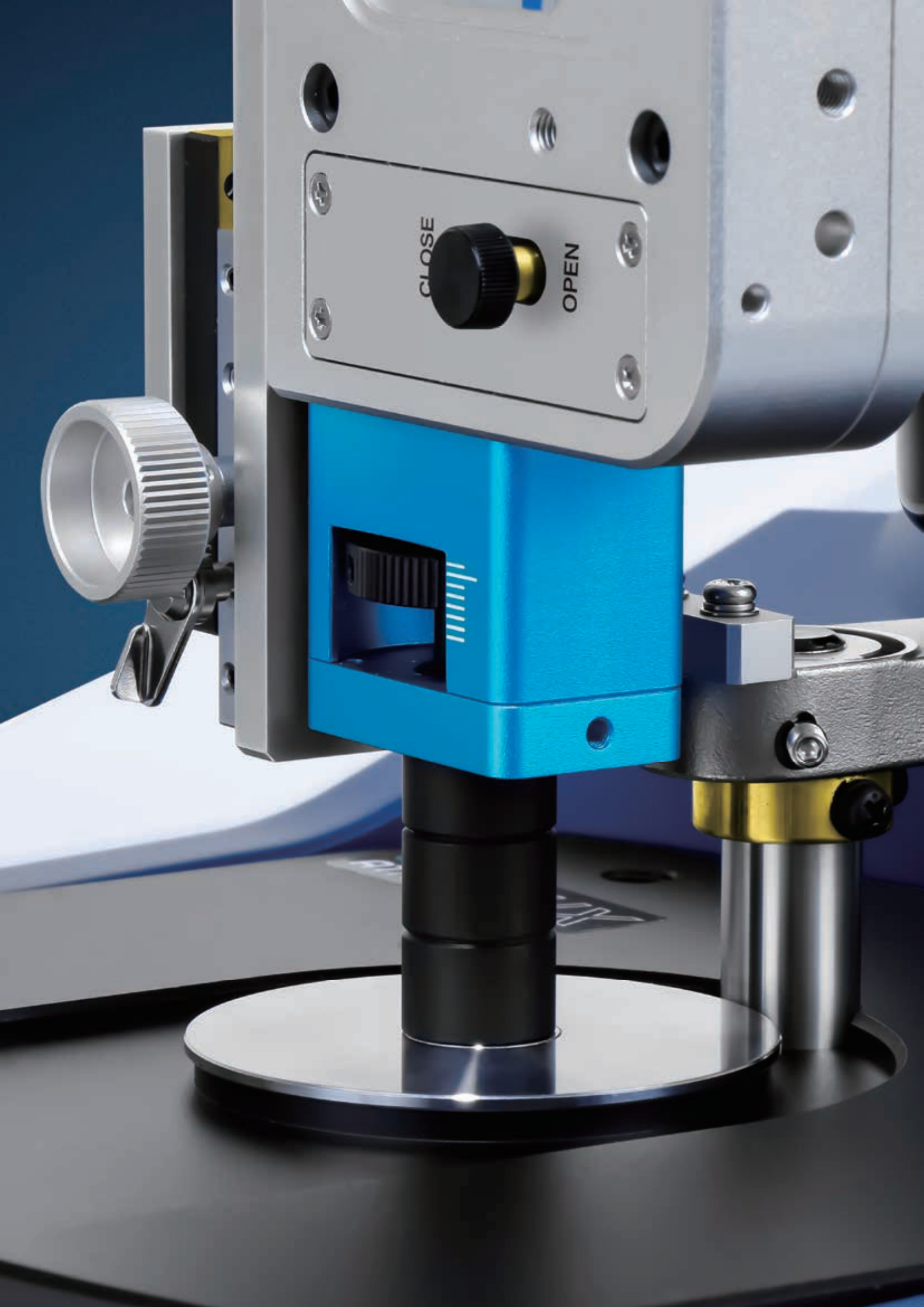
# PR-1W

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  $\text{cm}^{-1}$ .

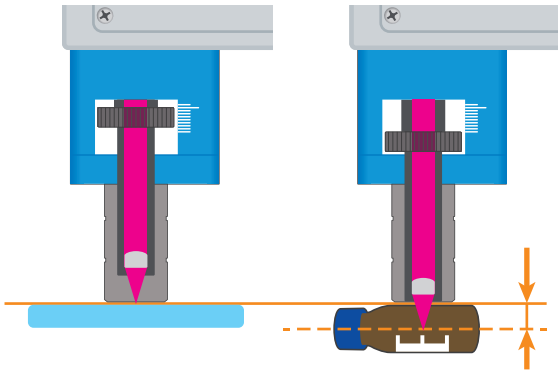
### Software

- 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

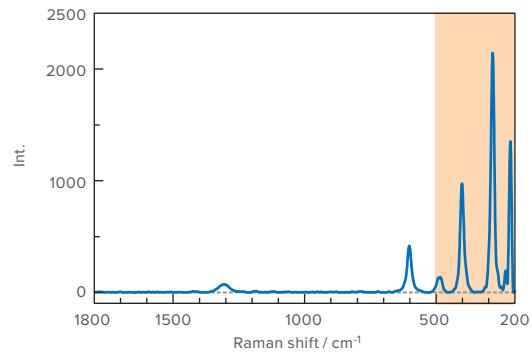
## Small-size hardware with high performance

### Adjustable focus position



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

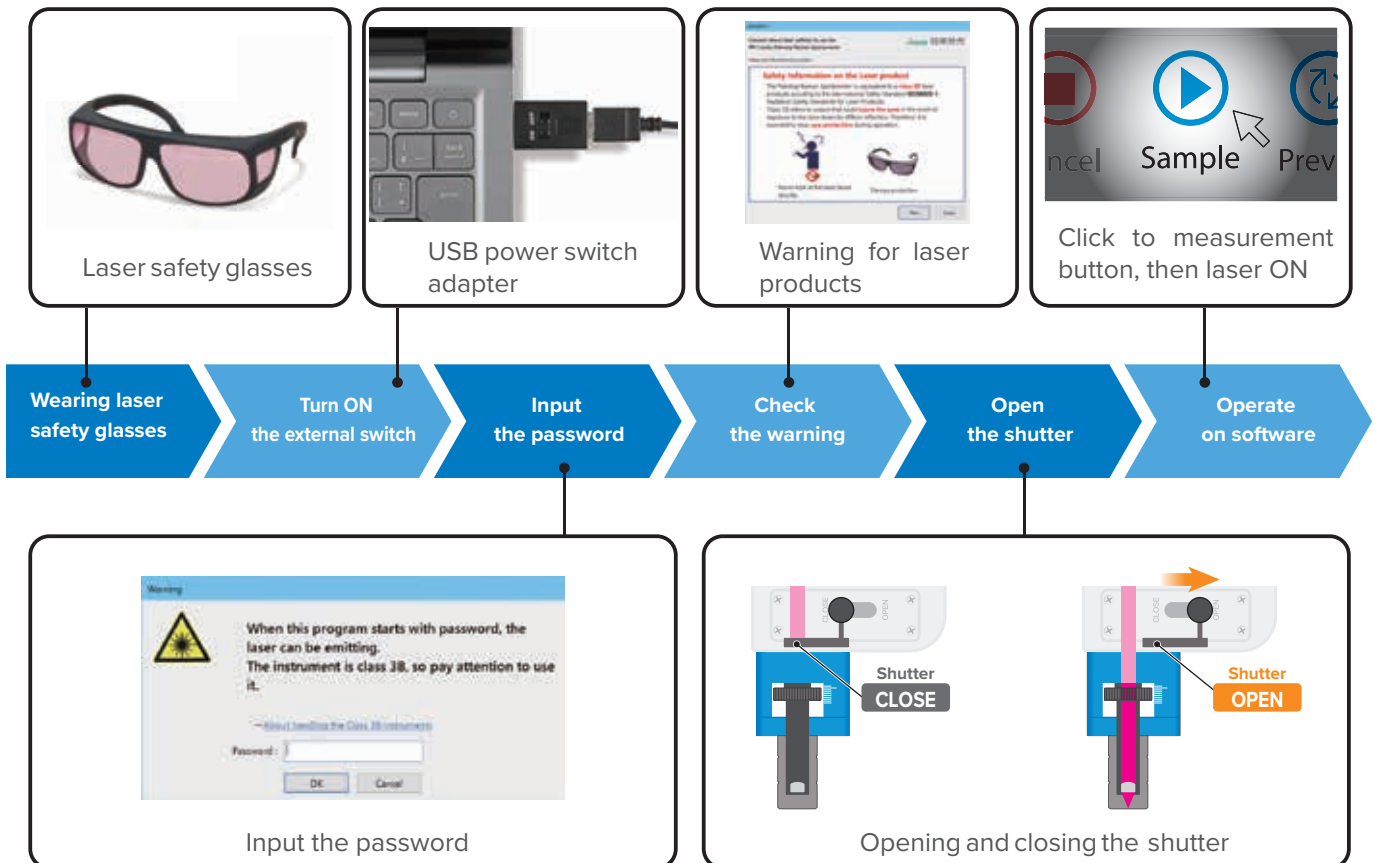
### Low wavenumber measurement



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

## 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.

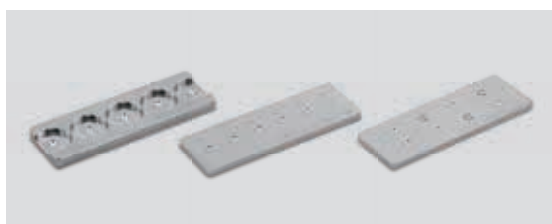


## Various optional accessories



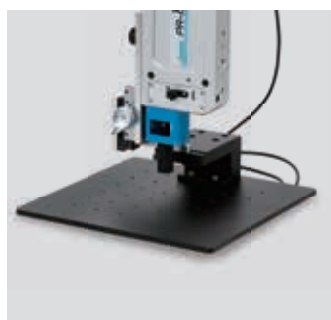
### PR-1-V Vial holder

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.



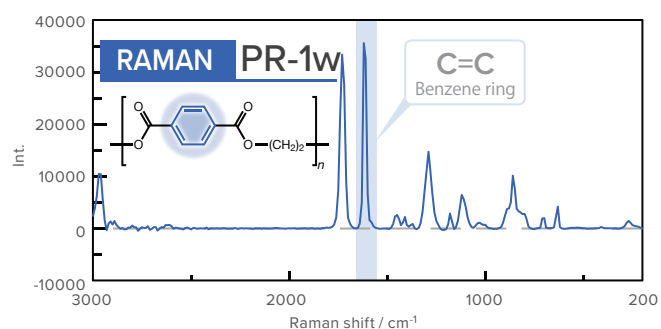
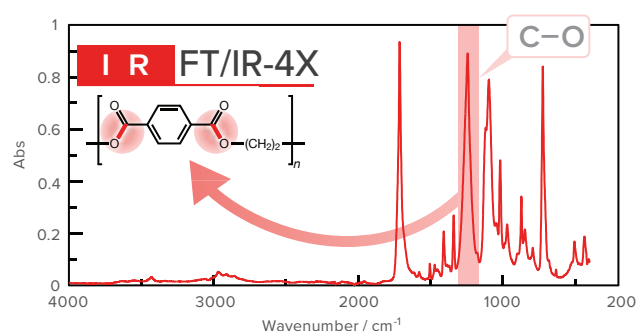
### PR-1-ATR Attachment for ATR accessory

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

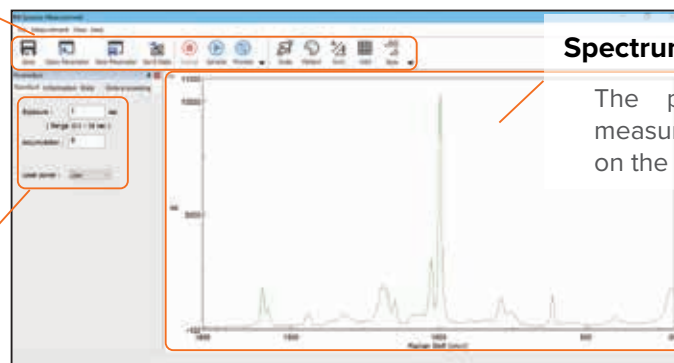
Raman spectroscopy is a popular technique for the analysis of the molecular structure and is considered complementary to IR spectroscopy. Combining PR-1w with FTIR spectrometer enables to get more information than the one obtained from an instrument.



# Simple operation

## Tool buttons

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

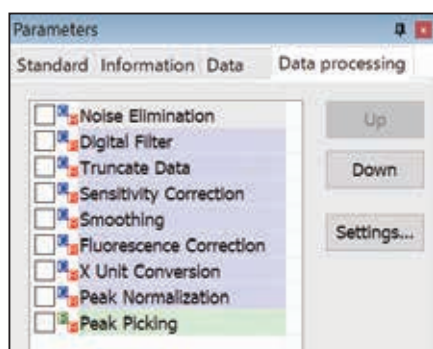


## Spectrum view

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.



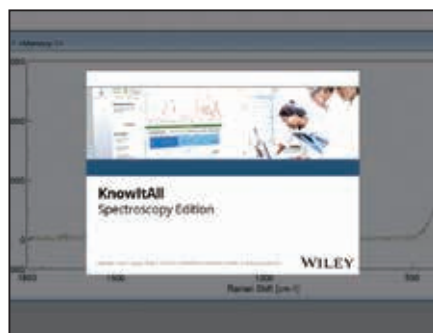
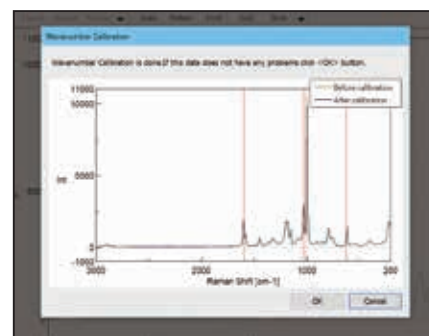
## Real time data processing

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.



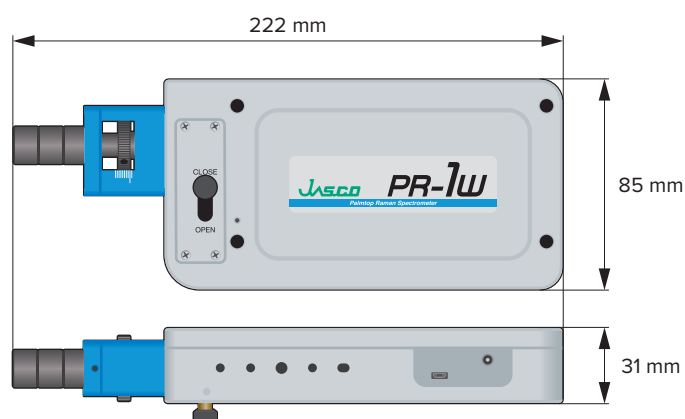
## Spectral search

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

# Specifications

Model		PR-1W
Lasers	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 <sup>-1</sup>
Resolution (@ 1000 cm <sup>-1</sup> )		3 cm <sup>-1</sup> /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.



#### **JASCO CORPORATION**

2967-5, Ishikawa-machi, Hachioji-shi, Tokyo 192-8537 Japan  
Tel: +81-42-649-5177 Fax: +81-42-646-4515 Web: [www.jasco.co.jp](http://www.jasco.co.jp)  
Japan

#### **JASCO INTERNATIONAL CO., LTD.**

11-10, Myojin-cho 1-chome, Hachioji-shi, Tokyo 192-0046, Japan  
Tel: +81-42-649-3247 Fax: +81-42-649-3518 Web: [www.jascointl.co.jp/english/](http://www.jascointl.co.jp/english/)  
Australia, Hong Kong, India, Indonesia, Korea, Malaysia, New Zealand, Pakistan,  
Philippines, Russia and CIS countries, Singapore, Taiwan, Thailand, Vietnam

#### **JASCO INCORPORATED**

28600 Mary's Court, Easton, Maryland 21601, U.S.A.  
Tel: +1-410-822-1220 Fax: +1-410-822-7526 Web: [www.jascoinc.com](http://www.jascoinc.com)  
Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Guatemala, Mexico,  
Paraguay, Peru, Puerto Rico, United States of America, Uruguay, Venezuela

#### **JASCO EUROPE S.R.L.**

Via Luigi Cadorna 1, 23894 Cremella (LC), Italy  
Tel: +39-039-9215811 Fax: +39-039-9215835 Web: [www.jasco-europe.com](http://www.jasco-europe.com)  
**JASCO Deutschland** [www.jasco.de](http://www.jasco.de) | **JASCO UK** [www.jasco.co.uk](http://www.jasco.co.uk) | **JASCO France** [www.jascofrance.fr](http://www.jascofrance.fr)  
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#### **JASCO CHINA (SHANGHAI) CO., LTD.**

Room No.D, 10F, World Plaza, 855 Pudong South Road, Pudong New Area, Shanghai, China  
Tel: +86-21-6888-7871 Fax: +86-21-6888-7879 Web: [www.jasco-global.com](http://www.jasco-global.com)  
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