

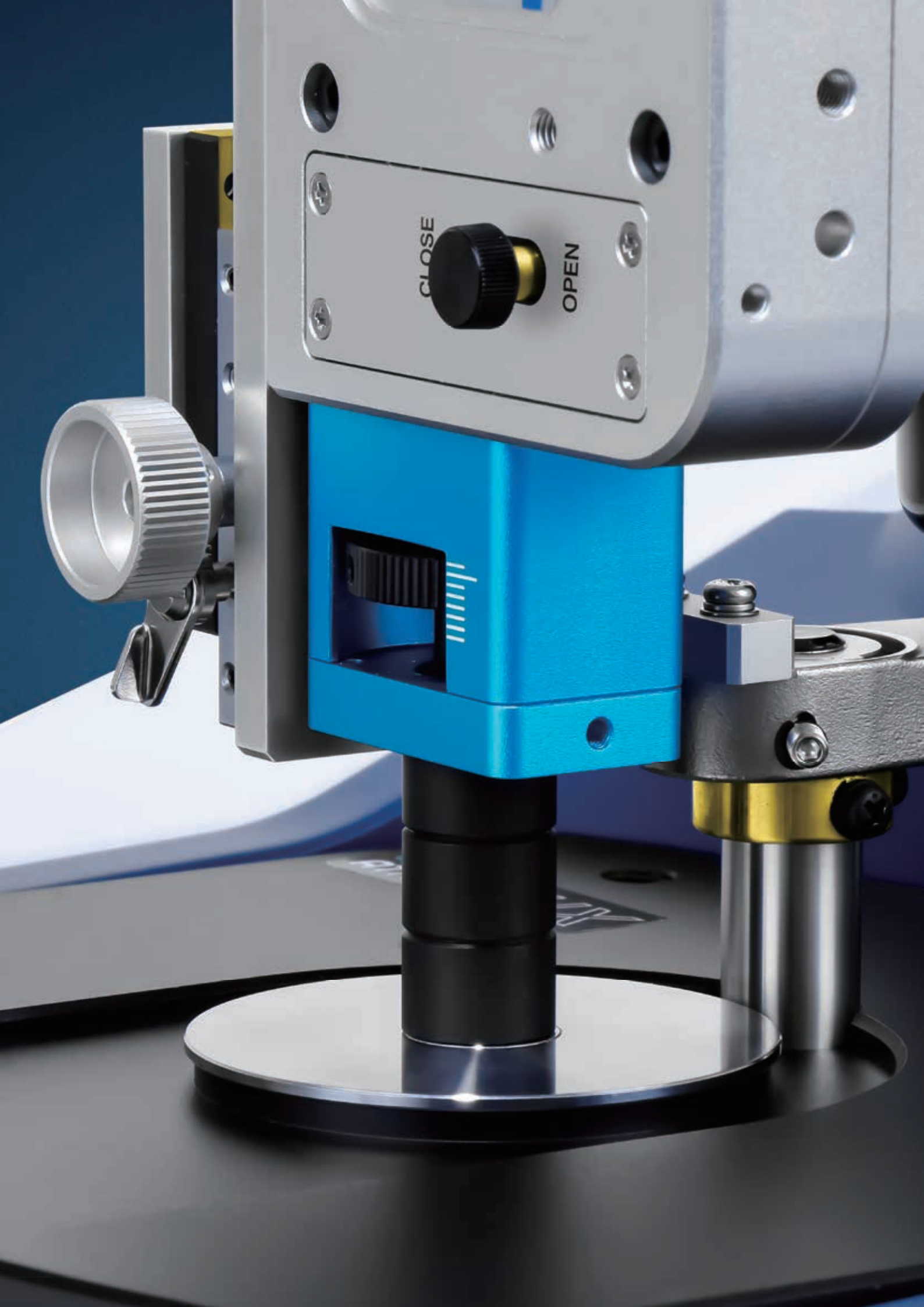
# PR-1W

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

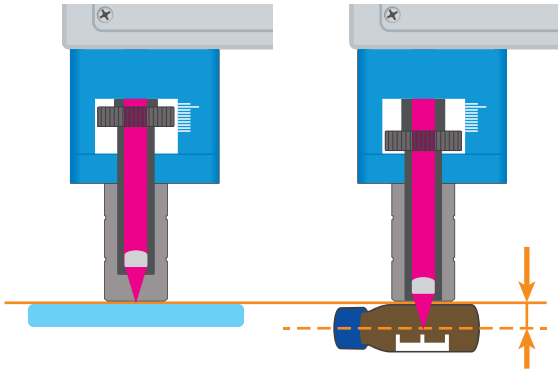
### Software

- 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

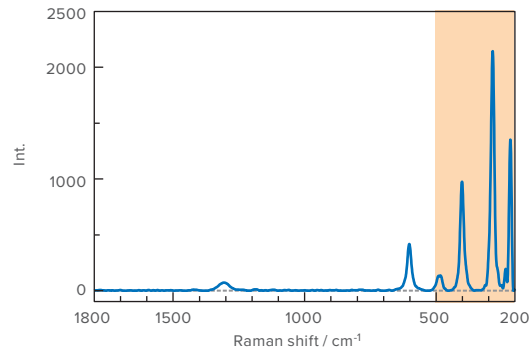
Small-size hardware with high performance

## Adjustable focus position



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

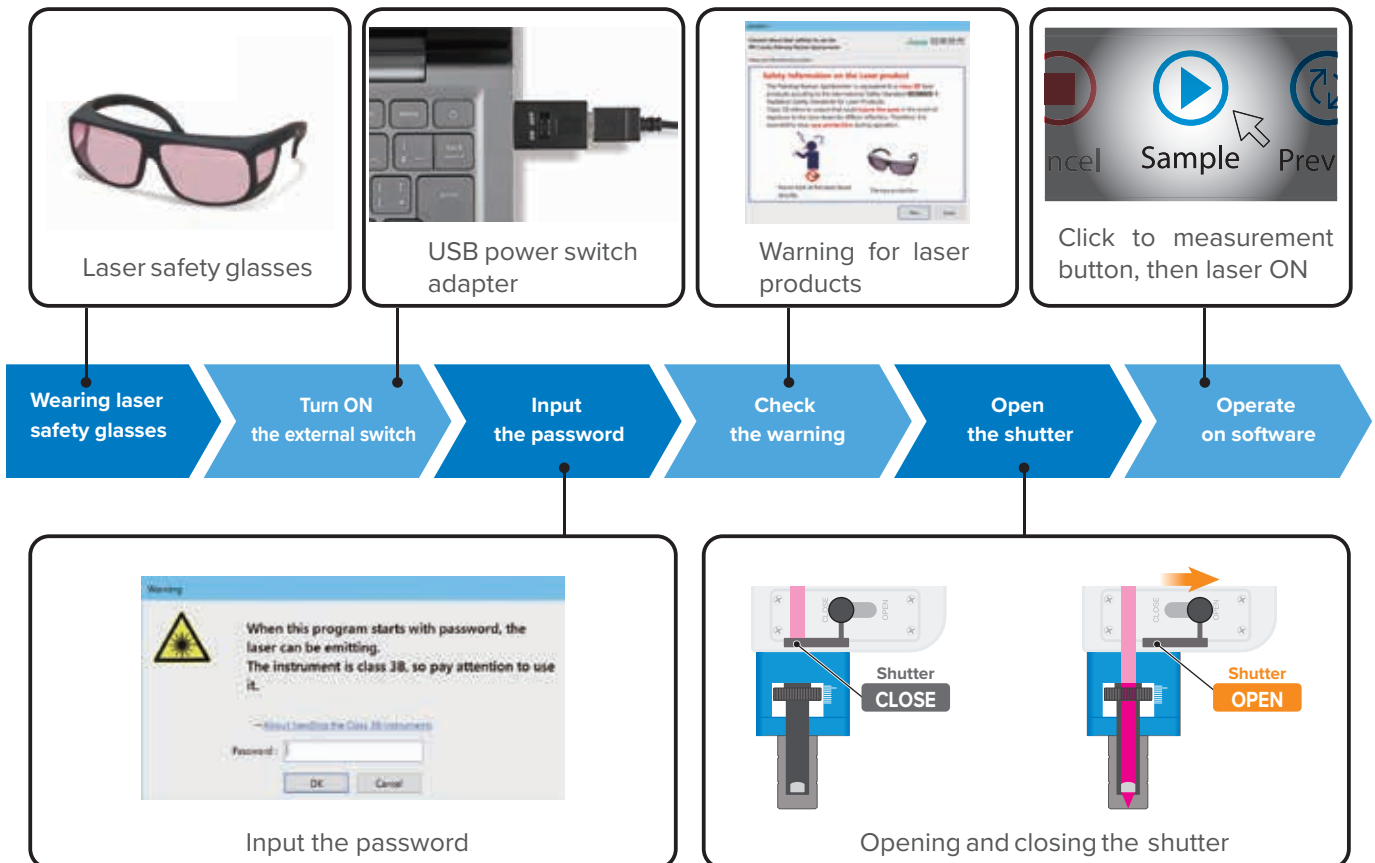
## Low wavenumber measurement



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.

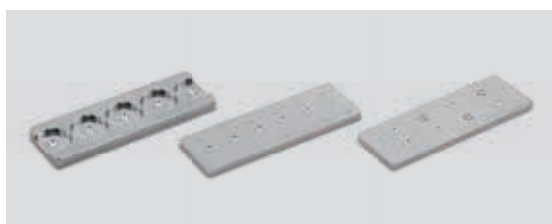


## Various optional accessories



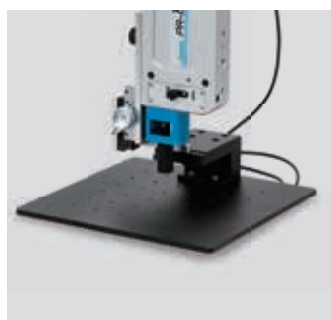
### PR-1-V Vial holder

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.



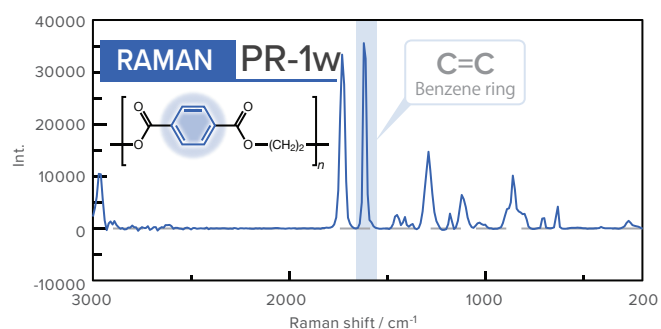
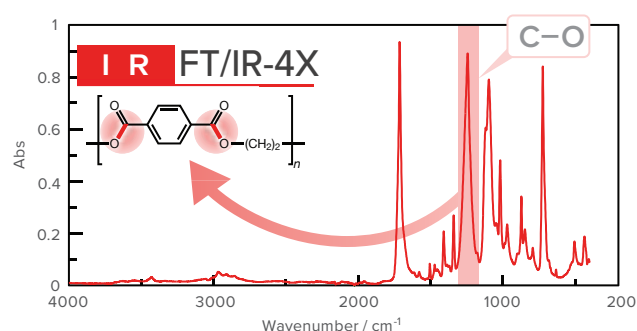
### PR-1-ATR Attachment for ATR accessory

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

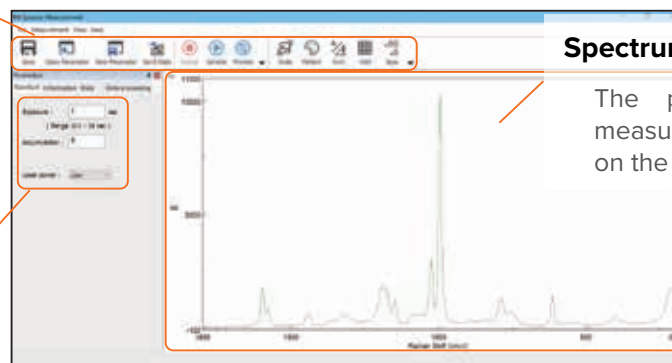
Raman spectroscopy is a popular technique for the analysis of the molecular structure and is considered complementary to IR spectroscopy. Combining PR-1w with FTIR spectrometer enables to get more information than the one obtained from an instrument.



# Simple operation

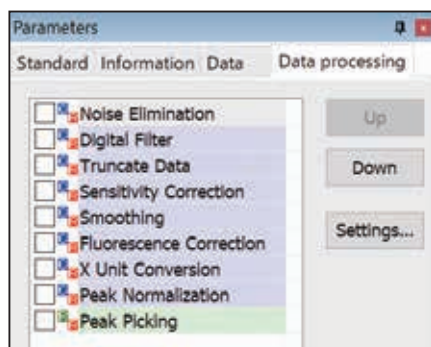
## Tool buttons

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



## Measurement parameters

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



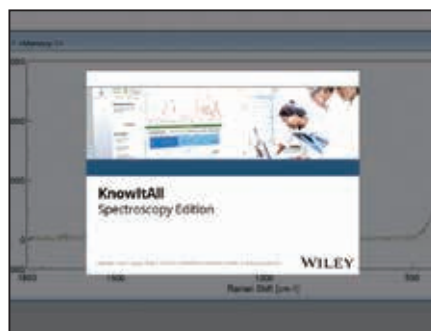
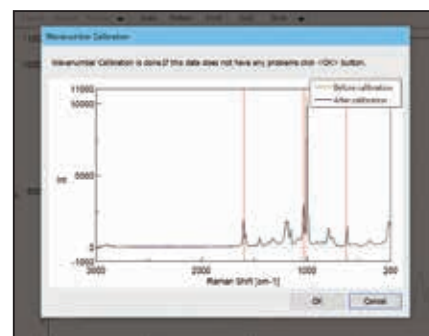
## Real time data processing

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.

## Interval measurement program (optional)

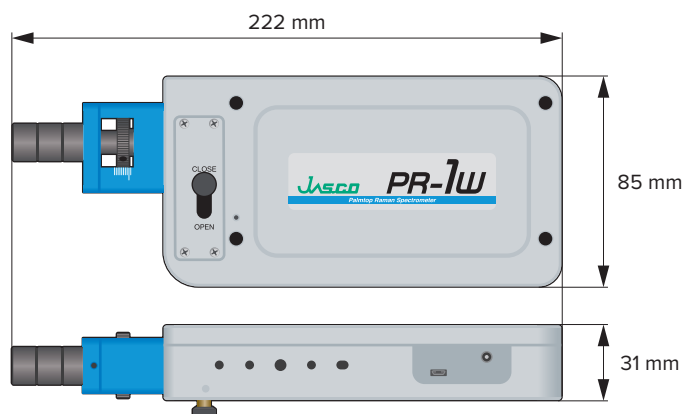
The interval measurement program is used to acquire spectral data during a time course measurement. This program is commonly used for long-term observation of spectral changes during reactions. Both full spectrum and changes in intensity changes at a specified wavenumber can also be monitored.



# Specifications

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

## Dimensions



\*Installation space of PC is required separately.



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