

# RAMAN SPECTROMETER & ANALYZER NS-Raman

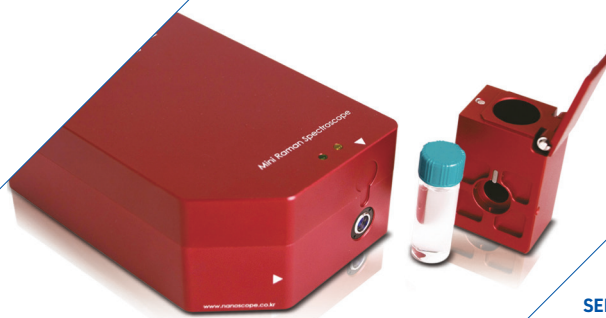
NS200 series  
Single laser micro Raman  
spectrometer



Ramcheck-A1  
Raman mapping strip reader



NS100 series  
Handheld-size Raman spectrometer



SERSpace  
SERS substrate



# NS200 series Single laser micro Raman spectrometer

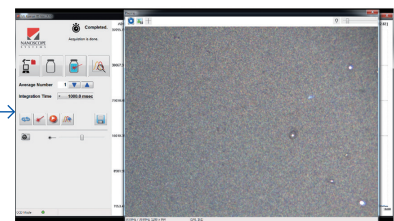
NS200 series provides compact size single laser micro Raman spectroscopy. Unlike the bulky Raman instruments, it can be easily and conveniently handled even by the first user. It is easy to focus on the target position of the sample by optical microscope imaging and auto focusing function. It is compact and readily customizable for the various experimental setup.



## Focusing the target with optical image



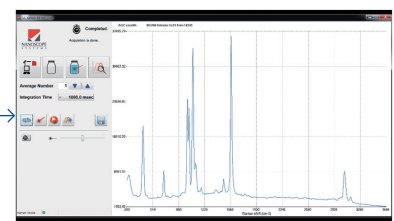
## Microscope Mode



## Spectrum acquisition



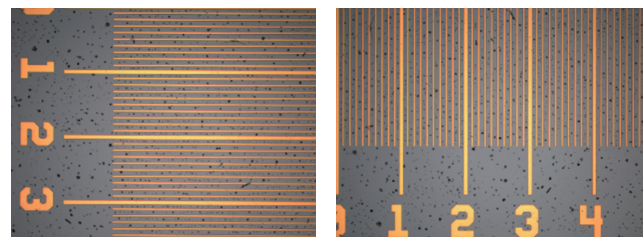
## Raman spectrometer Mode



Built-in optical microscope enable the user to "see the target" before spectrum acquisition

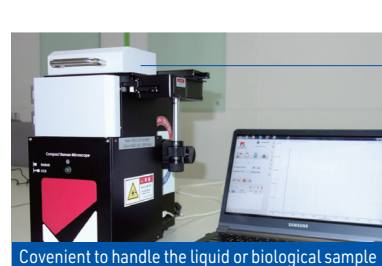
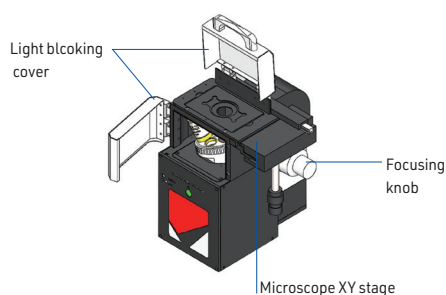
## Features & Benefits

- Personal benchtop Raman spectrometer
- Optical microscope imaging
- Auto focusing
- Signal acquisition with high sensitivity
- Operation with laptop or desktop computer (USB interface)
- Convenient dark room chamber
- Analysis of detected signal with library database
- Easy and intuitive operation & analysis software
- User's own library management software
- Raman signal mapping with automatic sample stage

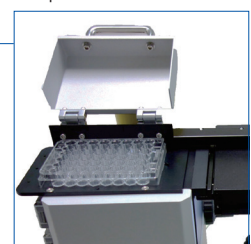


Field of View : 483 x 362 μm (with 20X objective lens)

## Inverted type configuration

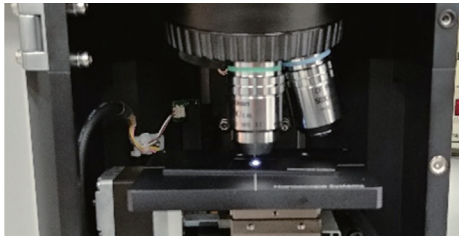


wellplate

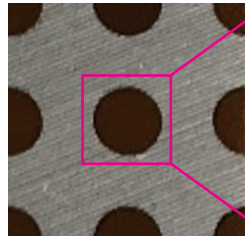


## Mapping with motorized stage

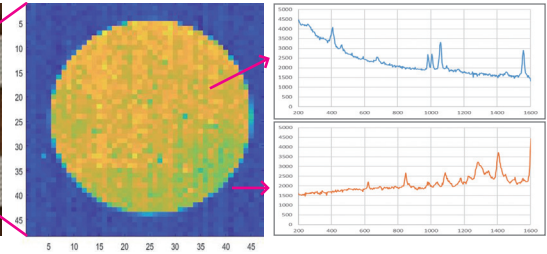
Raman mapping image can be obtained by the motorized stage scanning method. The scanning range or the mapping area is defined on the optical microscope image, and sequential acquisition of spectrum along the scanning paths in defined range is performed automatically. Result is displayed by the adequate colors reflecting the material property of each point characterized by the Raman spectrum.



Motorized stage for Raman mapping



Specify the mapping range on microscope view image

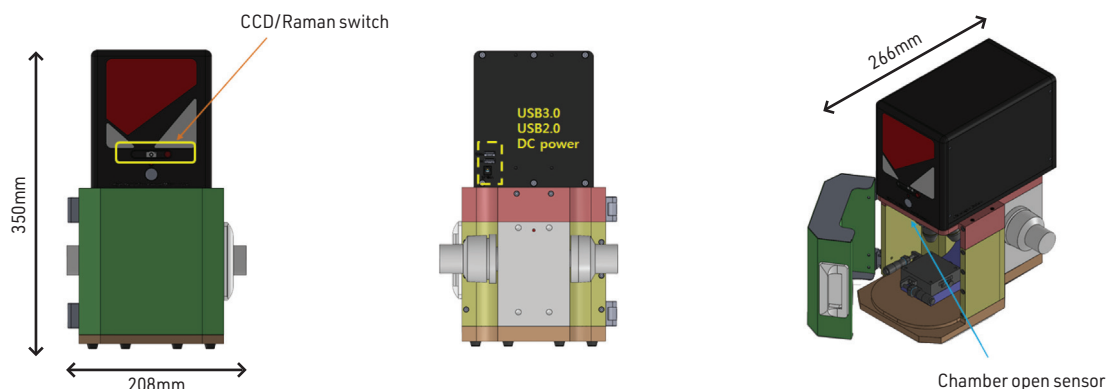


Raman mapping image ; Different color for different property

## Specifications

Model	NS200	NS220	NS240
Laser Wavelength	785 nm ± 1 nm	633 nm ± 1 nm	532 nm ± 1 nm
Spectrum Range	100 cm <sup>-1</sup> ~ 3200 cm <sup>-1</sup>	100 cm <sup>-1</sup> ~ 3600 cm <sup>-1</sup>	
Spectral Resolution	≤ 10cm <sup>-1</sup>		
Collection Optics	NA 0.45 / WD 4.5 mm (Default) Depends on Objective lens		
Laser Output Power	80 mW Depends on Objective lens	40 mW	20 mW
Exposure	Min : 5 msec ~ Max : 65 sec		
External Power	24V@5A		
Weight	~9.5 kg (w/o Objective lens)		
Size	Head only : 140 x 228 x 162 mm <sup>3</sup> With frame : 208 x 266 x 350 mm <sup>3</sup>		
I/O (Interface)	USB 2.0, USB 3.0		
Software	NSRamanID		
Data Formats	.txt, .csv		
Library	~200 materials		
User Library	Can be built by user		
Display	By laptop computer		
Feature	Multiple Objectives, Lasers power measurement, Bright field CCD image		
Automatic functions (Optional)	Motorized motion of CCD-Spectrometer switching, Auto focusing, Motorized XY motion, Raman signal mapping		

## Dimensions



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# NS-Raman

## RAMAN SPECTROMETER & ANALYZER

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- NS200 series** single laser micro Raman spectrometer
- NS100 series** handheld-size Raman spectrometer
- Ramcheck-A1** for reading SERS strip
- SERSpace** SERS substrate amplifying Raman signal