



This is a new form of Raman system.

Laser Raman Microscope

**RAMAN**touch

## We developed the “Analysis” like this.

The best imaging performance and more;  
Automation by our brand new software “Laurus”  
cleared all the bothering operation.  
Real-time sharing of measurement realized the  
cooperation of multiuser over time and space.



Performance Raman microscopy performance improves like this if laser microscope professionals design.

### Diffraction limit

**Guarantee the spatial resolution of 350nm.**

350nm spatial resolution enabled to detect the structure and distribution of the sample with sub-micron order.

Raman image of RBM's distribution of SWNTs



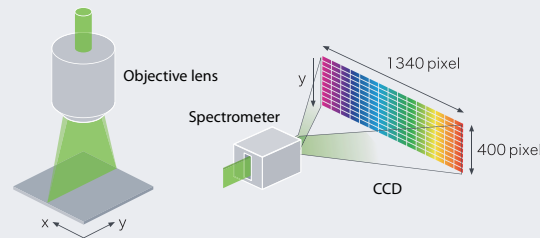
■ : 146  $\text{cm}^{-1}$  (Semiconductor)    ■ : 192  $\text{cm}^{-1}$  (Semiconductor)  
■ : 179  $\text{cm}^{-1}$  (Semiconductor)    ■ : 232  $\text{cm}^{-1}$  (Metal)

Measurement conditions: 532 nm / 100x, NA=0.90 / 16 mins

### Ultra-high speed

**Simultaneous measurement of 400 spectra.**

Patented line illumination excites and detects 400 spectra simultaneously and accelerate Raman imaging speed.



Line illumination

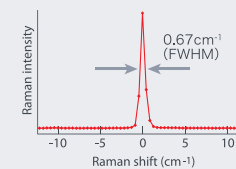
400 spectra measurement

### High resolution

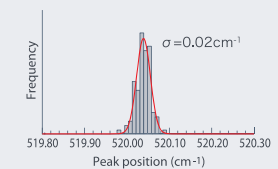
**High quality laser and 500 mm spectrometer.**

Narrow line width laser and 500 mm spectrometer realize high spectral resolution and repeatability of peak position.

FWHM of Rayleigh light



Si peak position repeatability

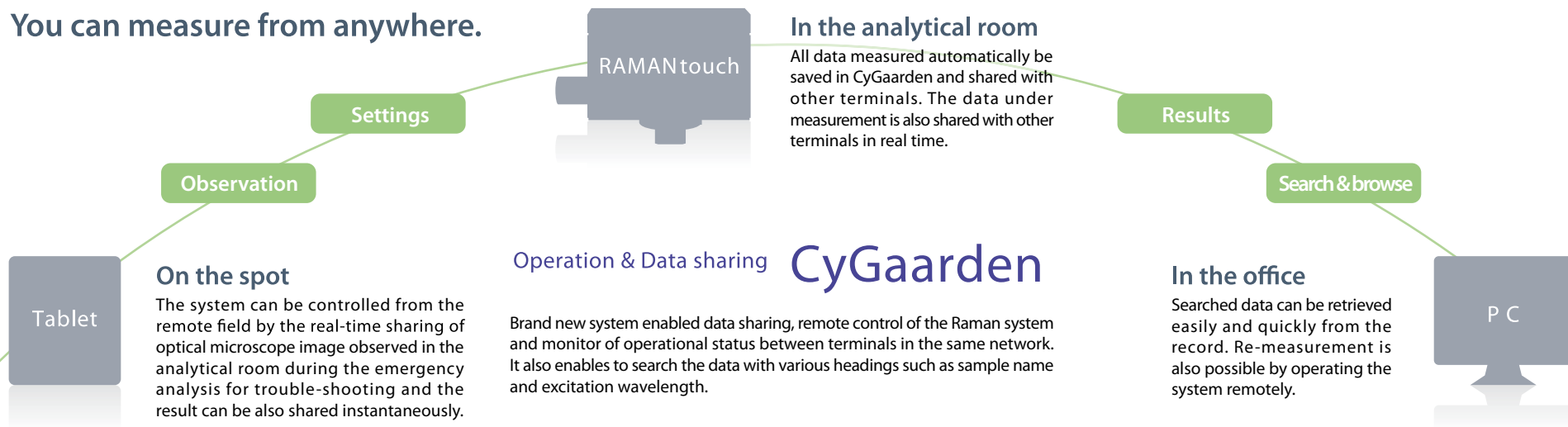


Measurement conditions (left): 785 nm / 1200 gr/mm







Measurement conditions (right): 532 nm / 2400 gr/mm / 6750 times

※This sample is provided by Prof. Shigeo Maruyama at The University of Tokyo.

No need to attend the machine.  
You can measure from anywhere.



Operation by Laurus It drastically streamlined the whole process of the measurement, from the scratch thru the result shared.

<p><b>Ultra-high speed start-up</b></p>  <p>Only a couple of seconds needed for start-up after double-click of icon. You can start measuring instantly.</p>	<p><b>Easy pointing</b></p>  <p>Laser beam scanning enables to realize instant measurement with maximum 10 nm accuracy by clicking the cursor anywhere.</p>	<p><b>Easy mode</b></p>  <p>Easy mode shows the minimum of setting conditions on the display and it also enables for beginners to easily operate RAMANtouch.</p>
<p><b>Functional group guide</b></p>  <p>The peak positions of various functional groups are displayed and it helps set the spectrum range and identify Raman peaks.</p>	<p><b>Ultra-high speed data processing</b></p>  <p>The General-Purpose Graphics Processor Unit (GP-GPU) realizes the ultra-high speed image processing such as noise reduction.</p>	<p><b>One-click report</b></p>  <p>The PowerPoint format of measuring report can be output with one button click. The items and layout of report can be freely customized by user.</p>

## New Product

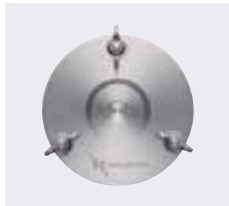


Imaging Raman scope

### RAMAN view

Broadened the restricted field of view of Raman microscope for Raman imaging an area of centimeter order.

## Accessory



Closed vessel for Li-ion battery analysis

### LIBcell

LIBcell enables to easily perform Raman spectroscopy measurement of the sample under stable inert atmosphere.



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## RAMANtouch specifications

	Specifications
Laser	488nm, 532nm, 671nm, 785nm ( 4 lasers at maximum )
Illumination mode	Point illumination / Line illumination
Focal length of spectrometer	500mm
Grating	3 gratings from 150, 300, 600, 1200, 1800, 2400 gr/mm
Detector	Electrically cooled CCD, 1340 x 400 pixels
Optical microscope	Upright / Inverted
Spatial dimension	820 x 450 x 670mm
Weight	70kg

## RAMANtouch performance

	Performance
Spatial resolution (X / Y / Z)	350nm / 500nm / 1000nm (@532nm, 100x 0.90NA)
Spectrum measurement range	100cm <sup>-1</sup> ~
Spectral resolution (FWHM)	1.2cm <sup>-1</sup> (@785nm, 1200gr/mm)
Spectral pixel resolution	0.3cm <sup>-1</sup> /pixel (@785nm, 1200gr/mm)
Peak position accuracy	0.1 cm <sup>-1</sup>

Options	<ul style="list-style-type: none"> <li>· Database</li> <li>· Wide field of view imaging</li> <li>· High accuracy stress measurement</li> <li>· Cooling / heating stage</li> <li>· Polarized Raman measurement</li> <li>· Remote operation from iPad</li> </ul>
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