Scientific-Grade Raman Microscope DTR8800

Features

- Fully automated Raman imaging, auto-focus and auto-scan.
- Ultra-large imaging (50X50mm), automatic image splicing.
- Support up to four excitation wavelengths Raman system.
- Rotating grating design, integrated high resolution and wide range advantage in one equipment
- Seal door design fit to different ambient light
- Long focal length & super high-resolution design.
- Ultra-field imaging function (optional).
- Super sensitivity, SNR > 6000:1.
- The maximum integration time reach up to1.3 hours.
- True focus ensures more accurate Raman images.
- Ultra-high spatial resolution.
- Exclusive software for switching optical path.
- Fast positioning and quickly find the focus position.
- Good quality objective lens, spot size up to micron.
- 5-mega cameras with clear and accurate images
- USB 2.0 connector to the computer.

Application

- Nanoparticles and new materials.
- Research institute research.
- Biological sciences.
- Forensic expertise.
- Materials science.
- Medical immune analysis.
- Agricultural and food identification.
- Gemstones and inorganic mineral identification
- Environmental science

Description

- The DTR8800 series scientific grade Raman microscope integrates two lasers, and combines the advantages of the microscope and the Raman spectrometer. Drawell self-developed Raman imaging microscope realizes "seeing is testing", say visualize precision positioning the micro-area of the sample at the microscope platform, so that the observer can collect the Raman signals from different surface of the sample, and meanwhile displaying the image of the detected areas on the computer.
  The full series of DTR 8800 can be fully automatic focus, automatic scanning, key operation, high throughput tests, uniformity scanning, etc., no need to wait and can be obtained highly reliable scanning imaging of Raman database.
  The DTR8800 is equipped with spectrometers with different focal lengths to meet the requirements of different resolutions.
  The DTR8800 is also equipped with objectives especially designed for Raman systems, which brings laser spots to the limit of diffraction, and then displays focus information accurately and intuitively on the computer through 5-mega cameras. Raman signal collected focal plane could higher or lower than actual one have been solved, so that it improve Raman signal as a result.
  The DTR8800 perfectly solves the loss of the camera imaging time path, and realizes the separation of camera imaging from Raman signal collection, so as to obtain the best signal intensity.
  At the same time, the DTR8800 uses high-performance Raman system with the scientific grade sensitive, signal-to-noise ratio, stability, which represent a leading level in the industry, providing a strong guarantee for the Raman spectroscopy research.

Parameters

DTR8800 performance parameters		
Excitation wavelengt	532,633,638,785,1064nm Optional	
Laser power	532nm：100mW，633nm：80mW，638nm：80mW 785nm：350mW，1064nm：500mW	
Optical path	C-Toptical path	
Focal length	350mm,510mm,760mm Optional	
Objectives	Standard configuration：4X, 10X,20X； Optional configuration：50X, 100X	
Microscopic lighting	Highbrightness long life white light LED	
Lighting Type	EpiIlluminiation	
Microscope camera	5-mega pixels industrial camera	
Focusing method	Conjugate Focus/confocal Focus	
Laser spot diameter	>1μm	
Laser stability	σ/μ<±0.2%	
Interface	USB2.0	
X, Y axis two-dimensional platform		
Move method	Manual, Electric optional	
Moving range	50X50 mm	
Mobile resolution	0.1 μm	
Positioning accuracy	1 μm	
Scan speed	20 mm/s	
Zaxis (auto focus)		
Focus accuracy	≤ ±0.2 μm	
Maximum stroke	20 mm	
Focus speed	No more than 10 s	
Physical parameter		
Dimensions	DTR8800-FL210 DTR8800-FL350 DTR8800-FL510 DTR8800-FL760	823(L)x500(W)x643(H) 905(L)x500(W)x643(H) 1009(L)x500(W)x643(H) 1320(L)x500(W)x643(H)
Weight	DTR8800-FL210 DTR8800-FL350 DTR8800-FL510 DTR8800-FL760	53 Kg 59 Kg 63 Kg 78 Kg

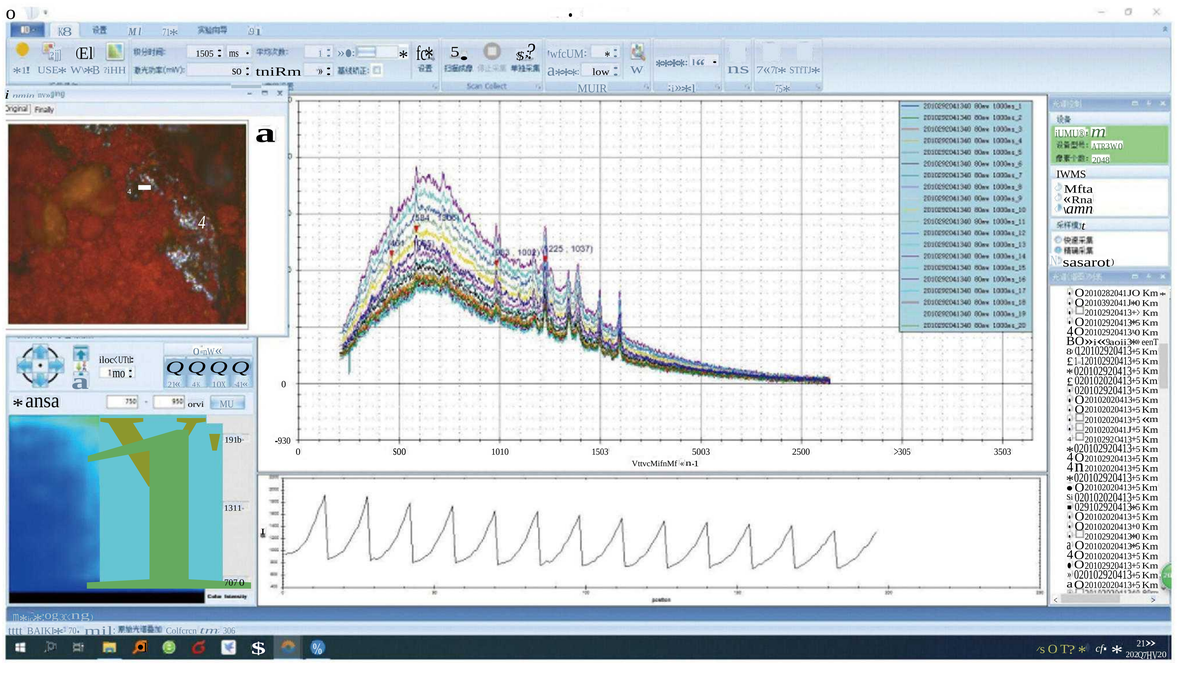

Figure 1 DTR8800 Software Interface 1

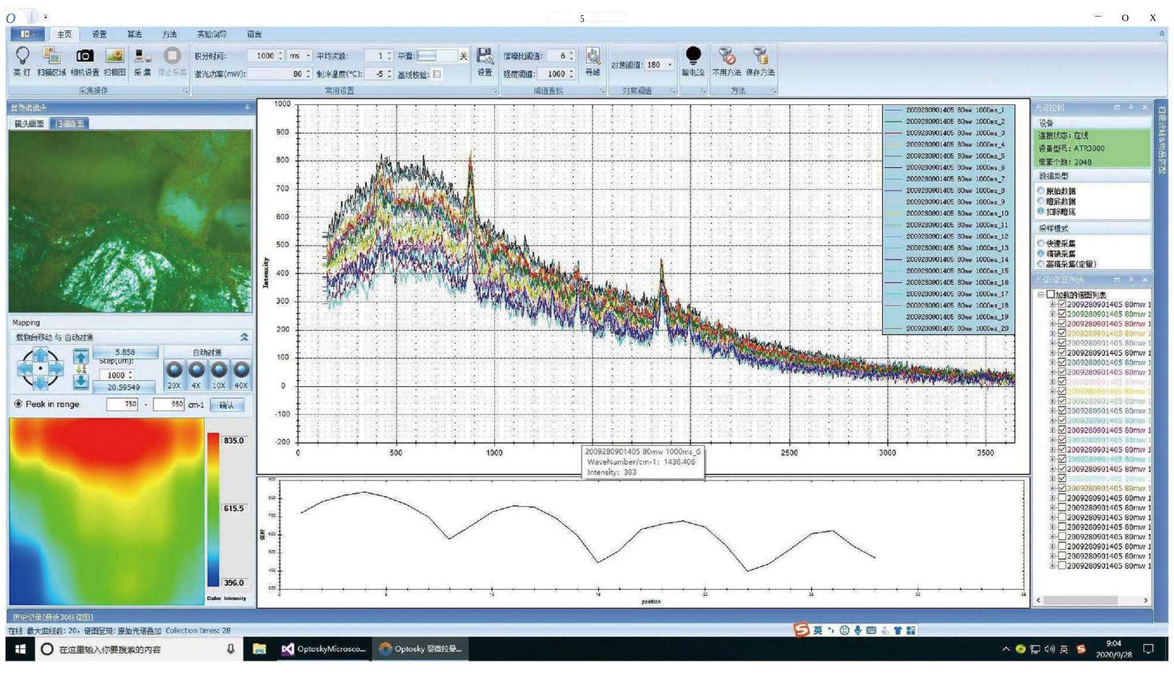

Figure 2 DTR8800 Software Interface 2

Table 1 DTR8800 product selection table

Model	Focus length	Excitation wavelength /nm	Laser Power/mW	Maximum wave number range	Minimum resolution/cm-1
DTR8800-FL350	350mm	532	100	200 ━3700	1.4
		633/638	80	200 ━3500	1.4
		785	350	200 ━3500	2.1
		1064	500	200━2500	5.2
DTR8800-FL510	510mm	532	100	200 ━3700	0.9
		633/638	80	200 ━3500	0.9
		785	350	200 ━3500	1.4
		1064	500	200━2500	3.6
DTR8800-FL760	760mm	532	100	200 ━3700	0.5
		633/638	80	200 ～3500	0.5
		785	350	200 ━3500	1.0
		1064	500	200━2500	2.7

DTR8800LT: 3rd stage cooling to -30°C， long integration time (up to 1.3h)
DTR8800SCM: Te-Cooled SCMOS detector
DTR8800BS：Basic series
DTR8800AF: Auto-focus
DTR8800MP ：Scan imaging-Mapping, Auto-focus

Order Guide:
Model No. Rules: DTR8800AF-LT-FL350-532+633:
AF: Auto Focus
LT: long integration time
FL: Focal length: 350mm
Dual-band: 532nm & 633nm
DTR8800MP-SCM-FL760-532+633+1064:
Scanning Imaging: SCMOS Detector
Focal Length:760mm
Triple-Band: 532nm, 633nm and 1064nm