

pRaman

PORTABLE RAMAN SYSTEM



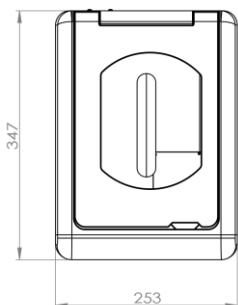
pRaman-830nm

The pRaman is a portable Raman spectroscopy system to be carried out for out-field work. It comes with a flexible optical fiber probe for probing of samples which is not possible to be extracted. The pRaman comes with near-infrared laser (785nm, 830nm or 10064nm) which is preferred for samples with high background fluorescence.

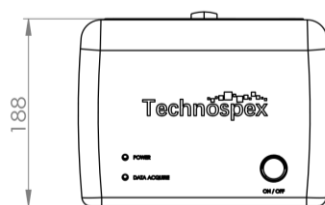
The spectrometer, integrated into the pRaman, comes with a high-sensitive, back-illuminated and low-etalon cooled-CCD linear detector, which is ideal for measuring weak Raman signals.

The compact design along with the flexible fiber probe make it easy for user to bring the system for out-field applications. Not limiting to solid or powder sample, user can use the pRaman to measure liquid samples with an optional liquid sample holder.

Top View



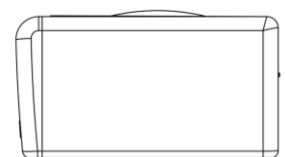
Front View



Side View



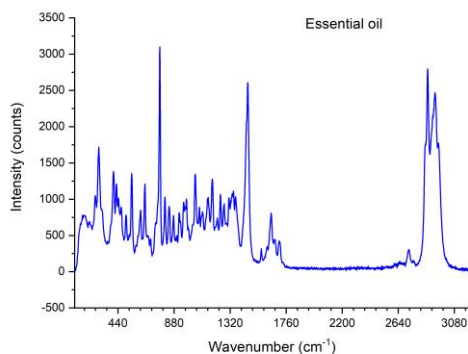
Back View



APPLICATIONS

- Agriculture
- Minerals and Gemology
- Forensic Science
- Pharmaceutical
- Medical
- Archaeology
- Education

RESULTS



Raman spectrum of essential oil taken with pRaman

SOFTWARE

Technospex uSoft software is built for easy control of systems and data processing. An intuitive interface enables seamless work-flow during testing, interpretation of the data and collation of result.

Control your system

uSoft a one-stop communication interface between you and your system. Experiment can be carried out hassle free, with just a few clicks.

Data collection

- Data can be acquired easily with a single click
- Acquired data can be saved / exported for future analysis
- Collation of several spectrum in one graph
- Various data collection modes, such as single, live and accumulation

Software control

- Adjustable laser power control - No physical attenuator or filter needed
- Shutter - For safety purpose, auto open and close of shutter is implemented. Shutter open when acquisition starts and closes when acquisition stops.

TECHNICAL SPECIFICATIONS

Laser	Power at laser port (Software controllable)	
785nm	500mW	
830nm	500mW	
1064nm	500mW	
Spectrometer	Spectral range	Spectral resolution
785nm system	250-3200 cm^{-1}	$\sim 9 \text{ cm}^{-1}$
830nm system	250-2100 cm^{-1}	$\sim 10 \text{ cm}^{-1}$
1064nm system	250-1050 cm^{-1}	$\sim 15 \text{ cm}^{-1}$
Detector - 785/830		
Detector type	1024 x 58 pixels, back-illuminated, low-etalon	
Cooling	$\sim -10 \text{ deg. C}$	
Integration time	7ms-10 mins	
Detector - 1064		
Detector type	256 pixels TE-cooled InGaAs linear array	
Cooling	$\sim 0 \text{ deg. C}$	
Integration time	0.02ms-20sec	
Communication		
Interface	USB 3.0/USB 2.0	
	LAN (RJ-45)	
Physical dimension		
	L x B x H 24.7 x 35.3 x 18.8 (cm)	

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