

# RAMAN 785

## Raman System for Laboratory and Process

The **Raman 785** system is ideally suited for precise measurements in harsh process environments because of its high optical throughput, rugged design and high resolution.

The basis for this highly sensitive system is a TE-cooled back-thinned CCD sensor which allows the detection of weak signals. The connection of the fiber-optic probe is realized via SMA-connectors.

A built-in temperature-stabilized laser provides an excitation of 785 nm with an adjustable power of up to 500 mW. The connection of the fiber-optic probe is realized via FC/PC-connectors.

To guarantee process environment suitability, the parts of the Raman probe in direct contact with the medium are made from stainless steel 316 and are equipped with a sapphire window, respectively.

An additional hose, also made of alloy steel, protects the fiber optic cables.

By choosing different fixed working distances of the probe, optimal measurement scenarios are realized in liquids, bulk materials and powders.



### Features:

- Raman Spectrometer System for process applications
- 785 nm excitation wavelength
- Temperature-stabilized laser source
- Optical probes for different measurement setups (liquids, solids, measurements through glass)
- 19" rack-mount standard

## Technical Specifications:

### RAMAN 785

#### Laser Excitation Source

Laser Type	Fiber coupled, stabilized multimode diode laser
Wavelength	785 nm
Output Power	50 to 500 mW, adjustable
Output Connector	FC/PC
Laser Class	3B

#### Spectrometer

Sensor	Back-thinned CCD 1024 pixel
Cooling	TE Cooling (1-Stage)
Spectral Range	65 cm <sup>-1</sup> to 3200 cm <sup>-1</sup>
Resolution	7 cm <sup>-1</sup> typ.
Integration Time	min. 3 ms

#### Fiber Optical Probe

Probe body	Stainless Steel 316
Window	Sapphire
Length of Fibers	5 m (standard), others on request
Fiber (excitation)	100 µm; FC/PC connector
Fiber (collection)	200 µm; SMA905 connector
Temperature Range	5 °C to 180 °C (Probe body)
Pressure Range	-1 bar to 100 bar

#### Mechanics

Power Supply	100 to 240 VAC; 50 to 60 Hz
Weight	approx. 11 kg
Dimensions l x w x h	133 x 449 x 376 mm (w: 462 with front handles)
Temperature (operating)	5 °C to 35 °C
Temperature (storage)	0 °C to 50 °C

Please note that any specs on the data sheet are subject to change without notice.

As a well-established manufacturer of spectroscopic measurement equipment, **inno-spec** provides optimized solutions for any individual applications: from customized OEM components for system suppliers up to fully integrated turnkey solutions for the end-user.

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