

## RIHFRM Fiber Coupled RAMAN Spectrometer:

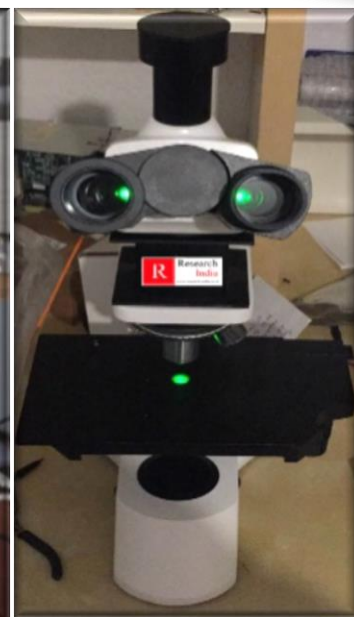
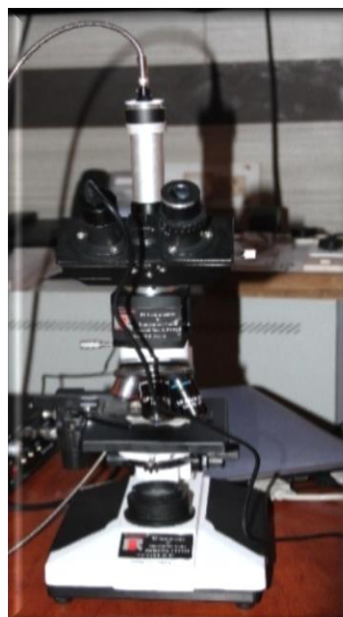
Our Fiber Coupled Raman Spectrometer RIHFRM Series developed by the **RI Instruments & Innovation India** which applies in the field of **Medical Sciences, Material Science, Nano Science, Basic Sciences, Food Safety, Environmental Sciences, Biological Science, Forensic Science** and more.

## Software & Hardware Features:

Instrument Control & Data Collection parameters are user-definable, such as exposure time, dark correction, base line correction, signal averaging, spectral smoothing, automatically saved spectra. Graphics could also be saved in .txt, .bmp, format and could be opened in any Third-Party Software i.e. Origin, Excel and other data processing software.

In one setup user can perform Raman, Raman Imaging.

Our RI Spectra also includes, parameters like resolution in 1nm steps, Optical triggering, etc.



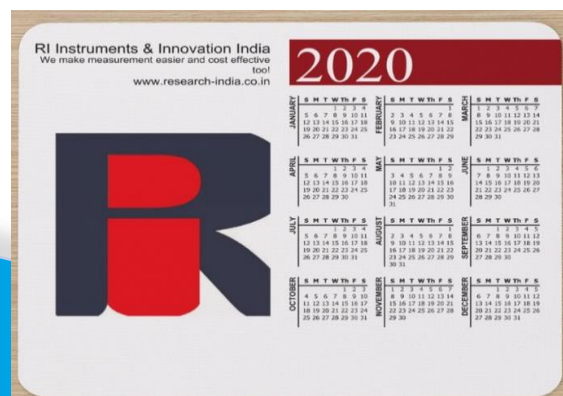
## Standard Models

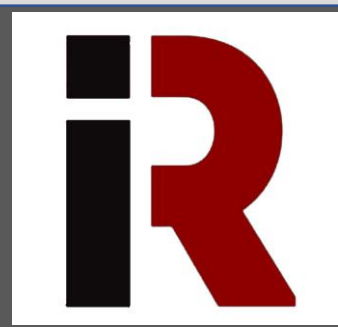
Model No.	Wavelength Range
RIHFRM-S	Channel 1: 200- 4500 $\text{cm}^{-1}$
RIHFRM-M	Channel 1: 120- 4500 $\text{cm}^{-1}$
RIHFRM-C	Customized

## Contact Us:

### RI Nanotech India

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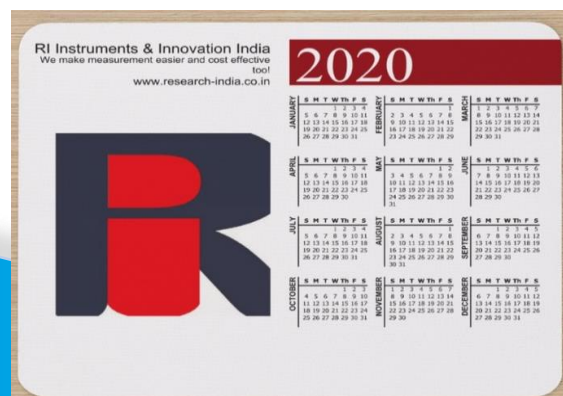
**Specifications**

Design	:	Czerny Turner
Detector	:	Linear array
Pixels	:	Linear Array CCD 3648 Pixel
Spectral range	:	120/200- 4500 cm <sup>-1</sup>
TEC Cooled	:	-40 °C (Standard) , -45 °C ( Optional )
Filter	:	Order Sorting Filter
Slit	:	Continuous Variable 0- 200/400 μm
Integration Time	:	1ms – 60 secs
A/D Resolution	:	16 Bit
Stray light:	:	<0.05% at 600 nm; <0.10% at 435 nm
Power Consumption	:	100mA @ 5V from USB interface
Trigger Modes	:	3 modes – Optional
Operating System	:	Windows 10 /8 / 7 (32 & 64 Bit)
Software	:	RI Spectra, With Database Search Option & Manual Shift Calibration, Measurement – Raman, Absorption, Transmission, Reflection, Fluorescence, Irradiance and Color Measurement (CRI)
Computer Interfaces:	:	USB 2.0
Laser Wavelength	:	532 nm (Optional 785 nm)
Laser Stability	:	1%
Laser Power	:	200 mW (Standard), 300mW – 500mW (Optional)
Laser Power	:	Tunable
Sample Holder	:	Raman of powder/liquid/thin film samples
Focal Length	:	200 mm
Coupling	:	0.39 NA, 600 μm Core SMA Connectors Multimode
Optical Resolution	:	2-5 cm <sup>-1</sup>
Signal-to-noise ratio	:	12000:1
Excitation fiber	:	100 ums optical fiber (Standard)
Collection Fiber	:	200 ums optical fiber (Standard) and 7 cores fiber :200 um with the 1 core of 600um Round to Linear optical fiber (Optional)
Laser line blocking	:	OD 6
Objective Lens	:	4x, 10x, 40x
Digital camera	:	5 MP
Focusing	:	Coaxial focusing control with ball bearing guide way & large knobs. Pre focusing/ auto focusing lock & tension adjustment ring.
Illumination	:	Built-in illumination system with 6V-20W Halogen or 3W LED

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Condenser	:	Abbe condenser N.A. 1.25 having aspherical lens, adjustable iris diaphragm.
Multimode	:	Easy adjustment switch between Camera Mode and Spectrometer Mode



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