

Scientifically, long time integration, Low temperature Portable Raman Spectrometer

ATR3110LT

Features:

- Ultra-low Dark Current, especially fit to long time integration time setting;
- Suit to low signal materials measure;
- Ultra-high sensitivity FFT-CCD TECooled;
- Detector cooled down to -15 °C;
- Ultra-low noise circuit;
- Powerful embedded software;
- Fluorescence background elimination;
- Peak finding and display;
- USB 2.0;
- User-friendly interface;

Application:

- Art, Art of Work, Craft, Archaeology, Antique
- Bioscience and Medical diagnosis
- Pharmaceutical Engineer
- Forensic Analysis & Criminal Investigate
- Agriculture and Food Safety
- Gemstones Identification
- Environmental Science
- Geology & Mines exploration
- Semi-conductor and solar energy

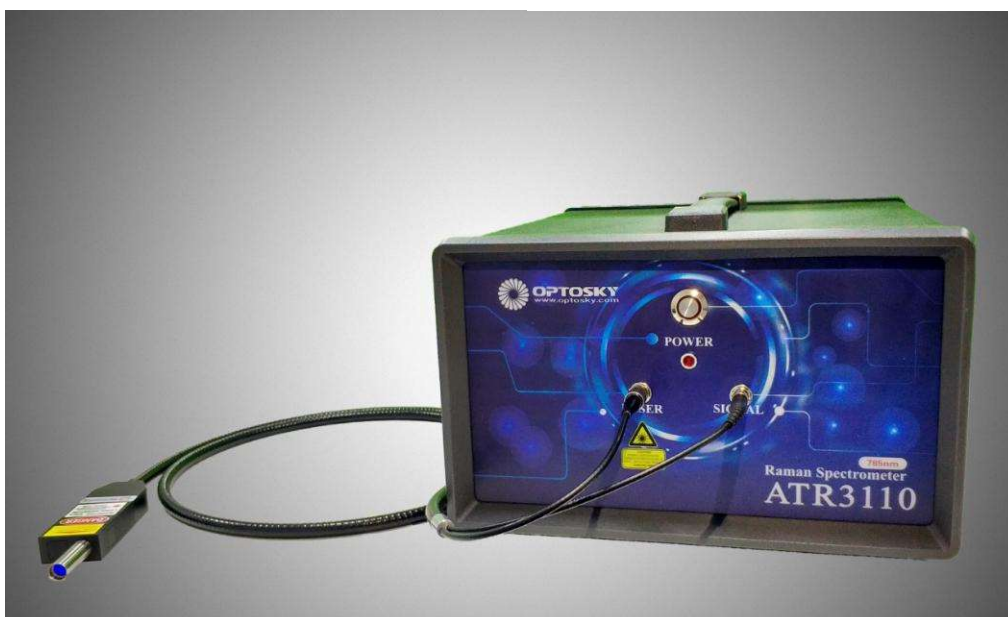
Description:

ATR3110LT Scientifically Portable Raman Spectrometer, LT means long time integration time. It especially fits to weak signal; long integration time reach up to 30minutes suit to laboratory research. Unique reliability ensures accurate detect result. Excellent low stray condition make a wide application to biochemical analyzer, food safety, pharmaceutical engineer.

Models	Wavelengths (nm)	Wavenumber (cm ⁻¹)	Resolution (cm ⁻¹) *
ATR3110LT-27	785	200-2400	7.4
ATR3110LT-35		200-3200	10
ATR3110LT-43		200-4000	13
ATR3110LT-266	266	200-2500	25
ATR3110LT-532	532	200-2800	11
ATR3110LT-633	633	200-2800	10
ATR3110LT-830	830	200-2600	7

Remarks:

- ASTM E2529-06 measurement method;



Specifications (Eg: 785nm Raman)

ATR3110LT System			
Interface	USB 2.0		
Integration Time	8ms-1.2hours		
Voltage	DC 5V(+/-5%), 4.5A		
Working Temp.	-10~40 °C		
Working Humidity	< 95%		
Dimension (L*W*H)	30×22.5×13.2 cm ³		
Weight	5.5 Kg		
Reliability			
Spectral Stability	$\sigma/\mu < 0.5\%$ (COT 8 hours)		
Temperature Stability	Shift $\leq 1 \text{ cm}^{-1}$ (10-40 °C)		
Spectral intensity shift (in 5 ~ 40 °C)	< $\pm 5\%$		
Optical Parameters			
Spectral Range (cm ⁻¹)	200-2400	200-3200	200-4000
Resolution (cm ⁻¹) / 50 μ m Slit size	7.5-9	10-12	13 -15
SNR	>3000:1 (918 cm ⁻¹ of Acetonitrile , 10s accumulation, 200mW)		
Sensitivity :	2000:1		
Optical system	f/4 C-T		
Focal distance	98 mm for incidence and output		
Detector			
Models	Scientific fast cooed FFT CCD		
Detector cooled down to	-15 °C		
Detect Range	200-1100 nm		
Effective pixels	1044*64 Area Array CCD		
Dynamic Range	50,000: 1		
Pixel Size	24 μ m×24 μ m		
Full Well	300 Ke ⁻		
Sensitivity	QE>40%, 6.5 μ V/e ⁻		
Laser			

Wavelength	785nm (+/-1nm)
FWHM	0.08 nm
MAX Power Output	≥550 mW
Power Stability	$\sigma/\mu < \pm 0.2\%$
Raman Probe	
Working Distance	6 mm
OD	OD>8
NA	0.3
Aperture	7mm