Datasheet

Routine Benchtop FT-IR Spectrometer ATP8900

Features

- Vacuum optics bench design at a vacuum below 0.2mbar
- Widest spectral range from 12,500-10cm^{-1}can auto-set in the software for extension to NIR, Mid-IR, Far-IR range under whole IR light source
- In a single measurement covering 6,000-50cm^{-1}
- High spectral resolution $\leqslant$ 0.25 cm^{-1}
- No interfere with atmospheric CO2 and H2O absorption line
- Reject any interference from laboratory environment
- Cast aluminum housing of the optics bench provides high stability
- High throughput and high sensitivity
- Optional Gold-ATR module under vacuum measurement
- Vacuum either whole instrument or single sample compartment for higher efficiency
- Multiple external optical ports can be configured to connect various external optical cavities, such as UHV (Ultra-High Vacuum) vacuum sealing chamber, low temperature dewar, high temperature emission vacuum chamber, external sample compartment, external detector chamber
- Connect to long path length gas cell for higher resolution to measure gas

Application

- Self-assembled ultra-thin film studies
- UHV vacuum-sealed ultra-high vacuum cavities
- Low temperature matrix-isolation
- Quantification of group lll and Vimpurities (B,P,Al,Sb,As,Ga,In) in Si single crystals
- In-situ diffuse reflection characterization of catalysts in a vacuum environment

Description

ATP8900Ad vacuum Fourier transform infrared spectrometer is a new high-end research-grade infrared spectrometer from Optosky Photonics Inc. The ATP8900Ad has a vacuum design for optical bench and sample chamber. The vacuum FT-IR spectrometer is widely used in nano surface analysis, polymer industry, materials science, pharmaceuticals, semiconductors and catalysis etc.

The oil-free vibration-damping pump can rapidly vacuumize the optical chamber and sample chamber with real-time vacuum level display, allowing the user to change samples quickly and efficiently.

The ATP8900Ad can be equipped with an external water-cooled mercury lamp light source and a liquid helium Bolometer detector, allowing the user to extend the spectral range to 10cm, reaching the terahertz research band.

We offer a spectral database(about 10,000 spectra), including inorganics, organometallic complexes, polymers, additives, organics, and the user can also build their own libraries.

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Parameter

Name	Parameters
Spectral range	6000-50cm^{-1} (Expandable to 12500-10 cm^{-1})
Spectral resolution	≤ 0.25cm^{-1}
Wave number accuracy	≤0.01cm^{-1}
Design	Integrated casting and moulding,vacuum level:≤0.2mbar
Interferometer	High stability Cube corner interferometer,10-year warranty
Beamsplitter	Wide range: mid and far infrared beam splitter (options: potassium bromide, calcium fluoride, quartz, zinc selenide, etc)
Detector	Mid and far DLaTGS detector (options: InGaAs,MCT and Bolometer, etc)
IR source	Long life mid-infrared ceramic light source (options: Water-cooled mercury and tungsten light sources)
Laser	He-Ne laser, 633nm
Connection port	Network cable data port
ATR accessory	Diamond crystals, resistant to wear and tear, corrosion resistant and easy to clean
Software	Functions:Spectral measurement, spectral data pre-processing, fast spectral comparison, self-built standard spectral library, quantitative analysis, intelligent spectral recognition, one-touch direct measurement and storage, automatic report generation and printing, etc
Database	Professional infrared spectral database, more than 10,000 spectra, including various inorganic compounds, organometallic complexes polymers, additives, organic compounds, etc
Weight	<100kg (Standard configuration)
Temperature	+15°C to +35°C

Name	Type	Quantity	Note
Vacuum FT-IR spectrometer	ATP8900Ad	1	spectrometer
Anti-vibration oil-free pumps		1	accessory
Power adapters		1	accessory

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