OPTOSKY
Spectroscopy Solutions

Datasheet

Routine Benchtop FT-IR Spectrometer | ATP8900

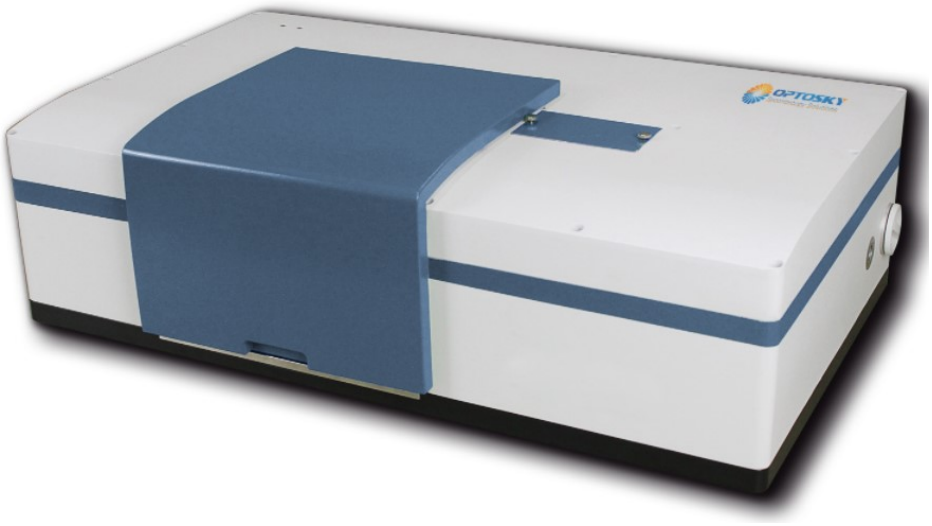
Features:

- **Michelson interferometer** with wear free and reliability of 10 year guaranty, with cube-corner mirror resist mechanical and temperature vibration
- Higher stability of optical system is designed with **gold mirror** improve reflectivity by >5% than traditional aluminum mirror.
- Super sensitivity and reliable temperature controlled **DTGS detectors**
- Reliable performance of **solid laser** life up to 10 years
- Vacuum cooling ceramic **IR light source** with high performance
- **Powerful software functions** for IR analysis and simplify measurement procedure

Description:

ATP8900 routine benchtop FT-IR spectrometer is self-designed seal integrated Kbr beamsplitter and high sensitivity DTGS Detector. The sample compartment can compatible with IR transmission module, Attenuated Total Reflectance, diffuse reflectance up or front, and specular reflectance, gas cell etc. The experiment involves in-situ diffuse reflectance attachment, temperature controller and other auxilliary equipment can be contained inside. This design is compact and save space.

ATP8900 is widely used for solid, liquid and gas transmission characteristics, direct measure with solid or liquid ATR diamond, ZnSe, Ge crystal no necessary press, and direct connect to gas cell fit to both high and low concentration gases, customize measure is available for one stop solution provider.



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1. Performance

Items	Description
Spectral Resolution	≤1 cm^{-1}
Spectral Range	8000-350cm-1
IR source	vacuum cooling ceramic light source, 1550K
Laser	Solid laser
Beamsplitters	KBr
Detectors	Temperature controlled DTGS detector
Interferometer	Cube-corner mirror Michelson interferometer, wear free fit to many field measure can resist to mechanical and temperature vibration
Wavenumber Accuracy	Better than 0.01 cm^{-1}
Wavenumber Precision	Better than 0.01cm^{-1}
Signal to Noise	≥40,000:1 1 min sample measurement, 4 cm-1, peak-to-peak
Dimension	685×415×223mm

2. Application

FT-IR spectrometer is widely applied to IR measure modules of solid transmission, ATR reflection, and diffuse transmission etc.

- **Solid Transmission**

  1. Many solid powder press
  2. Thin film Quantitative analysis
  3. Heating press module quantitative analysis
  4. Transparent IR materials of various glasses, Jades, crystal materials, and material properties change

- **Solid / Liquid Attenuated Total Reflectance (ATR）**

  1. Many powder sample without press for direct measure
  2. Irregular shape sample of non-destructive measure without press
  3. Many polymer, fiber, thin film, and high polymer sample
  4. Many O ring, rubber sample
  5. Many others difficult to measure by transmission

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- **Liquid Transmission**

1. Seal liquid cell qualitative analysis organic solution, VOCs
2. Disassemble liquid cell available in change optical length for quantitative analysis
3. Many lubricant oil quantitative analysis
4. IR window film forming liquid film for qualitative analysis

- **Gas Cell**

1. Glass or Stainless steel gas cell can inlet directly with select temperature control and optical length of 1.5cm, 3cm, 5cm, 7cm etc fit to high concentration gas
2. Mulit-reflectance gas cell of stainless steel, temperature control and optical length of 50cm, 100cm, 5m fit to low concentration gas
3. Corrosion resistant gas cell can customize anti-corrossion materials gas cell eg HF gas measure

3. Optional Accessories

- TGA-IR coupling Module
- GC-IR coupling Module
- External sample compartment, vacuum or purgeable
- External vacuum UHV Chamber
- 2cm to 20 meters gas cells
- Integrating sphere accessory
- In-situ Transmission accessory
- In-situ Diffuse Reflection accessory
- ATR and specular accessory

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4. Application

- **Pharm & Life Science**

Protein conformation and quantification

Quantification for Active Pharmaceutical Ingredients and excipient in water solution

- **Microorganism Identification**

Characterization for the volatility and stability of medicine combined with TGA module

- **Polymer and Chemical Products**

Detection and Characterization for the volatility and decomposition combined with TGA module

Monitoring reaction process in lab combined with MIR fiber probe module

- **Surface analysis**

Detection and Characterization for the Ultra-Thin film and mono-layer film

Characterization for the erosion process

- **Material Science**

Detection of Emissivity of building materials

Evaluation for Optical material such as Infrared windows and mirrors

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