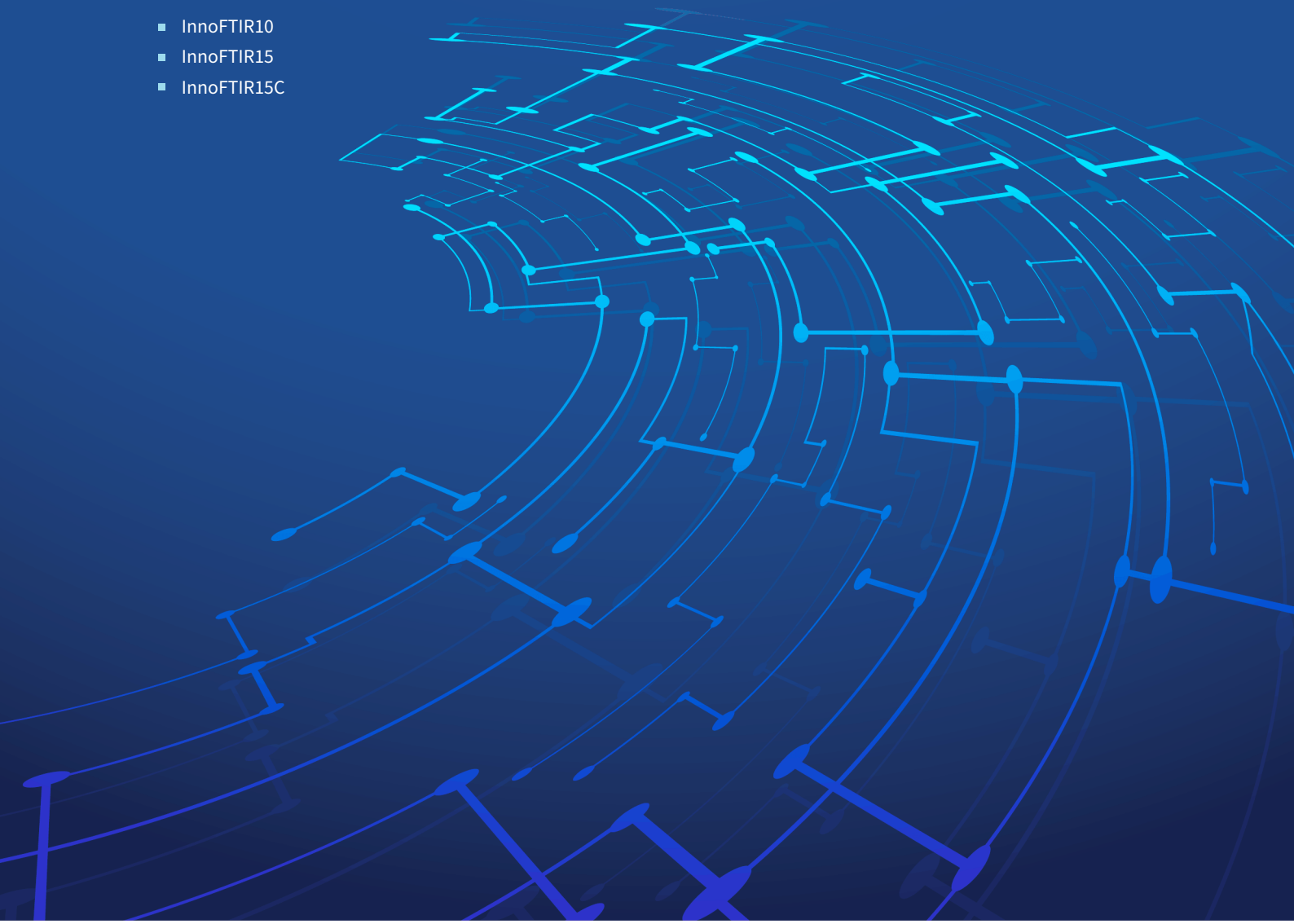
INNOTEG

Innovation • Accuracy • Reliability

Innoteg (Guangzhou) Scientific Instruments Co.,Ltd.

INNOTEG Fourier Transform Infrared Spectrometer

- InnoFTIR10
- InnoFTIR15
- InnoFTIR15C



InnoFTIR10

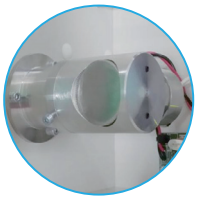
Fourier Transform Infrared Spectrometer

The InnoFTIR10 High-Precision Fourier Transform Infrared Spectrometer adopts a pendulum interferometer structure utilizing aerospace spectral detection technology, ensuring stable and reliable performance. Gold-coated optical mirrors enhance reflectivity, thermal stability, and durability, guaranteeing long-term reliability. The 60mm beam splitter with a moisture-resistant coating increases light throughput and signal-to-noise ratio, outperforming comparable domestic instruments. The InnoFTIR10 spectrometer is widely applicable across various fields, including pharmaceuticals, petrochemicals, food, materials science, gemstone/jade identification, environmental monitoring, and optical coatings. Its powerful functionality and stable performance are highly recognized.

Typical Applications

- Identification and compositional analysis of pharmaceutical raw materials.
- Packaging material identification.
- Qualitative and quantitative analysis of asphalt.
- Differentiation of PVC leather and PU leather.
- Detection of free silica in dust.
- Quality assessment of gemstones and jade.
- Hydroxyl content detection in quartz glass.
- Hemispherical emissivity measurement of architectural glass.
- Analysis of polymers and related compounds.
- Determination of total recoverable petroleum hydrocarbons in solid waste.

Instrument Features

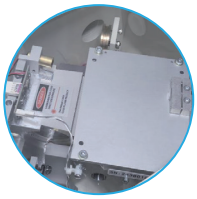


Light Source Stability:

Features an original imported high-intensity air-cooled ceramic infrared light source, offering longer lifespan and greater stability.

High Precision:

Equipped with an original imported low-noise DLATGS detector and a high-sensitivity KBr beam splitter. The 60mm multi-coated beam splitter ensures long optical path length and includes an anti-moisture coating, guaranteeing high light throughput and superior signal-to-noise ratio. With exceptional performance, it delivers professional and precise analytical results to meet specialized application requirements.



Structural Stability:

Incorporates a pendulum interferometer design derived from aerospace spectral detection technology, providing excellent stability and vibration resistance. Its accuracy surpasses that of traditional Michelson interferometers, and it remains fully operational even in the absence of a signal.

Versatile Testing:

Designed with a spacious sample chamber measuring 20×25.5×15cm, compatible with various infrared accessories such as ATR accessories, solid sample holders, liquid cells, reflection accessories, and variable angle accessories. It can accommodate large reflection accessories for testing glass samples up to 300*300*20mm, meeting diverse testing needs.

Dust and Moisture Protection:

The instrument features built-in heating and dehumidification functions to ensure stable operation in complex environments. It includes a visible desiccant window for easy monitoring and replacement. A multi-sealed design, combined with a dedicated dehumidifying dry cabinet, enhances environmental adaptability.

Easy Maintenance:

The interferometer energy is adjustable without opening the cover, making debugging and maintenance simple and convenient.

Additional Features:

The instrument is equipped with a nitrogen purging interface to minimize interference from water vapor and carbon dioxide in the air, improving measurement accuracy and reliability.

Helpful Reminder:

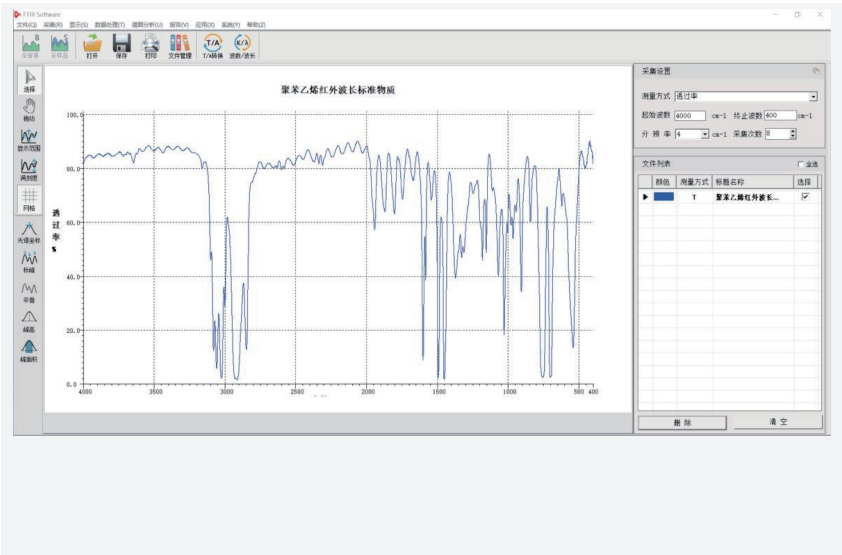
A maintenance prompt label is attached to the instrument's sample chamber for easy reference by operators at any time.

Specifications

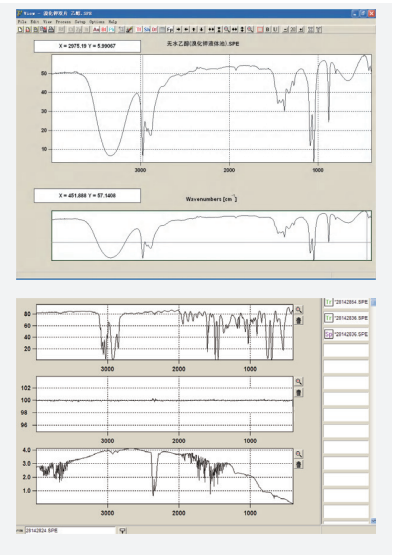
Spectral Range	7800-350cm^{-1}	Baseline Flatness	⩽0.1%T
Resolution	Better than 1.0 cm^{-1}, meeting requirements for pharmaceutical industry, university teaching, and basic research.	Signal-to-Noise Ratio	45,000:1 (Peak-to-Peak, at ~2100 cm^{-1}, 4 cm^{-1} resolution, 1-minute scan)
Beam Splitter	Original imported multi-layer Ge-coated KBr, Ø60mm, with moisture-resistant coating	Beam Diameter	10mm
Source	Original imported high-intensity, air-cooled ceramic IR source	Interferometer	Pendulum-type interferometer, offering excellent stability and vibration resistance
Detector	Low-noise DLATGS	Operating ModesOperating Modes	Transmittance, Absorbance, Energy
Dimensions (W×D×H)	⩾ 59×35.5×18.5 cm (Non-metrological parameter)	Sample Compartment Size (W×D×H)	⩾ 20×25.5×15 cm (Non-metrological parameter)
Weight	26kg	Communication Interface	USB
Operating Voltage	AC220V DC12V 40W	Operating System	Windows 10 (64-bit or higher)
Ambient Temperature	15-28°C	Relative Humidity	< 65% (non-condensing)

System Software

To meet the needs of multilingual users, we provide system software in both Chinese and English. It supports Windows 10 (64-bit or higher). Furthermore, to fulfill the specialized testing requirements of clients in specific industries—such as thermal performance of architectural glass, hydroxyl content in quartz glass, and asphalt testing—we can provide dedicated testing modules tailored to different sectors. The generated data reports can be exported in various formats including text and Excel for user data analysis and processing. The system includes a spectral library function with a built-in IR spectral database to meet user demands. Complying with GMP/GLP requirements and certification standards, the system supports electronic signatures, user privilege assignment, and audit trails to ensure compliance and reliability. IQ/OQ/PQ (3Q) certification services are available upon request.



Chinese-language operational software

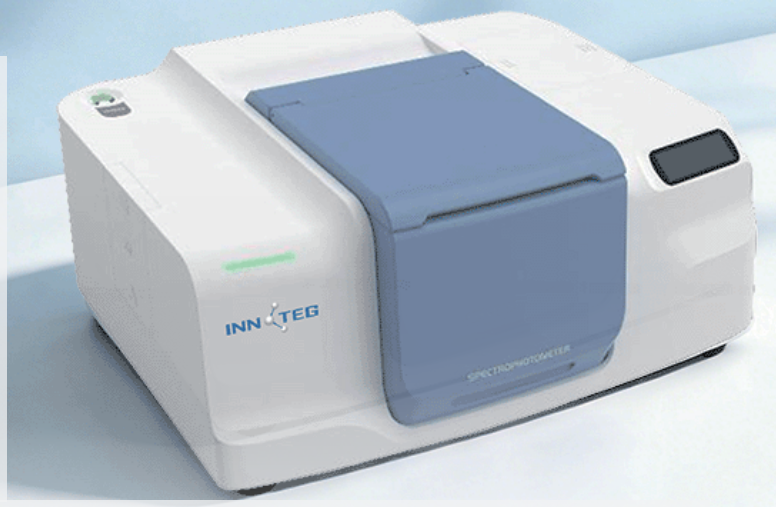


English-language operational software

**Product images are for reference only. Actual product shall prevail.*

InnoFTIR15

Fourier Transform Infrared Spectrometer



The InnoFTIR15 is a general-purpose Fourier Transform Infrared Spectrometer. It employs a Michelson auto-alignment interferometer, ensuring reliable and stable performance. The InnoFTIR15 design exudes a sense of technological sophistication, blending modern aesthetic appeal with practicality and user-friendliness. The instrument features an integrated temperature and humidity display, allowing the operator to monitor its working status in real-time. Its internal structure is meticulously designed and optimized, elevating the instrument's performance to a new level.

Functionally, the InnoFTIR15 boasts excellent spectral resolution and sensitivity, enabling accurate detection and analysis of the infrared spectral characteristics of various substances. It is widely used in multiple fields such as chemistry, biology, and materials science, providing researchers with a powerful analytical tool.

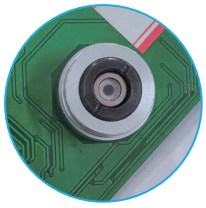
Typical Applications

- Identification and compositional analysis of pharmaceutical raw materials.
- Packaging material identification.
- Qualitative and quantitative analysis of asphalt.
- Differentiation of PVC leather and PU leather.
- Detection of free silica in dust.
- Quality assessment of gemstones and jade.
- Hydroxyl content detection in quartz glass.
- Hemispherical emissivity measurement of architectural glass.
- Analysis of polymers and related compounds.
- Determination of total recoverable petroleum hydrocarbons in solid waste.

Instrument Features

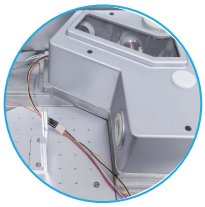
Light Source Stability:

Utilizes an original imported high-intensity air-cooled ceramic infrared light source, providing longer service life and greater stability.



High Precision:

Equipped with an original imported low-noise DLATGS detector for high-sensitivity trace analysis. Fitted with a multi-layer coated KBr beam splitter and moisture-proof coating, delivering outstanding performance to provide professional and precise analytical results that meet professional application requirements.



Structural Stability:

Adopts a Michelson self-compensating design with an integrated optical base, ensuring accurate positioning and superior instrument stability and reliability. Features an automatic calibration function.

Versatile Testing:

Features a large sample chamber design, compatible with various infrared accessories such as ATR attachments, solid sampling accessories, liquid cells, reflection accessories, and variable-angle attachments.

Dust and Moisture Protection:

The instrument includes built-in temperature and humidity display, allowing operators to monitor its internal working conditions in real time. The temperature display helps determine whether desiccant replacement is needed. A multi-seal design combined with a dedicated dehumidifying dry cabinet enhances environmental adaptability.

Easy Maintenance:

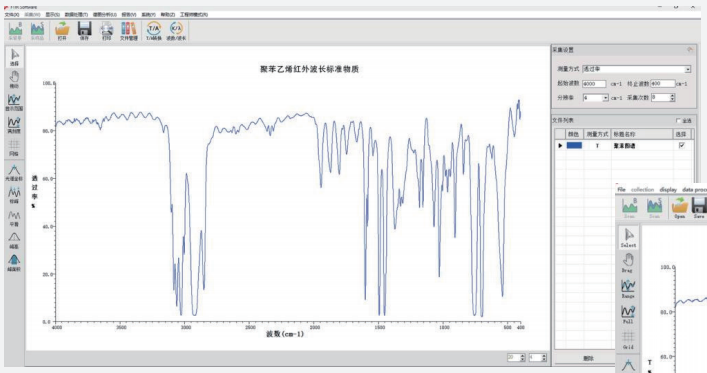
The interferometer is equipped with a sliding cover visual window above it, enabling adjustable energy, convenient debugging, and simple maintenance.

Specifications

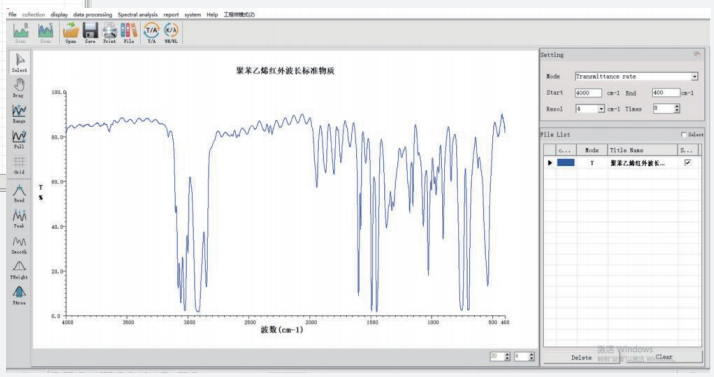
Spectral Range	7800-350cm^{-1}	Baseline Flatness	⩽0.1%T
Resolution	Better than 1.0 cm^{-1}, meeting requirements for pharmaceutical industry,university teaching,and basic research.	Signal-to-Noise Ratio	30,000:1 (Peak-to-Peak, at ~2100 cm^{-1}, 4 cm^{-1} resolution, 1-minute scan)
Beam Splitter	Original imported multi-layer Ge-coated KBr.	Beam Diameter	15mm
Source	Original imported high-intensity, air-cooled ceramic IR source	Interferometer	Michelson self-compensating type,automatic correction.
Detector	Low-noise DLATGS	Operating ModesOperating Modes	Transmittance, Absorbance, Energy
Dimensions (W×D×H)	486*406*230mm	Sample Compartment Size (W×D×H)	200*170*145mm
Weight	23kg	Communication Interface	USB
Operating Voltage	AC220V DC12V 40W	Operating System	Windows 10 (64-bit or higher)
Ambient Temperature	15-28°C	Relative Humidity	< 65% (non-condensing)

System Software

To meet the needs of multilingual users, we provide system software in both Chinese and English. It supports Windows 10 (64-bit or higher). Furthermore, to fulfill the specialized testing requirements of clients in specific industries—such as thermal performance of architectural glass, hydroxyl content in quartz glass, and asphalt testing—we can provide dedicated testing modules tailored to different sectors. The generated data reports can be exported in various formats including text and Excel for user data analysis and processing. The system includes a spectral library function with a built-in IR spectral database to meet user demands. Complying with GMP/GLP requirements and certification standards, the system supports electronic signatures, user privilege assignment, and audit trails to ensure compliance and reliability. IQ/OQ/PQ (3Q) certification services are available upon request.



Chinese-language operational software



English-language operational software

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InnoFTIR15C

Fourier Transform Infrared Spectrometer

The InnoFTIR15C is a dedicated instrument for measuring the corrected emissivity of architectural glass. It is equipped with a shading coefficient detection system, capable of determining the visible light transmittance, direct solar transmittance, total solar energy transmittance, UV transmittance, and other optical and thermal parameters of window glass. Complies with relevant standard requirements such as GB/T 2680-2021 and JGJ/T 151-2008.

Typical Applications

- The architectural glass emissivity detector utilizes an imported high-intensity air-cooled ceramic IR source, DLATGS detector, and imported multi-layer Ge-coated KBr beam splitter with a moisture-resistant coating, ensuring high precision and reliability.
- The instrument features a metal enclosure design, which not only provides excellent electromagnetic shielding performance, effectively resisting external electromagnetic interference and safeguarding the instrument's performance from being affected, but also ensures the accuracy and stability of measurement results. Simultaneously, the metal housing enhances the instrument's durability and protection rating, enabling it to maintain outstanding performance in various experimental environments.
- Dehumidifying Dry Cabinet: Provided as a complimentary accessory.
- Dedicated software for architectural glass testing is provided. The software complies with certification standards, supporting electronic signatures, user privilege assignment, and audit trails to ensure compliance.

Specifications

Detection Range	4000-400 cm^{-1}
Signal-to-Noise Ratio (S/N)	15,000:1 (RMS, at ~2100 cm^{-1}, 4 cm^{-1} resolution, 1-minute scan)
Wavenumber Accuracy	0.01 cm^{-1}
Dimensions	480*360*190mm
Weight	20kg
Standard Accessory	Specular Reflectance Attachment

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