FT/IR-4000/6000 Series

FT-IR Spectrometers

Model FT/IR-4600/4700
FT-IR Spectrometer

Model FT/IR-6600/6700/6800
FT-IR Spectrometer

JASCO

Total solutions to address a variety of applications

Advanced FT-IR Solutions

Based on over fifty years of experience in infrared spectroscopy and the most advanced technology, JASCO offers the best solutions for FT-IR analyses with a complete range of application-focused FT-IR spectrometers and sampling accessories as well as a dedicated instrument control and data analysis interface. The NEW FT/IR-4000 and 6000 Series FT-IR Spectrometers provide capabilities from education and routine analysis to high-end research applications, featuring high quality, performance and reliability. They are also designed with flexibility and expandability in mind to meet with a wide range of expanding application requirements.

- *Excellent signal-to-noise ratio*
- *A full range of sampling accessories*
- *IQ accessory recognition*
- *Vibration-proof optical bench*
- *Large sample compartment*
- *Auto-alignment*
- *Purgeable optics*
- *Highly sensitive detector*
- *Applicable to FT-IR microscopy and IR Imaging*
- *Rapid scan option*
- *Wavenumber extension option*
- *Vibrational CD (VCD) option*

FT/IR-4000 Series

The most complete selection of FT -IR capability fr om education and r outine analysis to high performance research systems with standard automatic validation

FT/IR-4600
Maximum resolution: 0.7 cm^{-1}
S/N ratio: 25,000:1

FT/IR-4700
Maximum resolution: 0.4 cm^{-1}
S/N ratio: 35,000:1

FT/IR-6000 Series

Designed for a wide range of critical r esearch and development applications such as wavenumber extension measur ement using with automatic beam splitter swtiching unit, step scan option or full-vacuum option.

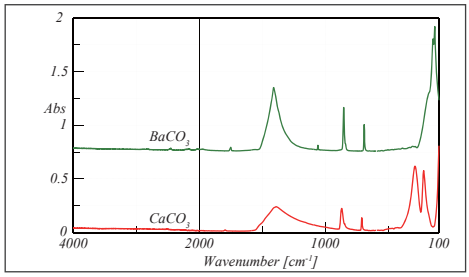
FT/IR-6600
Maximum resolution: 0.4 cm^{-1}
S/N ratio: 45,000:1

FT/IR-6700
Maximum resolution: 0.25 cm^{-1}
S/N ratio: 47,000:1

FT/IR-6800
Maximum resolution: 0.07 cm^{-1}
S/N ratio: 55,000:1
Rapid scan as standard
Au-coated mirrors for higher throughput
FT-Raman option

Automatic broadband measurement under vacuum condition

Combinig automatic beam splitter switching unit and automatic window switching unit/automatic gate valve unit allows to measur e boar dband range without br eaking vaccum condition. The spectra shows to measur e carbonate samples by ATR PRO ONE with boardband diamond crystal under vacuum condition.



Simple and Easy-to-Use Operations

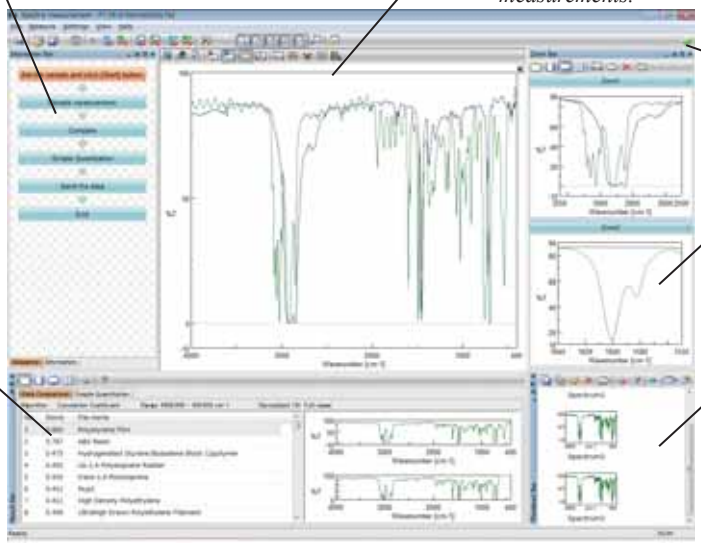
The FT/IR-4000/6000 Series is controlled by JASCO's proprietary Spectra Manager™ II cross-platform software. The Spectra Manager has various functions such as spectra measurement, quick start, spectra comparison and quantification. Measurement screen can be customized according to the requirements and such customized screen and parameters can be saved (User switching function).

Sequence

Information such as instrument status, measurement parameters and sequence of data acquisition etc. is displayed.

Real-time monitoring

Real-time data processing function allows to check the current spectrum during measurements. Spectra stored in thumbnails can be overlaid with the curr ent spectrum during measurements.



Self-diagnosis

Self-diagnosis function allows to check current instrument status.

Zoom

Target peak and functional gr oup can be checked easily by zoom function.

Results display

Acquisition results such as spectra comparison and quantification etc. are displayed.

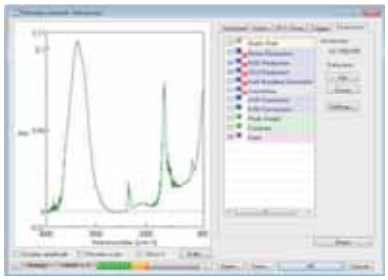
Thumbnail

The measured spectra can be stor ed as thumbnails on the thumbnail window.
The thumbnails can be viewed on spectra view.

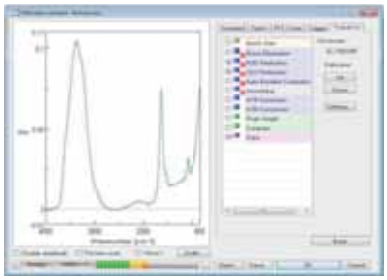
Advanced Measurement Screen of Spectra Manager II

Real-time data processing

Before start of measurement, data processing procedure can be determined by checking the results of real-time data processing in preview window.



Before data processing



After data processing (CO_2 reduction and H_2O correction)

High-throughput Single Reflection ATR NEW

ATR PRO ONE Single-reflection ATR Accessory

The New ATR PRO ONE is a single reflection ATR accessory optimized using with a newly designed monolithic diamond crystal and provides drastically high optical throughput. A "torque-limiter" pressure applicator providing reproducible sample pressure contact allows excellent reproducibility in measurements.

- *Two types of diamond crystal kit*
  - *High-throughput model optimized mid-IR measurement*
  - *Broadband model caapable for measuring Far-IR range*
- *Available ZnSe or Ge crystal kit*

Specifications

Model:		FT/IR-4600	FT/IR-4700	FT/IR-6600	FT/IR-6700	FT/IR-6800
Standard wavenumber measurement range:		7,800 to 350 cm^{-1}				
Optional extended wavenumber range:		15,000 to 2,200 cm^{-1}, 5,000 to 220 cm^{-1}		25,000 to 10 cm^{-1}		
Display wavenumber range:		15,000 to 0 cm^{-1} (standard)		15,000 to 0 cm^{-1} (standard), 25,000 to 0 cm^{-1} (optional)		
Wavenumber accuracy:		Within ± 0.01 cm^{-1} (theoretical value)				
Maximum resolution:		0.7 cm^{-1}	0.4 cm^{-1}	0.4 cm^{-1} 0.07 cm^{-1} (optional)	0.25 cm^{-1} 0.07 cm^{-1} (optional)	0.07 cm^{-1}
Optical system:		Single beam				
Sample chamber:		Size: 200 mm (W) × 260 mm (D) × 185 mm Optical path: Center focus, light axis 70 mm high				
Interferometer:	Configuration:	45° Michelson interferometer Corner cube mirror interferometer, with auto-alignment mechanism, sealed structure, DSP control		28° Michelson interferometer Corner cube mirror interferometer, with auto-alignment mechanism, sealed structure, DSP control		
	Vacuum instrument:	—		Options available		
	Mirror coating:	Aluminum				Gold
	Drive method:	Mechanical bearing, electromagnetic drive				
	Drive speed:	AUTO, 1, 2, 3, 4 mm/sec AUTO DLATGS 2.0 mm/sec. MCT (optional) 4.0 mm/sec.		0.5, 1, 2, 3, 4, 5, 6, 7, 8 mm/sec AUTO DLATGS 2.0 mm/sec. MCT (optional) 4.0 mm/sec.	0.5, 1, 2, 3, 4, 5, 6, 7, 8 mm/sec AUTO DLATGS 2.0 mm/sec. MCT (optional) 4.0 mm/sec.	0.125, 0.25, 0.5, 1, 2, 3, 4, 5, 6, 7, 8 mm/sec AUTO DLATGS 2.0 mm/sec. MCT (optional) 4.0 mm/sec.
	Rapid scan:	10 Hz (optional)		20 Hz (optional)		20 Hz (standard)
Beam splitter:	Substrate material:	Standard: Ge/KBr Option: Si/CaF_2, Ge/CsI (not interchangeable)		Standard: Ge/KBr Option: Quartz, Si/CaF_2, Ge/CsI, Mylar (interchangeable)		
	Replacement method:	—		Secure-lock beamsplitter catch system (Option: Automatic beam splitter switching unit)		
Light source:		Standard: High-intensity ceramic source Option: Halogen lamp (factory option only)		Standard: High-intensity ceramic source Option: Halogen lamp, water-cooled mercury light source Up to three light sources may be installed simultaneously including external light sources.		
Detector:		DLATGS (with Peltier temperature control) (standard)				
		W-MCT, M-MCT, N-MCT, Si, InSb, InGaAs (optional) Two detectors may be mounted simultaneously within the instrument.		W-MCT, M-MCT, N-MCT, Si, InSb, InGaAs, PAS, Si bolometer (optional) Two detectors may be mounted simultaneously within the instrument. Up to two external detectors may be installed.		
Purging:		Interferometer, Sample compartment/Detector				
Signal-to-noise ratio: (4 cm^{-1}, 1 min, near 2,200 cm^{-1})		35,000:1	40,000:1	55,000:1	60,000:1	70,000:1
Gain switching:		AUTO, 1, 2, 4, 8, 16, 32, 64, 128				
100%T line flatness:		Within 100 ± 1.0%T (4,000 to 700 cm^{-1}, continuous repetitive measurement)				
Communication:		USB2.0				
FTIR main unit:		Dimensions: 460 (W) × 645 (D) × 290 (H) mm Weight:33 kg		Dimensions: 600 (W) × 670 (D) × 315 (H) mm Weight:56 kg		
Power supply unit:		Dimensions:200 (W) × 285 (D) × 90 (H) mm, Weight:4.7 kg This unit can be placed on its base or on its side.				

Standard Composition

Parts name	Number	Remarks
Power supply	1	
Connecting cable	1	Cable for connecting the main unit to the power supply
AC cable	1	AC cable for the power supply
USB cable	1	Cable connecting the main unit to the PC
Sample holder	1	
Standard sample	1	Polystyrene film
Stepped pin	2	Used when installing optional accessories into the sample compartment.
Instruction manual	1	
Install Disk	1	Including Spectra Manager™ II, QAU-4000 Quantitative program and KnowItAll JASCO Edition
Fuse	2	

* CFR Model does not include QAU-4000.
* LE or LE-CFR Models does not include QAU-4000 and KnowItAll JASCO Edition.

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For more information, please contact:

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Products described herein are designed and manufactured by ISO-certified JASCO Corporation.

MADE IN TOKYO, JAPAN