

FTIR Specifications

FT/IR-4000 Series Specifications

Model	FT/IR-4600	FT/IR-4700
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}	
Display Wavenumber Range	15,000 to 0 cm^{-1} (standard)	
Wavenumber Accuracy	Within $\pm 0.01 \text{ cm}^{-1}$ (theoretical value)	
Maximum Resolution	0.7 cm^{-1}	0.4 cm^{-1}
Optical System	Single beam	
Sample Chamber	Size: 200 mm (W) \times 260 mm (D) \times 185 mm Optical path: Center focus, light axis 70 mm high	
Interferometer	45° Michelson interferometer Corner cube mirror interferometer, with auto-alignment mechanism, sealed structure, DSP control	
N ₂ Purge	Interferometer, Sample Compartment, Detector	
Vacuum Instrument	N/A	
Mirror Coating	Aluminum	
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	
Rapid Scan	10 Hz (optional)	
Beam Splitter	Standard: Ge/KBr Option: Si/CaF ₂ , Ge/CsI (not interchangeable)	
Replacement Method	N/A	
Light Source	Standard: High-intensity ceramic source Option: Halogen lamp (factory option only)	
Detector	DLATGS (with Peltier temperature control) (standard)	
Optional Detectors	W-MCT, M-MCT, N-MCT, Si, InSb, InGaAs (optional) Up to two detectors can be mounted internally.	
Signal-to-Noise Ratio: (4 cm^{-1} , 1 min, near 2,200 cm^{-1})	25,000:1	35,000:1
Gain Switching	AUTO, 1, 2, 4, 8, 16, 32, 64, 128	
100%T Line Flatness	Within $100 \pm 1.0\%T$ (4,000 to 700 cm^{-1} , continuous repetitive measurement)	

Model	FT/IR-4600	FT/IR-4700
Communication	USB 2.0	
FTIR Main Instrument	Dimensions: 460 (W) × 645 (D) × 290 (H) mm, Weight: 33 kg	
Power Supply	Dimensions: 200 (W) × 285 (D) × 90 (H) mm, Weight: 4.7 kg This unit can be placed on its base or on its side.	

FT/IR-6000 Series Specifications

Model	FT/IR-6600	FT/IR-6700	FT/IR-6800
Standard Wavenumber Measurement Range	7,800 to 350 cm ⁻¹		
Optional Extended Wavenumber Range	25,000 to 10 cm ⁻¹		
Display Wavenumber Range	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	0.4 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 (W) × 260 (D) × 185 (H) mm Optical path: Center focus, light axis 70 mm high		
Interferometer	28° Michelson interferometer Corner cube mirror interferometer, with auto-alignment mechanism, sealed structure, DSP control		
N ₂ Purge	Interferometer, Sample compartment, Detector		
Vacuum Instrument	Full and Partial options		
Mirror Coating	Aluminum	Aluminum	Gold
Drive Method	Mechanical bearing, electromagnetic drive		
Drive Speed	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	20 Hz (optional)	20 Hz (standard)	
Beam Splitter	Standard: Ge/KBr Option: Quartz, Si/CaF ₂ , Ge/CsI, Mylar (interchangeable)		
Replacement Method	Secure-lock beamsplitter catch system (Option: Automatic beam splitter exchange system)		
Light Source	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)		

Model	FT/IR-6600	FT/IR-6700	FT/IR-6800
Optional Detectors	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.		
Signal-to-Noise Ratio: (4 cm ⁻¹ , 1 min, near 2,200 cm ⁻¹)	45,000:1	47,000:1	55,000:1
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	USB 2.0		
FTIR Main Instrument	Dimensions: 600 (W) × 670 (D) × 315 (H) mm Weight: 56 kg		
Power Supply	Dimensions: 200 (W) × 285 (D) × 90 (H) mm Weight: 4.7 kg Unit can be placed on its base or on its side		

Standard Composition

Item	Quantity	Description
Power Supply	1	
Connection 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 for locating optional accessories in the sample compartment
Instruction Manual	1	
Installation CD	1	Including Spectra Manager™, QAU-4000 Quantitative program and KnowItAll® JASCO Edition
Fuses	2	

* CFR Model does not include QAU-4000.

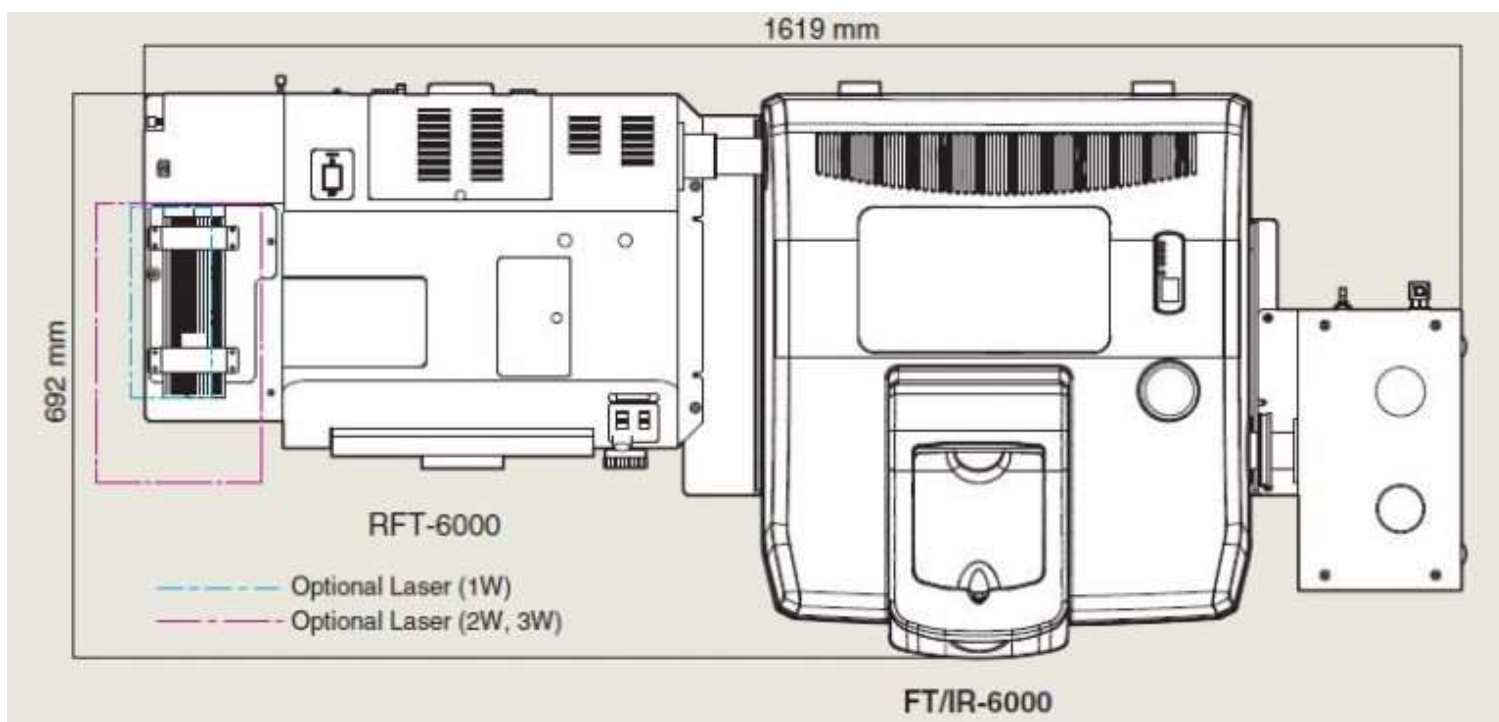
* LE or LE-CFR Models do not include QAU-4000 and KnowItAll® JASCO Edition.

FT-Raman Specifications

Laser (Option)	YAG laser: 1,064 nm; 1, 2, or 3 W (air-cooled)
Rejection Filter	150 cm ⁻¹ or more (Raman shift value) 50 cm ⁻¹ or more (Raman shift value) (Option)
Detectors	InGaAs: ~3,600 cm ⁻¹ or more (at R.T.) ~3,000 cm ⁻¹ or more (77 K) (LN2-cooled)
Interferometer	Beam splitter: Si/CaF ₂
Sample Stage	XYZ stage
Beam Collecting System	Lens method: F/0.63

Data Processing Functions	Smoothing, Baseline correction, Peak picking, Sensitivity correction, Arithmetic, Derivatives, Subtract, Raman shift, wavenumber conversion, Data truncate, Overlay, IF conversion, J-CAMP format conversion, Text format conversion
Other Standard Components	Laser plasma line rejection filter, Laser power monitor, Light source for Raman intensity correction (Halogen lamp), Interlock mechanism (Laser safety operation), Raman scattering collecting system (uses gold-coated mirrors)
Optional Accessories	Liquid sample cell / Liquid sample cell holder/ Powder holder, 90 degree scattering measurement system, TV monitor system for sample observation, Microscopic measurement system (Objective lens: X10, X50 including TV monitor system), Polarization measurement system (1/2 plate, Polarizer), Large XYZ stage, Thermal analysis system, Mapping system, Anti-vibration bench

Dimensions



Note: Excluding laser power supply