

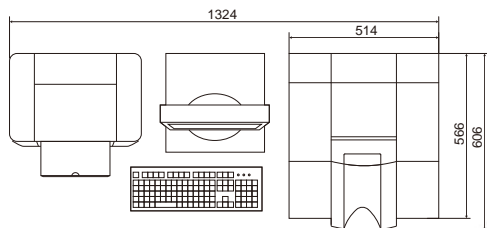
IRAffinity-1

Fourier transform infrared spectrophotometer

Hardware	Specifications
Interferometer	Michelson interferometer (30° incident angle) Equipped with dynamic alignment system (JPN patent No.2115670, 3613171) Sealed interferometer with auto dryer (JPN:registration of utility model No.3116465)
Optical system	Single-beam optics
Beam splitter	Germanium-coated KBr
Light source	High-energy ceramic light source
Detector	DLATGS detector equipped with temperature control mechanism
Wavenumber range	7,800 to 350 cm ⁻¹
Resolution	0.5, 1, 2, 4, 8, or 16 cm ⁻¹
S/N ratio	30,000:1 or higher (peak-to-peak, 4 cm ⁻¹ resolution, in a neighborhood of 2,100 cm ⁻¹ , 1 minute accumulation)
Mirror speed	4-step selection of 2.0, 2.8, 5, or 9 mm/sec
Data sampling	He-Ne laser
Gain	Automatic or manual setting (x1 to x128)
Sample compartment	Equipped with automatic accessory recognition mechanism 200 (W) x 230 (D) x 170 (H) mm Center focus
Dimensions	514 (W) x 606 (D) x 273 (H) mm 35 kg
Software	Specifications
OS	Windows XP™ Professional SP2
Interface	USB 2.0 standard
Hardware monitor	Self-diagnosis function, status monitor
Validation program	Complies with Japanese and European Pharmacopoeias and ASTM
Measurement	Spectrum measurement, continuous measurement, atmospheric correction measurement, continuous measurement using ASC, simple measurement mode
Data processing	Addition, subtraction, multiplication, division, normalization, baseline correction, log conversion, smoothing, differentiation, ATR correction, Kubelka-Munk correction, Kramers-Kronig analysis, wavenumber/wavelength conversion, peak detection, peak area calculation, film thickness measurement, atmospheric correction

Software	Specifications
Analysis support programs	Contaminant analysis program (patent pending), Pharma Report program
Quantitative calculations	Multi-point calibration method using peak height, peak area or peak ratio, multiple linear regression (MLR)
Spectrum search	Spectrum search (based on similarity), peak search, text search, compound search, setting of search conditions, search of user library and commercial library, creation of userlibrary
Printing	Report Generator function
Display	Compression of wavenumber axis, enlargement/reduction, auto scale, overlap, stack display, shift display
Editing	Copy, cut, paste
Other items	Customization of GUI
Optional software	Macro Platform, PLS quantitation, curve-fitting, mapping measurement, IRsolution Agent software
Audit trail	Auto file-saving function, saving of sample/background interferogram, saving of data processing history User administration based on passwords and creation of user groups Log recording Functions supporting compliance with FDA 21 CFR Part 11 requirements such as electronic signatures (IRsolution Agent software required)
Recognition of accessories	Automatic recognition of installed accessories, automatic setting of measurement parameters (QuickStart accessories only)
Computer/Printer	
Type	Desktop or laptop
Specifications	Provide a computer and printer of a type recommended by Shimadzu. Inquire separately for detailed specifications.
Other Specifications	
Installation site	Temperature: 15°C to 30°C; humidity regulated by air-conditioning equipment Humidity: 70% max.; with no condensation When analyzing or using organic solvents, provide localventilation systems as required by the applicable laws and regulations.
Power requirements*	100/120/220/230/240 VAC, 50/60 Hz, 150 VA for operation, 4 VA for standby

*An additional power supply is required for the computer set.
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High S/N ratio - 30000:1

Easy-to-Use, Advanced Software: IRsolution

Broader Range of Applications

The IRAffinity-1 is a compact Fourier transform infrared spectrophotometer that is housed within an elegant form.

The interferometer is continuously optimized by a dynamic alignment mechanism, and a built-in autodryer helps ensure ease of maintenance. It offers the highest S/N ratio in its class* (30,000:1, 1 minute accumulation, neighborhood of 2,100 cm^{-1} , peak-to-peak), a maximum resolution of 0.5 cm^{-1} , and compact dimensions. Furthermore, high-performance IRsolution software, which emphasizes operability, and analysis support programs (contaminant analysis program and a Japanese Pharma Report program) make it easier to perform data processing and analysis.

*As of January 2008, according to Shimadzu investigations.



IRAffinity-1

SHIMADZU
Fourier transform infrared
spectrophotometer