SHIMADZU
Excellence in Science

Fourier Transform Infrared Spectrophotometer
IRAffinity-1S

〉 Specifications

Hardware

Interferometer	Michelson interferometer (30° incident angle) Equipped with dynamic alignment system Sealed interferometer with auto dryer
Beam splitter	Germanium-coated KBr
Light source	High-energy ceramic light source with 3 years guaranteed
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}
Mirror speed	4-step selection of 2.0, 2.8, 5, or 9 mm/sec
Data sampling	He–Ne laser (guaranteed for 1 year)
Sample compartment	Equipped with automatic accessory recognition mechanism W200 × D230 × H170 mm Center focus
Power requirements	AC 100–240 V, 50–60 Hz
Power consumption	150 VA (when used), 4 VA (standby)

LabSolutions IR Software

OS	Windows 10 Pro 64 bit edition Windows 7 Professional 32/64 bit edition
Interface	USB 2.0, USB 3.0
Programs	Postrun, Spectrum, Quantitation, Photometric, Time course (option), Mapping (option)
Manipulation functions	Four Arithmetic Operations, Normalize, Zero Baseline Correction, 3 Point Baseline Correction, Multipoint Baseline Correction, Smoothing, Derivative, Cut, Connect, Reduce, Interpolate, Frequency Convert, X Adjust, Time-Temperature Conversion, Peak Pick, Film Thickness, Data Calculation, Purity, Deconvolution, FFT, Kubelka–Munk, ATR Correction, Kramers–Kronig, Atmosphere Correction, 3D Reprocess, 3D Extract, Purity Judgement
Search functions	Spectrum search (based on similarity), peak search, text search, combination search, setting of search conditions, search of user library and commercial library, creation of user library Library of approx. 12,000 spectra of organic compounds, polymers, pharmaceutical products, inorganic compounds, food additives, contaminants, etc. included

Quantitative functions	Multi-point calibration curve method, CLS quantitative method, PLS quantitative method (option), Photometrics, Recalculation function for quantitative and photometric results
Printing functions	Report template creation, Printing using report templates, Easy printing using the ViewPrint function (patent pending)
Validation program	Complies with Chinese, European, US, and Japanese Pharmacopoeias and ASTM
GLP/GMP support	Tree-structured audit trail function, Recording of operation logs and data logs (history), Saving by overwriting the same filename is prohibited
Security functions	Coordination with LabSolutions security functions, User-group based privilege settings
File formats	Files of JCAMP-DX, ASCII, CSV, IRsolution, HYPER-IR can be loaded and saved.

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