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Excellence in Science

Specification Sheet

IRXross™

Fourier Transform Infrared Spectrophotometer

The IRXross creates a new concept for infrared spectroscopy. It offers the optimal solution for a new era with diverse application requirements.

Hardware

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Interferometer	Michelson interferometer (30° incident angle) Equipped with Advanced Dynamic Alignment system Sealed interferometer
Optical system	Single-beam optics
Beam splitter	Germanium-coated KBr
Light source	High-energy ceramic with 3 years guaranteed
Detector	DLATGS detector with temperature control MCT detector (Hg–Cd–Te) with liquid nitrogen cooling (option)
Wavenumber range	7,800 to 350 cm^{-1}
Resolution	0.25, 0.5, 1, 2, 4, 8, 16 cm^{-1}
SN ratio	55,000:1 or higher (with KBr window) 42,000:1 or higher (with KRS-5 window) (4 cm^{-1} resolution, 1 min scan, around 2,100 cm^{-1}, peak-to-peak) 8,000:1 or higher (with KBr window, MCT measurement) 6,000:1 or higher (with KRS-5 window, MCT measurement) (4 cm^{-1} resolution, mirror speed 9 mm/sec, 120 scans, peak-to-peak) 2,000:1 or higher (with KBr window, rapid scan measurement) 1,500:1 or higher (with KRS-5 window, rapid scan measurement) (16 cm^{-1} resolution, mirror speed 40 mm/sec, 1 scan, peak-to-peak)

Mirror speed	4-step selection of 2.0, 2.8, 5.0, or 9.0 mm/sec 10, 20, 30, or 40 mm/sec for Rapid Scan (option)
Data sampling	He–Ne laser with 12 months guaranteed
Gain	Automatic or manual setting (between 1× and 128×)
Sample compartment	Equipped with automatic accessory recognition mechanism W200 × D230 × H170 mm Center focus
Dimensions	W505 × D578 × H330 mm
Weight	35 kg
Installation site	Temperature: 10°C to 35°C* Humidity: 20 to 70% with no condensation *15°C to 30°C for operation 20 to 90%RH with no condensation when using KRS-5 window (moisture-resistant type) at 10°C to 30°C
Power supply voltage	AC 100 to 240 V, 50 to 60 Hz
Power consumption	150 VA (for operation), 8 VA (100 V for standby), 25 VA (240 V for standby)

LabSolutions™ IR Software

OS	Windows® 10 Pro 64 bit edition
Interface	USB 2.0, USB 3.0
Programs	Postrun, Spectrum, Quantitation, Photometric, Time course (option)
Measurement	Spectrum measurement, Continuous measurement, Atmospheric correction measurement, Simple measurement mode
Hardware monitor	Self-diagnosis function, Status monitor
Manipulation functions	Four arithmetic operations, Normalization, Baseline correction, Smoothing, Derivative, X-axis range change, Data correction, Data points thinning/interpolation, Wavenumber-wavelength conversion, X adjust, Time-temperature conversion, Peak pick, Point pick, Film thickness calculation, Data calculation, Degree of coincidence, Deconvolution, Fourier transform, Kubelka Munk conversion, ATR correction, Advanced ATR correction, Kramers Kronig transformation, Atmosphere correction, Degree of coincidence calculation
Manipulation functions (option)	Peak split, 3D recalculation, Spectrum extraction from 3D data
Analysis support programs	Contaminant Analysis, Pharma Report, Food Additives Identification, Purity Calculation
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.
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

Validation program	Complies with Chinese, European, US, and Japanese Pharmacopoeias and ASTM (Please confirm the applicable version.)
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
Macro functions	Analysis support program • 23 programs for supporting analysis related to contaminant analysis, confirmation test, quantitation and film thickness calculation are included as standard. Easy macro function • Collective execution of multiple operations by simply arranging operations in the order of the procedure • Execution possible from the PC Macro platform (option)
Optional software	Time course, PLS quantitation, Peak split, 3D processing, Macro platform
Optional libraries	Contaminant Library Thermal-Damaged Plastics Library UV-Damaged Plastics Library Sadtler Library STJ Library, etc.
File formats	Files of JCAMP-DX, ASCII, IRsolution, HYPER-IR can be loaded and saved.

Dimensions (PC and printer dimensions are examples.)
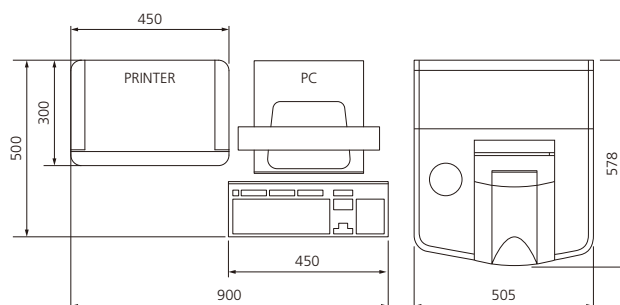
Units: mm

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