



— FTIR —
Spectrophotometer



FTIR SPECTROPHOTOMETER LFTIR-101

The flagship FTIR Spectrophotometer model LFTIR-101 from Labocon offers the highest S/N ratio (>15000:1) along with maximum resolution of 1.5 cm⁻¹ in its category.

Furthermore, the high-performance IR software, which emphasizes operability, and analysis support programs (Contaminant analysis program and Pharmacy Report program) make it easier to perform data processing and analysis.

Features

- **Optical system**
 - Single beam optical system (sealed and desiccated)
 - Dynamic collimation moving mirror with up to 130,000 times per sec continuous dynamic adjustment ensures ultra-high stability and maintains better spectral peak shape
- **IR Source**
 - High-energy air cooled light source and easy replaceable
- **Highest signal-to-noise (S/N) performance**
 - S/N ratio: >15000:1
- **Interferometer**
 - Fully sealed Michelson interferometer with long lasting sealing material and desiccator ensures higher adaptability to the environment
 - Beam Splitter: KBr
- **Detector**
 - DTGS detector equipped with temperature control mechanism
- **Best spectral resolution and fastest kinetics speeds**
 - High resolution up to 1.5cm⁻¹ can meet various user applications
- **Hardware monitor**
 - Self-diagnosis function, status monitor
- **Powerful, intuitive software interface for ultimate productivity**
 - **OS:** Windows XP Professional SP2
 - **Interface:** USB 2.0 standard
 - **Measurement:** Continuous measurement using ASC, simple measurement mode
 - **Data processing:** Addition, subtraction, multiplication, division, normalization, baseline correction, log conversion, smoothing, differentiation, ATR correction, Kubeika-Munk correction, Kramers-Kronig analysis, wave number/wavelength conversion, peak detection, peak area calculation
 - **Analysis support programs:** Contaminant program , pharmacy report program
 - **Quantitative calculations:** Peak height, peak area, multi-point calibration curve method using ration
 - 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 user library, free libraries included.

- **Standards**
 - Polystyrene standard: 1.5 ml and 3.0 ml cards
- **Spectrometer interface**
 - USB 2 standard/Ethernet connection
- **Optional Accessories:**
 - Laser 01 No
 - IR Source 03 No
 - CaF2 rectangular sealed cell 0.2mm path length with cell holder (Complete assembly) 07 No
 - Teflon/Neoprene gas kit/spacer for sr. No3 (Qty.: 12) 02 pkt
 - Rechargeable desiccant bags 04 Nos
 - ATR assembly 01 No

Application

Labocon FTIR spectrophotometer LFTIR-101 is mainly applicable in areas of petrochemicals, organic chemistry, polymer chemistry, medicine, food analysis, chemical engineering, pharmaceutical, etc.

Specification

Model	LFTIR-101
Wavelength Range	4000-400cm ⁻¹
Wavelength Accuracy	1.5cm ⁻¹
Wavelength Precision	1cm ⁻¹ at 906,1028,1601; 5cm ⁻¹ at 2849,3025
Resolution	1.5cm ⁻¹
Signal to Noise Ratio	>15000:1
Overall Dimension	450x350x210mm
Power	50 W
Power Supply	220V 50Hz
Weight (Net/Gross)	14/22 kg
Catalog No.	9425119164



FTIR SPECTROPHOTOMETER LFTIR-102

The flagship FTIR Spectrophotometer model LFTIR-102 from Labocon offers the highest S/N ratio (>17,500:1 p-p with 75% beam attenuation (typical 5 sec p-p)) along with maximum resolution of 0.5 cm^{-1} in its category.

Furthermore, the high-performance IR software, which emphasizes operability, and analysis support programs (Contaminant analysis program and Pharma Report program) make it easier to perform data processing and analysis.

Features

- **Optical system**
 - Single beam optical system (sealed and desiccated)
 - Dynamic collimation moving mirror with up to 130,000 times per sec continuous dynamic adjustment ensures ultra-high stability and maintains better spectral peak shape
- **IR Source**
 - High-energy ceramic light source and easy replaceable
- **Highest signal-to-noise (S/N) performance**
 - S/N ratio: >17,500:1 p-p with 75% beam attenuation (typical 5 sec p-p)
- **Interferometer**
 - Fully sealed Michelson interferometer with long lasting sealing material and desiccator ensures higher adaptability to the environment
 - Eight times higher dehumidification capacity than ordinary FTIR
 - Beam Splitter: Germanium-coated KBr
- **Detector**
 - DLATGS detector equipped with temperature control mechanism
- **Best spectral resolution and fastest kinetics speeds**
 - High resolution up to 0.5 cm^{-1} can meet various user applications
 - Kinetics scan rates: >110 spectra/second
- **Hardware monitor**
 - Self-diagnosis function, status monitor
- **Powerful, intuitive software interface for ultimate productivity**
 - **OS:** Windows XP Professional SP2

- **Interface:** USB 2.0 standard
 - **Measurement:** Continuous measurement using ASC, simple measurement mode
 - **Data processing:** Addition, subtraction, multiplication, division, normalization, baseline correction, log conversion, smoothing, differentiation, ATR correction, Kubeika-Munk correction, Kramers-Kronig analysis, wave number/wavelength conversion, peak detection, peak area calculation, film thickness measurement, atmospheric correction
 - **Analysis support programs:** Contaminant program , pharma report program
 - **Quantitative calculations:** Peak height, peak area, multi-point calibration curve method using ration, 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 user library, free libraries included.
- **Compliances**
 - **Validation:** 100% compliance with ASTM 1421-99 Standards and y-axis is validated
 - **Polystyrene standard:** 1.5 ml and 3.0 ml cards
 - **Validation program:** Complies with European and Japanese Pharmacopoeias and ASTM Spectrum measurement, continuous measurement, atmospheric correction measurement
 - **Spectrometer interface**
 - USB 2 standard/Ethernet connection
 - **Optional Accessories:**

• Laser	01 No.
• IR Source	03 Nos.
• CaF ₂ rectangular sealed cell 0.2mm path length with cell holder (Complete assembly)	07 Nos.
• Teflon/Neoprene gas kit/spacer for sr. No3 (Qty.: 12)	02 pkt.
• Rechargeable desiccant bags	04 Nos.
• ATR assembly	01 No.
• Polishing Kit	01 No.

Application

Labocon FTIR spectrophotometer LFTIR-102 is mainly used in areas of petrochemicals, organic chemistry, polymer chemistry, medicine, food analysis, chemical engineering, pharmaceutical, etc.

Specification

Model	LFTIR-102
Wavelength Range	7800-350cm ⁻¹
Wavelength Accuracy at 2200cm ⁻¹	0.01cm ⁻¹
Wavelength Precision	0.003cm ⁻¹
Resolution	0.5cm ⁻¹
Signal to Noise Ratio	17,500:1 P-P
Photometric Performance	Better than 0.06%T
Kinetics Scan Rate	>110 spectra/sec
Overall Dimension	540x520x260mm
IR Power	>160 mW
Power	50 W
Power Supply	220-230 V
Weight (Net/Gross)	30/40 kg
Catalog No.	9425120164



FTIR SPECTROPHOTOMETER LFTIR-200 SERIES

The flagship FTIR Spectrophotometer model LFTIR-200 series from Labocon offers the highest S/N ratio (>15000:1 p-p)) along with maximum resolution of 0.5 cm^{-1} in its category.

Furthermore, the high-performance IR software emphasizes on the operability; makes it easier to perform data processing and analysis.

Features

- **Optical system**
 - Single beam optical system (sealed and desiccated)
 - Permanent alignment moving mirror; no need of dynamic collimation
- **IR Source**
 - High efficiency Reflex Sphere module (Air cooled) and easy replaceable
- **Highest signal-to-noise (S/N) performance**
 - S/N ratio: (>15000:1 p-p)
- **Interferometer:**
 - Fully sealed Michelson interferometer with long lasting sealing material and desiccator ensures higher adaptability to the environment
 - Eight times higher dehumidification capacity than ordinary FTIR
 - Beam Splitter: Germanium-coated KBr
- **Detector**
 - DTGS detector equipped with temperature control mechanism
- **Best spectral resolution and fastest kinetics speeds**
 - High resolution up to 0.5 cm^{-1} can meet various user applications
- **Hardware monitor**
 - Self-diagnosis function, status monitor
- **Powerful, intuitive software interface for ultimate productivity**
 - **OS:** Windows XP Professional SP2
 - **Interface:** USB 2.0 standard
 - **Measurement:** Continuous measurement using ASC, simple measurement mode
 - **Data processing:** Addition, subtraction, multiplication, division, normalization, baseline correction, log conversion, smoothing, differentiation, ATR correction, Kubeika-Munk correction, Kramers-Kronig analysis, wave number/wavelength conversion, peak detection, peak area calculation, film thickness measurement, atmospheric correction

- **Quantitative calculations:** Peak height, peak area, multi-point calibration curve method using ration, 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 user library, 11 free libraries included.
- **Spectrometer interface**
 - USB 2 standard
- **Optional Accessories:**
 - Laser
 - IR Source
 - Rechargeable desiccant bags
 - ATR assembly
 - Polishing Kit
 - Special silicon plate holder
 - Special SiO₂ powder dust monitoring software



Application

Organic/ Inorganic salt analysis compound, Polymer analysis/ Thin film, KBr pellet, Inorganic Nano Composite analysis, Bitumin (for road construction to check carbonyl bonding).

Specification

Model	LFTIR-201	LFTIR-202
Wavelength Range	7800 to 400cm ⁻¹	
Wavelength Precision	±0.01cm ⁻¹	
Resolution	Better than 0.85cm ⁻¹	Better than 0.5cm ⁻¹
Scanning Speed	0.2-2.5 cm ⁻¹ /s	
Signal to Noise Ratio	Better than 15000:1	
Overall Dimension	630x520x240mm	
Power	1000W	
Power Supply	220V 50Hz	
Weight (Net/Gross)	20 kg	
Catalog No.	9425117442	9425118442



LABOCON SYSTEMS LIMITED

Fowler Avenue, The Hub, Farnborough Business Park
Farnborough, GU14 7JF, United Kingdom

 +44 203 3724850 |  info@labocon.com |  www.labocon.com