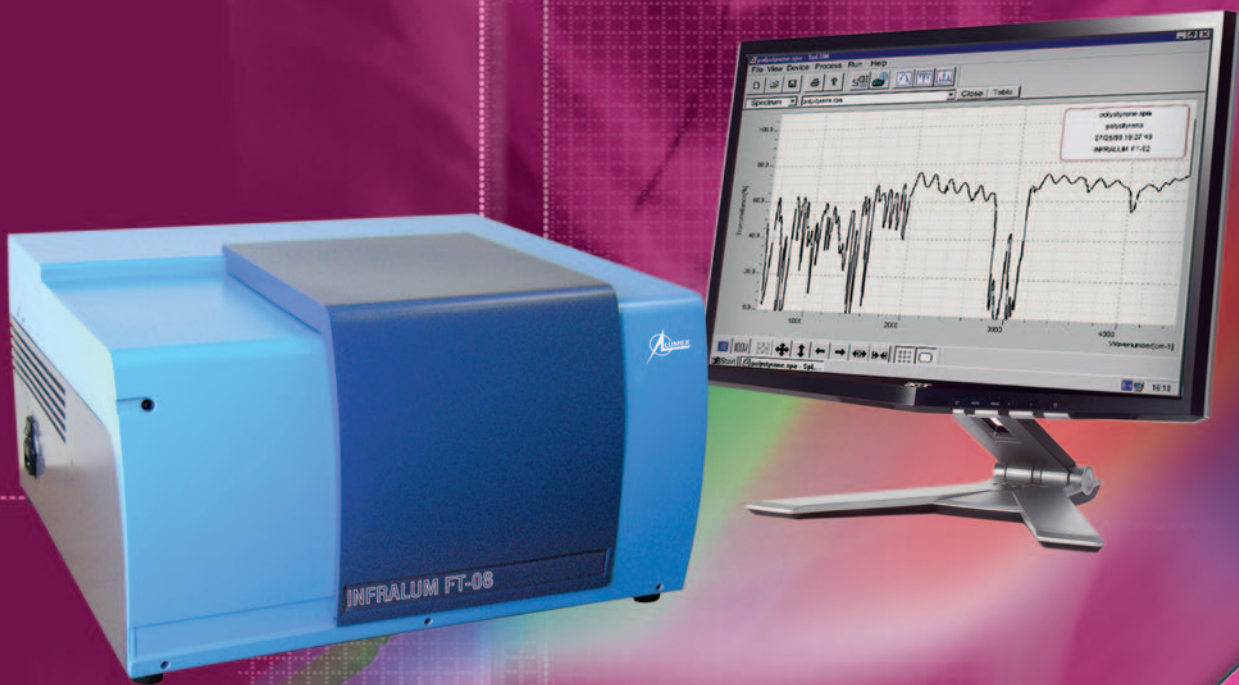




FT mid-IR Spectrometer InfraLUM® FT-08



- High signal-to-noise ratio
- Hermetically sealed optical compartment with the automated moisture monitoring system
- Enlarged cell compartment
- PIKE Technologies accessories
- Broad range of spectra databases

The FT mid-IR spectrometer InfraLUM® FT-08 has been designed basing on our extensive R&D and expertise in the IR spectroscopy. This multipurpose and easy-to-operate instrument provides a well suited option for various analytical laboratories. The high-quality misalignment-proof optics, high-resolution DLATGS detector, and a wide variety of accessories ensure the users' absolute confidence in the high accuracy of the measurement data.

DISTINCTIVE FEATURES OF THE FT MID-IR SPECTROMETER INFRALUM® FT-08

- **Patented Double Cat's Eye misalignment-proof interferometer**
- **Built-in smart total self-diagnostics system**
- **Hermetically sealed optical compartment with the automated moisture monitoring system**
- **Advanced radiation source with extended service life**
- **Intuitive comprehensible software**
- **Innovative ergonomic design of the spectrometer housing that provides best convenience for the operator**
- **Versatility in use**

The enlarged cell compartment enables the use of the whole range of measuring accessories, and the state-of-the-art software provides the capability of the design of dedicated measuring procedures for the users' specific applications. These advantageous features ensure coping with a wide variety of organic analysis problems using an InfraLUM® FT-08 spectrometer.

- **Ease of use**

Possible installation of the spectrometer by the user, automatic accessory and optical component recognition system, smart temperature and moisture sensors in the electronic and optical units, intuitive comprehensible and easy-to-operate software, and automatic validation of the spectrometer enable the user to carry out most of the technical manipulations in operation with InfraLUM® FT-08 on his/her own.

- **The software versatility and efficiency** are provided due to the integrated calibration module, the capability of the design of customized measuring procedures for the users' specific applications.

The software is easy to operate, logically designed and efficient; it allows for dedicated spectra libraries in the JCamp format to be plugged in and own user's libraries to be compiled. No special training and expertise are needed for the user to run the software.

- **Complete line of compatible PIKE Technologies optical FTIR accessories**

InfraLUM® FT-08 along with PIKE Technologies accessories is a powerful and effective system which greatly facilitates both scientific research and routine analysis.

PIKE TECHNOLOGIES ACCESSORIES FOR INFRALUM® FT-08

- **Single and multiple ATR accessories**
- **Diffuse reflectance accessory**
- **Sample compartment microscope**

ATR products successfully replace constant path transmission cells and salt plates used for analyses of liquid and semi-liquid materials. Horizontal ATR can be used to analyze films, pastes, pliable solids, and fine powders. Thanks to the reproducible effective pathlength, it is well suited for both qualitative and quantitative applications.



- **MIRacle™ ATR accessory**

The PIKE MIRacle™ is a universal single ATR sampling accessory for analysis of **solids, liquids, pastes, gels, and intractable materials**. The MIRacle™ ATR accessory is available with 5 different crystal types (ZnSe, Diamond, Ge, Si, and AMTIR) and with unique versions of these crystal materials.

- **Multiple reflection HATR accessory**

Horizontal Attenuated Total Reflectance (HATR) accessory successfully replace constant path transmission cells, salt plates and KBr pellets used in the analysis of **liquid, semi-liquid materials, and a number of solids.**



- **EasiDiff™ diffuse reflectance accessory**

The PIKE Technologies EasiDiff™ is an economical, high quality diffuse reflectance accessory designed to analyze a wide variety of solid samples. It is most often used in the analysis of **pharmaceuticals, illicit drugs, inorganic solids and minerals, and powdered chemicals.**



- **μMAX™ sample compartment microscope**

The μMAX™ is an all new optical design for IR microanalysis, providing high performance sampling at low-cost with exceptional ease of use. The μMAX™ is the first sample compartment IR microscope capable of all microscope modes – transmission, reflection and ATR.



More PIKE Technologies accessories are available for use with InfraLUM® FT-08.

For more information on PIKE Technologies accessories, please visit www.piketech.com or contact LUMEX Instruments sales office.

SPECTRA DATABASES

LUMEX provides software interface for a broad range of **FTIR and ATR-FTIR spectra** databases that are developed by S.T. Japan-Europe GmbH in cooperation with the Aldrich Chemical Company and the National Institute of Advanced Industrial Research in Japan.

FTIR Transmission Spectra Databases

This is one of the largest and highest quality FTIR databases in the world. The data have been measured at the Japanese National Laboratories using various sample preparation methods: KBr, Liquid Film and Nujol mulls. The quality of the spectra was continuously checked by expert spectroscopists. High purity samples were obtained from Japanese fine chemical producers and were cross-checked using NMR and MS instruments. Spectra libraries with resolution of 2 cm^{-1} or 4 cm^{-1} are available.

ATR-FTIR Spectra Databases

All spectra were collected using samples of highest purity produced by the Aldrich Chemical Company and Japanese fine chemical manufacturers. Therefore, the spectra are taken of important, chemically significant compounds, which make the databases ideal for investigative analysis and quality control applications. The complete collection comprises more than 32.000 ATR-FTIR spectra and is subdivided into dedicated databases meeting your individual application needs.

For more information on FTIR Spectra Databases, please contact LUMEX Instruments sales office.

APPLICATION EXAMPLES

- **Scientific research**
- **Pharmaceutical industry**
- **Polymer materials testing**
- **Semiconductor materials testing**
- **Lubricants testing**
- **Oil products testing (determination of benzene in gasoline)**

PERFORMANCE CHARACTERISTICS AND SPECIFICATIONS

Spectral range	8000–350 cm ⁻¹
Wavenumber accuracy	±0.05 cm ⁻¹
Variable resolution	16, 8, 4, 2, 1, 0.5 cm ⁻¹
RMS signal-to-noise ratio	> 40000 (4 cm ⁻¹ , 1 min, 2150±50 cm ⁻¹)
Stability of the 100% line	0.2%
Scanning speed	0.8 s/scan at 16 cm ⁻¹ resolution
Detector	High resolution DLATGS
Beam splitter	Ge-coated KBr in a hermetically sealed desiccated casing
Interferometer	Vibration- and misalignment-proof patented Double Cat's Eye Interferometer
Radiation source	High-intensity long-life stabilized ceramic IR radiation source
Power consumption	65 W
Size	580x550x340 mm
Weight	32 kg

EQUIPMENT AND OPTIONS

- **InfraLUM® FT-08 FT mid-IR spectrometer**
- **SpectraLUM® software package**
- **Set of measuring cells, accessories, spectra libraries (on Customer's request)**

WARRANTY

All LUMEX instruments are covered by a twelve-month warranty.

SERVICES

Installation and commissioning of InfraLUM® FT-08 spectrometer can be carried out at a customer site by our service engineers. Personnel training specific to customer needs can also be provided. Free delivery of spare parts and repair of are provided within the warranty period.

LUMEX
INSTRUMENTS

The information and specifications in this publication are subject to change without notice.

Lumex Instruments Canada
0890278 B.C. Ltd.
Unit 207, 31510 Gill Ave.,
Silver Creek Industrial Park
Mission, B.C., V4S0A1, Canada
Phone: +1 604-820-8085
+1 866-233-6057
E-mail:
sales@lumexinstruments.com
www.lumexinstruments.com

Lumex Analytics GmbH
Naher str., 8
24558 Wakendorf II, Germany
Tel.: +49 (0) 4535 297-756
Fax: +49 (0) 4535 297-783
E-mail: info@lumexanalytics.de
www.lumexanalytics.de

Lumex-Marketing LLC
pr. Obukhovskoy Oborony,
70, bldg. 2, St. Petersburg
192029, Russia
Tel.: +7 (812) 718-5390
Fax: +7 (812) 718-5399
E-mail: sales@lumex.ru
Post address:
BOX 1234, St. Petersburg,
190000, Russia
www.lumex.ru

**Beijing Lumex Analytical
Equipment Co. Ltd.**
Level 19, Tower E2, Oriental
Plaza, 1 East Chang An Avenue,
Dong Cheng District,
Beijing 100738, China
Tel.: +86 (10) 6412-9525
Fax: +86 (10) 6242-3844
E-mail:
lumexcn@lumex.com.cn
www.lumexcn.com

