



● TENSOR II FT-IR Spectrometer

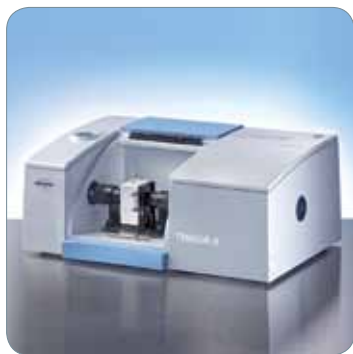
- Permanently aligned RockSolid™ interferometer and DigiTect™ 24 Bit ADC detectors for highest sensitivity and stability
- Diode laser with long life time
- Stabilized IR source for long life time
- Powerful electronics with extended functionality provides high stability against mechanical disturbances and vibrations
- Continuous control of performance
- Power mode for low intensity applications with DTGS-detectors
- Fully automated test routines for validation according to cGMP (OQ, PQ)
- 21 CFR Part 11 and validation according to EU-, JP- and US-Pharmacopeia

If you need a FT-IR spectrometer for routine or advanced applications, the TENSOR II is the right choice for your laboratory. It combines highest performance with flexibility and very intuitive operation. The TENSOR II can be used with many sampling accessories and can be extended for FT-IR microscopy, FT-IR imaging, VCD, TGA and GC.

Easy Operation & High Comfort in Use

OPUS Software provides customizable workspaces and wizards guiding the operator during data acquisition, data evaluation and data visualization. Although the OPUS spectroscopy software provides very comprehensive functionality, only those functions are presented which are of relevance for the individual user. The TENSOR II automatically recognizes the used sampling accessory and sets the most suitable measurement parameter.

The performance of the TENSOR II is continuously controlled by the system itself. Besides the permanent monitoring of all included components, test measurements are periodically performed to verify the specification of the spectrometer.



With the protein setup CONFOCHECK the TENSOR II is very suitable to analyze protein conformation and heat induced denaturation processes.



Many sampling accessories are available for the TENSOR II. All these are electronically recognized for automated testing and setting of suitable parameters.



To analyze samples with highest lateral resolution, the TENSOR II can be extended by FT-IR microscopy and FT-IR imaging.

High Performance and Specification

The TENSOR II accomplishes a very high sensitivity and signal to noise ratio due to its permanently aligned high throughput RockSolid™ cube corner interferometer and its DigiTect™ 24 bit ADC detector technology.

In combination with its very powerful electronic platform these features provide a very high stability of the system against mechanical disturbances and vibrations. For low intensity applications with DTGS detectors the TENSOR II is equipped with a special power mode which increases the sensitivity significantly (e.g. very useful for DRIFT measurements with dark samples).

Flexibility & Expandability

The research-grade performance of the TENSOR II combined with its easy workflow makes it the ideal choice for academic laboratories and industrial QC laboratories as well. Its large sample compartment allows the use of virtually any accessory.

The system can further be extended by the FT-IR microscope series HYPERION, the thermo gravimetric module A588, the gas chromatographic module (A586-AA/436-GC), the VCD module PMA-50, or the micro plate reader HTS-XT.

For certain applications spectral range exten-

sions to the near infrared (NIR) and to the far infrared (FIR) are available for the TENSOR II.

Low Cost of Ownership

The high quality of the TENSOR II is not only expressed by its very high specification and its premium class housing but also by the long life time of all included components. Its "heart", the permanently aligned RockSolid™ interferometer, has been designed for a life time of over 10 years. The TENSOR II is the first R&D FT-IR using a diode laser with a much longer hold time than HeNe-lasers included in conventional R&D FT-IR instrumentation. The IR-source in the TENSOR II is electronically stabilized to accomplish much longer exposure times than before. To facilitate the usage of the TENSOR II also in countries with high humidity the system is also available with optical window materials and beam splitter made from ZnSe.

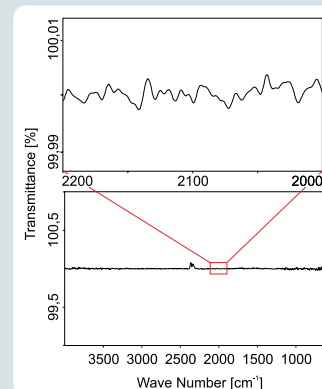
Validation

For regulated pharmaceutical laboratories the TENSOR II is prepared with fully-automated test routines for operational qualification (OQ) and performance qualification (PQ). Its software OPUS is compliant with 21 CFR Part 11, and validation according to the US, European and Japanese Pharmacopeia. Integrated NIST traceable standards facilitate fully automated validation measurements with the TENSOR II.

High Sensitivity

Compare today's routine FT-IR spectrometers and you'll discover that you must often sacrifice performance for affordability. We at Bruker believe that quality optics and high performance should be available for an instrument which is used in R&D and routine.

The TENSOR series provides sensitivity that rivals most other manufacturers "research" models. It offers an achievable signal-to-noise ratio (SNR) of better than 45,000 peak-to-peak using 1-minute measurement conditions. Experience the TENSOR series advantage of superior sensitivity for faster, more accurate results.



TENSOR offers highest sensitivity

- 1 minute sample acquisition time
- 4 cm⁻¹ resolution
- KBr beamsplitter, room temperature DTGS detector and MIR source

Bruker Optics
is ISO 9001 certified.

Laser class 1

Technologies used are protected by one or more of the following patents:
US 7034944; US 5923422; DE 19704598

www.bruker.com/optics ● **Bruker Optics Inc.**

Billerica, MA · USA
Phone +1 (978) 439-9899
Fax +1 (978) 663-9177
info@brukeroptics.com

Bruker Optik GmbH

Ettlingen · Germany
Phone +49 (7243) 504-2000
Fax +49 (7243) 504-2050
info@brukeroptics.de

Bruker Hong Kong Ltd.

Hong Kong
Phone +852 2796-6100
Fax +852 2796-6109
hk@brukeroptics.com.hk