

The TEO-200 series of instruments employ a sealed and desiccated interferometer and detector compartment, ensuring high spectral integrity with low levels of water vapor within the interferometer.

Features

- Pendulum Roof Mirror Type
- Wavelength 7000 to 400 cm^{-1}
- Resolution, standard 1cm^{-1} (0.5 Option)
- Multicoated KBr beamsplitter

TEO 200 BENCHTOP FTIR Spectrometer



TEO 200 Benchtop FTIR Spectrometer

OVERVIEW

The TEO-200 series of FTIR spectrometers represent a low cost Fourier transform infrared spectrometers and employ a number of unique features that ensure high performance from a compact instrument. The TEO 200 measures just 590 X 390 X 190 mm and is regarded as one of compact and versatile infrared FTIR spectrophotometers. The design of the 200 is unique both in terms of optical design and the software and firmware designed specifically to significantly reduce overall analytical times. The interferometer geometry is employing a new compact Michelson self compensating optical system that eliminates many of the optical alignment problems found in conventional type optical interferometers.

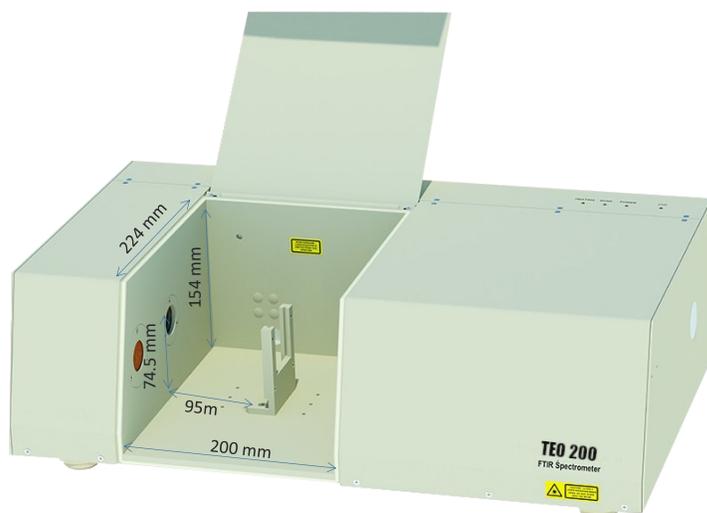
The TEO-200 design avoids the use of conventional corner cube optics and dynamic alignment. In practice this means that the instrument can be used in the research laboratory, in any university or college environment and if required, can also be used outside laboratory or in remote locations.

Interferometer Performance

All TEO FTIR instruments offer high S:N ratios and can provide SNR up to 15000:1. Resolution in the infrared is available 1 cm^{-1} programmable up to 32 cm^{-1} (option 0.5 cm^{-1}). The overall wavelength range is $7000\text{ to }400\text{ cm}^{-1}$ (IR) or $14000\text{ to }3000\text{ cm}^{-1}$ (NIR).

The Sample Compartment

As you will see the sample compartment is large indeed and can accommodate all of the normal sample handling requirements relating to FTIR spectroscopy. This unique compartment will also accommodate the wide range of accessories supplied by specialist accessory manufacturers. Overall dimensions are W200 X D224 X H154 mm. The optical axis is 74.5 mm above the base of the sample compartment and there is free space of 95 mm above the optical axis to the underside of the lid.



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SPECIFICATIONS

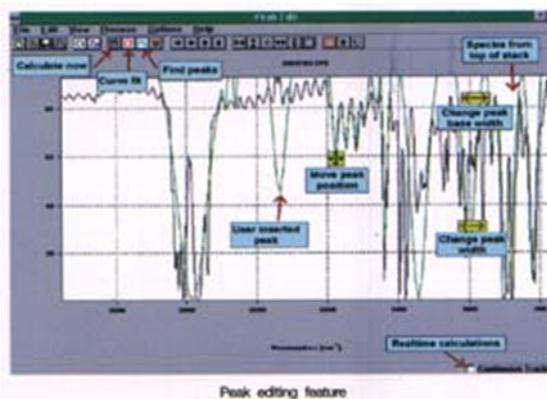
In order to facilitate the use of more than one beam splitter or detector, provision has been made to interchange the beam splitter and detector assemblies allowing the TEO-200 to be used at any wavelength from 14000 to 400 cm^{-1} .

Specifications	TEO 200 Benchtop FTIR 831-9001
Wavelength range, IR	7000 to 400 cm^{-1}
Wavelength range, NIR	14000-5800 or to 9000 – 3850 cm^{-1}
Resolution, standard	1 cm^{-1}
Resolution, option	0.5 cm^{-1}
Interferometer	Pendulum roof mirror type
Beam diameter	30 mm.
Aperture ratio	f 3.2
Beamsplitter, standard IR	Multicoated KBr
Beamsplitter, option	Multicoated ZnSe
Beamsplitter, standard NIR	Fused Silica
Frequency reference	VCSEL laser
Emission port	Option
Sample compartment	W20xD26xH16 cm
Beam at sample	10 mm dia.
IR source	High intensity air cooled ceramic
NIR source	Quartz-halogen lamp
Detector, IR Standard	low noise DLATGS
Detector, IR Option	MCT
Detector, NIR	Si, InGaAs photodiode
Data acquisition system	24 bit, high speed
Purge possibility	Yes
Operating system	Windows based
Interface	USB 2.0
Power	12VDC, 30 W
Dimensions	W59xD39xH19 cm
Weight	24 kg
Temp. environment	15 – 28 $^{\circ}\text{C}$
Humidity environment	Best below 65%

Software

The software is supplied and provided with each system shipped. The software includes features for all standard analytical requirements including manipulation of spectral data, instrument control, plot with preview on the screen plus many others. Also included are several facilities for analytical modeling of interferograms or spectra, with smoothing, and baseline correction, interactive editing and data manipulation. Also spectral subtraction, mixture subtraction, smoothing derivatives, plot with preview etc. Data input and output is possible in ASCII or JCAMP. Other commercial programmers can be used like Essential FTIR or Panorama for features such as Library Search.

Our unique software has been designed specifically for multi function applications, it is easy to use and it is provided free of charge. The utility of the software programme can be extended by adding other commercial programmes such as search, component identification, Kramers Kronig Transform, Chemometrics, etc. to suit individual requirements.



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ACCESSORIES

Sample Handling Accessories

The applications for FTIR are extensive and more use is being made of these techniques now than at any other time.

Many of these new applications can be attributed to the development of a very large and comprehensive range of sample handling accessories made available from many accessory companies. All such accessories can be used in the TEO 200 series of instruments.

So no matter what your sample is, we are able to offer just the right sample mount including accessories for ATR accessories, specular reflection, diffuse reflectance, DRIFT, photo acoustic, liquid sampling, gas cells, gas purge systems, hydraulic or hand help sample presses, film making kits, sample grinders, micro sampling, disposable cells, polishing kits, polarizers, plus a lot more.

Dimensions

Dimensions are in [mm]

