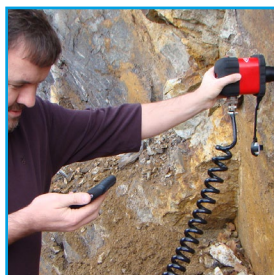


Agilent 4200 FlexScan FTIR spectrometer

Data sheet



FTIR in the palm of your hand.

Following on from the rapid acceptance of the handheld 4100 ExoScan FTIR, the Agilent 4200 FlexScan FTIR is a handheld FTIR designed specifically for various surface analysis applications, with the flexibility to be used in the most inaccessible of locations.

The 4200 FlexScan FTIR employs the optics, electronics, power supply and sampling technology of the 4100 ExoScan FTIR and splits them into two modules — the optics module, which contains the interferometer and sampling interface, and a power module, which contains the battery and system electronics. The optics module fits comfortably in the palm of your hand. The power module can be hooked to your belt, or suspended from a shoulder strap.

The compact dimensions and light weight of the optics module means you can conquer a host of previously impossible field-based applications that demand FTIR performance equivalent to traditional benchtop lab systems.

If you need to perform FTIR analysis in out-of-reach places such as inside vessels, you can simply attach the optics module to an extendable arm. If you need more stability, mount it on a tripod. Effortlessly perform repetitive measurements, such as analyzing numerous points over a large surface area.

Ease-of-use is crucial for performing analyses in the field. With the 4200 FlexScan, simply push a button on the optics module to analyze a sample. Control the system and view data with a handheld computer.

A variety of sampling interfaces are available to meet your specific application requirements. Choose from external reflectance, grazing angle reflectance, ATR, or diffuse reflectance. With this versatility, you can analyze a range of metal, polymers, plastics, composites, in addition to most solids and granulated materials.

Product highlights

- Specifically designed for surface analysis applications
- Small and lightweight
- Highly accurate mid-IR analysis
- No sample preparation
- Ideal for onsite, in-field use
- Available with general purpose and specific methods
- Bluetooth communication to handheld computer and/or laptop data station
- Multiple sample interfaces available

Specification highlights

- Handheld weight = 1.45 kg (3.2 lb)
- Handheld size = 14 x 10.8 x 8.3 cm (5.5 x 4.25 x 3.25 in)
- Wireless data collection
- Sample interfaces
 - Diffuse Reflectance
 - External Reflectance
 - ATR
 - Grazing Angle

See back of sheet for additional details.



Agilent 4200 FlexScan FTIR spectrometer

Data sheet

Available sample interfaces

Diffuse Reflectance

- Normal incidence
- Quantitative or sample ID
- Powdered samples
- Plastics
- Rough, low-reflecting surfaces

External Reflectance

- 45°
- Specular reflectance
- Reflectance absorption
- Coating thickness
- Surface oxidation

Grazing Angle

- 82°
- Metal surfaces
- Ultra-thin coatings
- Trace contamination

ATR

- Diamond crystal
- Elastomers and sealants
- Liquids
- Sample ID

Infrared

Size	Optics module: 14 x 10.8 x 8.3 cm (5.5 x 4.25 x 3.25 in) (w/o sample interface) Electronics module: 19 x 10.2 x 6.4 cm (7.5 x 4 x 2.5 in) Cable: 1.2 m (4 ft)
Weight	Optics module: 1.45 kg (3.2 lb) Electronics module: 1.16 kg (2.55 lb) (including battery) Total: 2.86 kg (6.3 lb)
Sample interface	External Reflectance, Single-Bounce Diamond ATR, Grazing Angle, or Diffuse Reflectance
Interferometer	Michelson interferometer, 4 cm ⁻¹ max. resolution
Frequency range	4000–650 cm ⁻¹
Beam splitter	ZnSe
Detector	Temperature-stabilized DTGS
Buttons	Power on/off, trigger (enter)
Power supply	Input: 100–250 V AC 47–63 Hz, Output: 15 V DC
Battery	10.8 V 4400 mAh lithium ion rechargeable (estimated 3.2 h run time)
Communication	Bluetooth communication to handheld computer and/or laptop data station

Handheld computer

Size	12.7 × 7.5 × 2.1 cm (5.00 x 2.94 x 0.81 in)
Weight	179 g (6.3 oz)
Processor	Intel PXA270 @ 624 MHz
Operating system	Microsoft® Windows® Mobile 5.0 Premium Edition
Memory	128 MB SDRAM, 256 MB NAND FLASH
Display	65K colors TFT LCD, 3.5 in, 240 (w) x 320 (l) pixel resolution
Touch panel	Glass analog resistive touch
Power supply	Input: 100–240 V AC 47–63 Hz, Output: 5 V DC
Battery	3.7 V 1200 mAh lithium ion rechargeable (>8 h estimated run time)
Expansion slots	CompactFlash and SDIO slots
Wireless LAN	IEEE 802.11 b/g antenna: internal
Bluetooth	v2.0 + EDR Class 2 supported

Durability

Operating temperature	0 to 50 °C (32 to 120 °F)
Storage temperature	-25 to 75 °C (-13 to 167 °F)
Humidity	95% non-condensing
Water resistance	Completely sealed spectrometer compartment
Shock	Withstands 40 G on each axis (In shipping case)
Vibration	Withstands 60 Hz for 30 min

This information is subject to change without notice.

© Agilent Technologies, Inc. 2011
Published in USA, May 1, 2011
5990-8096EN



Agilent Technologies