

IR850

FT-IR GAS ANALYZER



IR850 is a purpose-built FT-IR gas analyzer for continuous on-line monitoring of flue gas, greenhouse gas and VOC emissions from fixed sources including coal-fired power plants, steel mills, cement works, waste-to-energy and chemical plants. Covering 500-5000 cm^{-1} , it delivers ppm-level sensitivity, simultaneous quantification of up to 50 gases per scan, and calibrated models for 300+ compounds. It ensures reliable, real-time performance in high-temperature, high-humidity and corrosive flue gas environments.

KEY FEATURES

- Wavenumber 500-5000 cm^{-1} , resolution 4 cm^{-1}
- DTGS detector, no liquid nitrogen required
- Simultaneous analysis of up to 50 gases
- 300+ compounds with calibrated models
- Gold-coated mirrors, anti-corrosion design
- Optical path ≥ 4.5 m, chamber < 1.0 L
- Sample chamber heating $\geq 180^\circ\text{C}$
- Scanning ≥ 5 times/second
- Moisture-proof beam splitter
- USB, Ethernet, Modbus, 4-20mA outputs

TECHNICAL SPECIFICATIONS

PERFORMANCE HIGHLIGHTS

500-5000

CM⁻¹ RANGE

50 Gases

SIMULTANEOUS

300+

CALIBRATED MODELS

≥5

SCANS/SECOND

≥180°C

CHAMBER HEATING

OPTICAL SYSTEM

Measuring Principle	Fourier Transform Infrared (FT-IR), Michelson interferometer
Wavenumber Range	500 - 5000 cm ⁻¹
Resolution	4 cm ⁻¹ standard, 1 cm ⁻¹ optional
Detector	DTGS (room temperature, no liquid nitrogen required)
Beam Splitter	Moisture-proof sealed window, ≥10 year lifetime
Multigas Capability	Up to 50 gas components simultaneously per scan
Calibrated Library	300+ compounds with quantitative spectral models
Scan Rate	≥5 scans/second
Optical Path Length	≥4.5 meters (White cell multi-pass reflection)
Sample Chamber Volume	<1.0 liter
Mirrors	Full gold-coated, anti-corrosion coating
Chamber Heating	≥180°C, constant temperature control
Response Time	<60 seconds (typical, T90)

ELECTRICAL & ENVIRONMENT

Power Supply	220V AC / 110V AC, 50/60Hz
Power Consumption	≤300W
Operating Temperature	0°C - 45°C
Storage Temperature	-20°C - 60°C
Humidity	≤90% RH (non-condensing)
Protection Rating	IP54

SOFTWARE & COMMUNICATION

Analysis Software	Real-time multi-gas quantification and display
Data Outputs	Ethernet, USB, RS-232/485, Modbus TCP/RTU, 4-20mA
Data Logging	User-defined intervals, hourly/daily averages, trend display
Corrections	Pressure & temperature compensation, interference correction
Export Formats	Excel-compatible, spectral replay

RELIABLE INSTRUMENT MANUFACTURING & SERVICES

Call: +86 189-6516-4839 | Email: sales@nwspec.com | Xiongan Pilot Free Trade Zone, Hebei, China