

Aspectrics MultiComponent™ 5000 Process Analyzer

- Ultra-fast – 100 scans/second
- Process rugged – industrial encoder
- Real-time data streaming – embedded Chemometrics



The Aspectrics MultiComponent 5000 process analyzer is capable of simultaneous measurement of multiple interfering gas components in the ppb range. Built on Aspectrics patented Encoded Photometric Infrared (EP-IR) technology, the Aspectrics MultiComponent 5000 Analyzer utilizes proven industrial encoder technology to deliver a stable platform for process monitoring applications such as:

- Indoor Air Monitoring
- Environmental Monitoring
- Solvent Streams

Ultra-fast Operation

The Aspectrics MultiComponent 5000 process analyzer acquires 100 scans/sec across the entire spectral range of 4000-2000 cm^{-1} . The ultra-fast scanning combined with the on-board real-time FFT processing results in:

- High sample throughput
- Real-time kinetics monitoring
- Extreme sensitivity through spectral averaging

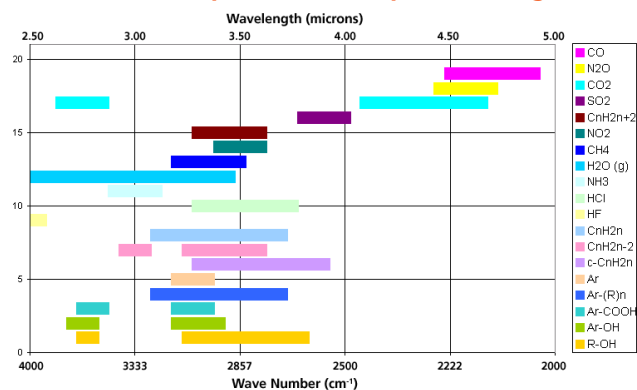
Process Rugged Design

Aspectrics MultiComponent analyzers incorporate a pre-aligned and pre-indexed optical design to meet the requirements of the demanding process environment. The proprietary EP-IR technology does not require a Michelson Interferometer.

The results:

- Ultra-fast scanning
- Vibration insensitive operation
- No hygroscopic components
- No internal laser

MultiComponent 5000 Spectral Range



Real-Time Results

The Aspectrics MultiComponent 5000 Analyzer has an on-board PowerPC for fast, real-time data processing while the Ethernet connectivity allows access by any networked client. Aspectrics quantitative software, ChemoBuilder, enables any user to quickly and easily create multi-component PCR based calibrations and transfer them into the embedded system. Once transferred, the MultiComponent 5000 Analyzer then operates as a stand alone network analyzer.

Industry Standard Protocols

The embedded system features an OPC DA V2 compliant OPC server as well as a web server with Java™ support for external platform independent accessibility and data transfer.

Aspectrics OCX supports the MyInstrument standard and allows a user to fully integrate the Aspectrics software into their process application.

Software Tools

The Aspectrics MultiComponent 5000 Analyzer includes a suite of software to make any process integration quick and easy. These features include:

- Simultaneously control multiple instruments
- Automated, intuitive PCR-based calibration
- Remote validation and calibration augmentation for rapid system deployment

MultiComponent 5000 Specifications

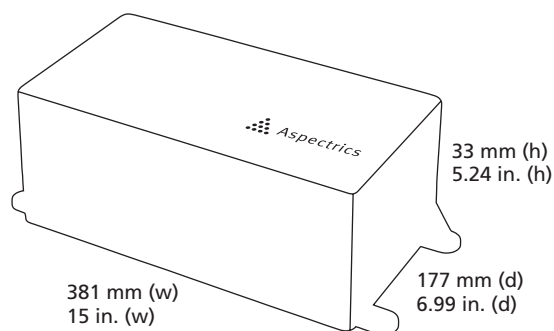
- Spectral Range*: 2500-5000 nm, 4000-2000 cm^{-1}
- Wavelength Accuracy: $< 0.1 \text{ cm}^{-1}$ at 2000cm^{-1}
- Grating: Fixed holographic grating
- Resolution (128 Channel) - 128 equidistant wavelength bands. Bandwidth $< 19.7 \text{ nm}$
- RMS S/N: $> 50,000:1^{**}$
- Detector: Dual stage electronically cooled single point PbSe detector with 1 Mhz acquisition frequency (detector ADC)
- Scan Speed: 100 scans/second (100 Hz)
- Operating Range: $0-40^{\circ} \text{ C} / 32-104^{\circ} \text{ F}$

- Power consumption: $< 23 \text{ W}$
- Certification Approvals: CE, UL, CSA, TUV
- Power requirement system: 24 V DC 2.5 A
- Power supply (external): 120/240 V 50/60 Hz 1.8 A AC CE, UL, FCC, CSA, TUV approved
- System Purge: Maximum purge gas 2 bar and 5 l/min
- Dimensions (HxDxW): 333 mm (5.24 in) x 177 mm (6.99 in) x 381 mm (15 in)
- Weight: 6.8 kg (15 lbs)
- Embedded System: Power PC processor with chemometric engine, OPC DA V2 server, DCOM support and web server with Java applet
- Software: Aspectrics Command Center™ Suite
- Platform: Windows XP/2000
- Third party connectivity: MyInstrument Active X component
- Communications: Ethernet 100/10 Mbit, 2x RS-232, 25 pin Analog
- Output: TCP/IP, OPC DA v2, 25 pin Analog I/O

MultiComponent 5000 Optional Accessories

- MID-IR Development Bench: Accommodates standard third party FT-IR sample accessories for method development. Includes IR light source and optics
- Integrated Sample Cells: Aspectrics ICell low volume cells with integrated optimized source and optics
- Aspectrics Real Time Spectroscopy Software

MultiComponent 5000 Dimensions



* Nominal

** Using optional MID-IR method development Bench in open beam configuration, 60s integration and maximum energy for 128 channel system.



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