

## ARCOPTIX GASEX MODULAR



19" rackable chassis (4U)

The ARCOptix GASEX MODULAR is a fully configurable solution for gas spectroscopy applications. Besides our GASEX OEM module, the system can offer a large variety of standard components and accessories as requested by the end user application. Typical examples of accessories are heated sample lines, single board computers (SBC) for on-board processing, membrane gas pumps and so on. The GASEX MODULAR is available in a 19" rackable chassis (4U) for smooth integration in a more complex system.

### Applications

- *Ambient air/combustion/emission monitoring*
- *Process monitoring/control in chemical applications*
- *Food processing*
- *Toxic gas detection*
- *Greenhouse gas monitoring*
- *All kinds of relevant mobile applications*
- *Bio-medical applications*

### Features

- **19" rack (4U)**
- **Fully configurable unit (internal components and front/back faces)**
- **Assistance to select or integrate relevant parts**
- **FT-IR with 4-TEC MCT detector**
- **0.2L volume, 5m optical path heated, gold plated gas cell**
- **Gold/rhodium protected cell**
- **High resolution of  $0.5\text{cm}^{-1}$**
- **Wear free moving parts for extended lifetime**
- **Temperature controlled reference laser**

## Specifications

Product code	GASEX-MODULAR-RCK19
Analyzer	GASEX OEM module, see below for complete product specifications
Typical accessories	Single-board computer for onboard processing Auxiliary controller board for parameters monitoring Membrane pump, Flow-meter, Muffler/cooler (combined unit) Scrubber, Heated line
Dimensions [mm]	489x428x127
Weight [kg]	15 (typical)

Product code	GASEX-OEM-060-4TE	GASEX-OEM-085-4TE	GASEX-OEM-120-4TE
Beam-splitter Material	CaF2		ZnSe
Spectral Range [cm <sup>-1</sup> ]	5'000 - 1'660	6'600 – 1'200	5'000 - 830
Spectral Range [μm]	2-6	1.5-8.5	2-12
Detector type	MCT-4TE cooled		
Detector Peak D* [cm Hz <sup>1/2</sup> W <sup>-1</sup> ]	> 1x10 <sup>11</sup>	> 8x10 <sup>9</sup>	>4x10 <sup>9</sup>
Signal-to-noise ratio	>55'000:1 <sup>i</sup>	>35'000:1 <sup>i</sup>	>35'000:1 <sup>i</sup>
Interferometer type	Permanently aligned with dual retro-reflector		
Resolution (unapodized) [cm <sup>-1</sup> ]	0.5 <sup>ii</sup> , 2, 4, 8 (user selectable)		
Wave-number repeatability	<10 PPM		
Scan frequency	>1.5 Hz @ 0.5cm <sup>-1</sup>		
Internal reference laser	Temperature controlled solid-state @850nm		
A/D Converter	24 bit		
Amplifier	4 gain levels low noise trans-impedance amplifier		
Power requirement	< 35W @ 12 V (FT-IR only)		
Communication interface	USB 2.0		
Software interface	Windows 7/10/11		

	GAS CELL
Path length	5m
Internal volume	0.2L
Total transmission	50%
Internal temperature [°C]	20-200 (not condensing)
Mirrors	Rhodium & gold coating
Windows material	BaF2
Gas inlet/outlet connector	Swagelok 6mm or ¼" (custom on request)
Power requirement (cell only)	400 W (peak), 25 W (steady-state) @ 110-230 VAC or 12-60 VDC

<sup>i</sup> Measured with a silicon carbide (SiC) source (~1550K), 60s measurement, around peak sensitivity wavelength, Norton-Beer weak apodization, linearly corrected baseline, resolution setting 0.5 cm<sup>-1</sup>

SPECIFICATIONS ARE SUBJECT TO CHANGES WITHOUT NOTICE. Please contact [info@arcoptix.com](mailto:info@arcoptix.com) for more information.

