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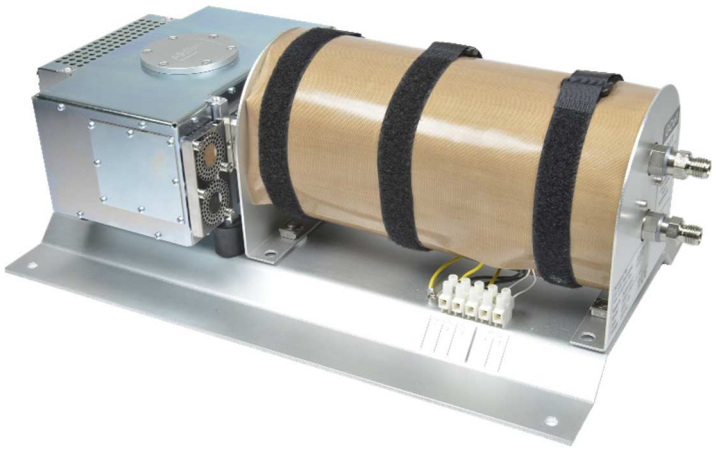
ARCOPTIX GASEX OEM



The ARCoptix GASEX OEM module represents a highly efficient, rugged and fully integrated solution for gas spectroscopy in our product portfolio. Our OEM010 module is coupled to a low volume (0.2L) heated (up to 200°C) gas cell, in which light experiences multiple reflections, resulting in an integrated optical path of 5m with more than 50% transmission. The cell's internal optics is rhodium and gold coated, making it extremely resistant against most chemicals including acid gases such as HF, HCR, HBR...

The GASEX OEM has been standardized to operate with a resolution of 0.5cm^{-1}, which makes it compliant with the newest legal regulations for emission measurements. Featuring a USB 2.0 connection, the unit can also host an embedded single-board computer for standalone operation. Typical limit of detection (LoD) is in the range of 1 ppm for most of the gases – with 1 minute integration time.

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

- **Internal light source**
- **Built-in 4-TEC MCT detector**
- **0.2L volume, 5m optical path heated gas cell**
- **Rhodium protected internal optics**
- **Complete module for gas spectroscopy**
- **High resolution of 0.5cm^{-1}**
- **Wear free moving parts for extended lifetime**
- **No purging of the interferometer required**
- **Temperature controlled reference laser**
- **Compact & lightweight**
- **USB 2.0 connection**

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Specifications

Product code	GASEX-OEM-060-4TE	GASEX-OEM-085-4TE	GASEX-OEM-120-4TE
Beamsplitter Material	CaF2		ZnSe
Spectral Range [cm^{-1}]	5'000 - 1'660	6'600 – 1'200	5'000 - 830
Spectral Range [µm]	2-6	1.5-8.5	2-12
Detector Peak D* [cm $Hz^{1/2}W^{-1}$]	>1x10^{11}	> 8x10^{9}	> 4x10^{9}
Signal-to-noise ratio	>55'000:1[i]	>35'000:1[i]	>35'000:1[i]
Detector type	MCT-4TE cooled		
Interferometer type	Permanently aligned with dual retro-reflector		
Resolution (unapodized) [cm^{-1}]	*0.5*[ii], 2, 4, 8 (user selectable)		
Wave-number repeatability	<10 PPM		
Scan frequency	>1.5 Hz @ 0.5cm^{-1}		
Internal reference laser	Temperature controlled solid-state @850nm		
A/D Converter	24 bit		
Amplifier	4 gain levels low noise trans-impedance amplifier		
Built-in light source	SiC globar @1'550 K		
Power requirement (FTIR only)	< 35W @ 12 V		
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	6mm or ¼" (custom on request)		
Power requirement (cell only)	400 W (peak), 20 W (steady-state) @ 110-230 VAC or 12 VDC		
Dimensions FTIR+cell [mm]	380x180x120		
Total weight [kg]	3.9		

[i] Measured with a silicon carbide (SiC) source (~1550K), 60s measurement time, around peak sensitivity wavelength, Norton-Beer weak apodization, linearly corrected baseline, resolution setting 0.5 cm^{-1}

[ii] Available on request, please contact info@arcoptix.com for more information.

SPECIFICATIONS ARE SUBJECT TO CHANGES WITHOUT NOTICE. Please contact info@arcoptix.com for more information.