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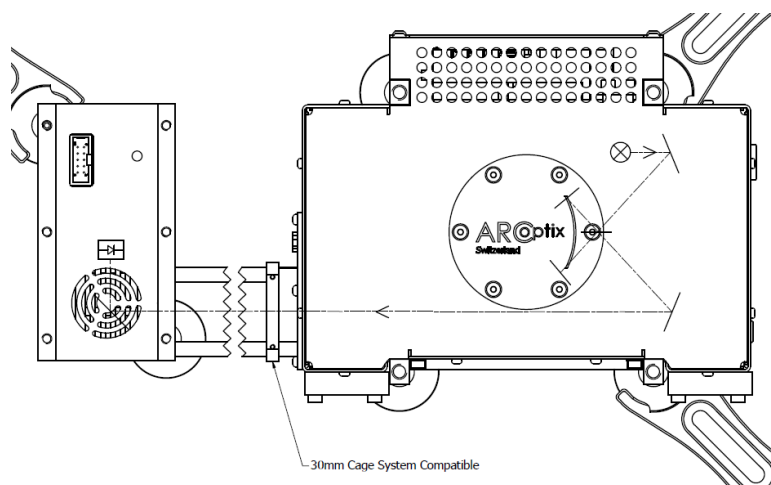Email: info@arcoptix.com

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# ARCOPTIX OEM011

The ARCoptix OEM011 is a flexible alternative to our OEM010 series. The main module features a built-in light source (SiC globar) regulated in temperature as well as our permanently aligned interferometer system. The TE-MCT detector has been moved to an external module which is ideal for configurations requiring a sampling system (short path gas cell, purged volume, etc.). Both modules are easily fixed on optical breadboards and can accommodate 30 mm cage system rods for rapid prototyping.

## Features

- **Internal light source**

- **Compact, rugged unit**

- **External detector module**

- **Robust to ambient light perturbation**

- **Dynamically adjustable resolution:**
  - $16cm^{-1}$
  - $8cm^{-1}$
  - $4cm^{-1}$
  - $2cm^{-1}$
  - $0.5\ cm^{-1}$ (on request)

- **Wear free moving parts for extended lifetime**

- **Compatible with 30 mm cage system rods**

- **Temperature controlled reference laser**

*Optical routing in the ARCOPTIX OEM011*

# Specifications

| Product code | FTIR-OEM011-060-4TE | FTIR-OEM011-085-4TE | FTIR-OEM011-120-4TE |
|---|---|---|---|
| Beam-splitter material | $CaF_2$ | | ZnSe |
| Spectral Range [$cm^{-1}$] | 1'660-5'000 | 1'200-6'600 | 830-5'000 |
| Spectral Range [µm] | 2-6 | 1.5-8.5 | 2-12 |
| Detector Type | MCT (2-TE cooled) | MCT (4-TE cooled) | |
| Detector Peak D* [$cm\ Hz^{1/2}W^{-1}$] | >1x10$^{11}$ | >8x10$^9$ | >4x10$^9$ |
| Signal-to-noise ratio (SNR) | > 80'000:1[i] | >40'000:1[i] | |
| Output beam characteristics | Ø 12.7 mm collimated (max ~30mrad half angle) | | |
| Detector module FOV [mrad] | 28 (half-angle, Ø 12.7 mm input aperture diameter) | | |
| Interferometer type | Permanently aligned, double retro-reflector design | | |
| Resolution (unapodized) [$cm^{-1}$] | *0.5[ii]*, 2, 4, 8 (user selectable) | | |
| Wavenumber repeatability | <10 PPM | | |
| Scan frequency | >4 hz @ 4$cm^{-1}$ | | |
| Internal reference laser | Temperature-stabilized solid-state laser @850nm | | |
| A/D Converter | 24 bit | | |
| Amplifier | 4 gain levels low noise trans-impedance amplifier | | |
| Operating temperature | 10°C-40°C | | |
| Power requirement | 12V / 30W (interferometer), 12V / 10W (detector module) | | |
| Communication Interface | USB 2.0 | | |
| Software Interface | Windows 7/10/11, Linux<br>API for controlling the instrument via our DLL<br>Single board computer available on request | | |
| Dimensions [mm] | 165x145x82 (interferometer), 93x75x66 (detector module) | | |
| Weight [g] | 2100 (interferometer), 400 (detector module) | | |

[i] Input to output direct light routing, 60s measurement, around peak sensitivity wavelength, 4cm-1, Norton-Beer weak apodization.

[ii] Available on request only, please contact us at info@arcoptix.com for details

SPECIFICATIONS ARE SUBJECT TO CHANGES WITHOUT NOTICE.