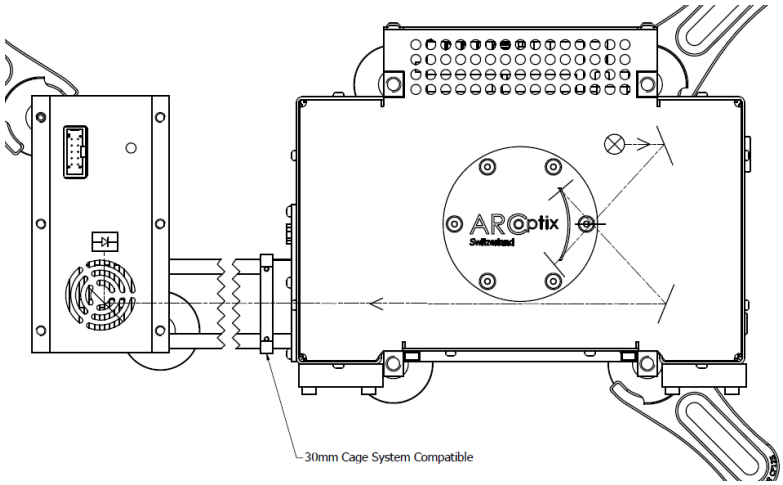
# ARCOPTIX OEM011

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.




*Optical routing in the ARCOPTIX OEM011*

## 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**

# 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 (4-TE cooled) | | |
| **Detector Peak D* [cm $Hz^{1/2}W^{-1}$]** | >1x$10^{11}$ | >8x$10^{9}$ | >4x$10^{9}$ |
| **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** | >4Hz @ 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) | | |
| **Built-in light source** | SiC globar (1550 °K) | | |
| **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

SPECIFICATIONS ARE SUBJECT TO CHANGES WITHOUT NOTICE.