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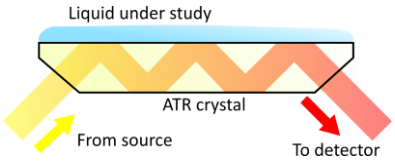
ARCOPTIX FTIR KIT

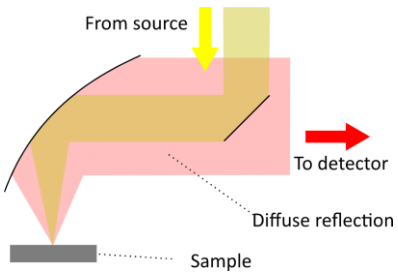


The ARCoptix **FTIR KIT** is a selected set of building blocks that can be seamlessly mounted on the instrument to perform various measurements, offering a compact and highly performant FTIR based platform.

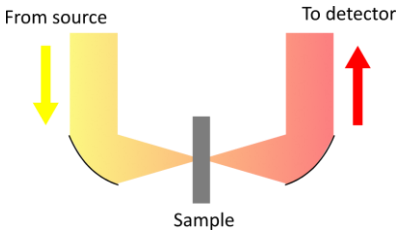
The **ATR** module consists of a 3 bounce ZnSe ATR crystal designed to measure liquids or suspended solutions.



The **diffuse reflectance** module allows characterizing even low reflective samples over the entire spectral range provided by the selected detector while simultaneously blocking specular reflection.



The **transmittance module** uses focused beams to allow characterizing diverse optical components (filters, windows etc.) or liquids in a cuvette.



Features

- **Internal light source**
- **Available with LN2 cooled MCT photodetector**
- **Robust to ambient light perturbation**
- **Dynamically adjustable resolution:**
  - **8cm^{-1}**
  - **4cm^{-1}**
  - **2cm^{-1}**
- **Wear free moving parts for extended lifetime**
- **No purging of the interferometer required**
- **Temperature controlled reference laser**
- **Low power consumption**
- **USB 2.0 or ethernet connection**

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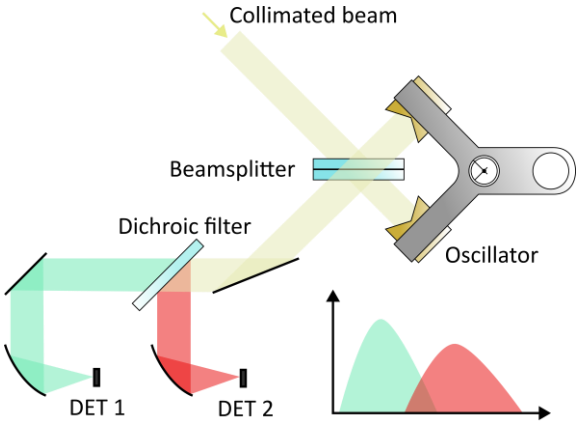
Specifications

Product code	FTIR-KIT-060-4TE-XXX	FTIR-KIT-120-4TE-XXX	FTIR-KIT-160-LN2-XXX
	- ATR (ATR module) - DRA (Diffuse reflectance module) - TRA (Transmittance module)		
Beam-splitter material	CaF_2	ZnSe	
Spectral Range [cm^{-1}]	5'000-1'660	5'000 – 830	5'000 – 650
Spectral Range [µm]	2-6	2-12	2-16
Detector Type	MCT (4-TE cooled)		MCT (LN2 cooled)
Detector peak D* [cm $Hz^{1/2}W^{-1}$]	>1 $x10^{11}$	>4$x10^{9}$	>5$x10^{10}$
Signal-to-noise ratio	> 80'000:1 [ii]	> 40'000:1 [ii]	> 70'000:1 [ii]
Internal reference laser	850nm		
Power requirement	40W @12VDC		30W @12VDC
Integrated light source	20W SiC globar		
Interferometer type	Permanently aligned, double retro-reflector design		
Resolution [cm^{-1}]	2, 4, 8 (user selectable)		
Wavenumber repeatability	<10PPM		
Scan frequency	>4 Hz @ 4cm^{-1}		
A/D Converter	24 bit		
Operating temperature	10°C-40°C		
Communication	USB 2.0 / Ethernet		
Software Interface	Windows 10/11 API for controlling the instrument via our DLL		
Dimensions	180mm x 160mm x 80mm		
Weight	2200 g (excluding LN2 dewar)		

DUAL DETECTOR CONFIGURATION

The performances of the FT-IR spectrometer can be greatly enhanced by integrating a second detector (dual detector configuration) that will boost the signal-to-noise ratio substantially over a selected spectral range (usually 2-6 µm).



[i]Measured with a 20W halogen lamp in transmission mode, 60s measurement, around peak sensitivity wavelength, Norton-Beer weak apodization, linearly corrected baseline, resolution setting 4 cm^{-1}

[ii] Measured with a silicon carbide (SiC) source (~1550K) in transmission mode, 60s measurement, around peak sensitivity wavelength, 4cm-1, Norton-Beer weak apodization.

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

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