

# ARCSpectro HT

ARCOptix  
Switzerland

## DATA SHEET



## Miniature Ultra-High-Throughput Fourier Transform Spectrometer

The ARCSpectro - HT is a stationary Fourier transform spectrometer that is based on polarization optics. It provides an extremely high sensitivity and is ideal for measurements of low light or diffusing sources. Its unique design permits to collect light over a large surface of several millimeters. It can gather between 50 and 100x more light than a grating spectrometers (with similar resolution)

The optical setup is extremely simple because the user can directly illuminate the 4 mm entrance window with the light to be spectrally analyzed without need of cumbersome and expensive focusing optics. It can also be used in combination with large lightguides.

Typical characteristics of the HT series are

- **Ultra-high-throughput**
- **Large spectral range: 400nm-1050nm**
- **High resolution**
- **No moving parts, Robust monolithic design**

### Applications

- Raman spectroscopy
- Fluorescence spectroscopy
- Reflectance measurement
- Colorimetry

### For additional information please contact:

ARCOPTIX S.A.

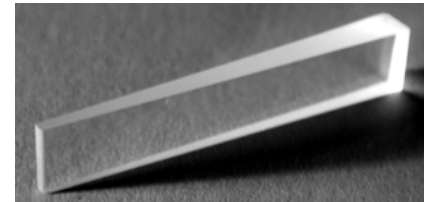
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### FEATURES & BENEFITS

A monolithic bloc design makes the HT insensitive to external conditions and **robust**.

The heart of the HT is made of materials that are transparent over a **large spectral range** and the sensitivity is only limited by the detector.

**High resolution and High throughput** are combined in Fourier transform spectroscopy because resolution is limited by the maximum optical path difference and not by the entrance slit.

The **entrance aperture** is several millimeters large.

**Simple optical setup** integration is possible because there is no need for injection or fiber optics.

**Its compact design (for a FT spectrometer) and its USB connection makes this device practical to use.**

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ARCSpectro HT specification overview:

Spectral range	400 nm – 1050 nm
Signal-to-Noise (single measurement full detector dynamic used, Ratio between the peak value and bottom value of HeNe Spectrum)	1000 :1 (Multiplex advantage)
Detector type	Silicon detector array
Dark noise	2-3 counts RMS over a total of 4096 count
Detector sensitivity	~15 photons per count
Full well capacity	30'000 e-
Spectral Resolution (FWHM)	
400 nm	0.4 nm
700 nm	1.3 nm
1000 nm	2.5 nm
Wavelength Accuracy	< 0.5 nm
Operating Temperature	10°C – 50°C
Measurement time	1 ms to infinite
Operating Voltage	5 V (USB powered)
Light guide core diameter (optional)	4 mm
Entrance aperture	4 mm (Diam.)
Communication Interface	USB
Software Interface	Windows XP
Sampling rate	0.5 MHz
A/D converter	12 bit
Product Dimensions (including electronics)	12 cm x 6 cm x 5 cm
Product Weight	400 g
Power Consumption	0.2 W
Wavelength temperature drift	>0.001nm/°C

ARCOptix is a company located in Neuchâtel (Switzerland) in the heart of the watch valley. For more information about ARCOptix, visit [www.arcoptix.com](http://www.arcoptix.com)

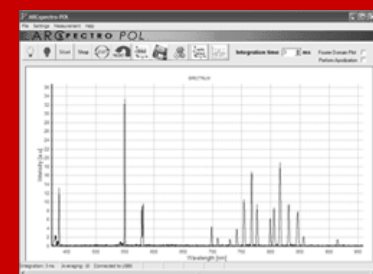
The ARCSpectro HT is highly modular systems and ready for custom spectroscopy.



Light can be brought to the spectrometer via a **4mm diameter light guide**



Data transfer and power supply via **USB port**.



**Software Module for Windows XP**