ARCspectro HT

DATA SHEET



Miniature Ultra-High-Troughput 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 cn also be used in combination with large lightguides.

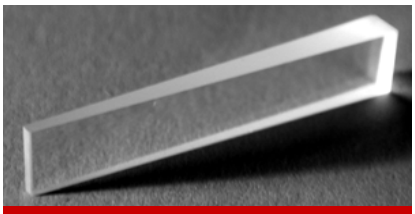
Typical characteristics of the HT series are

- **Ultra-high-throughput**
- **Large spectral range: 400nm-1000nm**
- **High resolution**
- **No moving parts, Robust monolithic design**

Applications

- Raman spectroscopy
- Fluorescence spectroscopy
- Reflectance measurement
- Colorimetry

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

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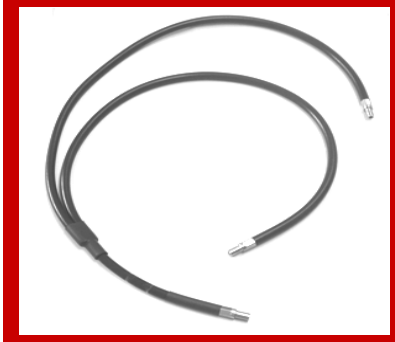
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ARCspectro HT specification overview:

Spectral range	**400 nm – 1000 nm**
Signal-to-Noise (single measurement, full detector dynamic, shot noise limited)	**25 dB**
Detector type	**Silicon detector array**
Spectral Resolution (FWHM) **400 nm** **700 nm** **1000 nm**	 **0.4 nm** **1.3 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**

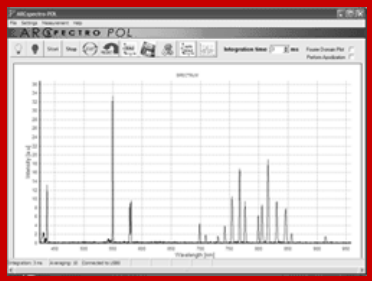
The ARCspectro HT is highly modular systems and ready for custom spectroscopy.



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

ARCoptix is a company located in Neuchâtel (Switzerland) in the heart of the watch valley.
For more information about ARCoptix, visit www.arcoptix.com

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