

# The 1cc Spectrometer

For the visible spectrum



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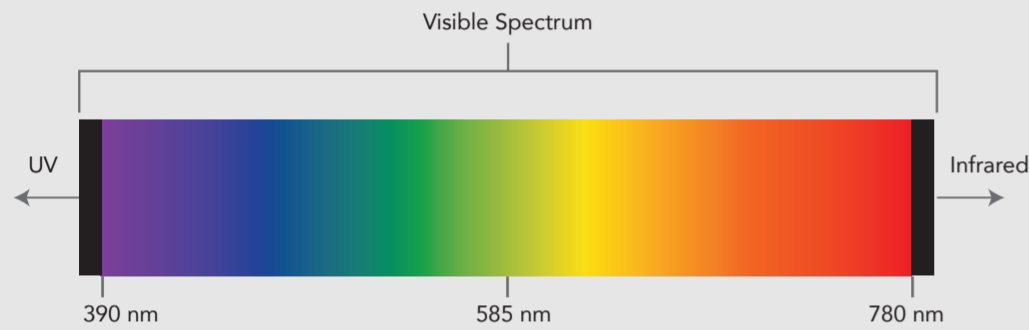
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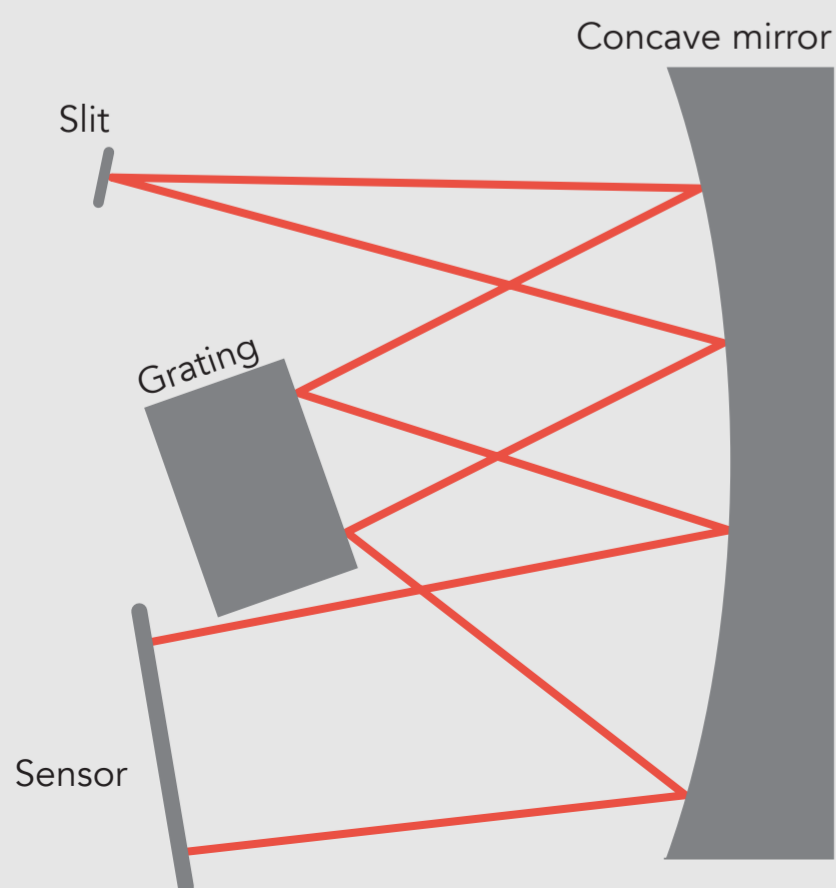
## Visible Spectrum

The cubic centimeter spectrometer is designed for the visible spectrum which extends from ~390 nm to 780 nm.

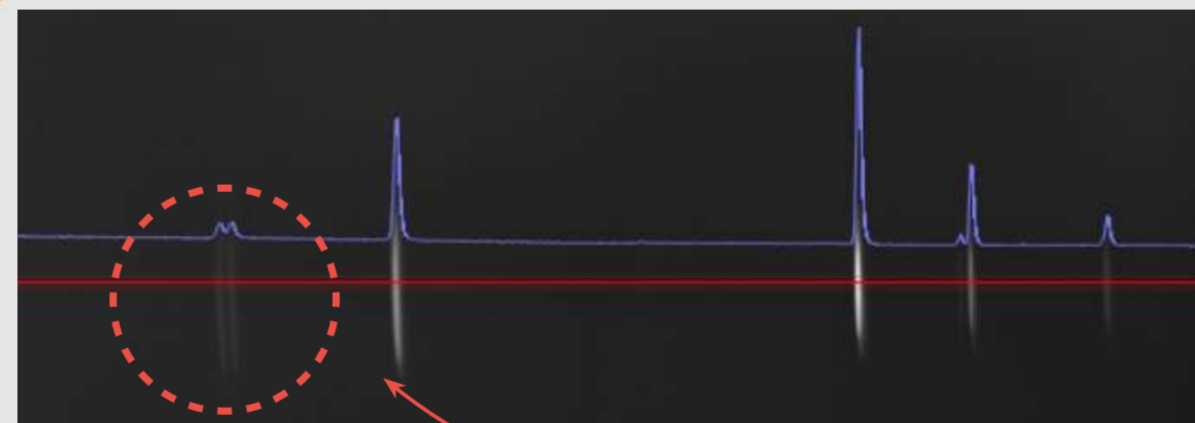
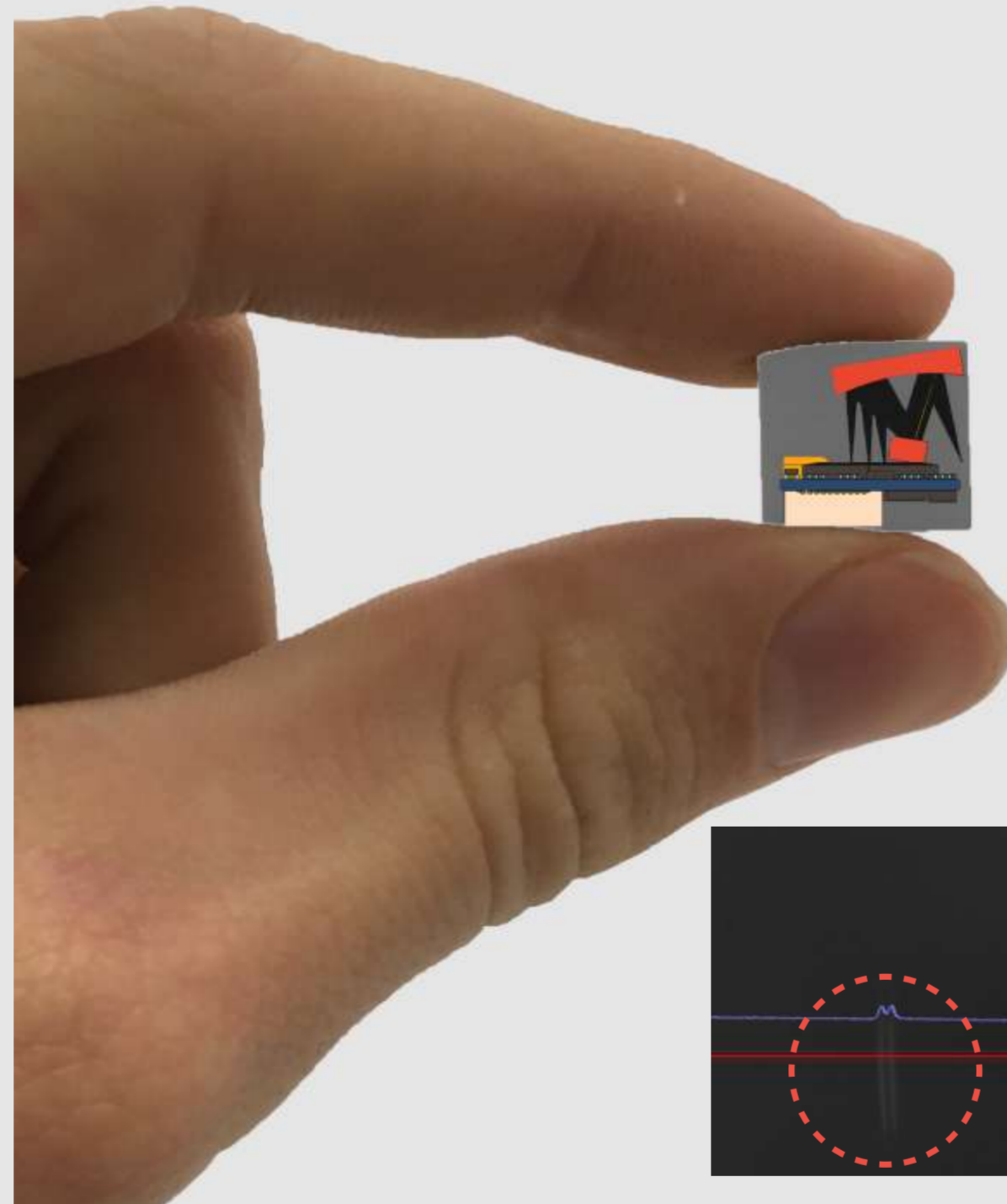


## Fastie-Ebert design

The Fastie-Ebert design is very suitable for smaller spectrometers. It is a design with only four components: a slit, grating, mirror and image sensor. These four components create a spectrum from ~400 nm till ~800 nm.



## A lilliput spectrometer

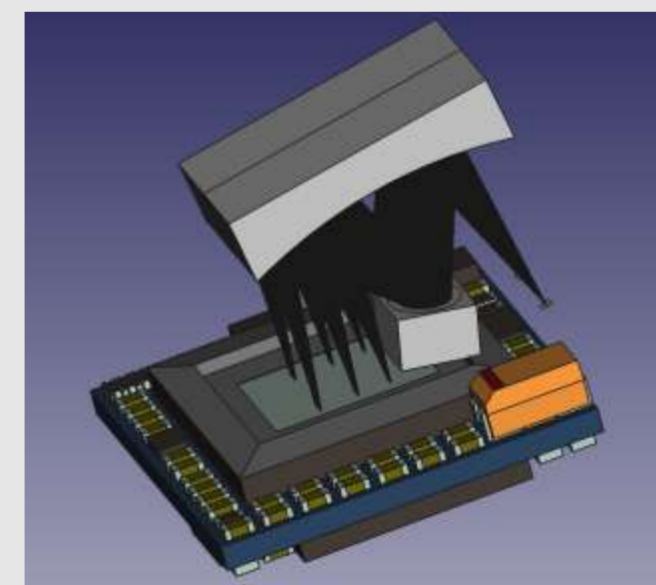


Spectrum of an Argon Mercury lamp, indicating that the resolution is at least 2 nm

## Two channel design

The high resolution in such a small device is created by splitting the spectrum into two parallel channels. By doing this Anteryon creates a unique spectrometer with high sensitivity and excellent resolution. Both channels can also be configured independently. The two channels have each their own spectrum, e.g.

VIS 1: 400 - 600 nm  
VIS 2: 535 - 800 nm



## Resolution

Due to the two channel design it is possible to create a high resolution in such a small device. In this case

VIS 1: 2 nm  
VIS 2: 3 nm

## Future plans

Anteryon is planning to make several *fit-for-use* spectrometers. For example a spectrometer with a wider spectrum, extending into the infra-red (SWIR). This will be a device which measures from 400 till 1700 nm. Two different sensors will be used, one for VIS and one for SWIR. In this way the two channels are used in the best possible way.



## Real scale

This is the real size spectrometer:



1cc