



IndiGo

Handheld modular spectrometer

About Vadeno Optical Solutions

Vadeno is a company that represents several companies in the Benelux in the world of Photonics. One of our expertises is in Research and Development, serving the industry in the development of specific applications in spectrometry.

The IndiGo units were developed as powerful spectrometry tools that are easy to use, mobile and affordable thanks to new communication technologies (smartphones, tablets).

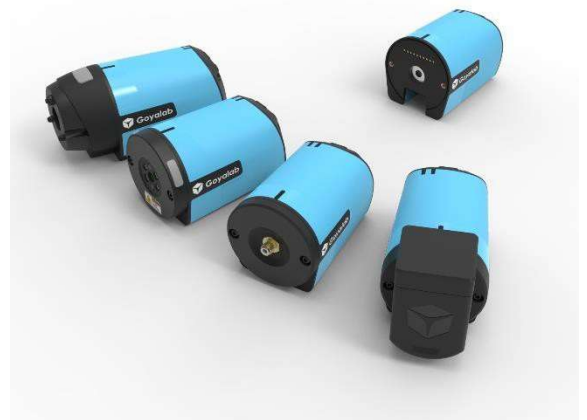
We want to democratize spectrometry and make it accessible to all.



With IndiGo, the power of spectroscopy is at your fingertips

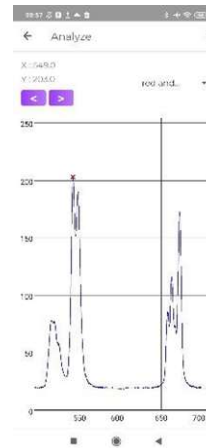
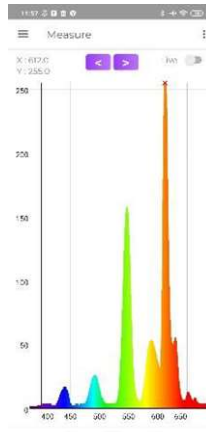
IndiGo is a modular handheld spectrometer connected to a smartphone by Bluetooth. This new spectrometer allows the user to measure emission, absorption or transmission spectra directly on a smartphone. The wavelength range goes from 370 nm up to 810 nm with a resolution of 5 nm. IndiGo is compatible with all smartphones with a Bluetooth 5.0 connection. Thanks to its dedicated app available on Android 7.0 (soon on iOS), it allows the user to make measurements anywhere, anytime, at a reasonable cost.

With its optional modules, IndiGo can become a fluorescence spectrometer or a chemical analyser that fits in your pocket.



Features

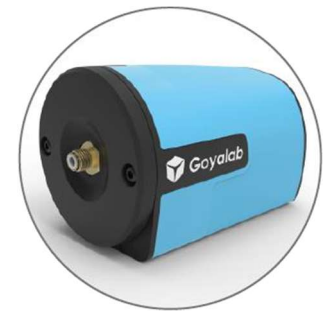
- > Modular spectrometer
- > Bluetooth connectivity
- > Battery or mains powered
- > CE certification (FCC on-going)
- > Plug-n-Play Interface for PC applications
- > Available on Android (soon on iOS)



Optional modules

OPTICAL FIBER ADAPTOR

The module allows the user to adapt an optical fiber with a SMA connector, in order to make the measurement less sensitive to alignment and to make it more flexible.



UV MODULE

The LED module allows the user to add a light source to the IndiGo. This LED accessory is supplied with up to 6 UV-A LEDs at (375nm) as standard. The wavelength can be customized and can include UV-B LEDs (300nm). This module is very useful for measuring fluorescence spectra in various products such as food products, fluorescent inks or taggants, or various impurities, even at trace level.



LASER MODULE

This module includes a laser excitation source at 532nm (other wavelengths available upon request) and a set of filters to perform laser-induced fluorescence measurements or Raman measurements.

This module is very useful for measuring fluorescence spectra in various products such as food products, or various impurities, even at trace level and for the diamonds identification.



CUVETTE HOLDER MODULE

This module allows the user to measure spectra in liquids thanks to its cuvette holder. This module offers 2 types of lighting: a white LED for absorption and UV- A LEDs for fluorescence.

This module is very useful for chemical analyses.



Specifications

<i>PHYSICAL</i>	
Dimension	76 x 45 x 53 mm
Weight	107g

<i>SPECTROMETER</i>	
Sensor	1,3MP monochrome CMOS 1,280H x 1,024V
Wavelength Range	370 - 810 nm
Wavelength Data Increment	1nm
Spectral Resolution	5nm (FWHM)
Wavelength Reproducibility	1nm
Integration Time Range	10ms-2000ms

<i>SYSTEME CONFIGURATIONS</i>	
Battery	10h in operation & 24h in standby mode
Data Format	.txt
Power	5V - 750mA

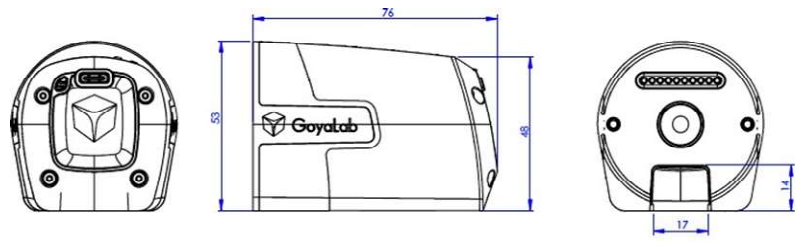
<i>ENVIRONMENTAL CONDITIONS</i>	
Temperature	0°C - 30°C operation & -10°C - 40°C Stockage
Humidity	0% - 90% noncondensing

<i>INTERFACES</i>	
Bluetooth	5.0 Bluetooth Low Energy
USB	USB-C

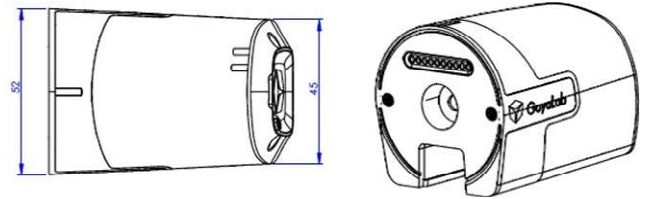
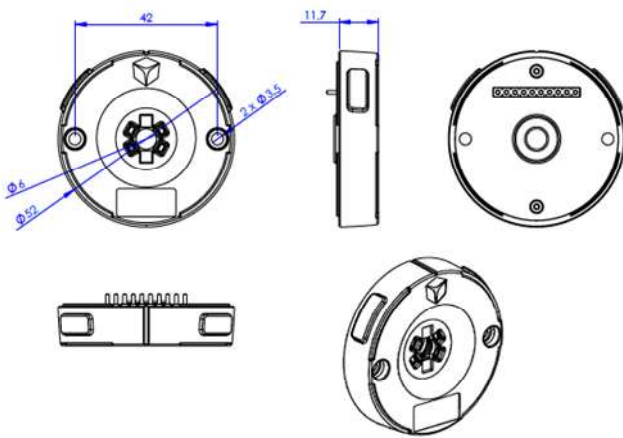
<i>CALIBRATION</i>	
Wavelength	Made in factory
Intensity	Available in option

▶ Dimensions

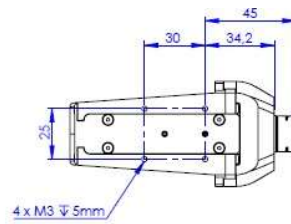
Core module



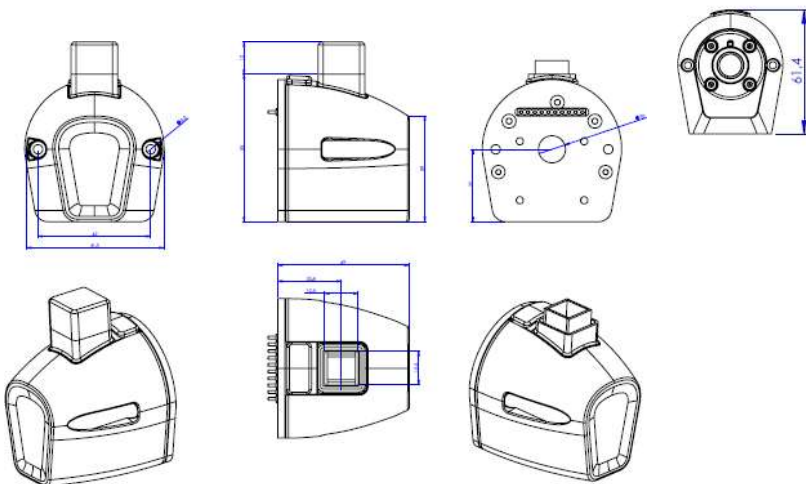
UV module



Laser module



Cuvette holder module



Optical fiber adapter

