Nylis Spectrometer
Quick Start Guide

Version 1.2 - 27 April 2026

This Quick Start Guide describes the steps required to make the first simple measurements with your spectrometer. For more sophisticated features please see the **user manual**, which is included on the **USB flash drive** and **available on our website**.

Package Contents

The retail package of the spectrometer includes:

- Nylis spectrometer
- USB cable
- USB flash drive with software and documentation
- Quick start guide
- Calibration and test report

Software Installation

The application software Inspective requires Windows 7 or later. Simply run InspectiveSetup.msi on the USB flash drive to install the software and device drivers on your computer. The software is free of charge and does not require a license.

You can run the application from the Start Menu. Once it's running, you can pin it to the taskbar for easier access by right-clicking on its application icon.

Inspective requires the ".NET Desktop Runtime" by Microsoft to be installed. It's quite likely that it will be automatically installed on your system once you have started the application software Inspective. However, if you get a message saying that the runtime is missing, please follow the link on our website to download the software, or alternatively install it from the USB flash drive. Please note that you need the "Desktop" version of the runtime. The ".NET Runtime" (without "Desktop") or the "ASP .NET Core Runtime" are not sufficient.

Connecting Your Spectrometer

Use a USB cable to connect the Nylis spectrometer to your PC. Use the supplied cable if you have a traditional USB Type-A port on your computer. For the new USB Type-C port you need a cable with Type-C connectors on both ends (not included).

Upon connecting the device both LEDs should turn on for a brief moment and then the red LED should go off. Otherwise please refer to the Troubleshooting section below.

Optical connection

To couple the light into the spectrometer, you can use a standard fiber optical cable with SMA connectors or directly focus the light onto the entrance slit.

For simple measurements that don't require precision you can also just point the spectrometer towards the light source. For example, for a first test you may point tthe device at a lamp or computer screen.

Troubleshooting

- **Both LEDs remain off:** The device does not get any electrical power. Please check the USB connection. Try a different cable or a different computer. If you're using a USB hub, try connecting the device directly to the computer.
- **Both LEDs remain on:** The device is not properly recognized by the operating system. Please ensure you have the software installed. Check the driver status in the Windows Device Manager. It may also be a problem with the electrical connection, therefore please also try a different cable or a different computer.
- **Green LED is flashing:** This indicates an internal error. Please contact technical support (see below).
- **Green LED is off and red LED is flashing:** The supply voltage is too low. Please check the USB cable. Try a different cable or a different computer. If you're using a USB hub, try connecting the device directly to the computer.
- **Green LED is on, red LED is off, but the software cannot find the device:** It may take several seconds for the driver to be installed, so please wait and try again. If unsuccessful, please try disconnecting and reconnecting the device. You may use the Device Manager in Windows to check the status of the driver installation.

For further assistance please contact Technical Support (see below).

First Measurements

Start the application software by choosing "Inspective" from the Start Menu. Once it's running, you can pin it to the taskbar for easier access by right-clicking on its application icon.

Press F1 for a short description of the main window.

To open the connection to the device, click on the "Open Device" button (showing a plug and a green Plus sign, tab "Device"). If no device can be found, a "Simulated Spectrometer" is opened instead, which allows you to try out the software without an actual device.

When the connection is established, select "Auto" and click on the green triangle button to take a spectrum. In order to obtain spectra faster or with less noise, change the "Auto exp. time" value. You can also set the exposure parameters manually. Click the "Run Continuously" button (tab "Acquire") for repeated measurements.

The "Intensity" selection box lets you choose which quantity to display on the y axis of the spectrum.

List of Spectra

Once you take a new spectrum, the previous measurement is generally overwritten. If a spectrum looks good and you would like to keep it, click on the "Keep current spectrum" button (showing a blue pushpin). When you take another spectrum afterwards, instead of overwriting the previous measurement, a new spectrum is added to the list. In order to keep every new measurement, select "Keep all new spectra".

You can select one or more spectra in the list by clicking on them. If one spectrum is selected, you can see further information about its properties in the panel below.

In the list of spectra you can also find a check box next to each spectrum name. By placing a check mark here, you can select which spectra should be displayed in the spectrum diagram. If no check mark is placed, the selected spectra are displayed.

When you save the measured data to a file, all spectra in the list are written to a single file. The file format ".spz" is a simple ASCII table that can easily be imported to Excel or any numerical evaluation software.

Inspective features "Undo" and "Redo" for all changes to the list of spectra. This also means that if you take a new spectrum and overwrite the previous one, the old spectrum is still available in the "Undo" buffer. So you can keep on taking and overwriting spectra and if you then decide that you would like to go back to an earlier measurement, you can simply keep "Ctrl-Z" pressed to travel back in time.

Diagram Window

Zooming into the displayed spectrum and moving around can be easily done with the mouse. This is similar to using a touch screen, but with the mouse you have only one pointer, therefore a few modifier keys are also required:

- To move around, click on a spectrum in the diagram, keep the button down and move the mouse.
- To zoom in on the x axis, simply use the mouse wheel.
- To zoom in on both axes, press the "Shift" key and use the mouse wheel.
- To simply click on the axis labels and then drag them is also a possibility.
- To shift the y axis (instead of scaling it), keep the "Shift" key pressed while clicking.

- To zoom out, place a check mark at "Auto scale".

Software Development Kit

The Software Development Kit (SDK) contains documentation, sample code and device drivers to control devices by Avenir Photonics from your own software.

Technical Support

If you have any questions or comments, please check our website at:
https://www.avenirphotonics.com/support/

If this does not solve your question, please contact us at:
support@avenirphotonics.com

Software updates are usually released several times per year. You can find the latest version on our website.

We appreciate any comments, bug reports or feature requests. Therefore please do not hesitate to share your experiences and requirements with us. Once again, for more sophisticated information please refer to the **user manual**, which is included on the **USB flash drive** as well as **available on our website**.

Changing the entrance slit

The entrance slit of the Nylis spectrometer can easily be exchanged by the user. Use a hex key to loosen the headless screw below the optical interface. Then carefully remove the SMA connector with the entrance slit at its back. When reinserting another SMA connector, make sure that the semi-circle markings on both parts line up. Then fasten the headless screw again. If the screw does not go all the way in, check the position and angle of the SMA connector.