

HighFinesse  
The Standard of Accuracy

HighFinesse Tutorial

# Control the Wavelength Meter with your own application

## Overview

This tutorial shows you how to ...  
... control the Wavelength Meter  
with your own application.

This guide is intended to give you a short introduction on how to control a HighFinesse non-standalone wavelength meter or laser spectrum analyzer with external software. It is discussed how to use a Python example as a starting point for your own application on the computer running the wavelength meter software.

If you are interested in remote control via the network instead, please take a look at our tutorial »**Control the wavelength meter with your own application via the network**«

[https://www.highfinesse.com/en/howto/tutorial/How\\_To\\_Access\\_WS\\_EN.pdf](https://www.highfinesse.com/en/howto/tutorial/How_To_Access_WS_EN.pdf)



## Further information

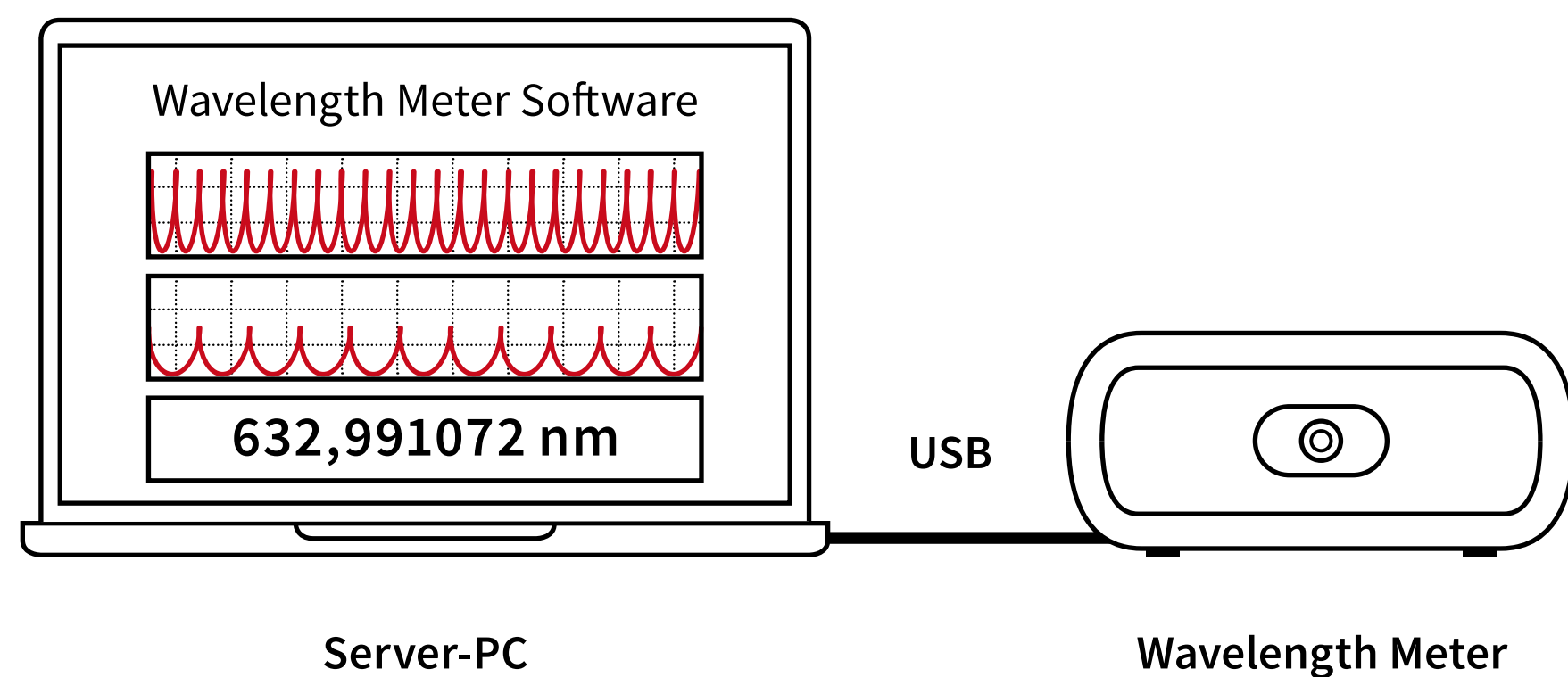
HighFinesse User Manual,  
Chapter 4

HighFinesse Python examples  
[https://  
www.highfinesse-downloads.com/  
download/t0849yd8uzpj](https://www.highfinesse-downloads.com/download/t0849yd8uzpj)

HighFinesse Labview (beta version)  
[https://  
www.highfinesse-downloads.com/  
download/etugh84b4px8](https://www.highfinesse-downloads.com/download/etugh84b4px8)

HighFinesse Matlab examples  
[https://  
www.highfinesse-downloads.com/  
download/2ytbyvzww8rb](https://www.highfinesse-downloads.com/download/2ytbyvzww8rb)

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Install and connect the instrument as described in the relevant quickstart guide.

<https://www.highfinesse.com/en/support/quick-start-guide.html>

2

Download the **HighFinesse Python Examples** from the link below.

[https://  
www.highfinesse-downloads.com/  
download/  
t0849yd8uzpj](https://www.highfinesse-downloads.com/download/t0849yd8uzpj)

3

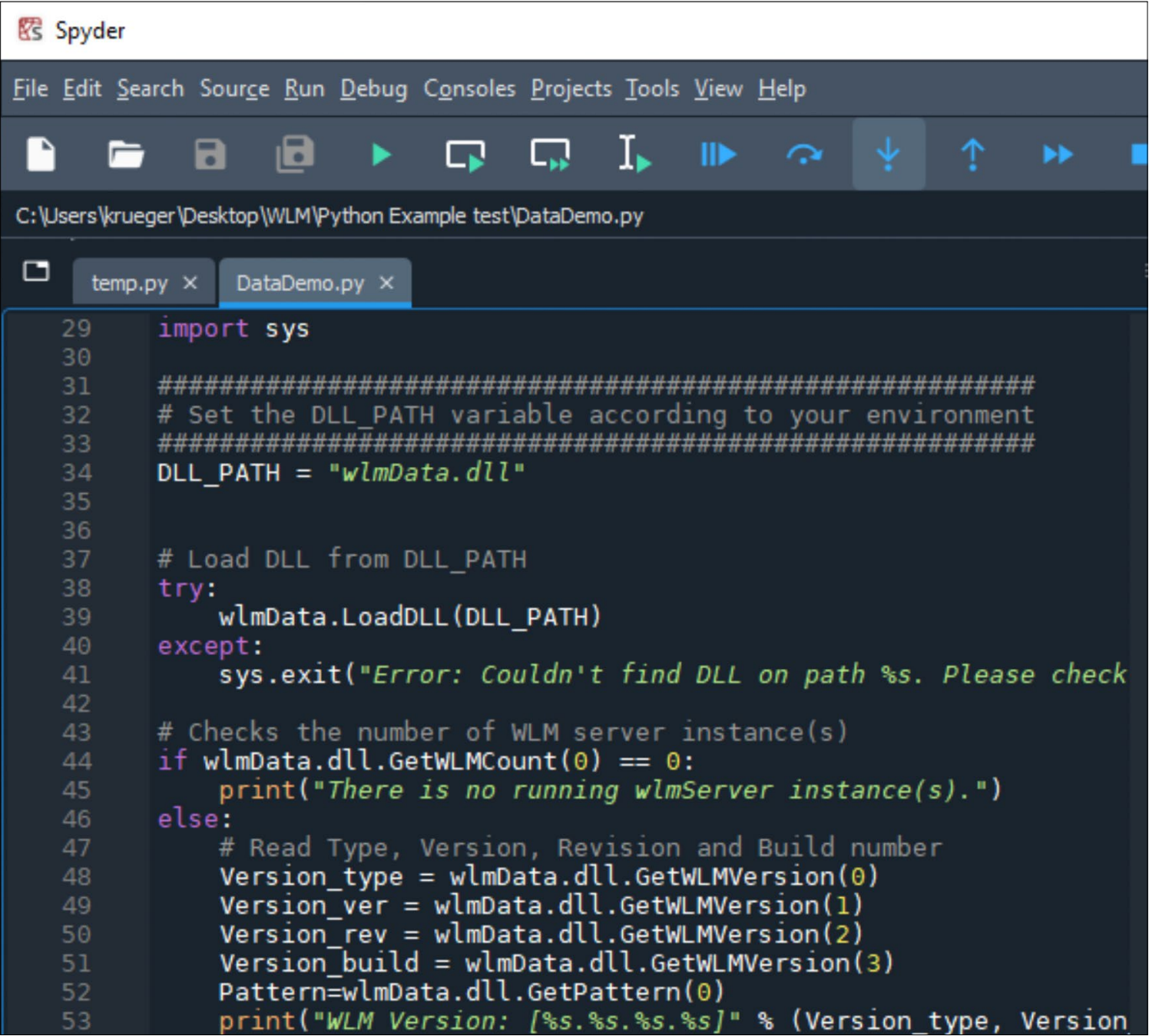
Run the wavelength meter software.

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Make sure to keep the files `wlmData.py` and `wlmConst.py` in the same path as the script you would like to run.

Avoid copying any `wlm Data.dll` files to the path of the example.

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```
29 import sys
30
31 #####
32 # Set the DLL_PATH variable according to your environment
33 #####
34 DLL_PATH = "wlmData.dll"
35
36
37 # Load DLL from DLL_PATH
38 try:
39     wlmData.LoadDLL(DLL_PATH)
40 except:
41     sys.exit("Error: Couldn't find DLL on path %s. Please check
42
43 # Checks the number of WLM server instance(s)
44 if wlmData.dll.GetWLMCount(0) == 0:
45     print("There is no running wlmServer instance(s).")
46 else:
47     # Read Type, Version, Revision and Build number
48     Version_type = wlmData.dll.GetWLMVersion(0)
49     Version_ver = wlmData.dll.GetWLMVersion(1)
50     Version_rev = wlmData.dll.GetWLMVersion(2)
51     Version_build = wlmData.dll.GetWLMVersion(3)
52     Pattern=wlmData.dll.GetPattern(0)
53     print("WLM Version: [%s.%s.%s.%s]" % (Version_type, Version
```

Open `CallBackDemo.py` with a suitable program (for example Spyder).

This script shows you how to efficiently collect the wavelength data using the Callback procedure. This is a good starting point for your own application in Python.

Follow the instruction in the **the manual (chapter 4)** to write your own code.

In most cases it is **not needed to specify the .dll path**. The example will work as it is.



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It is not working.  
What can I do?

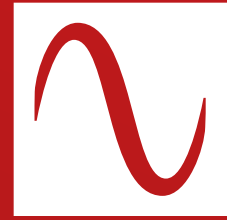
- Check if both the **wavelength meter software** and the script run on the same rights level.
- Verify that the **wavelength meter software is running**, which is **needed for successful communication**. It is possible to start the wavelength meter software (also with GUI hidden) via the API using the command ControlWL
- Verify that your **software is up to date**.
- **Contact HighFinesse** with the **serial number** of your instrument.



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Looking for another example?

<b>Python example</b>	<b>Purpose</b>
CallbackDemo.py .....	Efficient wavelength read out
CallbackExDemo.py .....	Efficient wavelength read out for multiple wavelength meters
DataDemo.py .....	Basic example
DataDemoPIDSetting.py .....	Laser Control/PID
DataDemoStartSoftwareOperation.py	Start the software and a measurement
StatusGUIDemo.py .....	Building a custom GUI
InstrumentListGUIDemo.py .....	Building a custom GUI for multiple instruments
LSAAnalysisDataDemo.py .....	Read the spectrum provided by HighFinesse Laser Spectrum Analyzer
PatternDemo.py .....	Read the interferograms
SetAveragingSettingNum .....	Averaging settings



# HighFinesse

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