

Microfluidic Spectroscopy User Manual

Components and Software:

- Spectroscopy Board
- Micro USB cable
- Power Supply (or battery)
- Processing (software)
- Arduino (software)

Operating Instructions:

1. Setup the power supply to output 5V with a current limit of 0.15A. Attach the Spectroscopy Board to the power supply with the orange wire as V_{in} and yellow as ground. If using a battery instead, attach orange to positive terminal and yellow to negative terminal. Attach the power to the 2.1A USB socket
2. Attach the micro USB cable to the Spectroscopy Board and a computer that will be running the Processing software.
3. Open processing and find the program "Data_visualization.pde." Open this program but do not run it yet.
4. In the code, the last line in the setup should say "output = createWriter("test.txt");" This line of code saves the data in a text file with the name 'test'. This name can be changed to anything as long as .txt is at the end of the name.
5. Run the code after changing the name. Data will be shown numerically and graphically to the user. To control the LED, click anywhere within the graph to toggle it on and off.
6. To exit the code, hit enter. DO NOT JUST X OUT OF THE PROGRAM. Doing so forces the writing function short and data may be lost.
7. Repeat steps 4-6 for any additional tests. If changes need to be made to the software, Arduino must be used. The original program with documentation is called "test_voltage.ino".



```
size(500,300);
frameRate(60);
background(255);
port = new Serial(this, Serial.list()[0], 9600);
port.bufferUntil('\n');
output = createWriter( "test16.txt" );
}

void draw() {
```

Data_visualization
0.53763443V
LED: ON