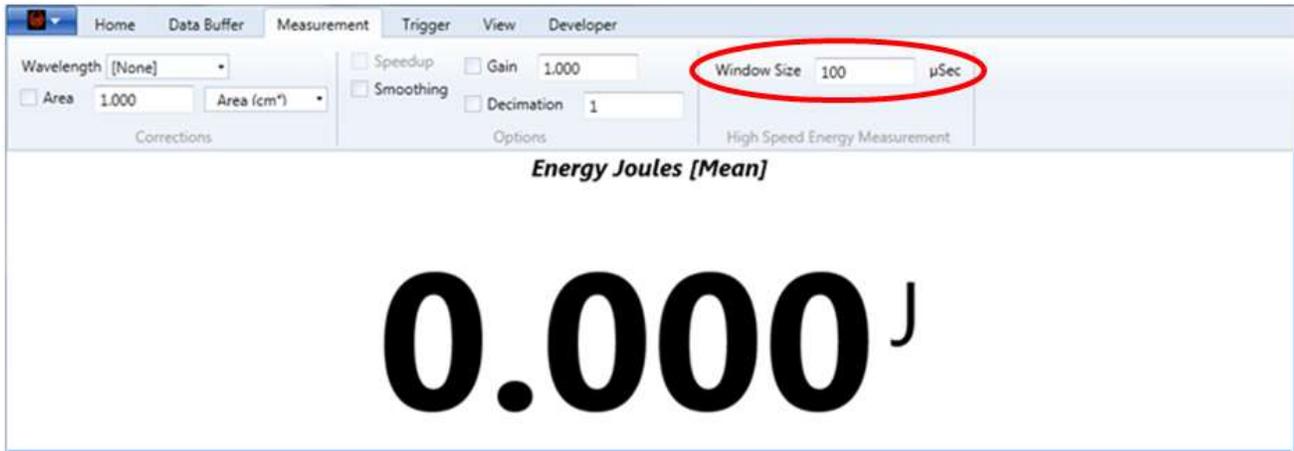


PowerMax-Pro Guide: Energy Readings with LabMax-Pro Capturing the Correct Window Size

What is the proper Window Size setting to capture the entire energy pulse?



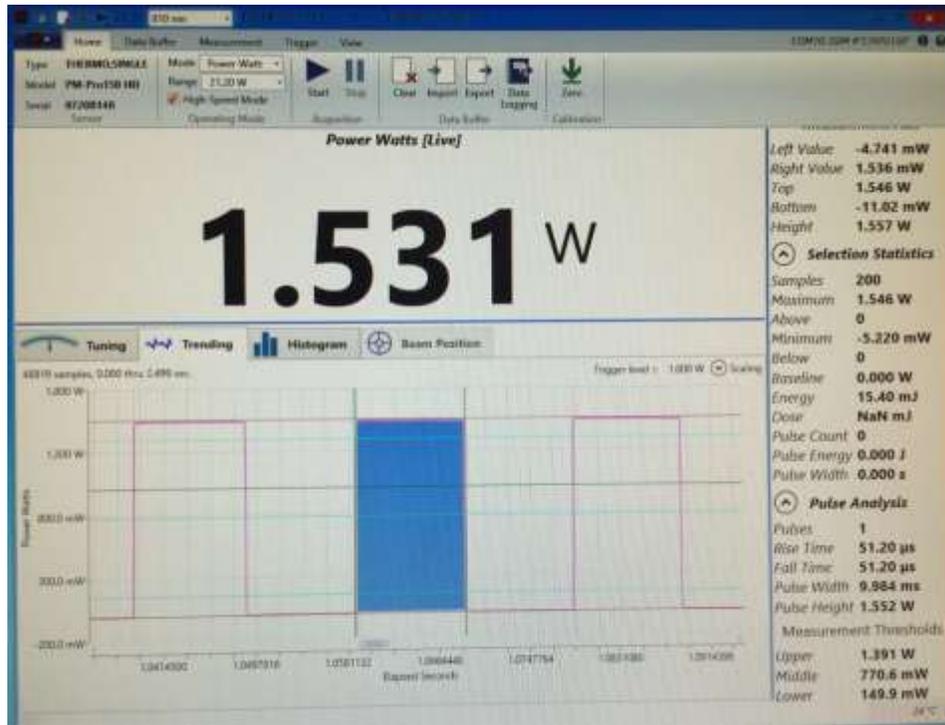
The window size sets the range of time in which the PowerMax-Pro will look for and integrate a pulse. The value is in microseconds. It is important to set a window that is slightly longer than the laser pulse length, but not too long that the next pulse arrives before the window closes. If the window is set shorter than the laser pulse length, not all of the pulse will get captured and integrated. The algorithm will integrate baseline noise if the window is set longer than the laser pulse length. This is likely the result in a low amount of error, so caution on the side of a slightly longer pulse length window than one that is too short.

Additional information

If you have the pulsewidth information of your laser, set the capture window to the pulsewidth plus 10%. You can increase or decrease the window size as needed to improve the quality of your measurements.

When using host commands to set a measurement window of 10 ms enter CONF:MEAS:WIN 10000.

If you do not have the pulsewidth information of your laser, utilize the PowerMax-Pro to collect this information. Zero the meter before you begin, then configure the sensor for a power measurement and verify that you have a good trigger set to minimize the noise. Once you have captured a sample of data, run the pulse analysis to measure the pulsewidth of your laser. The following example is of a laser with a 10 ms pulsewidth.



Set the meter into joules mode. You must make sure that the window size is large enough to capture the entire 10 ms but short enough so that I'm not capturing additional laser pulses. For this example set your window size to 11000 μ s.



The entire laser pulse is now captured. Increase and or reduce the window size to see how it affects your readings.