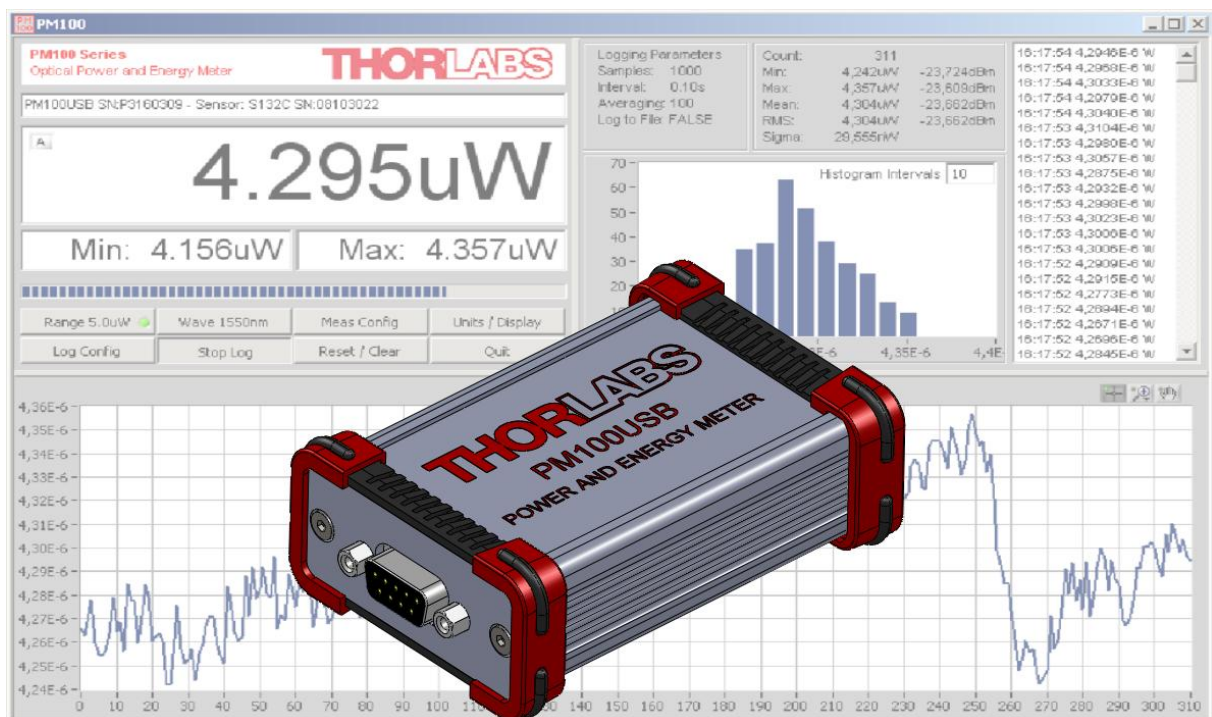


# Quick Reference

## Thorlabs Instrumentation

### Optical Power and Energy Meter

# PM100USB



**2009**

## Safety

### ⚠ Attention ⚠

**All statements regarding safety of operation and technical data in the instruction manual will only apply when the unit is operated correctly.**

**The power meter PM100D must not be operated in explosion endangered environments!**

**Sensor, photodiode and control inputs and outputs must only be connected with duly shielded connection cables.**

**Only with written consent from Thorlabs may changes to single components be carried out or components not supplied by Thorlabs be used.**

**Do not remove covers!**

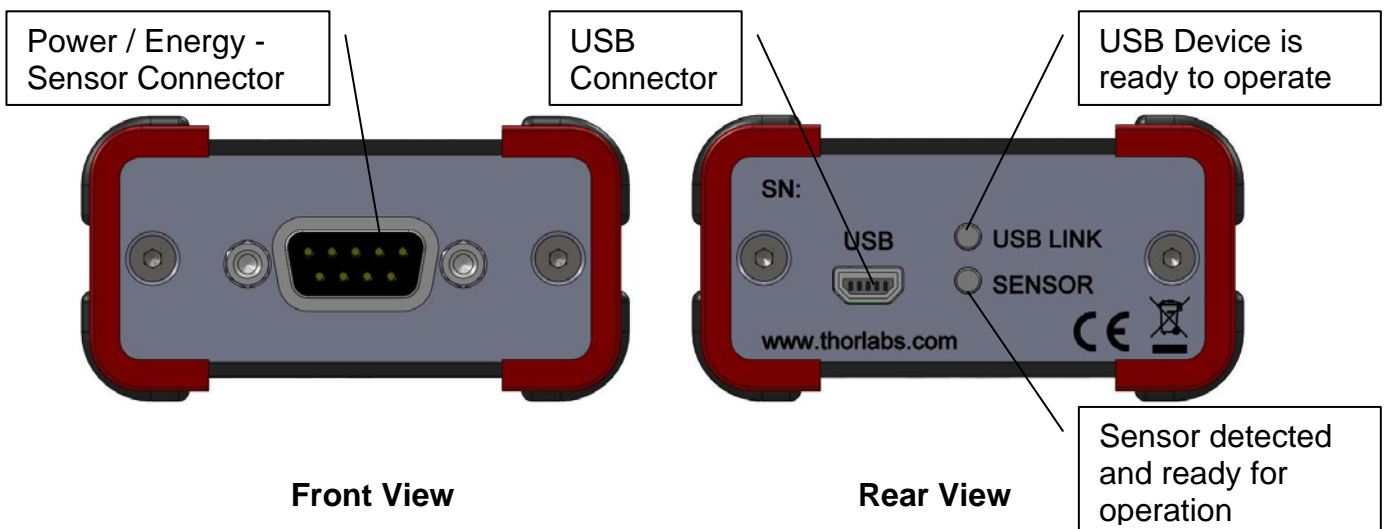
**Refer servicing to qualified personal!**

## 1 General Information and Physical Overview

The PM100USB Optical Power and Energy Meter is designed to measure the optical power of laser light or other monochromatic or near monochromatic light sources and the energy of pulsed light sources with an external PC that is connected via USB interface.

The PM100USB is compatible to all Thorlabs “C-Type” Photodiode, Thermal, Pyroelectric sensors, and custom Photodiode, Thermal and Pyroelectric detectors. The provided software, including drivers and applications for LabVIEW and C makes it easy to integrate the instrument in test and measurement systems.

All software and commands are compatible and interchangeable with the PM100D handheld power and energy meter and with the PM100A handheld optical power meter.



## 2 Getting Started

### 2.1 Unpacking

Inspect the shipping container for damage.

If the shipping container seems to be damaged, keep it until you have inspected the contents and you have inspected the PM100USB mechanically and electrically.

Verify that you have received the following items.

1. PM100USB power/energy meter
2. USB cable, type 'A' to 'mini-B'
3. Quick-start guide
4. USB memory stick with instrument drivers, user application and operation manual
5. Certificate of Calibration

### 2.2 Installation and Preparation

1. For proper installing the PM100USB it requires a NI-VISA runtime version on the PC (available on the National Instruments website [www.ni.com](http://www.ni.com) or from the data carrier that comes with the instrument. Allow installing and follow the dialog instructions.
2. Install the PM100 Utility software from the data carrier. You can chose a convenient auto-run function of the data carrier by browsing to the folder 'Autorun' and executing 'autorun.exe'.
3. Interlink the USB cable with its male type 'A' connector at the PC side and the 'Mini B' type connector on the instrument side. The PM100USB gets its operation power from the PC via the USB cable. When connecting the PM100USB first time to a PC, sequent a new hardware 'PM100USB test and measurement device' and a 'DFU device' will be recognized; please allow installing. After successful installation the 'USB LINK' LED in the rear panel lights up and the unit is ready to operate.
4. Connect a suitable power or energy sensor. The sensors are 'hot swappable' and have a self-fixing mechanism. To plug or unplug a sensor slightly press from both sides on the pins in the connector housing. After recognizing a valid sensor and downloading its information and calibration data the 'SENSOR' LED in the rear panel lights up.
5. Run the PM100 Utility software and confirm the connected PM100USB.

For more information, please refer to the detailed user manual that is provided on the data carrier that shipped with the PM100USB.

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<http://www.thorlabs.com>