Connecting the optical power meter to LabVIEW



Overview

Connecting Thorlabs Power Meter to LabVIEW Check the folders where the optical power monitor is installed in program files (x86) to see if the LabVIEW driv.

Key Takeaways

A LabVIEW-based optical power meter control system allows automated measurement, logging, and analysis of optical power using instrument drivers and communication protocols like VISA or COM objects. OverviewLabVIEW provides a graphical programming environment ideal for controlling optical power meters and integrating them into automated measurement systems. By using LabVIEW, you can interface with instruments such as Thorlabs PM100x series, Keysight N7740, or Ophir Centauri meters, enabling real-time data acquisition, logging, and analysis.

Key Components

Instrument Drivers

Thorlabs PM100x: LabVIEW drivers are included with the PM100x software package. After installation, the driver folder should be placed in LabVIEW's instr.lib directory.

Example V

Is are available in the TLPM.llb file for basic operations like reading power and setting measurement ranges. Keysight N7740: LabVIEW drivers for the N7740 optical power meter are available from Keysight, supporting LabVIEW 8. 5 or later.

© 2026 METRA FIBER MARKET - All rights reserved

Ensure the IV

I driver version 1. 1. 1.

0 or newer is installed for compatibility. Ophir Centauri: Uses a COM object (DLL) for LabVIEW integration, allowing high-speed measurements up to 10 kHz.

The CO

M object provides access to all meter functions, including range selection and measurement mode. Communication ProtocolsVISA (Virtual Instrument Software Architecture): Commonly used for serial, USB, or GPIB communication with power meters. LabVIEW provides VISA VIs to open sessions, send commands, and read data.

CO

M Objects / DLLs: Some meters, like Ophir Centauri, provide COM interfaces for direct control from LabVIEW, enabling high-speed automated measurements. Data Acquisition and LoggingLabVIEW allows real-time data acquisition, plotting, and logging to files for post-processing.

Modular V

I design enables easy integration with other instruments or automated test setups. High-speed logging (e.g., 10 kHz) is possible using optimized loops and buffer management, particularly when using COM objects or dedicated instrument drivers.

Implementation Steps

Install Drivers and Software: Install the optical power meter software and LabVIEW drivers. Ensure NI-VISA Runtime Engine is installed for communication. Configure LabVIEW Environment: Place driver folders in instr.lib and verify that example VIs are accessible.

Establish Communication: Use VISA or COM objects to open a session with the power meter. Test basic commands like reading power or setting ranges.

Develop Measurement V

I: Create a LabVIEW VI to acquire data, set measurement parameters, and log results. Modular design allows easy expansion for multiple channels or automated sequences. Test and Calibrate: Verify measurements against known standards and adjust integration times, averaging, or sensor calibration as needed.

Advanced ConsiderationsHigh-Speed Measurements: For pulsed lasers or VCSEL characterization, use COM object interfaces to achieve measurement rates up to 10 kHz.

© 2026 METRA FIBER MARKET - All rights reserved

Multi-

Instrument Integration: LabVIEW's modularity allows simultaneous control of multiple instruments, enabling complex automated test setups. Error Handling: Implement error checking in VIs to handle communication failures or sensor errors. By following these steps and leveraging the provided drivers and example code, you can build a robust LabVIEW-based optical power meter control system suitable for laboratory automation, high-speed measurements, and precise optical characterization.

Article Content

Connecting Thorlabs Power Meter to LabVIEW

Check the folders where the optical power monitor is installed in program files (x86) to see if the LabVIEW driver code is there. If it is move or copy its folder to your LabVIEW instr.lib folder. It

Installing LabVIEW support for Ophir Power Meters and PC Interfaces

The StarLab installation process installs the necessary USB drivers and registers the Ophir COM object required for LabVIEW (and other user software environments) to communicate with Ophir power

Thorlabs Power Meter: Not recognised in LabVIEW

I''ve been trying to make a LabVIEW 17 VI for the Thorlabs PM101A (with S150C detector) optical power meter. I have installed all the recommended drivers and downloaded the Thorlabs

Installing LabVIEW support for Ophir Power Meters and PC Interfaces

In order for LabVIEW to work with an Ophir power meter or PC interface, first *install the StarLab PC application.

LabVIEW COM Demo

Q: How can I interface my Ophir Power Meter (Starbright, StarLite, Juno, USBI, Pulsar, NOVA II, Vega, USBI) to LabVIEW? A: For customers using the new LabVIEW COM Demo, there is nothing

MKS-DaleOwens/NML-Power-Meter-Monitoring

Launch the VI "NML Power Monitoring Main" and follow status message instructions to select UUT count, intialize system, configure sample timing parameters, then start the test.

Real-Time Optical Power Measurement Program

© 2026 METRA FIBER MARKET - All rights reserved

Real-Time Optical Power Measurement Program. Contribute to gwangjinjeong/Newport-Powermeter-Control-Program development by creating an account on GitHub.

Instrument Control with LabVIEW

You usually don''t need to worry if the driver says it''s compatible with an older version of LabVIEW. Open it up in your newer version of LabVIEW, compile it, and it should be fine (famous last words).

2.2.3 Pulsar Multichannel and Triggered USB Interfaces

Smart Sensor to Pulsar to PC fledged Ophir multi-channel laser power/energy meter. Just install the software, plug the sensor into the Pulsar and the USB cable from the Pulsar to the PC USB port.

Need help to communicate with newport optical power meter 1936-c in Labview

Hallo all who read this thread, I am trying to program newport optical power meter 1936-c in Labview but could not communicate with the instrument over USB connection. I have installed the

Legacy Software for Touchscreen, Handheld, and USB-Interface

For the most recent version of the Optical Power Monitor software that integrates the functions of the Power Meter Software, please click here. The software package features three applications: Optical

Newport 2936C Optical Power Meters

Find instrument drivers that are available for this instrument for use in LabVIEW, LabWindows/CVI, or Measurement Studio. Example programs are included with most instrument driver downloads.

Programming optical power meter 1931 c on labview.

I am trying to program newport optical power meter 1936-c in Labview but could not communicate with the instrument over USB connection. I have installed the drivers necessary for the

LabVIEW does not recognize Thorlabs Power Meter

I''m trying to write a simple program in LabVIEW to take one measurement from a Thorlabs Power Meter (Version PM200, with firmware version 1.1.7). I have the driver for LabVIEW

N7740 Optical Power Meter LabVIEW Instrument Drivers

© 2026 METRA FIBER MARKET - All rights reserved

Prerequisites N7740 Optical Multiport Power Meters IVI Instrument Drivers n7740 optical multiport power meters ivi instrument drivers IO Libraries Suite Downloads io libraries suite

Read Thorlabs optical power meter in LabVIEW 2018 via USB connection

Solved: Hello all, I have been trying to read data from Thorlabs PM101R optical power meter using Labview 2018 (32 bit). Everything was fine. But

Instrument Control with LabVIEW

You likely have a specific instrument or piece of lab equipment you''d like to control with LabVIEW. The sorts of equipment that people often want to control include: power supplies, power meters, DMMs,

17654-D02 PM100D Rev H

The power meter PM100D must not be operated in explosion endan-gered environments! Sensor, photodiode and control inputs and outputs must only be connected with duly shielded connection

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Contact Us

Continue your research online:

Website: https://metramarket.es
Technical inquiry: https://metramarket.es/contact.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 METRA FIBER MARKET - All rights reserved