



# OP-205

USB Optical Probe (Micro-USB)

## Overview

The OP-205 Optical Probe with USB output functions as an interface that uses infrared waves to communicate with peripheral devices, including but not limited to electricity meters, water meters, heat meters, gas meters, or any other device equipped with an optical port. Its small housing design makes it both lightweight and rugged, using ABS and Polycarbonate filter material. This product is compatible with devices adhering to the European standard IEC 62056-21 (IEC 1107).

OP-205 features a Micro-USB connector suitable for tablets and smartphones with an interface that supports Micro-USB. The device is compatible with a range of operating systems including Mac, Windows, Android, Windows Mobile and Linux. The driver required for this purpose is included. The device draws power from the USB port, making an external battery pack or AC adapter unnecessary. OP-205 is equipped with a robust magnet that securely fastens the optical probe to the meter and is resistant to external light interferences besides infrared wavelengths.

## Advantages

- Ergonomic & User-friendly Housing Design
- Powerful Magnet
- Optical Filter
- High-quality Cable
- Compliant with IEC 62056-21 (1107) Standard (Physical)
- Powered by USB Port
- Wide Range of OS Drivers

- \* The driver necessary for this purpose included.
- \* Installation and configuration instructions are provided with the probe.



## Ergonomic & User-friendly Housing Design

The housing is designed with ergonomics in mind for comfortable handling. The material of construction ensures both robustness and lightness. It provides substantial resistance against surface wear due to its prolonged usage with optical port devices and meters.

It's worth noting that good material alone doesn't guarantee high hardness. The housing shape significantly impacts probe hardness. We have developed optical probes to endure a drop from a distance of one meter in case it slips from the user's grip.

## Powerful Magnet

The head of the device boasts a powerful magnet hidden below the surface, allowing the probe to attach securely to the optical port. This eliminates the need for constant manual checking and ensures a secure connection to the device.

**⚠ Caution:** Due to the strong magnetic force of the probe's magnet, please do not store it near electronic equipment as it may cause damage if stored for long periods. It can also result in malfunctions in any storage device, including hard drives, solid-state memories (such as flash memory and SSDs), RAM storage, and similar.

## Optical Filter

To establish communication between two devices through an optical port, a specific wavelength is necessary. The wavelength employed should be within the range of 880 nm infrared light, which remains invisible to the human eye. The light filter integrated into this optical probe effectively screens all ambient light, negating any possible interference to ensure uninterrupted and efficient communication between both the devices.

## High Quality Cable

When using wired products, the cable is susceptible to detachment due to bending and stretching. Nonetheless, our wired optical probes are equipped with a robust and superior quality cable, ensuring prolonged and effective use.

## Mechanical specifications

- Dimensions: Diameter 32mm, Height 26mm
- Cable: Length 2m, Diameter 4.5mm, four-wire cable LAPP GERMANY
- Connector: Micro-USB
- Infrared filter: Against external light influences
- Weight: Complete assembly weighs a maximum of 90gr
- Casing material: Probe Head ABS, Infrared filter Polycarbonate

## Electrical Specifications

- Signal Specifications: Acts as a device to a host PC/Laptop/Handheld computer USB port
- Compatibility: IEC 62056-21 (1107) standard
- Power Requirements: +5V DC powered by USB port
- Power consumption: approx. 25 mA (communication)
- Data Rate: from 300 to 19200 bit/s
- Communication: Half duplex
- Optical: 880nm bi-directional IR interface
- Echo filter: Yes

## Environmental Specifications

- Operating Temperature: -30°C to +60°C
- Storage Temperature: -40°C to +85°C
- Rugged: Meets the requirements of several tests, including those for thermal shock, humidity, water resistance, RF susceptibility, ESD, drop, random vibration, solar radiation, salt, fog, and low pressure.

## Driver Support

- MAC: OS 8/9/X
- Windows: 7 to 11, 32/64 bit
- Windows: 98/2000/ME/XP/Vista/CE/RT
- Windows Server: 2008/2012 R2x64
- Linux
- Android

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