

Fiber Optic Cable

PS-2601

Introduction

The PASCO Fiber Optic Cable is designed to be used with the Wireless Spectrometer (PS-2600A) in introductory spectrometry experiments. The cable's probe makes it possible to examine the spectra of various light sources. The Fiber Optic Cable and Wireless Spectrometer can also be used to measure light intensity.

⚠ IMPORTANT: To remove the Fiber Optic Cable probe from the Wireless Spectrometer's cuvette opening, grasp the sturdy cuvette-shaped base and pull upwards. **Do NOT pull on the cable**, as doing so may damage the connection between the cable and the base.

Components

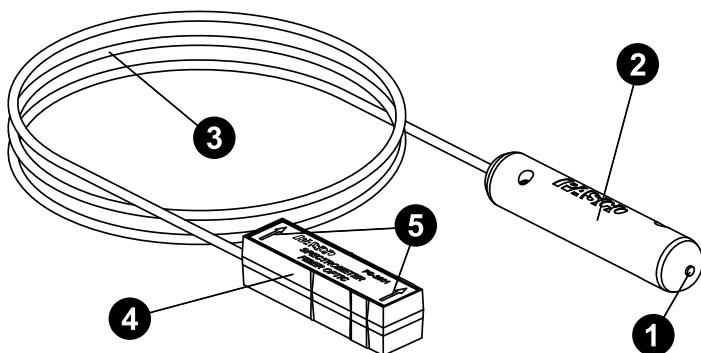
Included equipment:

- Fiber Optic Cable

Required equipment:

- Wireless Spectrometer (PS-2600A)
- Spectrometry software

Features



- 1 Fiber optic window
- 2 Fiber optic housing
- 3 Cable body
- 4 Cuvette-shaped base
- 5 Probe orientation arrows

Get the software

Using the Wireless Spectrometer requires the use of PASCO's Spectrometry software. Spectrometry is available for free for Mac, PC, iOS, and Bluetooth-compatible Android devices at www.pasco.com/products/software/spectrometry. The software is also available from the Apple App Store and from Google Play.

Usage

The Fiber Optic Cable's cuvette-shaped base features arrows on its label. When inserting the base into the cuvette opening on the Wireless Spectrometer, orient the base so that the probe orientation arrows point towards the sensing element, as represented in Figure 1.

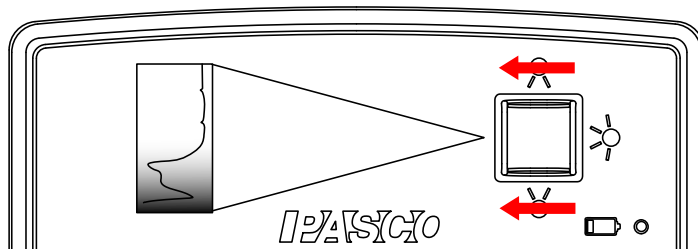


Figure 1: Correct orientation of arrows on cuvette-shaped base.


To make measurements using the Wireless Spectrometer and Fiber Optic Cable:

1. Turn on your Wireless Spectrometer and connect it to Spectrometry. For detailed instructions on this, see the manual for the Wireless Spectrometer and the Spectrometry online help.
2. If this is your first time using the Fiber Optic Cable, remove the protective film from the probe's cuvette-shaped base.
3. Insert the base into the cuvette opening on the Wireless Spectrometer. Make sure the probe is oriented so that the arrows on the base face towards the sensing element, as shown above in Figure 1.
4. In the software, navigate to the **Analyze Light** page.
5. Begin data collection, then point the fiber optic housing at the light source so that light from the source shines into the fiber optic window. The program will automatically begin receiving and displaying data regarding the measured light.

⚠ IMPORTANT: Excessive heat may cause damage to the fiber optic housing's internal components. If the light source you are studying produces significant amounts of heat, such as from a flame test, place a transparent glass plate between the source and the fiber optic housing.

Software help

The Spectrometry Help provides information on how to use this product with the software. You can access the help from within the software or online.

Software: Info and Settings  > Help

Online: help.pasco.com/spectrometry

Transmission loss specifications

Figure 2 shows a graph of transmission loss versus frequency for the Fiber Optic Cable. The graph demonstrates that the transmission loss over the visible spectrum is relatively low, in the range of 0.1 to 1.0 decibels per meter (dB/m).

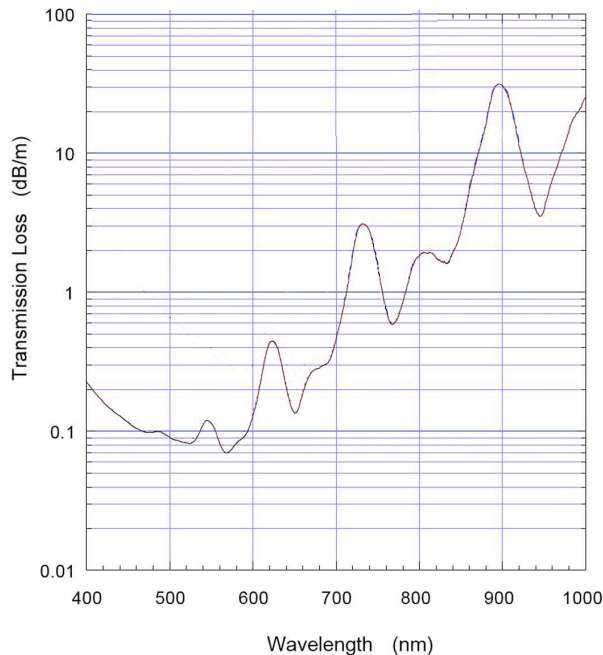


Figure 2: Typical Fiber Optic Cable transmission loss versus wavelength.

Specifications and accessories

Visit the product page at [pasco.com/product/PS-2601](https://www.pasco.com/product/PS-2601) to view the specifications and explore accessories. You can also download experiment files and support documents from the product page.

Experiment files

Download one of several student-ready activities from the PASCO Experiment Library. Experiments include editable student handouts and teacher notes. Visit [pasco.com/freelabs/PS-2601](https://www.pasco.com/freelabs/PS-2601).

Technical support

Need more help? Our knowledgeable and friendly Technical Support staff is ready to answer your questions or walk you through any issues.

-  Chat [pasco.com](https://www.pasco.com)
-  Phone 1-800-772-8700 x1004 (USA)
+1 916 462 8384 (outside USA)
-  Email support@pasco.com

Limited warranty

For a description of the product warranty, see the Warranty and Returns page at www.pasco.com/legal.

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