

SPEED OF LIGHT APPARATUS

Mod. F-LS1/EV

DESCRIPTION

This is a portable apparatus for the accurate determination of the speed of light. The accuracy of a single measurement is 0.1%. The device is:

- Portable
- Pre-aligned (no alignment necessary)
- Quickly operative (less than 1 minute)

It also allows the measuring of the refractive index of solids and liquids and of the speed ratio of coaxial cables.

The minimum intensity of the wave can be detected by ear; with an (optional) oscilloscope it is possible to distinguish them better based on amplitude minimums. A 1.20 meter long SMA cable is supplied for determining the speed factor in the cable and for measuring the laser modulation frequency using a standard frequency meter (optional).

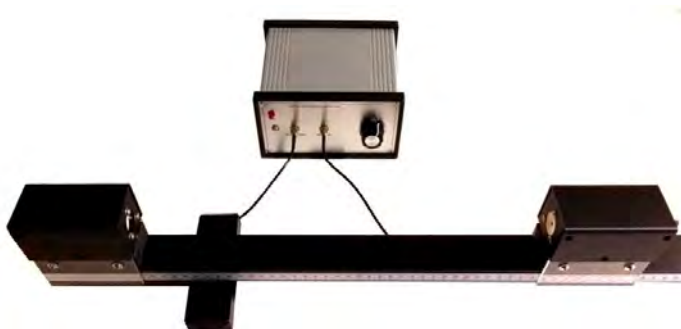
The accuracy of the apparatus is so great that it detects the slowing of light as it passes through the thickness of a microscope slide (about 1 mm of glass).

TRAINING PROGRAM

- Measuring the speed of light
- Measuring the refractive index of solids and liquids
- Measuring the speed ratio on coaxial cables

TECHNICAL SPECIFICATIONS

- Optical bench made of anodized aluminum, rectangular section
- Transmission unit in which a red laser (class II) is modulated at a frequency of 439.4 MHz and simultaneously turned on and off at an acoustic frequency of about 700 Hz
- Receiving unit that can slide without friction and side play on the optical bench, maintaining the alignment of the laser beam on the photodiode
- Control unit for the exchange of radiofrequency signals with the transmitting and receiving units and for the detection and display of the measurement conditions
- Two 1 meter long SMA cables for connection to transmitter and receiver
- SMA 90 ° cable, 1.20 m long
- A set of accessories for determining the speed of light in solids or liquids (plexiglass samples, liquid sample container)



SUPPLIED WITH

THEORETICAL - EXPERIMENTAL
HANDBOOK



OPTIONAL

- Dual-trace **OSCILLOSCOPE**
- **FREQUENCY COUNTER** that measures at least up to 1 Ghz