

LEOI-20 Michelson Interferometer



Description

The Michelson interferometer is an important instrument in today's physics laboratories and is often the first to be introduced to students for understanding beam interference, an important wave property of light. The Michelson interferometer produces interference fringes by splitting a beam of monochromatic light so that one beam strikes a fixed mirror and the other is incident on a movable mirror. When the reflected beams recombine, an interference pattern is produced. Michelson interferometer can be used for observing interference fringes and precisely measuring wavelength, distance and index of refraction

Feature

Smooth Mirror Movement
Precise Measurement
Two Micrometers

Application

1. Interference fringe observation
2. Equal-inclination fringe observation
3. Equal-thickness fringe observation
4. White-light fringe observation
5. Wavelength measurement of the Sodium D-lines
6. Wavelength separation measurement of the Sodium D-lines
7. Measurement of the refractive index of air

- 8. Holographic interferometry
- 9. Holographic reproduction

Specification

Flatness of Beam Splitter and Compensator	0.05 λ
Coarse Travel of Mirror	10 mm
Fine Travel of Mirror	0.25 mm
Fine Travel Resolution	0.5 μm
Wavelength Measurement Accuracy	Relative error: 2% for 100 fringes

Part list

Description	Qty
Interferometer Main Frame	1
Ground Glass Screen	1
Alignment Aperture	1
Instruction Manual	1
Sodium-Tungsten Lamp (optional)	Sodium lamp: 20 W; Tungsten lamp: 30 W adjustable
He-Ne Laser (optional)	0.7-1 mW @632.8 nm, includes laser tube holder
Air Chamber with Gauge (optional)	Chamber length: 80 mm; Pressure range: 0-40 kPa