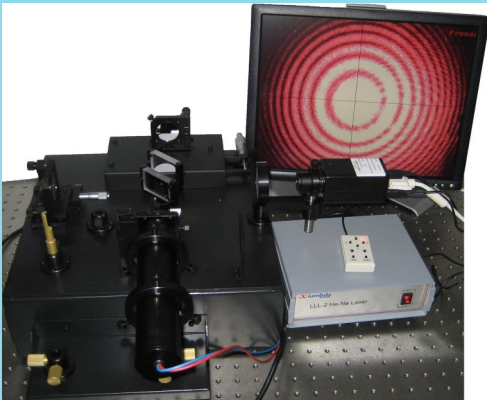


## LEOI-20 Michelson Interferometer

- *Smooth Mirror Movement*
- *Precise Measurement*
- *Two Micrometers*
- *He-Ne Laser, Sodium-Tungsten Lamp, and Air Chamber Included*
- *Optional VGA Video Camera for Fringe Image Display and Projection or PC Acquisition*



Fringe image acquired by color camera

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. Using an optional color camera, interference fringes can be acquired to a VGA display or a projector for real-time lecture demonstration, or to a PC for image or video acquisition via USB ports.

## Experimental Contents

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. Interference fringe acquisition by color camera for VGA display or projector or PC (optional)

## Specifications

Flatness of Beam Splitter & Compensator Plate	0.05 $\lambda$
Minimum Travel Reading	0.0005 mm
Coarse Travel of Mirror 1	10 mm
Fine Travel of Mirror 2	0.25 mm
Sodium-Tungsten Lamp	Sodium: 20 W; Tungsten: 35 W (Adjustable)
He-Ne Laser Output	0.7 ~ 1 mW at 632.8 nm
Air Chamber with Gauge	Chamber length: 80 mm; Pressure range: 0-40 kPa
Overall Dimension	350 mm×350 mm×245 mm
Weight	Approx. 20 kg
Camera with VGA port (Option 1)	Detailed specs posted on website
Camera with VGA & USB ports (Option 2)	Detailed specs posted on website

## Part List

No.	Description	Specifications	Qty
1	Main Interferometer		1
2	Ground Glass Screen	$\Phi 50$ mm	1
3	Alignment Aperture		1
4	He-Ne Laser	0.7~1 mW	1
5	Laser Holder		1
6	Sodium-Tungsten Lamp	Sodium: 20 W; Tungsten: 35 W	1
7	Air Chamber with Gauge	Range: 0~40 kPa; chamber length: 80 mm	1
8	CMOS Camera with Keypad (Optional)	Detailed specs posted on website	1
9	Power Cord		2

**Note: above product information is subject to change without notice.**