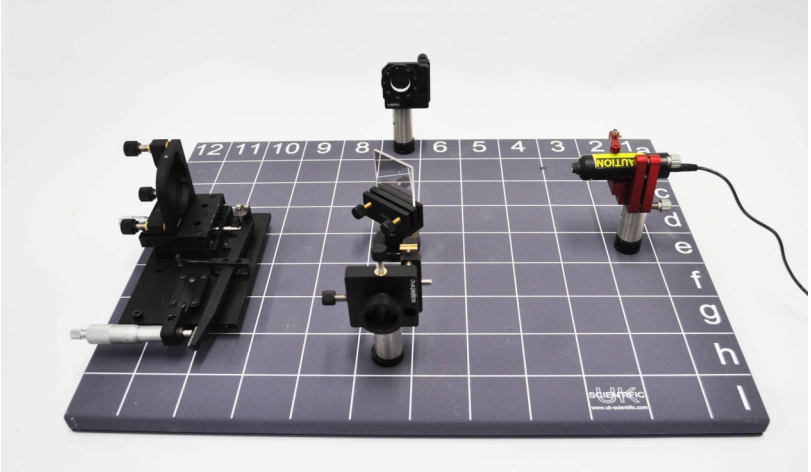
UO-08 MICHELSON INTERFEROMETER (BASIC)



- Two-beam Interference observation
- Refractive of index
- Optical thickness
- phase
- Equal-inclination fringe observation
- Equal-thickness fringe observation
- White-light fringe observation
- Wavelength measurement
- Alignment of optical components
- Interference fringe acquisition by colour camera for VGA display or projector or PC (optional)
- Use of Sodium light in stead of laser find finding the line separation in Sodium. (option)

INTERFEROMETERS

Interferometers are basic optical tools used to precisely measure wavelength, distance, index of refraction, and temporal coherence of optical beams. UK-scientific offers various types of Michelson interferometers and Fabre-Perot interferometers. This model is the basic Michelson interferometer and can upgrade at any time to more complicated and higher resolution once.

In this experiment a Michelson interferometer constructed to study the fringe patterns resulting from both a point source and a parallel beam and make a precise measurement of the wavelength of the He-Ne laser.

Vibration is the biggest problem in interferometers, so its parts must be tied on a rigid base plate .

UK-scientific ltd offers this basic Michelson interferometer on a bred board and real. All components can be reassembled to obtain another experiment when needed , and back as Michelson interferometer. And gives a good flexibility to have different types of Michelson interferometer.

The moving mirror can adjust its motion by two micrometres , one coarse which travels 10mm and fine travel 0.25 mm with resolution of 0.5 micron.

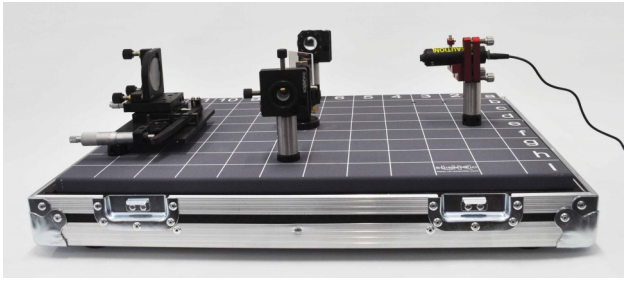
A CCTV, can attach to the interferometer to get better results and become more safe in use . The system provide a crosshair in screen and it has the facility of recording on RAM. So the student can show the actual results. And it can use in demonstration in class room on big size screen

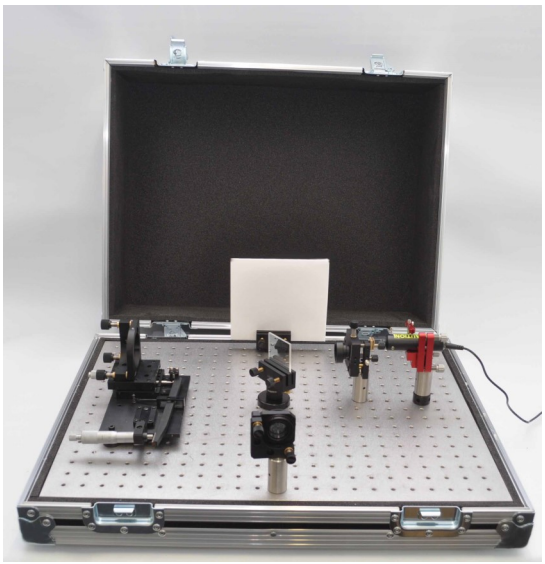
- **UO-08 Michelson interferometer (basic) includes:**
- Base plate of 600x450x20 mm , rigid, vibration damped , made of steel , coated with corrosion protection NEXTEL plastic coating and imprint grid (5x5)cm, with rubber feet for non-slip working .
- Fixed front surface mirror with two axes fine knobs (0.25mm thread) for fine alignment.
- Smooth and precision moving front surface mirror with , two axes fine knobs (0.25mm thread) for fine alignment, two micrometres coarse and fine motion.
- Collimating lens with holder
- Screen with holder
- Sample holder
- Diode red laser peak wavelength 650nm, and power <2mw
- Power supply for the laser.
- Laser holder.

UO-08 MICHELSON INTERFEROMETER (BASIC)

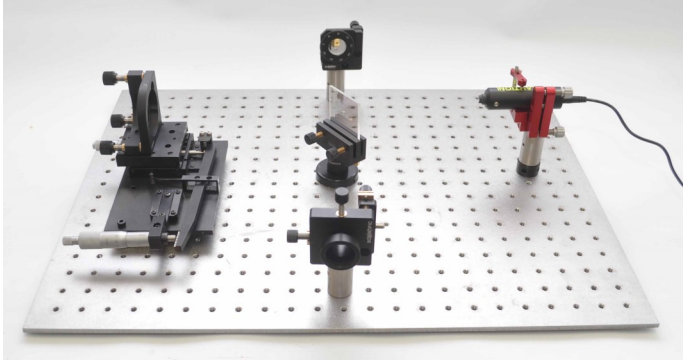
Options:

- Gas cell with holder and vacuum pump and pressure meter with controller and pipes.
- Diode laser , green at peek wavelength of 532nm and power <3mw. With power supply instead of the red light one.
- He-Ne laser of peak wavelength of 632.8 nm and power >2mw and power supply instead of the red diode laser and its power supply.
- Case that hold the base plate with all experiment, it is rigid and its lid can be removed to carry the experiment and be back when finish.
- CCTV system , for safety ,taking accurate measurements and for demonist rating the experiment for many students in the class, we provide a VGA camera with electronic reticule that can connect to any VGA monitor you have.
- Steel plate 450x600x5 mm with matrix of 5x5 cm of M6 holes , can use magnetic holders and fixed holders to the M6 hols. It can fix inside the case in (d) . or supply with rubber feet.
- Aluminium plate x x x5mm with matrix of 5x5 cm of M6 holes , can fixed holders to the M6 hols. Supply with rubber feet.





Case with removable lid.



Steel plate 450x600x5 mm with matrix of 5x5 cm of M6 holes