

## LASER MEASUREMENT KIT

This kit is meant for M.Sc. (Physics and electronics) and engineering students. This is also useful for research scientists. 15 advance experiments of precision measurements can be carried out with the items contained in the kit.

### List of Items

1.	Fresnel biprism	- 1 No
2.	Flat glass plate	- 1 No
3.	Optical flat	- 2 Nos
4.	Pin hole	- 1 No
5.	Mounted thin wire	- 1 No
6.	Beam Splitter 50/50	- 2 Nos
7.	Flat mirrors or reflectors	- 2 Nos
8.	Beam expander	- 1 No
9.	Precision mounts	- 6 Nos
10.	Base for mounts	- 6 Nos
11.	Quartz Crystal plate	- 1 No
12.	Lithium niobate crystal	- 1 No
13.	Screen	- 1 No
14.	Transmission grating	- 1 No
15.	Vernier Calipers	- 1 No
16.	Pair of polarisers with circular scales	- 2 Nos
17.	Convex lens	- 1 No
18.	Measuring tape	- 1 No
19.	Horizontal mount with screws	- 1 No
20.	Wedge shaped metal rod	- 1 No
21.	Diffuser plate	- 1 No
22.	S.S. Scale	- 1 No
23.	Circular table	- 1 No
24.	Glass rods	- 2 Nos
25.	Shear plate interferometer	- 1 No
26.	Single slit	- 1 No
27.	Graph paper	- 1 No
28.	Grating Mount	- 1 No
29.	Instruction manual	- 1 No

### List of Experiments

1. To measure the wedge angle of a glass plate.
2. To measure the diameter of a circular aperture using Fresnel diffraction.
3. To measure the diameter of a thin wire using diffraction.
4. To measure the wavelength of He-Ne laser light using Fresnel biprism.
5. To determine the wavelength of laser light or number of lines in a transmission grating.
6. To measure the wavelength of He-Ne laser light with the help of vernier calliper or engraved scale.
7. To find out the optic axis of the crystal of lithium niobate.
8. To measure the flatness of an optical surface.
9. To setup a Michelson Interferometer or modified Twyman Green Interferometer.
10. To setup a Mach Zehnder Interferometer.
11. To setup a plate Shear Interferometer.
12. To measure the Brewster's angle of a glass plate and hence the refractive index of glass.
13. To detect the inhomogeneity in glass rods using phenomenon of diffraction.
14. To measure optical rotation of Quartz.
15. To measure the width of a single slit.