

LEOK-7 Laser Optical Demonstration Instrument



- 47 fundamental experiments
- Diode laser powered by battery
- Cost effective solution
- Detailed instruction manual
- Easy alignment



The LEOK-7 Laser Optical Demonstration Instrument is developed as a low-cost solution to lower class optical education at universities and colleges. It provides a complete set of optical and mechanical components as well as light source.

A laser beam is emitted from a diode laser and expanded by a cylindrical lens. A beam splitter assembly then creates three equally intense beams. These beams' positions and directions can be adjustable independently and beam tracks are presented on a white board. A rotational disk with angular scales is located at the center of the board. There is a hole in the disk center for mounting various optical components. By inserting proper optical components into the optical path, numerous optics experiments can be demonstrated (covering ray optics, imaging optics, and optical instruments).

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Experimental Contents

- 1. Rectilinear propagation of light rays
- 2. Independent propagation of light rays
- 3. Law of light reflection
- 4. Beam expansion by a convex lens
- 5. Beam expansion by a cylindrical lens
- 6. Beam splitting by a beam splitter
- 7. Light reflection at a boundary of two media
- 8. Real image formed by convergent rays
- 9. Virtual image formed by divergent rays
- 10. Beam deflection by plane mirror
- 11. Imaging properties of a double mirror
- 12. Diffuse reflection of light
- 13. Law of light refraction
- 14. Total internal reflection of light
- 15. Applications of total internal reflection
- 16. Principle of periscope
- 17. Minimum deviation angle of prism
- 18. Displacement of rays through a plane plate
- 19. Propagation of light through optical fiber
- 20. Convergence of light by concave mirror
- 21. Self-tracing of light by concave mirror
- 22. Imaging of concave mirror (object distance >2f')
- 23. Imaging of concave mirror (object distance f'~2f')
- 24. Imaging of concave mirror (object at focal plane)

- 25. Imaging of concave mirror (distance < f')
- 26. Divergence of light by convex mirror
- 27. Self-tracing of light by convex mirror
- 28. Imaging of convex mirror
- 29. Rays passing nodal point of convex lens
- 30. Demonstrating focal point in object space
- 31. Light focusing by a convex lens
- 32. Principle of camera
- 33. Reversed imaging of unit magnification
- 34. Principle of projector
- 35. Principle of collimator
- 36. Principle of magnifier
- 37. Imaging of convex lens
- 38. Imaging of convex lens
- 39. Imaging of convex lens
- 40. Imaging of convex lens
- 41. Imaging of convex lens
- 42. Imaging of convex lens
- 43. Imaging of prism
- 44. Principle of Galilean telescope
- 45. Imaging of Galilean telescope
- 46. Principle of nearsighted vision correction
- 47. Principle of farsighted vision correction

Part List

Main unit	Including laser, beam expander, beam splitter, whiteboard, scale disk, holder, etc.	
Accessories	1. Right angle prism	2. Double plane mirror
	3. Equilateral prism	4. Semi-cylindrical lens
	5. Concave-convex cylindrical mirror	6. Beam expander lens
	7. Diffuse reflector	8. Plastic optic fiber
	9. Plane parallel plate	10. Plane mirror
	11. Bi-convex cylindrical lens	12. Plano-concave cylindrical lens
	13. Galilean telescope	14. Periscope
	15. Plano-convex cylindrical lens	

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