

LEOI-30A Diffraction Intensity Measurement System - Enhanced Model



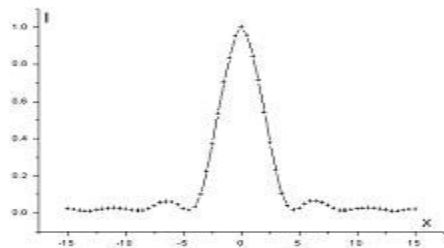
Description

This apparatus is designed to quantitatively investigate diffraction and interference effects of single-slit, multi-slit, and single-wire. There are three options of the photo-receiving device, i.e. a photo-cell with amplifier (option 1) for manual data acquisition, a linear CCD (option 2) for real-time data display on an oscilloscope, and a linear CCD with automatic data acquisition (option 3) for PC

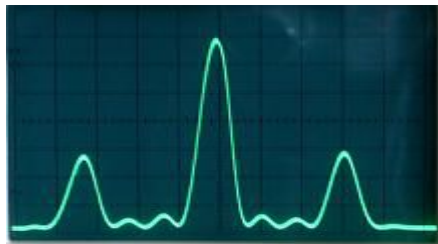
Specification

Optical Rail	length 1.1 m	
Semiconductor Laser	3.0 mW @650 nm	
Element	Single-Slit	slit width: 0.07 mm, 0.10 mm, and 0.12 mm
	Single-Wire	diameter: 0.10 mm and 0.12 mm
	Double-Slit	slit width 0.02 mm , central spacing 0.04 mm
	Double-Slit	slit width 0.07 mm , central spacing 0.14 mm
	Double-Slit	slit width 0.07 mm , central spacing 0.21 mm
	Double-Slit	slit width 0.07 mm , central spacing 0.28 mm
	Triple-Slit	slit width 0.02 mm , central spacing 0.04 mm

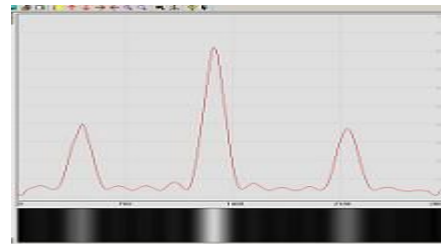
	Quadruple-Slit	slit width 0.02 mm , central spacing 0.04 mm
	Pentuple-Slit	slit width 0.02 mm , central spacing 0.04 mm
Photocell Detector (Option 1)	With 0.1 mm reading ruler & amplifier, connected to galvanometer	
CCD (Option 2)	pixel number: 2700; size: 11×11 μm; spectral range: 0.3~0.9 μm	
	with synchronization/signal ports, connected to an oscilloscope	
CCD and Data Acquisition (Option 3)	USB connected to PC, DAC 12-bit, with application program	



Data acquired and plotted manually



Graph observed on oscilloscope



Graph acquired by PC