LEOI-40 Experimental System for Polarized Light - Complete Model

Description

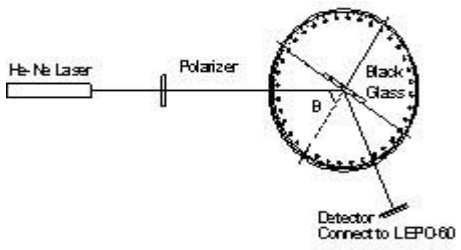
Compared with other important properties of light such as interference and diffraction, polarization is more abstract and relatively hard to understand. Without special equipment, human eyes or even optical detectors cannot recognize polarization phenomena. LEOI-40 is developed to help students understand the concept and mechanism of polarization. It allows students to measure different types of polarization and the working parameters of optical elements involved. The system is designed for manual operation in order to enhance students' hands-on ability and consolidate their knowledge and skills. Experiment results can be graphed to schematically illustrate the theory of polarization. Students should acquire a fundamental understanding of polarization and the mechanism involved in polarization elements.

Feathure

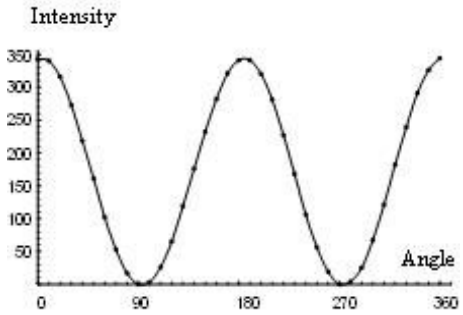
Ideal for demo
Observing polarization by reflection
Measuring Brewster's angle
Verifying Malus's law
Tri-color darkroom safety lamp
Detailed instruction manual

Application

1. Brewster's angle measurement of a black glass
2. Verification of Malus's law
3. Function study of a half-wave plate
4. Function study of a quarter-wave plate: circularly and elliptically polarized light



Brewster's angle measurement



Verification of Malus's law

Part list

Description	Specs/Part No.	Qty
Optical Rail	Duralumin, 1 m (LEPO-54-1)	1
Carrier	LEPO-54-2	3
Carrier	X-adjustable (LEPO-54-3)	1
Carrier	X-Y adjustable (LEPO-54-4)	1
Alignment Screen		1
Lens Holder	LEPO-9	2
Plate Holder	LEPO-13	1
Adaptor Piece	LEPO-10	1

Optical Goniometer	LEPO-49	1
Polarizer Holder	LEPO-52	3
Polarizer	Φ 20 mm with holder	2
λ/2 Wave Plate	Φ 10 mm, λ = 632.8 nm, quartz	1
λ/4 Wave Plate	Φ 10 mm, λ = 632.8 nm, quartz	1
Lens	*f* '= 150 mm	1
Black Glass	50×27 mm	1
Beam Expander	*f* '= 4.5 mm	1
He-Ne Laser	>1.0 mW @632.8 nm	1
Laser Holder	LEPO-44	1
Optical Current Amplifier	LEPO-60	1