LEOK-43

Information Optics Experiments

Features

- Including He-Ne laser and white-light source
- Holographic photography
- Holographic grating fabrication
- Abbe's theory of imaging and spatial filtering
- Theta-modulation
- Detailed instruction manual

Introduction

This experiment kit is designed to combine experiments with corresponding theories. By observing experimental phenomena in optics, students can get a better understanding of related theories in spatial frequency spectrum, optical Fourier transform, and holography. This experiment kit also helps students enhance their experimental skills.

Using this kit, the following experiment examples can be conducted:

1. Holographic photography

2. Holographic grating fabrication

3. Abbe imaging and spatial light filtering

4. Theta modulation

Specifications

He-Ne Laser	Wavelength: 632.8 nm Power: >1.0 mW
Rotary Slit	Single-Sided Width: 0 ~ 5 mm (continuously adjustable Rotation Range: ± 5°
White Light Source	Tungsten-Bromine Lamp (12 V, 30 W)
Filtering System	Low-pass, High-pass, Band-pass, Zero-order
Fixed Ratio Beam Splitter	5:5 and 7:3
Adjustable Diaphragm	0 ~ 14 mm
Grating	20 L/mm

Parts List

Description	Qty
He-Ne laser (LLL-2)	1
White light source (LLC-3)	1
Three-axis adjustable base (LEPO-1)	2
Two-axis adjustable base (LEPO-2)	7
Height adjustable base (LEPO-3)	3
Universal base (LEPO-4)	1
White screen (LEPO-14)	1
Plate holder (LEPO-13)	1
Variable diaphragm (LEPO-16)	1
Two-axis adjustable plate holder (LEPO-19)	1
Sample Stage (LEPO-21)	1
Frequency filter (LEPO-41)	1
Adjustable slit (LEPO-42)	1
Ground glass screen (LEPO-45)	1

Paper clip (LEPO-51)	1
Convex lens	3
Beam expander	1
Filter system	1
Plane mirror	2
Grating	1
Two-dimensional cross grating	1
Fixed ratio beam splitter	2
Grid with characters	1
Theta-modulation plate	1
Small object	1
Small white board	1
Holographic plate (silver salt)	1 Box