

MagicHOLO Optoelectronic Experiment Solution

Design different for U

Physical Optics Experimental System

UPOLabs

EXPLORE PHOTONS ARCANE

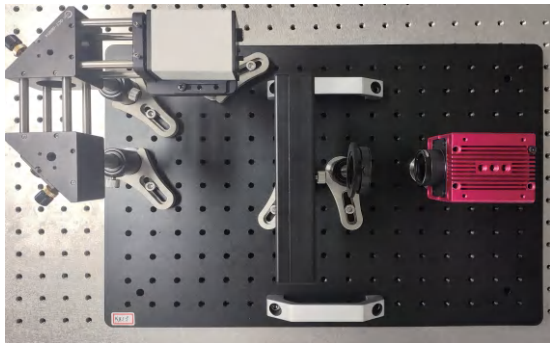


Overview

After loading digitally simulated optical elements into optical path, the associative optical phenomena are consistent with those produced by conventional physical optical elements.

In conformity with optical theory, the phenomena are reasonable verification of a variety of optical calculation theoretical formulas. Optical theoretical knowledge and actual physical phenomena is greatly integrated and reproduced through computer simulation algorithms.

UPOLabs Diffraction-free Beam Experimental System achieves mask simulation of basic optical elements by utilizing the amplitude modulation principle of liquid crystal spatial light modulators, thereby dynamically altering optical elements in the system to perform a variety of basic optical experiments.



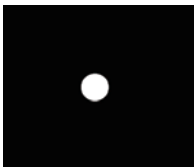
Physical Optics Experimental System Product Photo

Typical Configuration

Magicholo-PO-1024V	
Laser	Wavelength: 520 nm
Optical Attenuation Slice	Based on Requirements
45° Reflector Holder	Bottom Mounting Hole: M4 / M6 Threaded Hole
Reflector	Diameter: $\varnothing 25.4$ mm Focal Length(f): 100 mm
Spatial Light Modulator	RSLM1024V
Polarizer Bracket	Dimension: $\varnothing 25.4$ mm Aperture: $\varnothing 22$ mm
Polarizer	Dimension: $\varnothing 25.4$ mm Aperture: $\varnothing 22$ mm Polarization extinction ratio (PER) : 500:1
Beam Profiler	Pixel Size: $3.45 \times 3.45 \mu\text{m}$ Active Area: 14 mmW $\times$ 10 mmH Resolution: 4096 $\times$ 3000 (Based on Requirements)

Regarding detailed introduction for the system configuration, please consult sales@realic.cn.

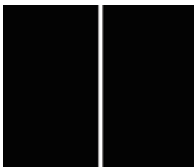
DEMO



Simulated Circular Hole Radius (pix) in UPOLabs SLM Software



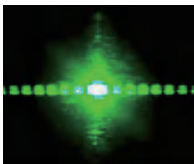
Circular Aperture Diffraction Pattern in Camera Live Capture



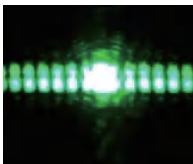
Simulated Single Slit Width 20 (pix) in UPOLabs SLM Software



Simulated Double Slit Width 10 & Slit Spacing 100 (pix) in UPOLabs SLM Software



Young's Single Slit Interference Pattern in Camera Live Capture



Young's Double Slit Interference Pattern in Live Capture by Camera

Application

The experiment teaching in Physical Optics includes mask simulation of various optical elements including single slit, double slit, grating, and pinhole