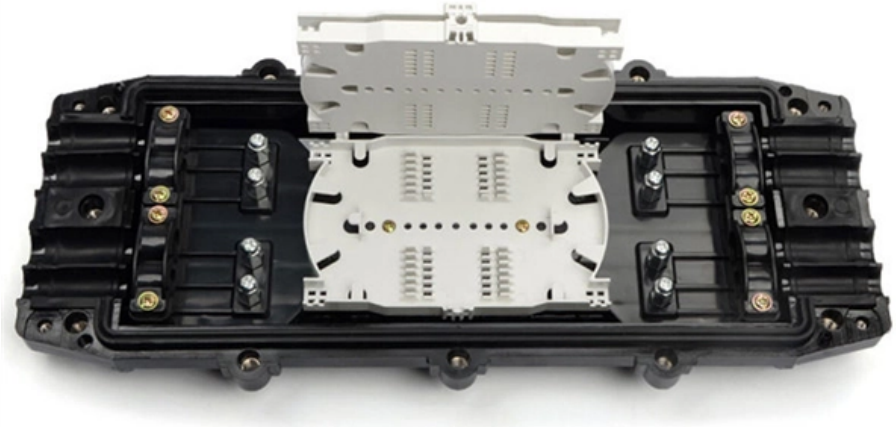
EIT Opto-Routing

# Spatial Light Modulator Holographic Lens



## Photorealistic 3D Holographic Display with Natural Defocus Effect

However, owing to the limited resolution of spatial light modulators compared to static holograms, reconstructed objects exhibit various coherent properties, such as content-dependent

## Multiplane Holographic Imaging Using the Spatial Light Modulator

The rapid generation of high-precision computer-generated holograms (CGHs) is a crucial task in the development of holographic 3D displays. The recent developments in metal

## A closed-loop control SLM-based holographic optical tweezers system

The adaptive algorithm of holographic patterns based on liquid crystal spatial light modulator (LC-SLM) for producing multiple optical traps were firstly made, demonstrating that

## (PDF) Efficient generation of a high-uniformity orbital angular

This approach is convenient to implement, avoids amplitude-modulation loss, and opens new opportunities for OAM spectrum manipulation in high-security holographic encryption, high

## Synchronous edge-enhanced and bright-field 3D

## imaging in single

An integrated ResNet and U-net DL model is designed to predict the complex holograms with the spiral-FINCH and dual-lens FINCH from one input hologram, thereby obtaining the edge

## See-through characteristics of a holographic contact lens display and

It uses a transmission-type spatial light modulator (SLM) and a polarizer to overlay three-dimensional images onto real scenes, affecting the display's see-through capability.

## Spatial Light Modulators and Their Applications in

This chapter provides comprehensive literature (review) of the LC-SLMs along with their major calibration methods. In addition, recent interesting

## Spatial Light Modulators

Spatial light modulator (SLM) is a general term describing devices that are used to modulate amplitude, phase, or polarization of light waves in space and time.

## High throughput diffractive multi-beam femtosecond laser processing

High throughput femtosecond laser processing is demonstrated by creating multiple beams using a spatial light modulator (SLM). The diffractive multi-beam patterns are modulated in

## Dynamic modulation of optical potential wells and rotating

For example, if a spatial light modulator is used, the rotation rate can reach the order of kilohertz. We provide a new method of rotating and manipulating nanoparticles.

## Spatial light modulators

Spatial light modulators The SPIE Digital Library offers a comprehensive collection of research articles, conference papers, and technical documents focused on spatial light modulators (SLMs), reflecting

## Title: font: times; size: 18 point; style: plain; justified: center

By feeding holographic data to a spatial light modulator (SLM), light (e.g., from a laser) can be separated into multiple beams with dynamically changeable positions and powers.

## Holographic multi-focus 3D two-photon polymerization with real-time

Spatial light modulators (SLM) have already been used to create multiple polymerizing foci in the pho-toresist by holographic beam shaping, thus enabling the parallel fabrication of multiple

## Can holographic optical storage displace Hard Disk Drives

On the signal beam we use a spatial light modulator to encode data, which is coupled into the media using a 2 f system with a Thorlabs TRH254-040-A-ML as the first lens.

## Subwavelength Spatial Light Modulator powering the Next

SwavePhotonicsaddressesthosetwochallengesbyintroducingaHolographicExtended Reality (HXR) chipset consisting of a Subwavelength Spatial Light Modulator and its compute companion chip--the

## Efficiency enhancements for frequency-shifting digital holographic

The first approach focuses on optimizing the illumination structure in the optical system. Specifically, wavefront modulation devices (e.g., spatial light modulators (SLMs) [16, 17] and phase

## Designing a new spatial light modulator for holographic photostimulation

Driven by the demands for speed and field of view in the holographic photostimulation community, we designed, built, and tested a liquid crystal on silicon (LCoS) spatial light modulator (SLM) with a

## spatial light modulator

By adjusting the holograms, one can generate any desired OAM beams from the same initial input beam. This approach has largely been facilitated by commercially available spatial light modulators

## Correcting curvature in micromirror-based spatial light modulators with

Computer-generated holography requires high-speed spatial light modulators (SLMs) for dynamically patterning light in 3D. Piston-motion micromirror-based SLMs support high-speed (>= 10

# Spatial light modulators

Key themes include the use of SLMs in optical imaging, holography, adaptive optics, and telecommunications, highlighting their role in enhancing image quality and enabling advanced

## GAEA-2.1 Phase Only LCOS-SLM

GAEA-2.1 Phase Only LCOS-SLM The GAEA-2.1 Spatial Light Modulator is the highest resolution SLM on the market with extremely small pixel pitch.

## 1 HoloChrome: a new holographic display architecture specifically

We present HoloChrome, a polychromatic holographic display framework designed to mitigatetheselimitations.HoloChromeutilizesanultrafast,wavelength-adjustablelaser and a dual-Spatial Light

## Accurate dynamic quantitative phase imaging using multi-wavelength

We present a novel, accurate, full-filed, dynamic quantitative phase imaging (QPI) technique by using multi-wavelength multiplexing and multi-plane iterative phase retrieval algorithm.

## Fabrication of microscale medical devices by two-photon

Applications: AR/VR/MR/Holographic Display Deep Learning/Neuronal Network Digital-/Computer Holography/ CGH ABSTRACT January, 2026 PLUTO / PLUTO-2 Spatial Light Modulators Authors:

# US11575860B2

Systems and methods for the optical control of qubits and other quantum particles with spatial light modulators (SLM) for quantum computing and quantum simulation are disclosed herein. The system

## Three-dimensional array optical tweezers based on array phase modulation

This approach addresses the diffraction efficiency limitations of spatial light modulators, enhancing overall performance. o The optical tweezers system demonstrates stable trapping of silica