UPOLabs

High Stability Liquid Crystal Spatial Light Modulator



HDSLM80R Integrated Type

- Small size allowing easy integration
- LCoS angle pitch-adjustable
- Lifting and lowering adjustable body
- Built-in water cooling

It is applicable to scientific research wavelength range of 420nm~1550nm. With phase modulation bit depth >2π, HDSLM80R SLM meets the phase stability requirement of infrared waveband and 1550nm communication waveband. Based on various coating optimization design, HDSLM80R SLM is divided into four phase-only types and one amplitude-only type in order to meet various scientific research needs. It provides pixel size of 8μm and resolution of 1920*1200. HDSLM80R SLM has been accredited as a priority choice by numerous universities and enterprises throughout the world.

Product Parameter

Types	Modulation Mode	Resolution	Frame Rate	Pixel Size	Bit Depth	Fill Factor	Amplitude Contrast	Phase Retardance	Wavelength
HDSLM80R	Phase-only	1920*1200	60Hz	8μm	8bit	> 95%	/	2.6π@1064nm	420~1100nm
HDSLM80R-NIR								2.5π@1064nm	1064±100nm
HDSLM80R-TELCO								2.6π@1550nm	1550±100nm
HDSLM80R-G								2.8π@532nm	420~600nm
HDSLM80RA	Amplitude-only						~1000 : 1	/	420~700nm

Application

It is not only applicable for researches on the subject of optical field regulation, optical communication, optical storage and optical computer and development of holographic optical tweezers, but also applicable to the procurement of nanolithography machines, optical communication WSS modules, laser cutting cryptocutting equipment. This device supports customized application and large-scale commercial exploitation.

Laser Stealth Dicing Technology

It is applicable to cutting machines for hard, thin, brittle, and transparent materials. The device provides damage threshold exceeding 10W and well application to 140μJ femtosecond laser. It has been employed in scientific researches of many universities throughout the world and passed the practical application evaluation oflarge-scale laser processing equipment companies in China.

Projection Lithography

It provides 2W/cm^2 and 405nm projection lithography. The amplitude type is the core component for the development of 3D printers and exposure machines. The phase type is typically used for the development of holographic printing and nanolithography equipment.

Beam Deflection

The 1650nm type is a core beam control device for the development of multipoint laser trackers and vibrometers. With highly stable beam pointing accuracy, the HDSLM80R SLM provides stable performance in long-hour high precision tracking by the combination use with a tunable laser source.

WSS Development

With 0.36dB interpolation loss which is comparatively lower in the industry, it is a core component in the development of optical device products such as WSS and TOF.