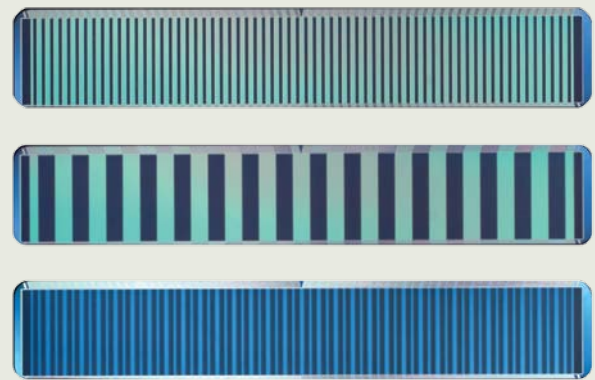




## Liquid Crystal Spatial Light Modulators

SLM-S640, SLM-S640d, SLM-S320, SLM-S320d



Examples of Strip Patterns

Spatial Light Modulators SLM-S320(d)/640(d) are linear-array SLMs based on nematic liquid crystals (LC) and are excellent tools for modulation of ultra short laser pulses in the wavelength range 430-1600 nm.

The SLMs are available as single mask configuration for phase or amplitude/polarization modulation and as dual mask SLMs for simultaneous modulation of phase and amplitude in a 4f-arrangement or in a chirped pulse amplification system.

The large active area allows for modulation even of high power lasers.

### Benefits

- Extensive LabView instruction set, MATLAB and C-libraries for an easy and comfortable operation
- ADC port, e.g. for feedback pulse optimization
- Optional custom-made AR coatings
- Optional removable mirror for reflective mode

### Applications

- High-resolution laser light modulation in phase and amplitude particularly for pulse shaping of ultra short laser pulses and high power lasers

# Liquid Crystal Spatial Light Modulators

## SLM-S640, SLM-S640d, SLM-S320, SLM-S320d

### Specifications

	Single Mask Configuration		Dual Mask Configuration	
	SLM-S640	SLM-S320	SLM-S640d	SLM-S320d
Active area	64 mm x 10 mm	32 mm x 13 mm	64 mm x 10 mm	32 mm x 13 mm
Number of addressable strips	640	320	2x 640	2x 320
Strip size	97 $\mu$ m (3.8 mil) x 10 mm	97 $\mu$ m (3.8 mil) x 13 mm	97 $\mu$ m (3.8 mil) x 10 mm	97 $\mu$ m (3.8 mil) x 13 mm
LC orientation (Angle LC director axis $n_e$ - strip orientation)	90 ° other orientations on request		$\pm$ 45 °	
Transmission (@ 450 nm ... 1100 nm, without polarizers)	> 80 %		> 75 %	
Gap	3 $\mu$ m (0.12 mil)			
LC type	nematic			
Phase modulation	Phase shift @ 430 nm Phase shift @ 1600 nm			approx. 7 $\pi$ approx. 2 $\pi$
Wavelength range	430 nm ... 1600 nm			
Driving voltage	0 V ... 8 V   0 V ... 5 V (switchable) 12 bit resolution			
Frame buffers	0 ... 63			
ADC port	0 V ... 2.5 V 12 bit resolution			
Interfaces	RS232, IEEE1394a (Firewire)			
Trigger in/out	via optocoupler			
Functions	extended instruction set integrated in firmware (based on SLM-S640/12 instruction set)			
Software driver requirements and Programming interface	Microsoft Windows: LabView and MATLAB drivers C-Interface: Microsoft Windows and Linux, optional: Apple Macintosh OS X			
Mirror (optional)	enabling operation in reflective configuration (removable for operation in transmissive configuration)			
Antireflective coating (optional)	customized coatings on request (broad or narrow band)			



#### Delivery includes

- LC display with controller unit and PC connection
- RS232 connector cable
- IEEE 1394a Firewire PCI board and connector cable
- Power supply
- Printed documentation for hardware and software
- LabView and MATLAB drivers for Microsoft Windows, C-library for Microsoft Windows and Linux
- Demonstration software
- Transportation case

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



JENOPTIK | Optical Systems  
 Optoelectronic Systems Business Unit  
 JENOPTIK Optical Systems GmbH  
 Goeschwitzer Strasse 25 | 07745 Jena | Germany  
 Phone +49 3641 65-3963 | Fax -3807  
 lightmodulators.os@jenoptik.com | www.jenoptik.com/light-modulators