

Liquid Crystal Based Spatial Light Modulator Full High Definition model / SLM-200

Santec spatial light modulator (SLM) is based on reflective liquid crystal on silicon (LCOS) microdisplay technology. The SLMs enable optical phase modulation freely and generate arbitrary 2D phase patterns on a LCOS pixel-by-pixel basis.

SLM-200 series are our latest Full HD LCOS model. The SLMs are suitable for various scientific and industrial applications, including beam shaping, wavefront correction and optical manipulations.

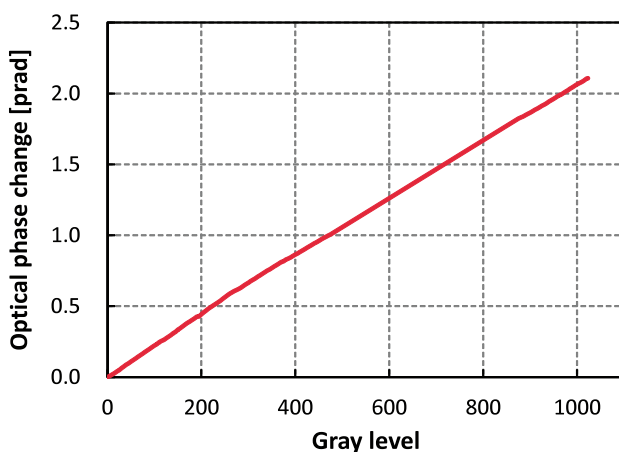
Features

- ▶ Full HD available
- ▶ Frame rate, x2 (120Hz)
- ▶ Memory function
- ▶ Triggers-input & output

Applications

- ▶ Beam steering
- ▶ Wavefront correction
- ▶ Pulse/Beam shaping
- ▶ Diffractive optics
- ▶ Optical manipulation
- ▶ Programmable phase pattern

Measurement



Full HD
available

Separate model



All-in-one model

Specifications

Item	min	max	Units	Notes
Operating Wavelength range	450	1600	nm	(Refer to appended table about AR coating option)
Panel size	(H)15.42 x (V)9.66		mm	Active area
Pixel resolution	(H)1920 x (V)1200		pixel	
Pixel size / pitch	7.8 / 8.0		mm	
Panel reflectivity	Typ. >80		%	Depending on specified wavelength range
Aperture ratio	95		%	
Gray level	10 (1024)		bit	
Frame rate	60 or 120		Hz	
LCOS drive frequency	1200		Hz	
Phase depth	2π	-	rad.	
Absolute phase fluctuation	Typ. <0.003		πrad.	
Relative phase fluctuation	Typ. <0.001		πrad.	
Response time	Typ. 100		ms	
Signal format	DVI / USB3.0		-	10-bit using RGB 8-bit, 3 colors
Operating temperature range	15	35	degC	
Storage temperature	0	40	degC	
Optical power handling	Typ. 1.0 ¹⁾		mW/cm ²	@1550nm, CW, 2.0mm beam diameter
Dimensions	117.6 x 117.6 x 33.7		mm	
Control software	GUI software for Windows		-	

1) The value is not guaranteed. Please refer santec SLM technical sheet in one instance for judgement of useable light power.

< AR coating option >

Item	Parameter					Units	
AR coating range	450-550	750-850	1000-1100	1500-1600	400-700	450-550 / 1500-1600	nm
AR coating reflectance ²⁾	< 0.5			< 1.5	< 0.6		%

2) Angle of incidence = 0degree

Ordering Code

SLM-200-01-XXXX-XX

AR coat range
 00 : non-coating, 01 : 450 ~ 550nm, 02 : 750 ~ 850nm, 03 : 1000 ~ 1100nm, 04 : 1500 ~ 1600nm
 12: 400 ~ 700 nm, 14: 450 ~ 550 nm / 1500~1600 nm CC: custom coating

0001: all-in-one model , 0002: separate model

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