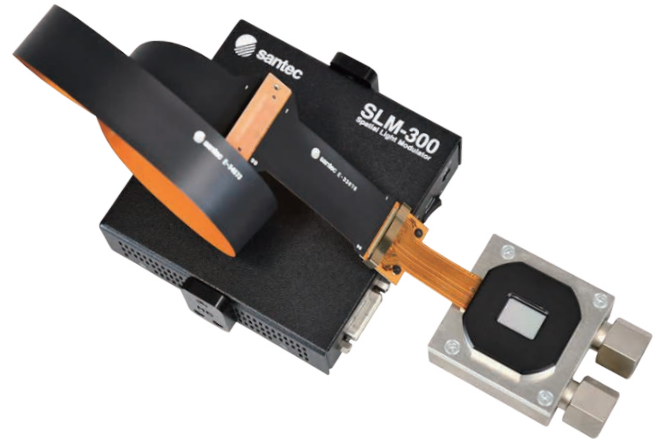


Liquid Crystal Based Spatial Light Modulator High Power LCOS model / SLM-300

SLM-300 is a LCOS-SLM specifically designed for high power laser applications by optimizing the liquid crystal and heat dissipation structure, enabling high power handling in the 200W range, 100 times higher than conventional models. The LCOS head uses a water-cooled heat sink with high cooling performance. This can contribute to improved processing efficiency and precision in laser processing, 3D printers, laser trimming for ICs, and other applications that use high-power lasers in the main wavelength bands. Three wavelength bands are supported: 532 nm, 800 nm, and 1064 nm. The SLM-300 will enable higher performance in optical applications such as wave-front correction, optical beam shaping for laser processing, biosensing and quantum computing.



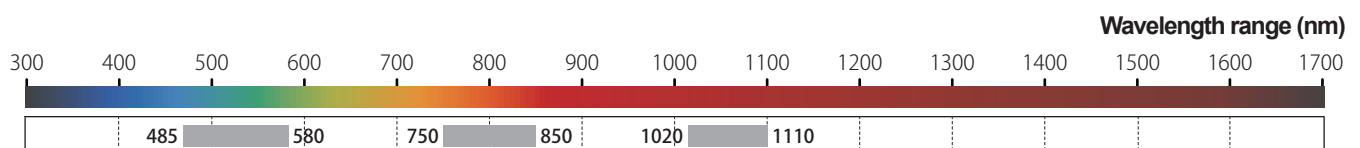
Features

- ▶ WUXGA (1920 x 1200) resolution
- ▶ 10-bit (1024 gray levels)
- ▶ Excellent phase stability ($\sim 0.003\pi$ rad.)
- ▶ Memory function
- ▶ Triggers-input & output
- ▶ High Power-durable LCOS based SLM

Applications

- ▶ Laser Processing
- ▶ 3D-Printing
- ▶ IC Trimming

Wavelength option



Specifications

Item	min.	max.	Units	Notes
Operating wavelength range	532, 800, 1064		nm	Three wavelength bands are available
Panel size	(H)15.36 x (V)9.60		mm	Active area
Pixel resolution ¹⁾	(H)1920 x (V)1200		pixel	
Pixel size / pitch	7.8 / 8.0		μm	
Panel reflectivity ²⁾	Typ. >80		%	
Aperture ratio	95		%	
Gray level	10 (1024)		bit	
Frame rate	60 or 120		Hz	Factory default setting
LCOS drive frequency	1200		Hz	
Phase depth	2π	-	rad.	
Phase stability	Typ. <0.003 π		rad.	
Response time ³⁾	Typ. 200		ms	
Interface	DVI* / USB3.0		-	*10-bit using RGB 8-bit, 3 colors
Operating temperature range	15	35	$^{\circ}\text{C}$	No condensation
Storage temperature	0	40	$^{\circ}\text{C}$	No condensation
Optical power handling ⁴⁾	-	200	W/cm ²	CW @1064 nm
Dimensions	117.6 x 117.6 x 33.7		mm	
Control software	GUI software and SDK for Windows		-	
Water flow	1 ~ 2		L/min.	15 ~ 25 $^{\circ}\text{C}$
Water inlet and outlet	Pipe fittings		-	Rc(PT) 3/8 inch female ⁵⁾

1) Specification on the defect pixels are no object.

2) Zero-order reflection.

Depending on specified wavelength range.

3) Response time is a typical value and is not affected by frame rate.

Tr: Rise time between 10% and 90% levels in a phase change of 0 to 1023 bit (2π rad.) at 25 $^{\circ}\text{C}$.

Tf: Fall time between 90% and 10% levels in a phase change of 1023 to 0 bit (2π rad.) at 25 $^{\circ}\text{C}$.

4) The value is not guaranteed.

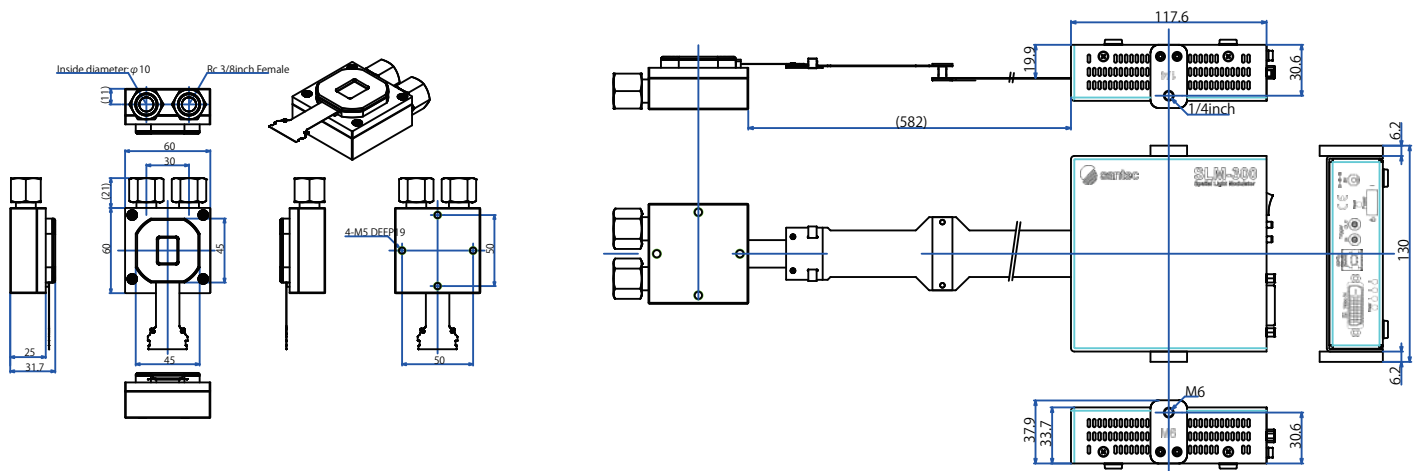
Depending on the conditions of the laser oscillator used, the product's life may be significantly shortened due to accumulated exposure time.

5) Supports NPT standard using attached conversion adapters.

Ordering code

Ordering code	Wavelength range (nm)	Response time (ms)
SLM-300-01-0002-01	485 to 580	Typ. 200
SLM-300-01-0002-02	750 to 850	
SLM-300-01-0002-03	1020 to 1110	

Dimensions Unit [mm]



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