

Liquid Crystal Based Spatial Light Modulator

High Power LCOS model / SLM-300

Patent Pending

Santec's spatial light modulator (SLM) is based on reflective liquid crystal on silicon (LCOS) micro-display technology. The Santec SLM-300 high-power LCOS based spatial light modulator holds the world record for high-power durability up to CW 200 Watts. The SLM-300 has 100 times higher power durability when compared with Santec's conventional SLM product, the SLM-200.

Features

- ▶ High Power-durable LCOS based SLM
- ▶ High Phase Resolution 10-bit (1024) Gray Level
- ▶ Ultra Low Phase Noise $\sim 0.003\pi$ rad

Applications

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



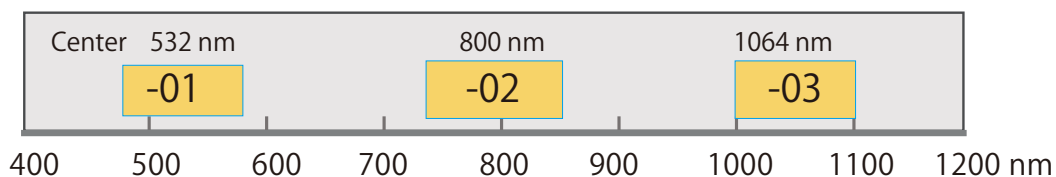
Specifications

Item	min	max	Units	Notes
Operating wavelength range	532, 800, 1064		nm	
Panel size	(H)15.36 x (V)9.60		mm	Active area
Pixel resolution	(H)1920 x (V)1200		pixel	
Pixel size / pitch	7.8 / 8.0		μm	
Panel reflectivity	Typ. >92		%	Depending on specified wavelength range
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. $<0.003\pi$		rad.	
Response time	Typ. 200		ms	
Interface	DVI* / USB3.0		-	*10-bit using RGB 8-bit, 3 colors
Operating temperature range	15	35	degC	No condensation
Storage temperature	0	40	degC	No condensation
Optical power handling	-	200 ¹⁾	W/cm ²	CW @ 1064 nm
Dimensions	122 x 122 x 38.3		mm	
Control software	GUI software and SDK for Windows		-	
Water flow	1 ~ 2		L/min	15 ~ 25 degC
Water inlet and outlet	Pipe fittings		-	Rc(PT) 3/8 inch female ²⁾

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

2) Supports NPT standard using attached conversion adapters.

■ Wavelength option



■ Ordering Code

SLM-300-01-0002-XX

Wavelength option
01: 532 nm, 02: 800 nm, 03: 1064 nm

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