

1920 x 1200 Analog Spatial Light Modulator

Resolution: 1920 x 1200

Array Size: 15.36 x 9.60 mm

Pixel Pitch: 8.0 x 8.0 μm

Backplane Refresh: 1.35 kHz

Fill Factor: 95.6%

0th Order Diffraction Efficiency: 76 - 91% (λ dependent)

0th Order Diffraction Efficiency: 87 - 98% (dielectric mirror)

Controller: HDMI

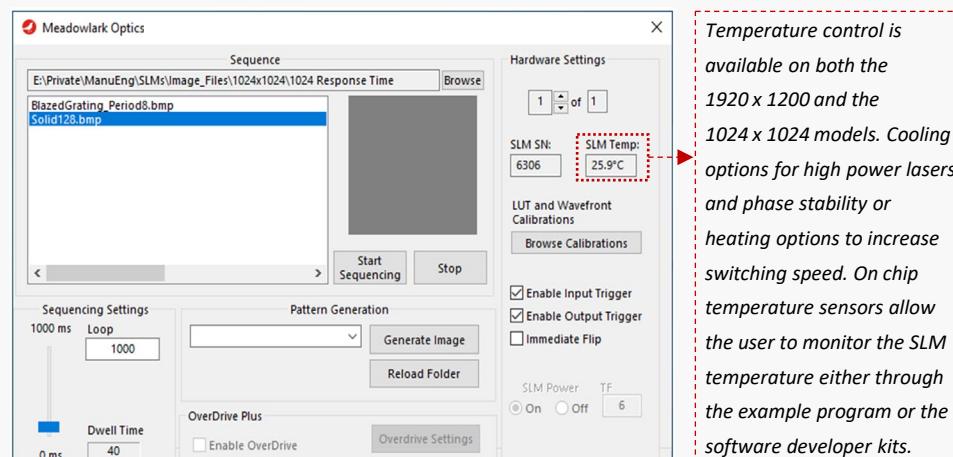
Standard Calibration Wavelengths	STANDARD SPEED Liquid Crystal Response Time			Calibrated Wavefront Distortion
	AR Coating Range 400 – 800 nm	AR Coating Range 500 – 1200 nm	AR Coating Range 850 – 1650 nm	
405 nm	≤ 14.0 ms	–	–	$\lambda/5$
532 nm	≤ 15.0 ms	≤ 19.0 ms	–	$\lambda/7$
635 nm	≤ 15.0 ms	≤ 20.0 ms	–	$\lambda/8$
785 nm	≤ 16.0 ms	≤ 23.0 ms	–	$\lambda/10$
1064 nm	–	≤ 33.0 ms	≤ 40.0 ms	$\lambda/10$
1550 nm	–	–	≤ 55.0 ms	$\lambda/12$



1920 x 1200 SLM with HDMI Controller



1024 x 1024 SLM with PCIe Controller



1024 x 1024 Analog Spatial Light Modulator

Resolution: 1024 x 1024

Array Size: 17.4 x 17.4 mm

Pixel Pitch: 17 x 17 μm

Backplane Refresh: 1.436 kHz

Fill Factor: 97.2%

0th Order Diffraction Efficiency: 75 - 87% (λ dependent)

0th Order Diffraction Efficiency: 90 - 98% (dielectric mirror)

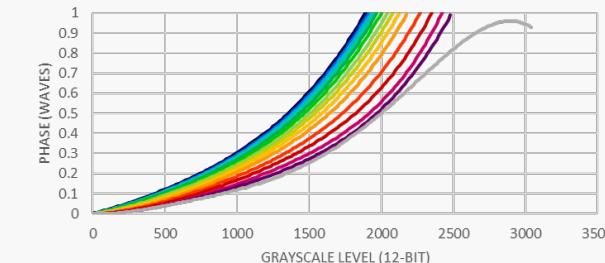
Controller: PCIe with 752 Frames of On-Board Memory

Standard Calibration Wavelengths	HIGH SPEED Liquid Crystal Response Time			Calibrated Wavefront Distortion
	AR Coating Range 488 – 850 nm	AR Coating Range 500 – 1200 nm	AR Coating Range 850 – 1650 nm	
532 nm	≤ 1.0 ms	≤ 1.4 ms	–	$\lambda/5$
635 nm	≤ 1.3 ms	≤ 1.8 ms	–	$\lambda/6$
785 nm	≤ 1.8 ms	≤ 2.4 ms	–	$\lambda/7$
1064 nm	–	≤ 3.4 ms	≤ 6.0 ms	$\lambda/10$
1550 nm	–	–	≤ 9.0 ms	$\lambda/12$

Standard Calibration Wavelengths	ULTRA HIGH SPEED Liquid Crystal Response Time			Calibrated Wavefront Distortion
	AR Coating Range 488 – 850 nm	AR Coating Range 500 – 1200 nm	AR Coating Range 850 – 1650 nm	
532 nm	≤ 0.6 ms	≤ 0.7 ms	–	$\lambda/5$
635 nm	≤ 0.7 ms	≤ 0.9 ms	–	$\lambda/6$
785 nm	≤ 0.9 ms	≤ 1.2 ms	–	$\lambda/7$
1064 nm	–	≤ 1.7 ms	≤ 2.0 ms	$\lambda/10$
1550 nm	–	–	≤ 3.9 ms	$\lambda/12$

ULTRA HIGH POWER 1024 x 1024

≥ 1 kW at 1070 nm



Maintaining full phase modulation under high power loads

Measured phase-voltage response at 1070 nm showing the SLM's ability to maintain a full wave of calibrated phase control. Tools are available so the SLM can be calibrated for well-controlled performance at every operating power level in range.

1536 x 1536 Analog Spatial Light Modulator

Resolution: 1536 x 1536

Fill Factor: 96.0%

Array Size: 30.7 x 30.7 mm

Max Hologram Frame Rate at 1064: >600 fps

Pixel Pitch: 20.0 x 20.0 μm

Response for On-Board Holograms: 6 $\mu\text{s} \pm 3 \mu\text{s}$

Pixel Voltage: 12 V

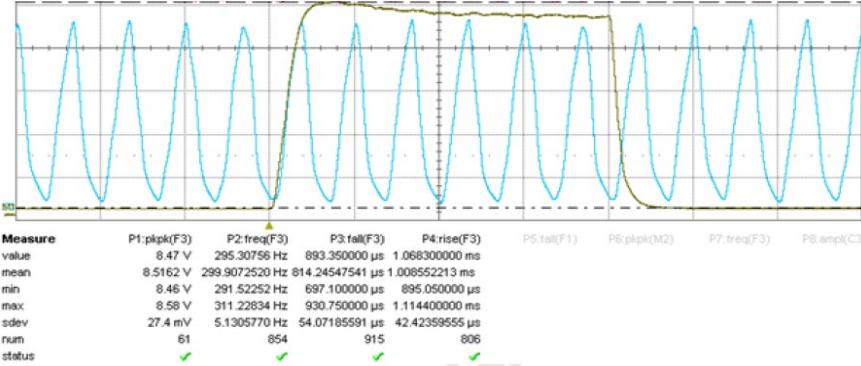
Controller: PCIe (up to 2,045 frames of On-Board Memory)

Remove the computer bottleneck. The SLM drive electronics can store a library of up to 2,045 user specified phase masks on the driver board. These masks can be selected in any sequence using on-board OverdrivePlus transition calculation for high-speed switching and extremely precise timing, without being limited by computer computation and data transfer speeds.

High power handling. The 1536 SLM combines a large 3 cm x 3 cm active array with liquid cooling to support high laser powers. Delivering more power on target for applications that need it, from multi-spot photostimulation to laser welding.



Fast Hologram-to-Hologram Operation



High Resolution Holography at 600 fps! Oscilloscope traces show diffracted spots generated by 1536 SLM at 600 Hz vs 100 Hz.

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SPATIAL LIGHT MODULATOR

— SELECTION GUIDE —

