512 NEMATIC SLM SPECIFICATIONS

	Model P512 – 0532	Model P512 – 0635	Model P512 – 0785	Model P512 – 1064	Model P512 – 1550
Array Size	7.68 x 7.68 mm				
Zero-Order Diffraction Efficiency (standard)	61.5% (maximum)				
Zero-Order Diffraction Efficiency (with High Efficiency Mirror)	90 - 95% (maximum)				
Duty Cycle	Up to 100%				
External Window - 600 to1300 nm also available (see chart on page 12)	Broadband antireflection coated for R_{avg} < 1% (over 450 - 865 nm)			Broadband antireflection coated for R_{avg} < 1% (over 850 - 1650 nm)	
Fill Factor (standard product)	83.4%				
Fill Factor (with High Efficiency Mirror)	100%				
Format	512 x 512 (262,144 active pixels)				
Mode	Reflective				
Modulation	Controllable index of refraction				
Phase Levels (resolvable)	50 linear levels (minimum) for 2π phase stroke with PCI or PCIe 8-bit Controller			100 linear levels (minimum) for 2π phase stroke with PCI or PCIe 8-bit Controller	
	1,000 – 8,000 linear levels (minimum) with DVI 16-bit Controller			2,000 – 16,000 linear levels (minimum) for 2π phase stroke with DVI 16-bit Controller	
Phase Stroke (double-pass)	Typically 2π (π to 12π upon request)				
Contrast Ratio (if used in Amplitude Mode)	200:1				
Pixel Pitch	15 x 15 μm				
Spatial Resolution	33 lp/mm				
Reflected Wavefront Distortion - RMS (standard)	λ/3 @ 532 nm	λ/4 @ 635 nm	λ/5 @ 785 nm	λ/6 @ 1064 nm	λ/8 @ 1550 nm
Reflected Wavefront Distortion – RMS (PhaseFlat)	λ/12 @ 532 nm	λ/15 @ 635 nm	λ/20 @ 785 nm	λ/20 @ 1064 nm	λ/20 @ 1550 nm
Standard Liquid Crystal Response Time / Switching Frequency	≤ 33.3 ms / ≥ 30 Hz	≤ 33.3 ms / ≥ 30 Hz	≤ 55.5 ms / ≥ 18 Hz	≤ 66.7 ms / ≥ 15 Hz	≤ 100 ms / ≥ 10 Hz
High Speed Liquid Crystal Response Time / Switching Frequency	≤ 7 ms / ≥ 142 Hz	≤ 12 ms / ≥ 83 Hz	≤ 17.2 ms / ≥ 58 Hz	≤ 10 ms / ≥ 100 Hz	≤ 20 ms / ≥ 50 Hz
High Efficiency with High Speed Liquid Crystal Response Time / Switching Frequency	≤ 10 ms / ≥ 100 Hz	≤ 16.7 ms / ≥ 60 Hz	≤ 22.2 ms / ≥ 45 Hz	≤ 16.7 ms / ≥ 60 Hz	≤ 28.5 ms / ≥ 35 Hz
Wavelength Range	515 – 585 nm	615 – 700 nm	760 - 865 nm	1030 - 1170 nm	1505 - 1650 nm

256 NEMATIC SLM SPECIFICATIONS

	Model HSP256 – 0532	Model HSP256 – 0635	Model HSP256 – 0785	Model HSP256 – 1064	Model HSP256 – 1550
Array Size	6.14 x 6.14 mm				
Zero-order Diffraction Efficiency (standard)	71.5% (maximum)				
Zero-Order Diffraction Efficiency (with High Efficiency Mirror)	90 - 95% (maximum)				
Duty Cycle	Up to 100%				
External Window - 600 to1300 nm also available (see chart on page 12)	Broadband antireflection coated for R_{avg} < 1% (over 450 - 865 nm)			Broadband antireflection coated for R_{avg} < 1% (over 850 - 1650 nm)	
Fill Factor (standard product)	90%				
Fill Factor (with High Efficiency Mirror)	100%				
Format	256 x 256 (65,536 active pixels)				
Mode	Reflective				
Modulation	Controllable index of refraction				
Phase Levels (resolvable)	50 linear levels (minimum) for 2π phase stroke with PCI or PCIe 8-bit Controller			100 linear levels (minimum) for 2π phase stroke with PCI or PCIe 8-bit Controller	
	1,000 – 8,000 linear levels (minimum) with DVI 16-bit Controller			2,000 – 16,000 linear levels (minimum) for 2π phase stroke with DVI 16-bit Controller	
Phase Stroke (double-pass)	Typically 2π at user-specified laser line				
Contrast Ratio (if used in Amplitude Mode)	200:1				
Pixel Pitch	24 x 24 μm				
Spatial Resolution	20 lp/mm				
Reflected Wavefront Distortion - RMS (standard)	λ/7 @ 532 nm	λ/8 @ 635 nm	λ/10 @ 785 nm	λ/12 @ 1064 nm	λ/15 @ 1550 nm
High Speed Liquid Crystal Response Time / Switching Frequency	≤ 2 ms / ≥ 500 Hz	≤ 2.5 ms / ≥ 400 Hz	≤ 4.5 ms / ≥ 222 Hz	≤ 7 ms / ≥ 142 Hz	≤ 14 ms / ≥ 71 Hz
High Efficiency with High Speed Liquid Crystal Response Time / Switching Frequency	≤ 2.8 ms / ≥ 350 Hz	≤ 3.3 ms / ≥ 300 Hz	≤ 5.7 ms / ≥ 175 Hz	≤ 10 ms / ≥ 100 Hz	≤ 20 ms / ≥ 50 Hz
Wavelength Range	515 – 585 nm	615 – 700 nm	760 - 865 nm	1030 - 1170 nm	1505 - 1650 nm

PhaseFlat and Standard Liquid Crystal are not available with 256x256 Model.