

Quality Control Report LSM800

Date: 2026-06-12

Laser Power

Laser	Measured Power (μW)
405	3.5
488	11.3
555	4.6
635	4.0

Resolution

Objective: 40x

Pinhole 1.0 AU

Objective 1.3

Sampling

Channel	Saturation	Nyquist (μm)	Found (μm)	Nyquist/found ratio
647	none	0.062x0.062x0.22	0.069x0.069x0.16	1.1, 1.1, 0.7
564	none	0.054x0.054x0.192		1.3, 1.3, 0.8
488	none	0.047x0.047x0.166		1.5, 1.5, 1.0
405	none	0.039x0.039x0.138		1.8, 1.8, 1.2

Resolution

Channel	Sig/Background ratio	Dimension	Measured FWHM (μm)	theory (μm)	Fit Goodness	Mes./theory ratio
647	<0.1	X	0.817	0.254	0.58	3.22
		Y	1.239	0.254	0.51	4.88
		Z	2.167	0.775	0.7	2.79
564	<0.1	X	0.784	0.221	0.86	3.54
		Y	1.17	0.221	0.88	5.29
		Z	2.35	0.676	0.51	3.48

488	<0.1	X	1.259	0.191	0.95	6.57
		Y	1.068	0.191	0.94	5.58
		Z	2.499	0.585	0.93	4.27
405	<0.1	X	1.174	0.159	0.47	7.39
		Y	1.239	0.159	0.92	7.8
		Z	4.711	0.485	0.44	9.71

Objective: 63x

Pinhole 1.0 AU

Objective 1.4

Sampling

Channel	Saturation	Nyquist (μm)	Found (μm)	Nyquist/found ratio
647	none	0.058x0.058x0.174	0.064x0.064x0.12	1.1, 1.1, 0.7
564	none	0.05x0.05x0.151		1.3, 1.3, 0.8
488	none	0.044x0.044x0.131		1.5, 1.5, 0.9
405	none	0.036x0.036x0.109		1.8, 1.8, 1.1

Resolution

Channel	Sig/Background ratio	Dimension	Measured FWHM (μm)	theory (μm)	Fit Goodness	Mes./theory ratio
647	<0.1	X	1.041	0.236	0.44	4.42
		Y	0.952	0.236	0.44	4.04
		Z	2.172	0.611	0.85	3.55
564	<0.1	X	1.098	0.205	0.79	5.34
		Y	0.915	0.205	0.9	4.45
		Z	0.539	0.533	0.56	1.01
488	<0.1	X	1.072	0.178	0.96	6.03
		Y	0.791	0.178	0.97	4.45
		Z	1.13	0.461	0.88	2.45
405	<0.1	X	1.128	0.148	0.92	7.65
		Y	0.928	0.148	0.93	6.29
		Z	1.025	0.383	0.79	2.68

Co-Registration

ISO 21073 co-registration accuracy

	Distance (in μm)	647	555	488	405
Channel 0	Lateral distance (in μm)		0	0.767	0
	Axial distance (in μm)		0.72	0.84	0.72
Channel 1	Lateral distance (in μm)	0		0.767	0
	Axial distance (in μm)	0.72		0.12	0
Channel 2	Lateral distance (in μm)	0.767	0.767		0.767
	Axial distance (in μm)	0.84	0.12		0.12
Channel 3	Lateral distance (in μm)	0	0	0.767	
	Axial distance (in μm)	0.72	0	0.12	

ISO 21073 co-registration accuracy

	Distance (in μm)	647	555	488	405
Channel 0	Lateral distance (in μm)		0	0.032	0.064
	Axial distance (in μm)		0.51	0.45	0.36
Channel 1	Lateral distance (in μm)	0		0.032	0.064
	Axial distance (in μm)	0.51		0.06	0.15
Channel 2	Lateral distance (in μm)	0.032	0.032		0.032
	Axial distance (in μm)	0.45	0.06		0.09
Channel 3	Lateral distance (in μm)	0.064	0.064	0.032	

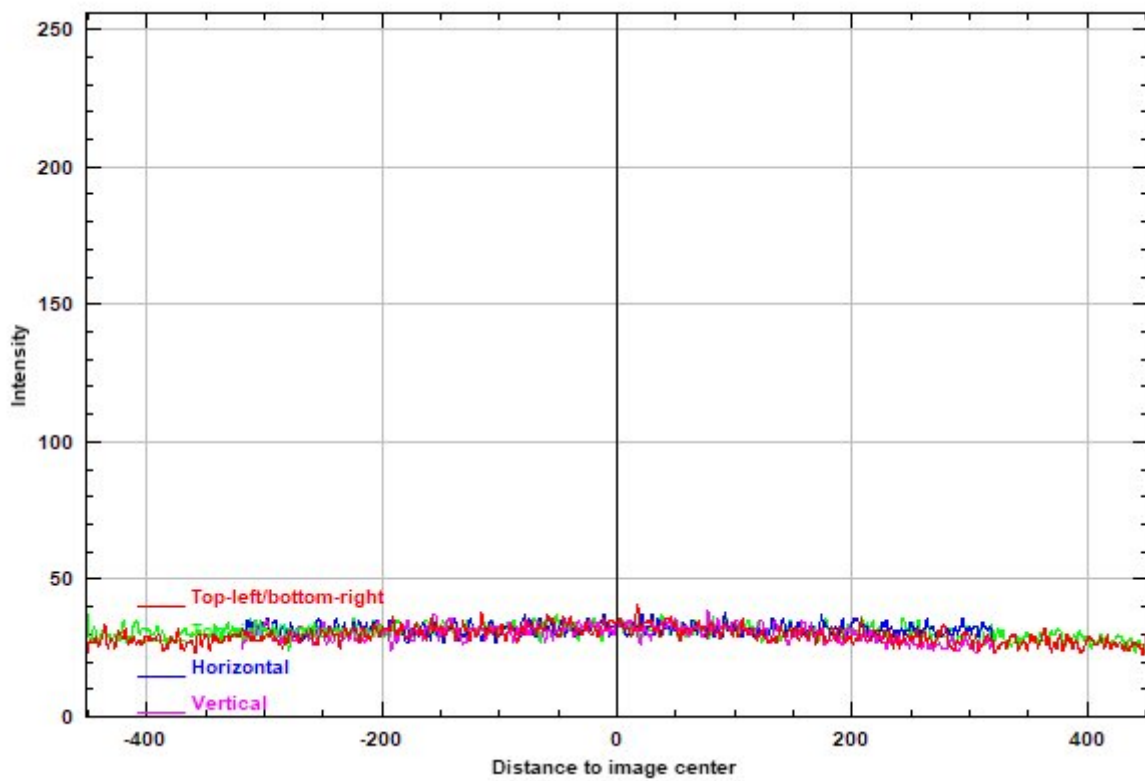
	Axial distance (in μm)	0.36	0.15	0.09	
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Illumination

Illumination uniformity

Filter	Uniformity (%)	Field Uniformity (%)	Centering Accuracy (%)	Image	Coef. of Variation	Mean c fit value
Alexa 350	37	85.3	78.9	C1-2026-06-12_Illumination	0.0902	0

Intensity profiles



Repositioning Accuracy

Average drift: 0.2026 μ m

