

ASML 5000/55 ACCEPTANCE TEST SPECIFICATIONS

Customer:	
Site:	
Machine serial number:	4111
Model:	5000/55
Wafer size:	3"
Purchase order no:	
Software Release:	9.2.0
Test completion date:	<i>See notes in side-bar</i>

Parameter	Specification (absolute values)	FAT		SAT	
		Measured	Accept	Measured	Accept

1. Illumination

1.1 Illumination Homogeneity					
15.0 x 15.0 mm [%]	≤ 3.0	1.18	2/13/2019		
9.4 x 19.0 mm [%]	≤ 3.0	1.08	2/13/2019		
Illumination intensity [mW/cm ²]	≥ 280	321	2/13/2019		

2. Reticle masking

2.1 Reticle masking [μm]	≤ 500	380	2/13/2019		
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4. Lens distortion

4.1 Non-correctable error [nm]					
X @15x15	≤ 120nm	95	2/13/2019		
Y @15x15	≤ 120nm	95	2/13/2019		
Mag	<50nm/cm	-20	2/13/2019		
Die Rotation	<5urad	-0.772	2/13/2019		
Trapezoidal X	<50nm/cm ²	-54	2/13/2019		
Trapezoidal Y	<50nm/cm ²	5	2/13/2019		

5. Material handling

5.1 Pre-alignment accuracy(Optical Sensor)					
Xm1w1 (um)	≤ 7	1.82	2/13/2019		
Ym1w1 (um)	≤ 7	2.95	2/13/2019		
Ym1w2 (um)	≤ 7	2.45	2/13/2019		

6. Overlay performance					
6.1 Stage repeatability					
X [nm]	≤ 100	51	2/13/2019		
Y [nm]	≤ 100	47	2/13/2019		
6.2 Single machine overlay (99.7%)					
X - Max 99.7%	≤ 150	52	2/13/2019		
Y - Max 99.7%	≤ 150	53	2/13/2019		
7. Wafer throughput					
7.1 Wafer throughput at 200 mJ/cm ²	≥ 74	121.21	2/13/2019		
7.4 Reticle exchange time (seconds)	≤ 40	26	2/13/2019		

The tests below require CD CIM or Other					
Focus Leveling					
Out Of Focus	Zero per wafer				
Imaging (Target CD)					
UDOF	>1.2um				
Intra Filed CD	+/- 0.05um @ 0.5+/-0.025um mean CD				
Target CD reproducibility	0.5 +/-0.05um				
Overlay					
Box in Box	<150nm				
Overlay on Produt wafer	<150nm				
System Stability					
3 day run test	Zero errors				
Contamination					
Topside particles	,3 Particles (0.5um or larger)				