TECHNICAL SPEC FOR Stepper

System Model:
Canon FPA 3000 i4 SN

Tool has been shut down by Litho tech.
Electricity, cooling water, Vacuum and CCA are closed.
Cables between Main unit and power box are still connected, locking kit and demounting for transport to be provided by buyer.

Wafer size: 6 inch

Wafer type: Jeida flat

Chuck type: ring chuck

Reticle changer type: (Canon standard?) I4 library Canon

Inline right or left: left

Particle checker (PPC): No

Touch panel type: Canon standard

Options:

Reticle size: 5 inch

Reticle alignment: see specs below

Wafer alignment: see specs below

Auto focus:see specs below

Auto feeder: Yes

Wafer tilt:

Wafer feeder: Yes

Track interface: Yes, tool was used inline, interface is track part

Laser: HeNe

Lens data: see below

Stage and U-lens at shutdown
Intensity: 550 mW/cm2
Uniformity: 4.5%

Stage vibration data:

Used for 0.35micron line and space? Y

Chuck maintenance tool: No

Reticle bar code reader: Yes

Cassette bar code reader: No

SW Version:

OS:

Vintage: 1995

Missing/defective parts: none

Canon FPA3000i4 #1 Pre-Acceptance Result in Alcatel Mietec

	Item	Specification	Result	Judge
1.Illuminator	Intensity(Normal Illumination)	≥ 6500W/m2	10747 W/m2	OK
	Intensity(SIA)	> 4000W/m2	5577 W/m2	OK
	Intensity(SIB)	≥ 4000W/m2	5795 W/m2	OK
	Uniformity(Normal)	≤ +1.0%	0.40%	OK
	Uniformity(SIA)	≤ +1.3%	0.70%	OK
	Uniformity(SIB)	≤ +1.3%	0.70%	OK
	Dose control accuracy	≤ +1.0%	0.23%	OK
	Dose Repeatability CD Method			
	28days 0.35 + 0.035 μ	Cp > 1.0		final
	0.50 + 0.050 μ	Cp > 1.3		final
	Dose Matching Between Steppers			
	0.50 μ	≤ + 0.015 μ	V:-0.006 H:+0.002	OK
	Masking Blade Accuracy (Wafer level)	≤ + 100 μ	MAX 35 μ	OK
	Reticle Change Time (Including Alignment)	≤ 60sec	50.9 sec	OK
2.Exposure	Resolution(Normal)	≤ 0.35 μ	waiting SEM	
Performance	Resolution(Off-Axis)	≤ 0.32 μ	waiting SEM	
	UDOF(Normal)			
	0.35 μ lines/spaces	≥ 0.6 μ range	waiting SEM	
	0.50 μ lines/spaces	≥ 1.2 μ range	1.3 μ range	OK
	UDOF(Off-Axis)			
	0.32 μ lines/spaces	≥ 0.8 μ range	waiting SEM	
	Image Surface Width (0.35 um L&S)	≤ 0.4 μ	waiting SEM	
	Proximity Effect (0.5 um L&S)	≤ 0.05 μ	0.038 μ	OK
	Asymmetric Resist Profile (0.5umL&S)	< 5.0 °	Max 3.3 °	OK
	Linewidth Repeatability within field			
	0.35 μ lines/spaces	≥ 0.04 μ range	waiting SEM	
	0.50 μ lines/spaces	≥ 0.05 μ range	waiting SEM	
	Linewidth Repeatability within wafer			
	0.35 μ lines/spaces	≥ 0.04 μ range	waiting SEM	
	0.50 μ lines/spaces	≥ 0.05 μ range	waiting SEM	
	Distortion (Normal Illumination)	≤ + 0.05 μ	dxmax:0.017 dymax:0.016	OK
	Distortion (SIA)	≤ + 0.06 μ	dxmax:0.013 dymax:0.021	OK
	Distortion (SIB)	≤ + 0.06 μ	dxmax:0.016 dymax:0.028	OK
	Intrafield Matching to (Mietec i1 #1)	≤ + 0.08 μ	dxmax:0.056 dymax:0.040	OK
	Intarfield Matching to all steppers	≤ + 0.08 μ		
		S2	dxmax:0.020 dymax:0.061	OK
		S3	dxmax:0.036 dymax:0.049	OK
		S4	dxmax:0.021 dymax:0.028	OK
3.Auto Focus	Stability		D1 -0.25,D2 -0.37,D3 -0.23	
	Over 5 days	≤ 0.3 μ range	D4 -0.18,D5 -0.13	
			Range 0.24 μ	OK
	Maximum Deviation of best focus			final
	among the various layer	≤ 0.3 μ range		
	Global Levelling	≤ 7 ppm	x:0.7ppm y:0.5ppm	OK
	Die by Die Levelling Stability	≤ 0.10 μ 3σ	0.026 μ	OK
	Die by Die Leveling Repeatability	≤ 7 ppm	x:3.5ppm y:2.8ppm	OK
4.AA accuracy	Reticle Rotation Accuracy	≤ + 0.01 μ	-.0081 μ	OK
	Reticle Rotation Repeatability	≤ 0.02 μ range	0.010 μ	OK

Canon FPA3000i4 #1 Pre-Acceptance Result in Alcatel Mietec

	Item	Specification	Result	Judge
	Single Machine (Resist to Resist)	< 0.06 μ X + 3sd		OK
	Mode1 |m|+3sig Day1	Day 2	Day 3	
	w1: 20 54 52	16 48 49	22 35 33	
	w2: 16 50 46	19 35 37	14 31 34	
	w3: 25 44 35	16 35 32	14 35 41	
	w4: 15 58 60	19 43 35	25 36 35	
	w5: 17 52 43	16 34 35	19 45 52	
	Mode4 |m|+3sig Day1	Day 2	Day 3	OK
	w1: 29 30 27	27 36 35	27 34 39	
	w2: 29 33 36	24 41 44	39 31 30	
	w3: 26 31 26	26 23 34	28 35 39	
	w4: 26 25 27	30 35 30	22 33 35	
	w5: 36 28 25	26 39 37	29 41 41	
	Machine to Machine (Resist to Resist)	< 0.09 μ X + 3sd		OK
	|m|+3sig Day 1	Day 2	Day 3	
	w1: 37 60 50	36 31 55	31 52 56	
	w2: 41 64 42	32 50 42	35 76 43	
	w3: 34 57 30	42 63 52	37 54 32	
	w4: 28 80 50	33 50 50	31 72 49	
	w5: 30 61 38	28 57 42	30 36 64	
5.X-Y stage	Stepping Accuracy	≤ ± 0.04 μ 3σ	x: 0.013 μ y: 0.030 μ	OK
	Scaling(Mietec reference wafer)	≤ ± 0.5 ppm	x:-0.34ppm y:0.06ppm	OK
	Orthogonality(CW 90deg method)	≤ ± 0.5 ppm	-0.03 ppm	OK
6.Pre-alingment	Mecahnical Prealignment Accuracy	≤ ± 30 μ 3σ	X: 4.9 Yl: 3.7 Yr: 11.4	OK
Accuracy				
7.Optical	Edge Bead Removal Range	0 - 6 mm	1mm; 3mm; 6mm	OK
EBR	Edge Bead Removal Accuracy	+0.3/-0.5 mm	-0.05 -0.09 -0.12	OK
8.Contamination	Particles > 0.3 μ Added Wf/pass	≤ 10	0.4 #/wf/pass	OK
	Particles > 0.5 μ Added Wf /pass	≤ 3	0.2 #/wf/pass	OK
9.Reliability	Cycled Wafers			
	Error/Assist			
	Test i)	25		OK
	Test ii)	500		OK
10.Throughput	Die by Die Leveling OFF	≥ 69	72.8 W/h	OK
	Die by Die Leveling ON	≥ 68	70.9 W/h	OK
11.COMPACT	Temperature Control	≤ ± 0.1 C		OK
CHAMBER				