N S R－S 2 0 4 B　NSR-S204B Standard Acceptance Test Items

Note: ・The Acceptance Test Procedure covers 6-inch reticles and 25×33mm fields.
・Tests for each item shall be conducted with leveling ON unless otherwise stated.
・Tests for each item are conducted unless otherwise stated
Lighting conditions: Conventional, Lens NA = 0.68, σ = 0.75.
・Tests of each item are performed by scanning (dynamic) unless otherwise stated.

Project	Specification	Grades
Resolution	220nm L&S	250nm OK
Depth of focus	△ 400nm or more / CD 44nm	good conditions required
T F D	Within 250nm	193 nm
Lens Distortion	± within 30nm	X: -25 ～ 17 nm Y: -25 ～ 20 nm
Magnification control accuracy	± within 10nm	H-I: 3 nm C-I: 1 nm
Maximum exposure range	25.0mm × 33.0mm (Horizontal× vertical)	OK
Reticle blind setting accuracy	+0.4 ～+0.8 mm	+Scan: X: 0.55 ～ 0.65 mm Y: 0.50 ～ 0.60 mm -Scan: X: 0.55 ～ 0.65 mm Y: 0.50 ～ 0.60 mm
Exposure Power 1) 1KHZ laser 2) 2KHz laser	1) ≦ 300 mW/cm^2 2) ≦ 600 mW/cm^2	1) No need mW/cm^2 2) 1201 mW/cm^2

Uniformity of the amount of dew	± within 2.5 %.	Max: 1.448 %
Cumulative exposure control accuracy 1) Linearity 2) Exposure matching	 1) ± within 1.3 %. 2) ± within 1.2 %.	 1) Max: 0.053 % 2) -0.058 %
Focus calibration repeatability	≦ 3σ 80 nm	56 nm
Stepping accuracy	≦ 3σ 25 nm	X: 21 nm Y: 25 nm
Orthogonality of arrays	Within ±0.1 seconds	-0.05 seconds
Reticle rotation	≦ |M| + 3σ 18 nm	17 nm
Superposition accuracy 1)FIA-EGA 2) LSA-EGA	≦ ≦ 1) |M| + 3σ 40 nm 2) |M| + 3σ 45 nm	1)X: 28 nm Y: 35 nm 2)X: 43 nm Y: 37 nm
Wafer pre-alignment reproducibility	≦ 3σ 1 5 μm	X: 3.002 μm Y: 5.641 μm θ: 4.072 μm
Focus-leveling repeatability	≦ 3σ 8 0 nm	+Scan: 27 nm -Scan: 19 nm
Processing power (2KHz laser, 200mm wafer) 1)FIA-EGA 2) LSA-EGA	 Target 1) 120 or more sheets/hour 2) 103 or more sheets/hour	 1) 123 pcs/h 2) 111pcs/hour

(1KHz laser, 200mm wafer) 1)FIA-EGA 2) LSA-EGA	Target 1) 109 or more sheets/hour 2) 94 or more sheets/hour	 1) No need/hour 2) no need/hour
Operation test 1) Wafer system 2) Reticle system	 1) Success rate 100% 2) Success rate 100%	 1) 100 % 2) 100 %