

Global Foundries

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No	ITEM	SPEC	RESULT
1	Resolution (0.175um IsoLine) Conv NA/σ = 0.68/0.75	Customer Dependent based on CD Tolerance, SEM/15 Point in Field, V/H 0.175um Iso	Customer needs to calculate using Item2 DOF Data
2	DOF (0.175um IsoLine) Conv NA/σ = 0.68/0.75	Customer Dependent based on CD Tolerance, SEM/15 Point in Field, V/H 0.175um Iso	Customer needs to calculate
3	Linewidth Abnormality/COMA (0.175um L&S) Conv NA/σ = 0.68/0.44	$[(L1 - L5) / (L1 + L5)]$ SEM/15 Point in Field, V/H 0.175um Iso	0.090 um
4	Total Focus Deviation Conv NA/σ = 0.68/0.75	(0.25μm L&S / 15Point V/H) Max-Min ≤ 0.20μm	0.195μm
5	Lens Astigmatism Conv NA/σ = 0.68/0.75	(0.25μm L&S / 15Point V/H) V-H ≤ 0.20μm	0.111μm
6	Lens Dynamic Distortion Conv NA/σ = 0.68/0.75	X,Y = Within ±25nm	X = -17nm~21nm Y = -24nm~62nm
7	Lens Flare / IU Flare Conv NA/σ = 0.68/0.75	Customer Dependent	Lens Flare = 7.0% IU Flare = 2.26%
8	Wafer Flatness Accuracy	1) Flat Within ≥ Max-Min 3.0μm 2) L.F.S Within ≥ Max-Min 0.8μm	1. 1.02μm 2. 0.520μm
9	Exposure Power Conv NA/σ = 0.68/0.75	Within ≥ 700mW/cm ²	837.89 mW/cm ²
10	Illumination Uniformity Conv NA/σ = 0.68/0.75	Within ±2%	5.09%
11	Orthogonality Accuracy	Within ± 0.48urad	±.20urad
12	Stage Precision Accuracy 1) Stepping Accuracy 2) Backlash Accuracy	1) $3\sigma \leq 25\text{nm}$ 2) $3\sigma \leq 25\text{nm}$	1. X: 14, 19, 17 Y: 7, 10, 10 2. X: 15, 13, 15 Y: 11, 11, 11
13	Wafer Pre-Alignment Repeatability	$3\sigma \leq 15\mu\text{m}$	X : 9.786 μm Y : 14.408 μm T : 19.794 μm

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14	Synchronization Accuracy 1) Mean 2) MSD	1) $\leq 10\text{nm}(-5\text{nm} \sim +5\text{nm})$ 2) $\leq 25\text{nm}$	1). X : 6nm, Y : 8nm 2). X : 20nm, Y : 20nm
15	AF Adjustment Result	PSD Max – Min $\leq 0.2\mu\text{m}$	0.030 μm
16	Integrator Accuracy	Target: 10, 20, 50, 100, 200mj/cm ² Ave $\leq 1.3\%$	Ave Max = 0.24%
17	Alignment Accuracy 1) FIA-EGA 2) LSA-EGA	FIA-EGA = $ M + 3\sigma \leq 35\text{nm}$ LSA-EGA = $ M + 3\sigma \leq 40\text{nm}$	1) X = $\pm 20\text{nm}$ Y = $\pm 20\text{nm}$ 2) X = $\pm 20\text{nm}$ Y = $\pm 20\text{nm}$