

Nikon i11D SET-UP REPORT

MODEL : NSR 2205i11D

M/C NO : 1105204

SET-UP Date : 2024.12 .01 ~ 2025.02 .14

SET-UP ENG'R : 김영선외 2인

APPROVAL			
DATE			
SIGNED BY			
NAME			

NSR-2205i11D Data Sheet

No	Item	Specification	Result	
1	Exposure Power	680mW/cm ² or More	737.2mW/cm ²	
2	Illumination Uniformity	Within $\pm 2.0\%$	1.448%	
3	Intergrater Exposure Accuacy	Within 1.0%	-0.05%	
4	Wafer Holder Flatness	Within 3.0 μ m	1.15 μ m	
5	Reticle Blind Setting Accuacy	+ 0.4 to + 0.8mm (on reticle)	0.50 ~ 0.75mm	
6	Reticle Rotation	X +3sigma Within $\pm 0.02\mu$ m	0.007 μ m	
7	Array Orthogonality	Within ± 0.1 sec	-0.032 sec	
8	Stepping Precision	Within 0.05 μ m (3 σ)	X	0.044 μ m
			Y	0.040 μ m
9	Step Back	Within 0.05 μ m (3 σ)	X	0.046 μ m
			Y	0.030 μ m
10	Distortion	Max & Min	X	-0.046 ~ 0.050 μ m
		$\leq 0.055\mu$ m	Y	-0.032 ~ 0.050 μ m
11	Inclination	$\leq 0.2\mu$ m	UL-LR	-0.090 μ m
			UR-LL	-0.061 μ m
12	COMA		Max	0.022 μ m

Nikon NSR-2205i11D Data Sheet

Lamp Check & Dose Control

Date : 2025/02/07

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

ITEM	RESULT	SPEC
Lamp Intensity	737.2 mW/cm ²	
Lamp Uniformity	1.448%	

Mode	Time (ms)	Specification (mJ/cm ²)	Read Value (mJ/cm ²)	Result (%)
	100	49.5 ~ 50.5	50.0	0.00
	200	99 ~ 101	99.9	-0.05
	400	198 ~ 202	199.8	-0.05
	800	396 ~ 404	399.6	-0.05



Nikon NSR-2205i11D Data Sheet

Wafer flatness

Date : 2024/02/07

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

	RESULT	SPEC
Max-Min	1.15 um	≤ 3.0μm

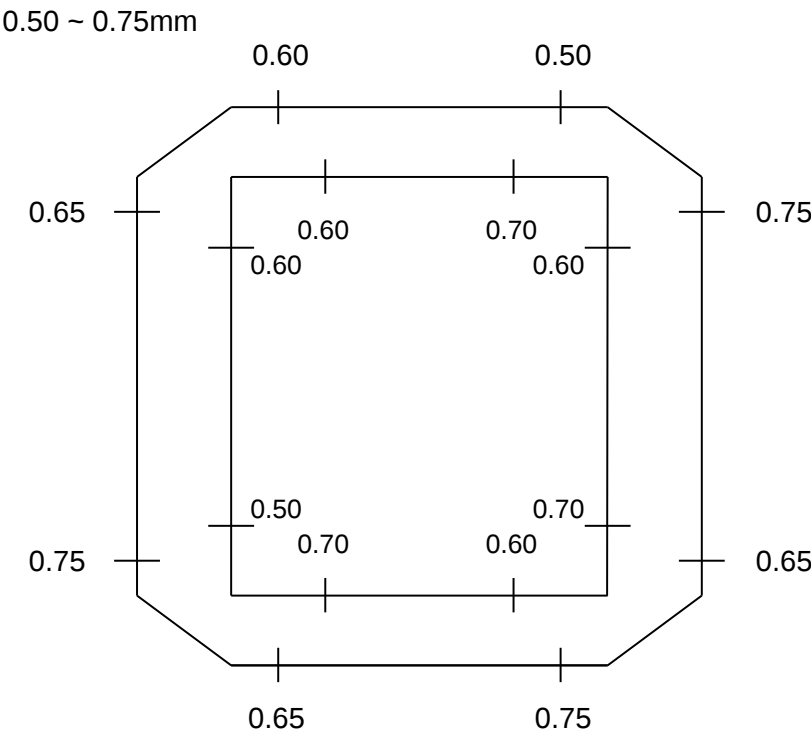


Nikon NSR-2205i11D Data Sheet

Reticle Blind

Date : 2024/12/05

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User Id	



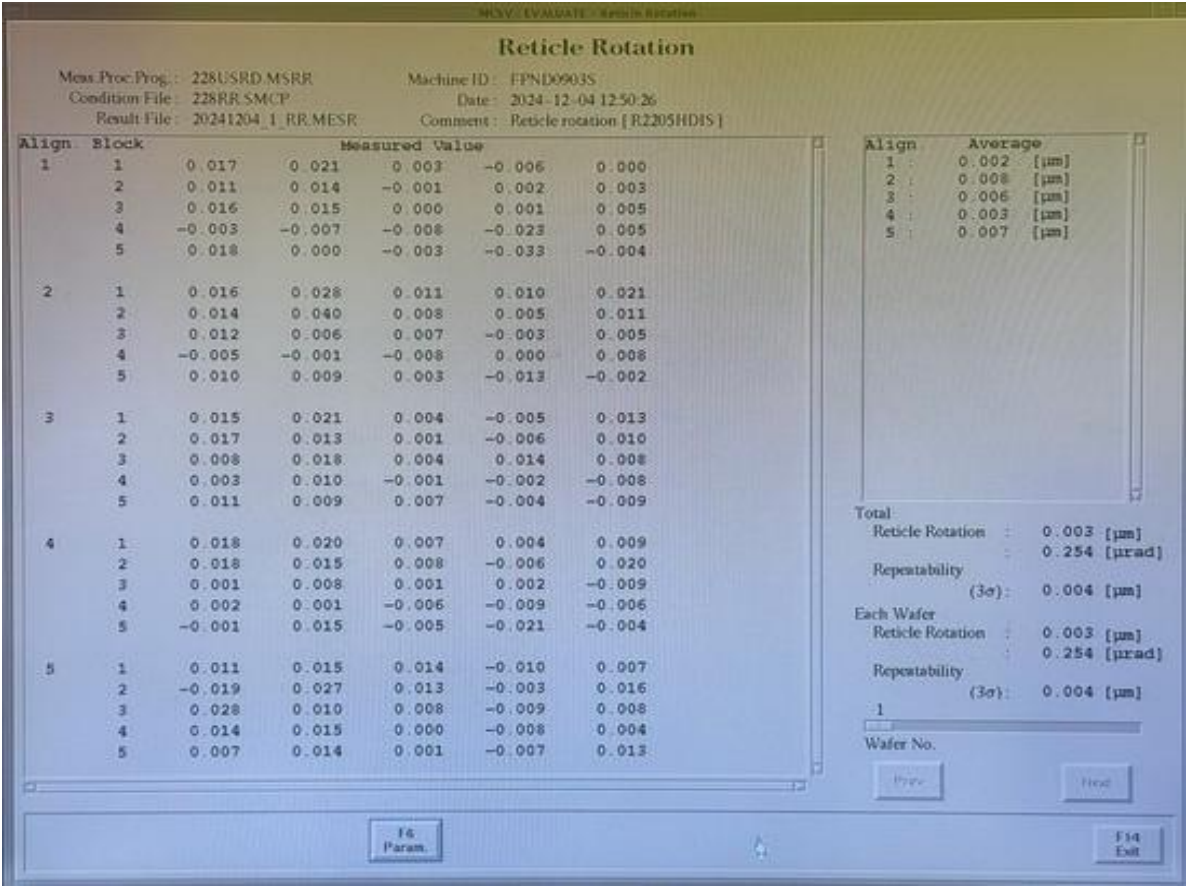
Nikon NSR-2205i11D Data Sheet

Reticle Rotation

Date : 2024/12/04

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

Reticle rotation	Result	Spec
Abs	0.003 um	within ≤ 0.02um
Rep.	0.004 um	



Nikon NSR i12D Data Sheet

7. Array Orthogonality

Date : 2024/12/04

Machine Type	NSR-2205i12D	Serial No.	
Inspected By		User ID	

Reticle rotation	Result	Spec
ORTM	-1.148 urad	Within ± 0.1 sec
ORTM90	0.844 urad	
ORT Result	-0.032 sec	

Process Program : @228USRB.ORTM		Processing : 1/1
Comment : Measurement Orthogonality < OF: Front > [R2205HB Ver.7]		Reject : 0
Reticle Name : R2205HB		
(7, 9): X EGA Result = -0.635		Sensor Calibration
(6, 8): Y EGA Result = -0.025		Reticle : Alignment Checked
(6, 8): X EGA Result = -0.620		LSA : Calib. with Reticle
(7, 7): Y EGA Result = -0.031		FIA : Calib. with Reticle
(7, 7): X EGA Result = -0.642		LIA : -----
(8, 8): Y EGA Result = -0.036		LC : Controlled
(8, 8): X EGA Result = -0.644		Focus Calib. : ----- [um]
g-EGA result		Lens Mag. : ----- [um]
Wafer Scaling :	0.264, 0.280 [ppm]	Alignment Sensor
Wafer Orthogonality :	-1.148 [urad]	Search : LSA
Wafer Rotation :	14.912 [urad]	g-EGA : FIA
Wafer Offset :	-0.643, -0.035 [um]	t-EGA : -----
Shot Scaling :	0.000, 0.000 [ppm]	D/D : -----
Shot Rotation :	0.000 [urad]	
Random Factor :	0.041, 0.035 [um]	

Process Program : @228USRB.ORTM90		Processing : 1/1
Comment : Measurement Orthogonality < OF: Right > (Manual Loading)		Reject : 0
Reticle Name : R2205HB		
(7, 9): X EGA Result = -0.582		Sensor Calibration
(6, 8): Y EGA Result = -0.031		Reticle : Alignment Checked
(6, 8): X EGA Result = -0.643		LSA : Calib. with Reticle
(7, 7): Y EGA Result = -0.029		FIA : Calib. with Reticle
(7, 7): X EGA Result = -0.661		LIA : -----
(8, 8): Y EGA Result = -0.005		LC : Controlled
(8, 8): X EGA Result = -0.633		Focus Calib. : ----- [um]
g-EGA result		Lens Mag. : ----- [um]
Wafer Scaling :	0.468, -0.606 [ppm]	Alignment Sensor
Wafer Orthogonality :	0.844 [urad]	Search : LSA
Wafer Rotation :	11.011 [urad]	g-EGA : FIA
Wafer Offset :	-0.631, 0.001 [um]	t-EGA : -----
Shot Scaling :	0.000, 0.000 [ppm]	D/D : -----
Shot Rotation :	0.000 [urad]	
Random Factor :	0.051, 0.063 [um]	

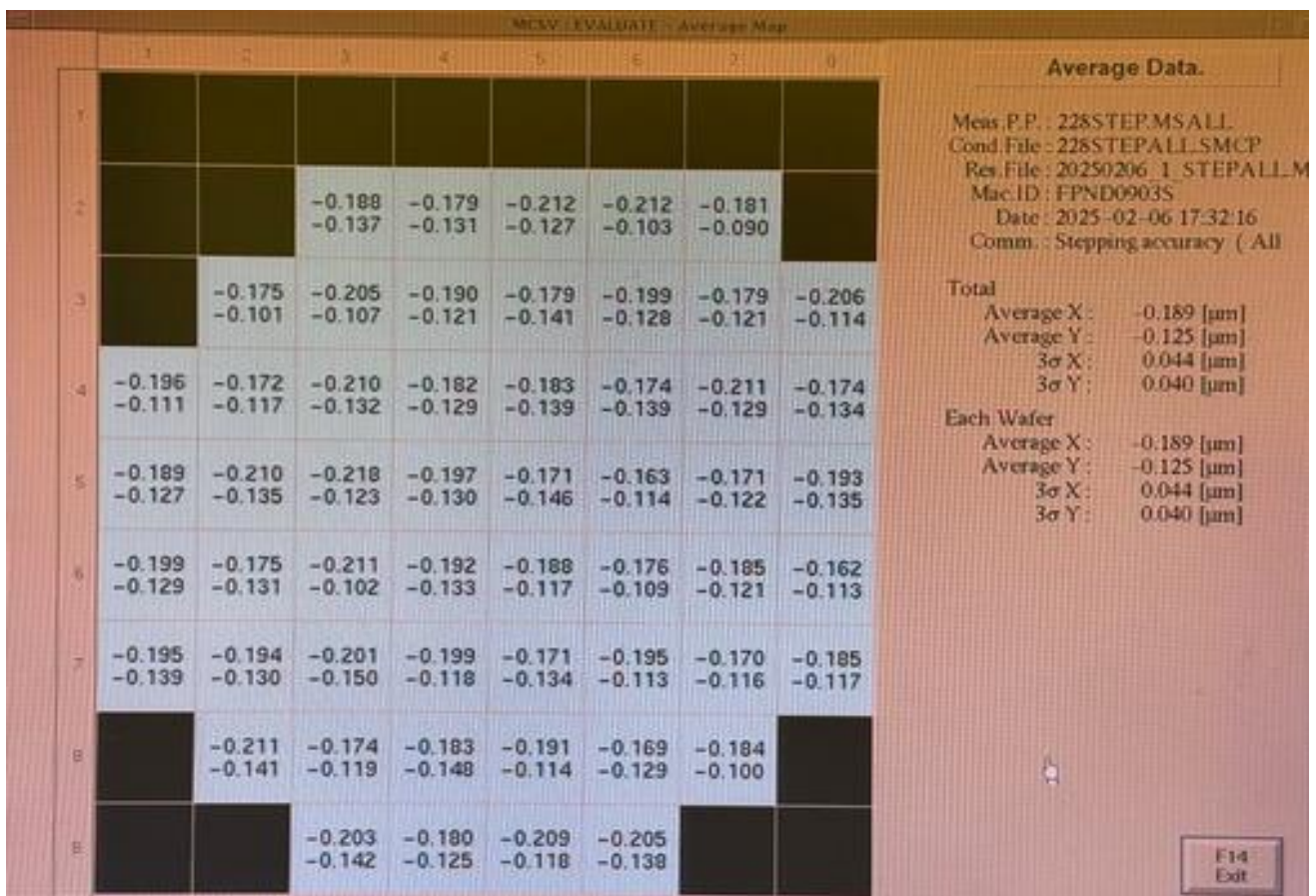
Nikon NSR-2205i11D Data Sheet

Stepping

Date : 2025/02/06

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

	X	Y	Spec
3σ	0.044 μm	0.040 μm	3σ≤0.050 μm



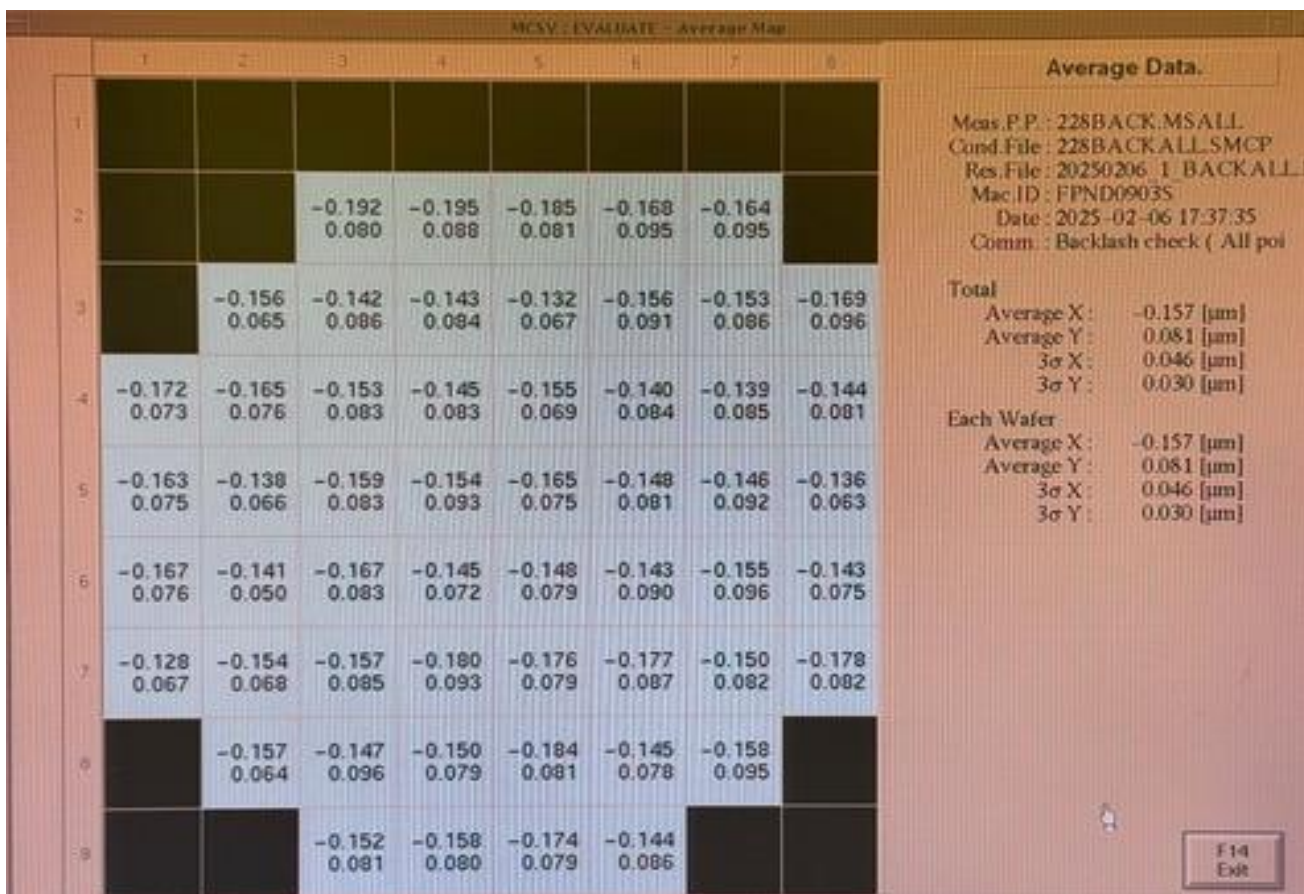
Nikon NSR-2205i11D Data Sheet

Step Back

Date : 2025/02/06

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

	X	Y	Spec
3σ	0.046 μm	0.030 μm	3σ≤0.050 μm



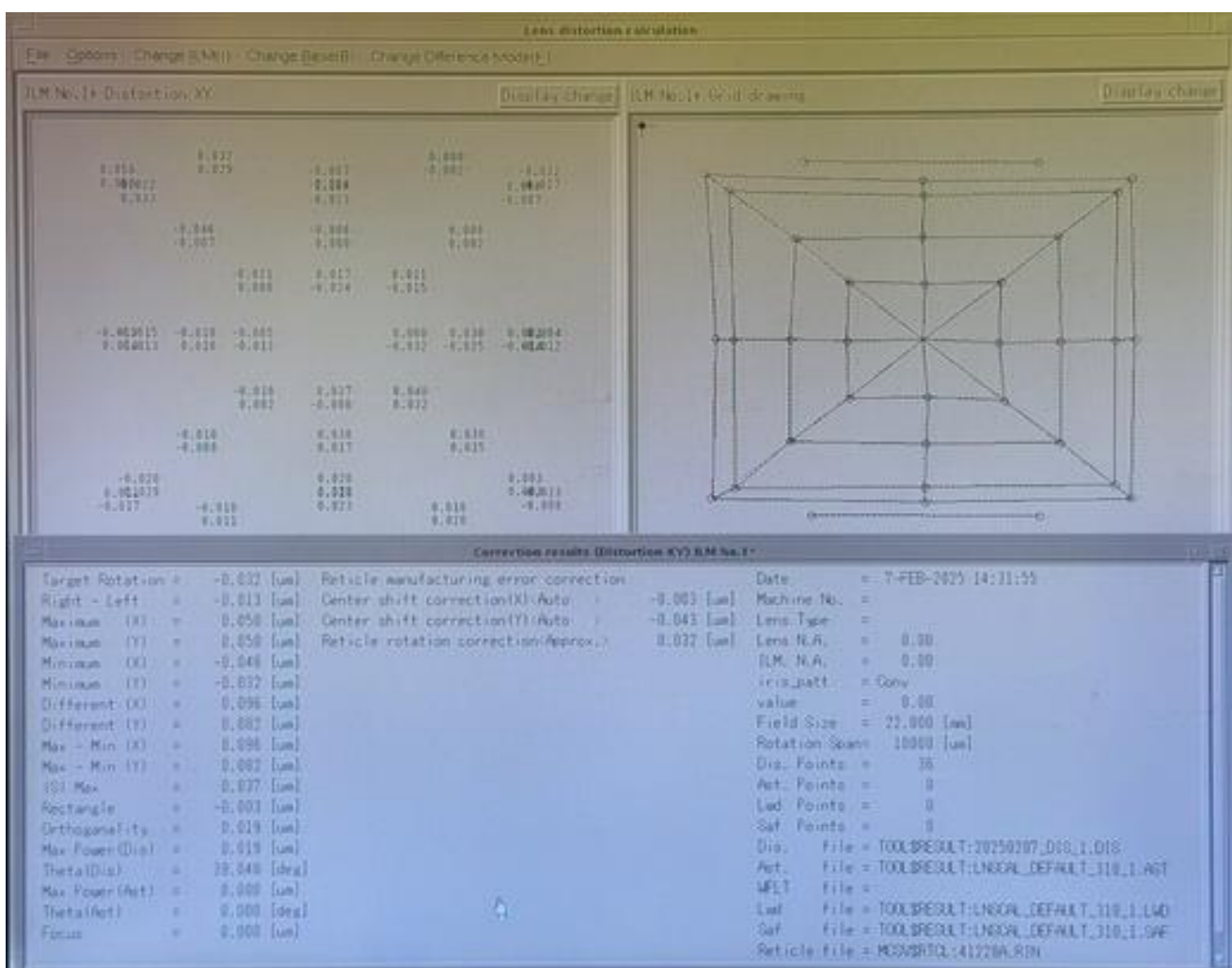
Nikon NSR-2205i11D Data Sheet

Distortion

Date : 2025/02/07

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

X	-0.046 ~ 0.050um
Y	-0.032 ~ 0.050um



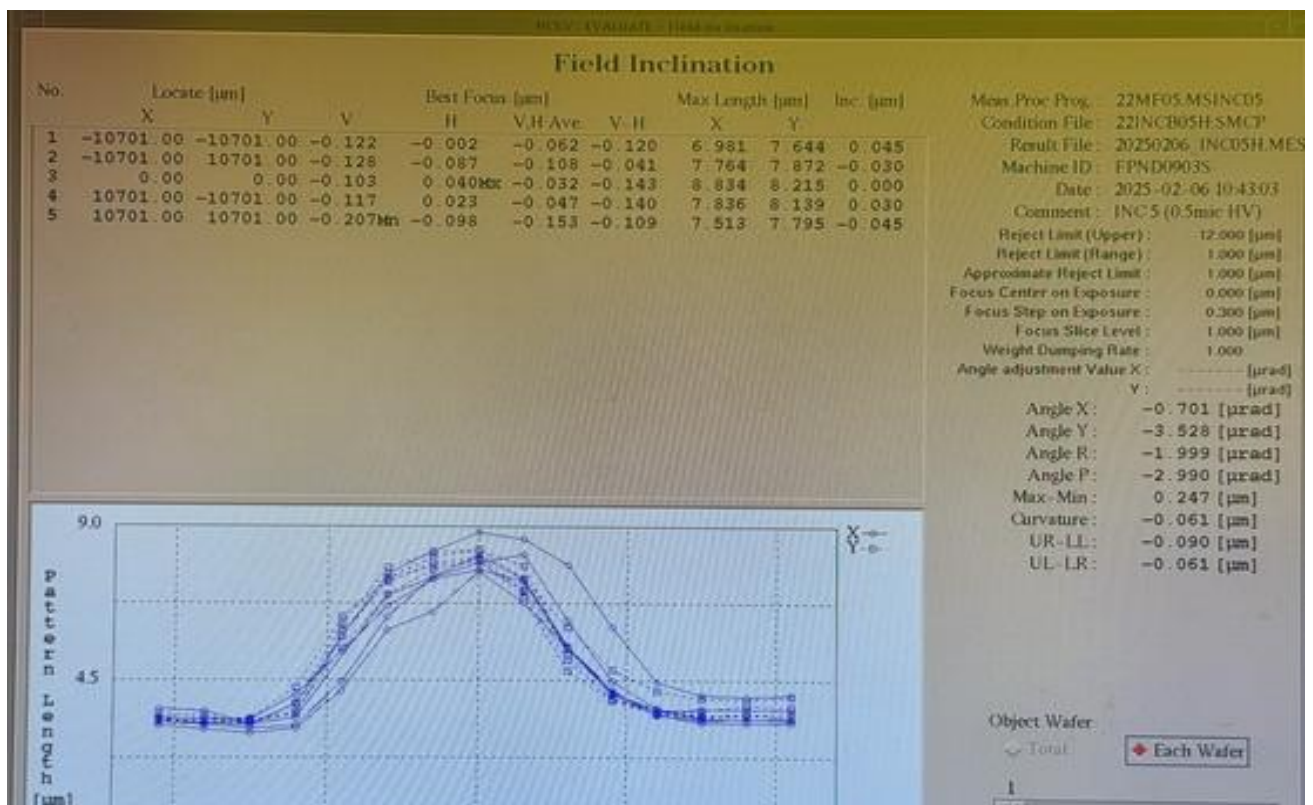
Nikon NSR-2205i11D Data Sheet

INC

Date : 205/02/06

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

	Result	Spec
UL-LR	-0.090um	within $\pm 0.2\mu\text{m}$
UR-LL	-0.061um	



Nikon NSR-2205i11D Data Sheet

COMA

Date : 2025/02/06

Machine Type	NSR-2205i11D	Serial No.	1105204
Inspected By		User ID	

COMA Result	Max : 0.022um
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Conv. 0.5um

496.3	518.8	-0.022				494.1	480.5	0.014
502.4	524.5	-0.022				499.2	499.9	-0.001
			502.2	507.3	-0.005			
			484.9	501.5	-0.017			
517.3	506.8	0.010				508.1	517.6	-0.009
516.7	501.5	0.015				506.2	517.3	-0.011

