Transaction Information

Tool ID	LASC701 (LAAS701)
Tool Status	Connected
Location	Woodlands, Singapore
Wafer Size	300 mm
Fab Section	Lithography
Tool Available Date	2021-12-31

General Product Information

Vendor Supplier	ASML
Model	XT 1250 D
Vintage	2005
Serial No	7337
Asset Description	193 nm Arf dry Scanner
Software Version	release _410
CIM	SECs
Process	65 nm and above

Hardware Configuration (Fab)

System Type	Description	Quantity	Status
Main System	Main Body	1	OK
Handler System	wfr handler to Track	1	OK
Factory Interface	NONE		
Options System			
Others			

Hardware Configuration (Subfab / Auxilliary Units)

Description	Quantity	Status
LCWC/MCWC	1	OK
ACC	1	OK
MDC	1	OK
Filter Cabinet	1	OK
Cymer Laser	1	OK

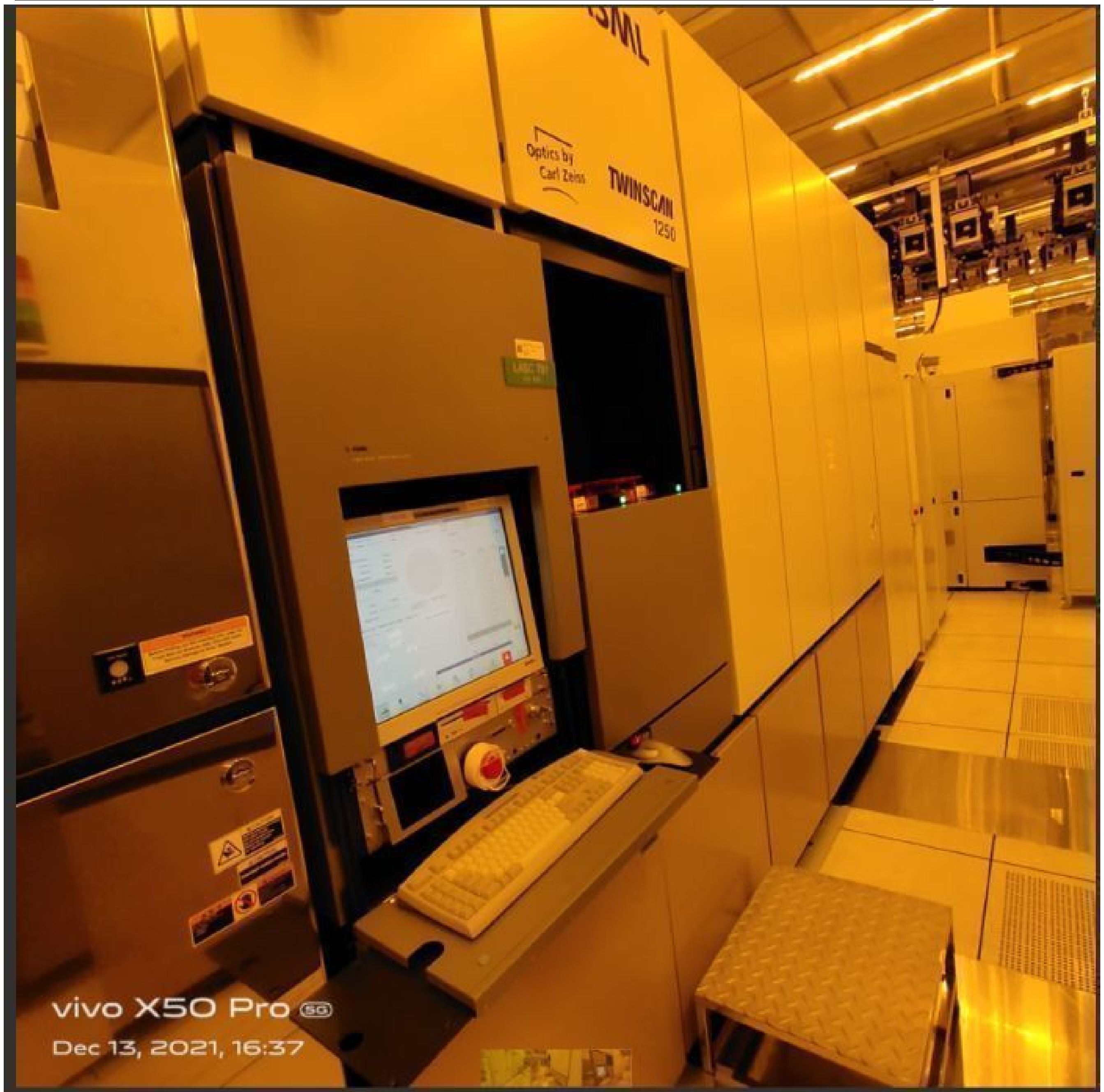
Missing/Faulty Parts / Accesorries List

Description	Quantity
NONE	

Tool Pictures

General	Main Body

General	Main Body



Hardware Sub-fab	CymerLaser/MDC/MCWC/LCWC/ ACC/Filter Cabinet

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Manufacture Serial	Serial No. Plate

Manufacture Serial	Serial No. Plate

Additional Configuration Files

Machine: 7337
Type: 1250D
Expiry date: No date

Configuration Items:
Track Pre-warning signal (APR)
    APR disabled
Avoid Track INPUT/OUTPUT conflicts, Raise AS after APR
    Avoid Track INPUT/OUTPUT conflicts disabled
Active wafer release for dry WS
    False
Closing disk type
    No closing disk present
Safeguard to prevent loading of reticles with too wide or mispositioned pellicles Disabled
Continuous clampable wafer table for dry WS
    Absent
Type of wafertable on chuck 2 for immersion machine
    Zerodur version 1
Type of wafertable on chuck 1 for immersion machine
    Zerodur version 1
WS Immersion throughput package
    None
WS Immersion thermal control package
    None
extended docking interface at Prealigner
    ECC_0MM
Wafer Stage Configuration
    Wafer Stage type 2 configuration
Wafer Carrier Location
    Right
Wafers per Carrier
    25
Wafer Mark Sensor
    Absent
Wafer Id Reader
    Absent
Wafer Size
    300mm
Wafer Track
    Present
Wafer Stage Type
    Dual Chuck
Wafer Stress Relaxation
    False
Lower Docking Plate
    Present
WS Balance Mass
    Stainless Steel
WH Robot Power Amplifier
    CPM 10
Wafer Stage Fast Stiff X Move Electronics
    Present

Wafer Stage Mirror Block Down Electronics
    Present
Universal Prealignment
    Disabled
Interferometer axis version at exposure
    3 plus 1 axis
Wafer Handling Pneumatics
    Dedicated
Wafer Switch
    Absent
Chuck 1 wafer size
    300mm
Chuck 2 wafer size
    300mm
Type of immersion hood for immersion
    None
Specifies chuck1 layout relev. for Immersion
    Chuck does not support immersion
Specifies chuck2 layout relev. for Immersion
    Chuck does not support immersion
Specifies chuck1 config
    Dry
Specifies chuck2 config
    Dry
Specifies chuck1 version
    not specified
Specifies chuck2 version
    not specified
Changed Short Stroke diff XY controller
    Disabled
Docking wheels at WH unload
    Present
Docking plate height
    Low
Immersion Hood version
    Absent
Carrier Handler Type
    Mark I 300 Foup
Wafer Handling Load Robot Type
    Double Fold Arm, 12 mm Z stroke
Wafer Handling Unload Robot Type
    Double Fold Arm, 12 mm Z stroke
Wafer Handling Store Unit
    Absent
Wafer Handler wrt BF Shifted in Z
    Not Shifted
Integrated Reticle Inspection System Clipped Status
    PPD2_1 System;
Reticle streaming lite
    Disabled
Enhancements in Reticle Monitor
    no enhancements
Reticle streaming
    Disabled

Improvements for reticle handling
    Disabled
Extend IRIS maximum particles scanned to 50000.
    Absent
Zeroing type for Encoders Measurement System
    Using extra hall sensors for zeroing
Reticle Stage Chuck Type
    Glued Leafspring
Reticle Stage Chuck Type
    TYPE_2: Glued LS, Pneum. GC, IFM / ENC
Nitrogen purging of Reticle Stage
    RS is not purged
Reticle Carrier Location
    Right
Integrated Reticle Inspection System
    PPD1 with IRIS1 functionality.
Integrated Reticle Library
    IRL with original functionality
Reticle Size
    6 inch
Reticle Carrier Tag Reader
    Present
Reticle Stage Long Stroke Motor Type
    Cobalt Ferro 18 teeth
Reticle Stage Long Stroke Config
    TYPE_3:CoFe_18 motor, SB controlled, int. vacuum supply, pneum GC
Automated Reticle Transport System
    Absent (Overrules Present)
Reticle Stage Lenscooler Box
    Lenscooler Box with anti-aliasing Filter
Maximum Reticle ID Length
    24 Characters
Reticle Stage Measurement System on Scan
    Heidenhain Encoders
Relative direction of ws to rs on the X axis
    Same
RS Object Field
    Normal
Reticle exchange type
    Retex option: E
Iris feature Scan
    Absent
Reticle Handler type
    Original
2D Barcode Reader
    Absent
Integrated Reticle Inspection System Configuration.
    Disable creation of OSIRIS viewable files.
Settle time reduction to improve the throughput
    Don't care
Scan speed increase to improve the throughput
    Don't care
WS Immersion Hood Only Testrig
    Absent

Version of RS/WS IO library
    Version 1
Dynamic Performance Calculation
    Mark 1
Stages Sample Rate
    5.0 kHz
Interferometer Electronics
    Ifsr
Capacitive z-height sensor type.
    Dual Z sensor board
Ifm config at measure side.
    8 axes
UV Shutter Optimized Open Time
    Optimized UV Shutter Open Time V2
DoseSystemPerformanceTest sequence
    Test sequence 1
PEP-ADC Intensity
    Disable PEP-ADC Intensity;
Online Lamp Peak
    Disable Online Lamp Peak;
Dose Intensity Optimization
    Disable Dose Intensity Optimization;
Laser Gas Life eXtension
    Disable Laser Gas Life eXtension;
Type of multi foil lens element
    none
Depolarizer type
    fixed depolarizer present
PSE Location
    not applicable
PCE Location
    not applicable
Intensity Calibration Per DOE
    Disabled
Pupil qualification method
    Centre of gravity method
Polarized illumination amorph DOE.
    Only unpolarized illumination.
Fresnel corrections for WSSS
    Disabled
Is NA accuracy measurement allowed?
    Disabled
Exchangeable Pupil Lens Element
    No EPLE
Multifunction Active Lens Element
    0
Multifunctional Active Elements
    0
Use Sigma Calibration
    no Sigma Calibration
Use Sigma WIP Preserving Offsets
    no Sigma WIP Preserving Offsets
THFFC FDE model lens dependent
    Disabled

BALE Type
      Don't Care
TIS diffuser
      TIS diffuser absent
Determination of NA ellipticity
      Disabled
XML output for LITHOGUIDE
      Disabled
Use validity ranges around UIP data when Enabled.
      Use exact matching for UIP data
Number of EXLE elements
      0
Functional use of Active Elements
      ALE function as ALE
Polarization Shaping Element Retractor
      No PSER hardware installed in the machine
Method for alignment of the laser beam
      Align the beam by minimizing the uniformity tilt over the slit (LUBF)
Pupil TIS angular sensitivity calibration and correction
      TIS Pupil Measurement will not be improved
Describes at what plane the BMU measures
      BMU readings are directly used as if they are at DOE1 plane
Lens Type
      12
Light-source Architecture
      Laser
Light-source Type
      Cymer Laser: XLA 165
Light-source Wave-length
      193nm
DOSEMAPPER
      Present
DOSE_MAPPER_1
      Present
REMA architecture
      REMA C
Illuminator Type
      120
Zoom Axicon Architecture
      ZZA
Zoom Axicon Type
      120
NA Control Architecture
      NA2 Torlon
NA Control Type
      120
Automated DOE Exchanger
      Present
Automated DOE Exchanger Architecture
      5 slots MIP Control
UNICOM
      Present

UNICOM Architecture
    1 Motor
Test Table
    Absent
Imaging Electronics Architecture
    B Architecture
Attenuator Type
    Variable
Test Table Z Axis
    Worm Wheel
PUPICOM
    Present
PUPICOM Architecture
    DC Motor with gearbox
Number of Z Lens Manipulators
    5
Number of Active Lens Elements
    1
Number of Bi-directional Active Lens Elements
    0
Number of Active Manipulator Elements
    0
Number of Active Elements
    1
Number of Half Dome Mirrors
    0
Number of Semi-Active X-Y Lens Manipulators
    4
Setup sensor board version
    Setup SSD version 1
Imaging Generic Power Amplifier
    Generic Power Amplifier
Imaging Control Rack Configuration
    IPDR
Type of projection multiplexer board
    MUX Absent
LEC Rack in Electronic Architecture
    Present
Projection GPA Configuration Version
    Version 2
Number of Lens NEXZ Manipulators
    5
Number of Lens Z Manipulators Using Camdisk
    0
Spotsensor surface coating
    Bilatal
Energy Sensor
    VLOC
Spot Sensor Chuck 1
    VLOC
Spot Sensor Chuck 2
    VLOC
Modelling for MAXYS
    Absent

Uniformity Improvement Package
    Present
Number of pre-amps available per Z-manipulator
    0
Immersion
    Absent
Pupil measurements with ILIAS
    Present
Automatic CUA
    Absent
Beam Control
    Beam adjustment
Extended Spot Sensor Matching
    Present
Number of Rxm
    5
Number of Rym
    5
Diaphragm Limiter
    Absent
NA1 motor type
    None
Spot Sensor Reticle Stage
    Absent
Smooth Field Uniformity
    Absent
Exchangeable Last Lens Element
    Present
Exchangeable Pupil Lens Element
    Absent
Number of manipulable ELLE axes
    0
UV Shutter version
    UV Shutter version 1
Dosecontrol Hardware
    ISB
Illuminator platform
    Aerial 2
Polarization
    Absent
Automatic PCE exchanger
    Absent
Automatic CUA exchanger architecture
    Not applicable
Test table architecture
    Aerial 2
Illumination modes
    All illumination modes
DUV Lightsource Power Level
     45.00 Watt
Lens Top Tool Connection
    Lens Top Tool can be mounted on top of the Lens
Scanning Energy Sensor Calibration
    Static Energy Sensor Calibration

Position of Spot Sensor on Chuck 1
    Spot Sensor Position on Chuck 1 layout 1
Position of Spot Sensor on Chuck 2
    Spot Sensor Position on Chuck 2 layout 1
Z-capture for low relfectivity wafers
    Off
TIS plate deformation correction
    Disabled
FSM Flexibility package
    Disabled
Field width optimised leveling
    Disabled
Constrained fit
    Disabled
Levelling throughput improvement on measure side
    No levelling throughput package
Point-to-Point LS Machine Matching
    Disabled
Circuit Dependent FEC
    Present
Focus Monitoring
    Present
Extended LS areas
    Disabled
Air Gauge
    Absent
Type of Air Gauge
    No Air Gauge device present
Reticle shape correction
    Disabled (Overrules Enabled)
LS focus node
    LS focus node 3
Level Sensor Processing Rack
    LCSR
LS_PEMM_CONFIG
    Present
LS_CPU_CONFIG
    3 CPU's available
BaseLiner overlay high order intrafield
    BaseLiner-Overlay high order intrafield is disabled.
BaseLiner focus high order intrafield
    BaseLiner-Focus high order intrafield is disabled.
BaseLiner focus control.
    BaseLiner-Focus application is disabled.
BaseLiner overlay control.
    BaseLiner-Overlay application is disabled.
Pattern Matcher fullchip
    Absent
Pattern Matcher
    Absent
Maximum numerical aperature (NA) that can be used in Lot Production
    level 0
Log missed translations
    Disabled

Allow even orders usage
      Present
Multilingual UI
      Absent
Improved Maintenance action scheduling.
      Disabled
Recipe Creator
      Light
Lot Report Data Category
      Enhanced Diagnostics
CDC
      Enabled
EFESE
      Absent
PED control mode
      Absent
Proximity Matching
      Present
mbds control
      Present
Enhanced exposures 1
      Present
Data collection not covered by FOCUS and OVERLAY
      InformPro Data Collection enabled.
Overlay Data Collection
      Overlay Data Collection enabled.
XML Lot Report Content Level
      Basic
Enable the Maintenance Assistant
      Disable Maintenance Assistant
EDA Interface
      Disabled
Equipment Constants via SECS interface
      Enabled
LCI WaitWatcher plug-in
      Absent
Reorder Lot Service
      Present
Shot Data Collection
      Absent
Focus Data Collection
      Present
Alignment Recipe Override
      Alignment Recipe Override Disabled
Alignment Strategy ID Standard or Extended. Protected.
      Alignment Strategy ID max length is 15 characters
Enable to support SMASH XY mark types.
      SMASH XY marks are not supported.
Specifies which mark types are supported
      ASML marks only
Alignment laser configuration
      2 color laser
OADB Improved Dynamic Range
      Disabled

board configuration
    ODB + ADB
Alignment Camera Mirror
    Absent
Athena Narrow Marks Twinscan
    Present
Alignment Sensor Type
    Athena OM
Athena Focus Improvements 1
    Present
Max alignment speed
    Setting 1
AA processing rack
    AACR processing rack
Particle Extraction Mass Flow Meter
    Absent
purging configuration
    purging CONFIG 3
Bubble Extraction Seal Setting
    Not Applicable
Ultra Pure Water flow controller (WICC)
    absent
LCW Circuit set-up
    Flow Version 1
In situ Wafer Table Stone Cleaning
    Stone 1
Clean Air Configuration
    Others
Metroframe Circuit Water Cabinet
    Absent
CT Miscellaneous Rack
    Present
Clean Air Temperature Control
    Driver and ACC
Purge Hoods configuration
    Compressed Clean air and Extremely Clean Dry air
Nitrogen Purge Utility Control
    Absent
Reticle Cleaning
    Absent
Metroframe type
    TYPE_I
Inlet restriction for clean air
    Inlet restriction at right side
Reticle Stage purged mini environment
    Present
Gas Control Unit Type
    High Flow (HF)
Wet Imaging Control Cabinet
    Not Applicable
Readout location of Pneumatic Facility Unit sensors
    Machine Base Diagnostics System (MBDS)
Laminar Bottom Hood
    Absent

Extreme Clean Humiditied Air
    Absent
Lens Circuit Water Flow
    High
Motor Circuit Water Flow
    Normal
SPM temp correction for lens axis
    Disabled
2 Sided IFM-beams for WS-X (expose)
    Not available
2 Sided IFM-beams for WS-X (measure)
    Not available
Diff pressure correction for IFM beams
    Absent
IFM Laser Configuration
    AOM Recombo Laser
Position Control Rack Configuration
    Rack Configuration type 3
Position Control Power Rack Configuration
    TYPE_3: Stages Power Rack upto E-spec
Number of Motion Controllers
    5 Motion Controllers present
Position Control Motion Control rack
    PMCR
Reticle Stage Short Stroke X amp.
    PADC 100V/16A
Reticle Stage Short Stroke Y11 amp.
    PADC 100V/16A
Reticle Stage Short Stroke Y12 amp.
    PADC 100V/16A
Reticle Stage Short Stroke Y21 amp.
    PADC 100V/16A
Reticle Stage Short Stroke Y22 amp.
    PADC 100V/16A
Wafer Stage Short Stroke 1 XY1 amp.
    PADC 100V/16A
Wafer Stage Short Stroke 1 XY2 amp.
    PADC 100V/16A
Wafer Stage Short Stroke 1 XY3 amp.
    PADC 100V/16A
Wafer Stage Short Stroke 2 XY1 amp.
    PADC 100V/16A
Wafer Stage Short Stroke 2 XY2 amp.
    PADC 100V/16A
Wafer Stage Short Stroke 2 XY3 amp.
    PADC 100V/16A
Reticle Stage Short Stroke Z1 amp.
    Pass Low Current 8.5A
Reticle Stage Short Stroke Z2 amp.
    Pass Low Current 8.5A
Reticle Stage Short Stroke Z3 amp.
    Pass Low Current 8.5A
Wafer Stage Short Stroke 1 Z1 amp.
    Pass Low Current 8.5A

Wafer Stage Short Stroke 1 Z2 amp.
Pass Low Current 8.5A
Wafer Stage Short Stroke 1 Z3 amp.
Pass Low Current 8.5A
Wafer Stage Short Stroke 2 Z1 amp.
Pass Low Current 8.5A
Wafer Stage Short Stroke 2 Z2 amp.
Pass Low Current 8.5A
Wafer Stage Short Stroke 2 Z3 amp.
Pass Low Current 8.5A
Reticle Stage Long Stroke Y11 amp.
450V20A: PAAC AT-pepD
Reticle Stage Long Stroke Y12 amp.
450V20A: PAAC AT-pepD
Reticle Stage Long Stroke Y21 amp.
400V16A: PAAC AT-D
Reticle Stage Long Stroke Y22 amp.
400V16A: PAAC AT-D
Reticle Balance Mass 1 amp.
400V16A: PAAC AT-D
Reticle Balance Mass 2 amp.
400V16A: PAAC AT-D
Wafer Stage Long Stroke E X amp.
400V16A: PAAC AT-D
Wafer Stage Long Stroke M X amp.
450V20A: PAAC AT-pepD
Wafer Stage Long Stroke E Y1 amp.
400V16A: PAAC AT-D
Wafer Stage Long Stroke E Y2 amp.
400V16A: PAAC AT-D
Wafer Stage Long Stroke E CS amp.
400V16A: PAAC AT-D
Wafer Stage Long Stroke M Y1 amp.
450V20A: PAAC AT-pepD
Wafer Stage Long Stroke M Y2 amp.
400V16A: PAAC AT-D
Wafer Stage Long Stroke M CS amp.
400V16A: PAAC AT-D
Wafer Stage Balance Mass 11 amp.
325V14A: PAAC AT-C
Wafer Stage Balance Mass 12 amp.
325V14A: PAAC AT-C
Wafer Stage Balance Mass 21 amp.
325V14A: PAAC AT-C
Wafer Stage Balance Mass 22 amp.
325V14A: PAAC AT-C
Pressure update rate for fringelength correction
Pressure update rate 2 or 4 Hz
TestStream
TestStream disabled
Performance Enhancement Package
None
PEP Image Streaming
Absent

Lot Overhead Reduction
    LOR2
PDOC quality indicator check
    PDOC quality indicator functionality is absent
Combined stage alignment
    Disabled
Reduced capture range for TIS scans
    Disable reduced range TIS scan scenarios
Extended Zone Alignment
    Disabled
Intrafield Higher Order Process Corrections
    Disabled
SMASH Reuse Capture Information in Stage Alignment
    Coarse capture scans are done on all stage alignment marks.
Allow wafer plane deviation check with Focus Monitoring
    Disabled
Parameter indicates how long overlay data will be stored.
    Short retention period.
Level sensor Ry drift correction
    Enabled
Fading Control Switch
    Enabled
Improved wafer reject mode
    Disabled
Automated Lens Heating Calibration
    Disabled
Lens heating History in LH Feedforward
    Enabled
Allow different Exp,TIS Align set
    Absent
Imaging Fading Control
    Disabled
Gridmapper
    Enabled
2D grid correction
    Enabled
Double TIS scan
    Disabled
Symmetrical Reticle Alignment
    Disabled
Ast offset correction in TIS LHFB/LOCO (Version 3)
    Disabled
Choice of avoidance routing.
    Absent
NEXZ-tilt per exposure
    The NEXZ-tilt cannot be adjusted per exposure.
Off-axis slit
    Projection lens has no off-axis slit.
Improved Edge Field Leveling
    Enabled
Enhanced Throughput Reticle Alignment
    Present
Wavelength Adjustable
    Adjustable

Allow L1L7 Type 1 Optimization
Absent
Lot Alignment Report Encryption
Unencrypted
Stage Alignment Filter
Present
Lot Correction Sequence
Type B
Lens Heating Feedback
Present
Application Specific Lens Heating Calibration and Verification
Present
Improved Contrast Control
Absent
ILIAS lens setup
Absent
Air Gauge Improved Levelling
Absent
Process Dependent Gain Correction
Absent
Enhanced Exposure Overlay
Full
ALE 1 Use
Lens heating only
Overlay Node
Level 0
E-chuck Flatness Qualification Test
Enabled
TOP HD
Absent
Reticle Align High Precision
Absent
LS spot coverage
Absent
Layout Version Number TIS Plate 1 on Chuck 1
TIS Plate 1 Layout Version 2
Layout Version Number TIS Plate 1 on Chuck 2
TIS Plate 1 Layout Version 2
Layout Version Number TIS Plate 2 on Chuck 1
TIS Plate 2 Layout Version 3
Layout Version Number TIS Plate 2 on Chuck 2
TIS Plate 2 Layout Version 3
Usage of wavelength data by TIS
Disabled
Usage of Energy Sensor data by TIS
Disabled
Indication what kind of AM controller hardware is present
SUCR
Piezo Active Lens Mounts
Absent
ILIAS Functionality For Lithoguide
Present
ISIS Functionality For Lithoguide
Absent

SAMOS Stray Light Test For Lithoguide
    Present
PUPIL Measurement For Lithoguide
    Present
FOCAL Measurement for Lithoguide
    Present
Leveling Verification Test for Lithoguide
    Present
Lithoguide Imaging Recipes
    Absent
Dose System Performance Test for Lithoguide
    Present
ILIAS Sensor Location
    Chuck 2
ILIAS sensor type chuck 2
    Multiple scan grid
ILIAS sensor type chuck 1
    None
Reticle Level Polarization Sensor
    Absent
Improve robustness DPCM mark
    Disable DPCM mark robustness improvement
SASO robustness and fiber connectivity
    Disable SASO robustness
Extended X width masking range
    Disabled
PDO offset for EFL LS spots
    Disabled.
Assure System Snapshots
    Assure System Snapshots not allowed
Insert a delay time before starting a Lot (lens heating).
    Enabled
Save throughput data to the disk
    Disabled
Patch strategy
    Patchlevel
Chuck Dedication
    Enhanced
Application Type
    Scanner Application
Number of RMCS clients
    No clients
MDL Viewer
    Site View
ZERO Fiducial
    ILIAS
Machine Architecture
    XT Machine Architecture
XT Architecture Revision
    Rev1
Machine Type
    1250
Machine Specification
    D Specification

Stand-alone Workstation
      False
Machine Location
      Customer Site
CP 1A
      Absent
CP 1B
      Absent
CP 2
      Absent
CP 3
      Absent
CP 4
      Absent
CP 5
      Absent
CP 6
      Absent
Wafer Handler Productivity
      Wafer Handler Productivity Level 0

Operator:ASML Machine:7337 Release:4.1.0
Date:30/11/2021 Time:19:41

Report Filename : EMZC.69
Report Path : TM/MetrologyCalibration/InitXYplane/EMZC.log/
Machine Type : 1250D

Test Info
Machine ID : 7337
Machine type : 1250D
Lens ID : 0123168a
ELLE ID : 000000
Testlog : ZSCA_7337_20211130_1825_manual.tlg
Date and time of measurement : 11/30/2021 18:25
Reticle ID : 45564101P110
Measurements layout : UV13X2
Clearout reticle : Yes
Chuck ID : Chuck 2
Number of cycles : 1
Number of Y positions : 5
Lens Temperature : 22.00 [C]
Lens Pressure : 1003.22 [mbar]

Lens Stability

Zernike delta over measurement time

	Delta [nm]	Spec. [nm]	In Spec.
Z5	-0.180	2.000	Yes
Z7	-0.159	2.000	Yes
Z9	0.249	2.000	Yes
Z14	-0.107	2.000	Yes
Z16	0.062	2.000	Yes

RMS values

		After Correction		Deltas		
	Current [nm]	NEXZ [nm]	+SA [nm]	NEXZ [nm]	SA [nm]	Both [nm]
Spherical	1.39	1.38	1.38	0.01	-0.00	0.01
Coma	0.78	0.52	0.53	0.26	-0.01	0.25
Astigmatism	1.14	1.14	1.14	-0.00	-0.00	-0.00
3-foil	0.64	0.63	0.62	0.01	0.01	0.02
(Z5->Z37)	2.05	2.03	2.02	0.02	0.01	0.03
(Z38->)	1.04	1.04	1.04	0.00	0.00	0.00