

XLS 7500

Configuration

System Configuration

Lens Tropel 2955 4:1 I-Line (365nm) 0.55NA 28.8 mm field size

AWHIIIIB Automatic Wafer Handler configured to cycle 25 6" wafers. AWH may be configured for 3" to 8" wafers. 1", 2", or single chips may be loaded by hand.

Theta/Z-Stage Provides wafer rotation, leel, and Z-motion.

RMS10 Ten 5" reticles may be loaded and stored.

Illuminator I line light source idles at 700W and may be pulsed to 1000W during wafer exposure.

CFS Automatic Focusing System.

MicroDFAS Local alignment system measures and corrects stage alignment prior to stepping.

PPC/RRS Provides rotation and Z-motion of the reticle using Piezos.

Insitu Probe mounted to stage and used to measure and correct lens reduction, rotation, and focus. It also measures and corrects system alignment baselines.

IQ Probe Probe used to optimize lamp position and light source uniformity. It also accurately measures and corrects Dose.

Computer Sun Work Station, Sparc 5

GWA Global Wafer Alignment System performs automatic digital alignment of global targets.

ACS Atmospheric Compensation System uses nitrogen to pressurize the reduction lens and accurately measure and correct for environmental changes.

Chamber XLS environmental chamber protects the stepper while maintaining temperature and cleanliness.

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Specifications

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Resolution, Line/Space/Contacts	0.5 μ m Line/Space/Contact
Depth of Focus, Line/Space/Contacts	\geq 1.0 μ m
Sidewall Angles	80-100° Positive 90-100° Negative
Exposure Control	Precision, Linearity \pm 1%
Magnification Control	\pm 3PPM
Focus Control	\pm 0.2 μ m
Overlay	\pm 90nm
Magnification Stability	\pm 3PPM
Focus Stability	\pm 0.2 μ m
Exposure Dose Stability	\pm 1.5%
Illumination Uniformity	\pm 2.0%
Local Leveler Repeatability	5ppm, 3 sigma
Throughput	62 WPH (150mm) 47 WPH (200mm)
Operational	25 wafers with no assists