Model 1100/4035 Specifications

Automatic Functions

Auto Prealignment:	Darkfield
Capture Window:	+ - 2 millimeters
Site by Site Alignment:	Darkfield
Placement:	< 0.13um, 2 sigma
Overlay Alignment:	98% < 0.16um
Target Capture Window:	+ / - 50 microns, scanning 200 micron target
Auto Focus:	Site by Site, electronic
Focus Gauge:	Automatic compensation for environmental fluctuations, image tilt
Auto wafer level:	Site by Site, electronic
Autoloader:	Cassette to Cassette, SEMI standard
Manual Loader:	Input and Output slot, single wafer
Reticle Load and Align:	Less than 5 minutes
Field Change:	7 seconds

System specifications

Wafer Sizes:	2", 3", 4", 5", 6", 8"
XY Stage:	Air bearing, laser metered, resolution of .00004 mm
Vibration Control:	Air cushioned granite table
Computer:	HP332 or HP362 computer with 3.5" floppy and hard disk (362)
Printer:	80 column printer, with clean room paper
Throughput:	55 WPH (1.0um lens), 45 WPH (0.8um lens)
Throughput, MVS System:	50 WPH (1.0um lens), 40 WPH (0.8um lens)

Lens Specifications

Lens Type:	Catadioptric
Lens Elements:	5 Total in two groups
Projection Ratio:	1:1
Exposure Spectrum:	Broadband, 390nm-450nm
Chromatic Correction:	Throughout exposure spectrum
Alignment Spectrum:	500nm-650nm
Numerical Aperature:	variable, .26NA thru .40NA
Resolution, Variable NA:	1.0um standard, 0.8um optional
Depth of Focus:	4.0 ums @ 1.2 um lines for 1.2 um lens 3.0 ums @ 1.0 um lines for 1.0 um lens 2.0 ums @ 0.8 um lines for 0.8 um lens
Field Size, 1.2um lens:	Max area rectangle = 34.2 mm x 13.6 mm Longest rectangle = 39 mm x 11.4 mm Largest square, 18 mm x 18 mm
Field Size, 1.0um lens:	Max area rectangle = 34.2 mm x 13.6 mm Longest rectangle = 39 mm x 11.4 mm Largest square, 18 mm x 18 mm
Field Size, 0.8um lens:	Max area rectangle = 31.8 mm x 11.5 mm Longest rectangle = 39 mm x 8.4 mm Largest square, 15.5 mm x 15.5 mm
Lens Type:	Catadioptric
Lens Elements:	5 Total in two groups

Illumination Specifications

Automatic Exposure Control:	Integrated dose monitored for exposure repeatability
Lamp Type:	200 watt mercury arc, pulsed to 500 watts during exposure
Mercury Vapor Control:	Built in
Exposure Uniformity	+/- 2.5%

Reticle Specifications

Size (from standard 5"x5" plates):	3" x 5" x 0.090" and 5" x 5" x 0.090"
Pellicle Protection:	Chrome Side
KLA/NJS Inspectable:	Yes, 4 identical rows
Substrate:	Quartz or low expansion
Alignment Mark:	Scribe Area
Size:	200um square standard, optional crossmask size allows reduction of mark to 70um minimum
Design Flexibility:	Verticle or Horizontal alignment marks
Generation Technique:	E-Beam or optical step and repeat
Fields per reticle:	2 fields standard, up to 7 fields total (requires optional hardware)

Physical Specifications

Footprint:	14 feet square
Dimensions:	46" width x 50" depth x 78" height
Service Clearance:	Allow 24" on all sides, and in back
Weight:	3000 lbs
Facility Requirements:	No environmental chamber required
Ambient Temperature Control:	70 degrees , +/- 2 degrees fahrenheit
Electrical:	115 volts, 50/60 Hz, 15 Amps, Inrush current, 35 Amps for 100 milliseconds
Nitrogen or Compressed Air:	Minimum 80 psi, 2 CFM, Dry to -40 degrees F dewpoint, filtered to 0.2 microns
Vacuum:	One line, minimum 20" Hg, 2 CFM
Exhaust:	Single exhaust to 3 - 10 CFM at 0.1" H20

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