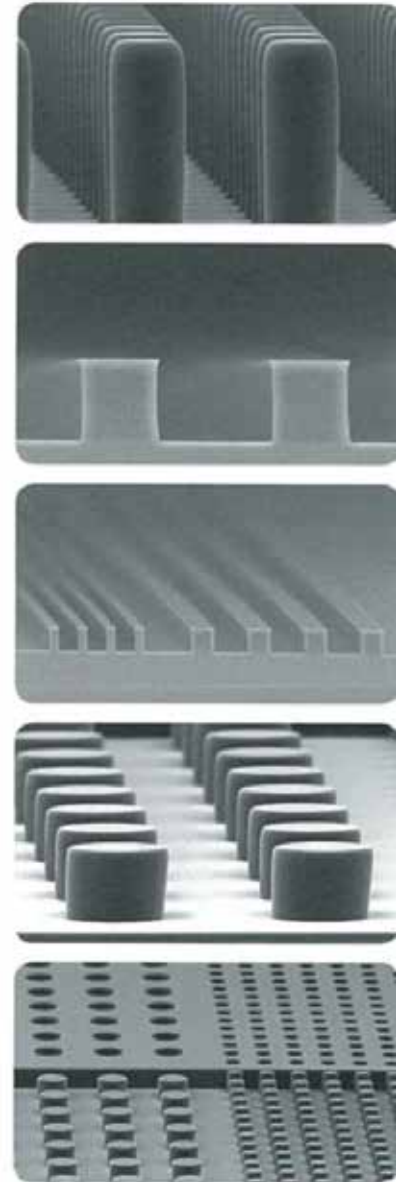


Manual Mask Aligner LED Light Source

The MDA-400LJ is a mask aligner specially designed for university and research institutes. The system is equipped with a maintenance free 365nm LED light source (50.000 hours lifetime) and therefore ideal for resist processing.



Standard Features	
Manual & pneumatic control system	
Sample size	up to 4" diameter
Mask size	up to 5" x 5"
UV LED light source with power supply	
Dual CCD zoom microscope and dual monitor	
Alignment tooling module with X,Y,Z and theta motion (micrometer)	
Wedge error compensation system (air bearing type)	
Dimension	800 (W) x 800 (D) x 800 (H) mm
Weight	120 kg
Warranty	1 year



Tel.: (31) 341 360 590
info@sps-europe.com
info@sps-asia.com

Manual Mask Aligner LED Light Source

Light source module specifications	
Lamp type	UV LED
Wavelength	365nm (i-line)
365nm beam Intensity	10~20 mw/cm ²
Max. beam size	Diameter 125mm
Beam uniformity	≤3%

Microscope specifications	
Dual CCD zoom microscope	
Manual moving stage	Dual X, Y, Z axis
Objective spacing	40 ~ 100mm
Move range	Y Axis ± 15mm
Dual monitor	
Magnification(scope)	90-480X

Resolution specifications	
Vacuum Contact	1μm < Thin PR (thickness 1μm) @ Full size Si wafer>
Hard Contact	2μm
Soft contact	3μm
20μm Proximity	5μm

Stage and controller module specifications	
Exposure timer	0.1 sec to 999.9 hour
Stage movement	X,Y,Z and Theta
X, Y	±5mm
Z Motion travel	10mm (Separation distance mask & sample distance: max. 5mm)
Theta	About ±4°
Contact mode	Vacuum, hard, soft contact vacuum & hard contact (force controllable)
Alignment accuracy	<±1.0μm
Vacuum / pneumatic controls	Substrate, mask, chuck lock & contact

Utilities requirement specifications	
Electric power	230VAC / 15A / Single phase with ground
Nitrogen	>40 psi (3kg/cm ²), 6 mm tube (PU)
Clean dry air	>85.5 psi (Over 6 kg/cm ²), 6mm tube (PU)
Vacuum	< -200 mbar
Exhaust	Not required



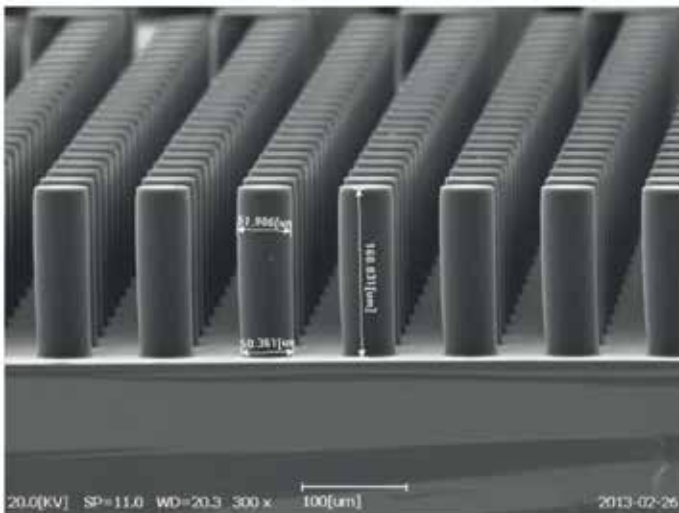
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Manual Mask Aligner LED Light Source



SU-8 for MEMS Process

Example of SU-8 processed on the MDA-400LJ.



SU-8 height 160µm width 50µm



SU-8 height 170µm width 40µm



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