



Model OAI 800E: Enhanced Front and Backside Semi-automatic Mask Aligner

With over 4 decades of product development and manufacturing in the semiconductor industry, OAI meets the growing challenge of a dynamic market with an elite class of photolithography equipment designed for R&D and semi-automatic production. Built on the proven OAI modular platform, the Model 800E is an enhanced, high-performance high-resolution lithography system which delivers a level of performance that is unmatched at this price point. The aligners feature OAI's Advanced Beam Optics offering exceptional uniformity. Upgradable with OAI's Precision Lithography Modules, the Model 800E is a versatile tool in the lab or in the field. The Model 800E utilizes Windows 10 control and recipe storage. It also comes with joystick controlled alignment and optics stages, and can be configured with non-contact 3-point wedge effect correction and auto-align capability. These combined features are typically found in more expensive mask aligners but are available for an affordable price on the Model 800E.

Standard Frontside Features

- Dual 1MP resolution GIGE CCD cameras
- Substrates up to 8" square • masks to 9"x9"
- Windows PC controlled with recipe storage
- Motorized joystick for alignment and positioning
- * Exposure modes: Vacuum, hard soft & proximity
- Auto Wedge Effect compensation

Standard Backside Features

- All of the above, plus:
- 2 additional cameras (4 total)
- Digital zoom
- Motorized backside optics focus

Semi-automatic

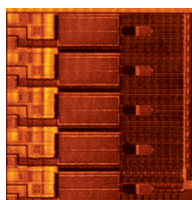
Topside Alignment

Bottomside Alignment

Advanced Beam Optics

2 & 4-camera versions

Many options





Specifications: OAI Model 800E Enhanced Mask Aligner System

Front/Backside Mask Alignment System

Mask rotation	$\pm 45^{\circ}$
Mask size	Up to 9"x9"
Mask loading	Vacuum and mechanical clamp
Mask/substrate pressure	User definable (Electronically Enhanced Hard Contact)
Chuck motion control	X,Y,Z & Theta (motorized joystick)
Exposure gap	0-3000 μ m
Gap adjustment	1 μ m
Mechanical resolution	0.1 μ m
X, Y travel	± 5 mm
Theta travel	$\pm 4^{\circ}$
Leveling	Automated wedge-compensation system
Overlay accuracy	Top to back <2 μ m (3s) - Top side to 0.5 μ m
Substrate size	To 200mm square
Printing modes	Proximity, Soft, Hard and Vacuum Contact
Printing resolution	Vacuum: submicron
	Hard contact: to 1 μ m
	Soft contact: to 2 μ m
	Proximity: to 3-5 μ m with 15-20 μ m gap
Exposure time	1-3200 seconds in 0.1 second increments
Alignment Optics Magnification	Top: Continuous zoom - 70x to 400x
	• Optional 140x to 800x
Alignment Optics Separation	Bottom: 180x
	Top: 42mm to outside of mask
	• Optional to 9mm
	Bottom: 19mm to 200mm
	• Single microscope 0mm to 200mm

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