

Development and production
of laser and sorting systems

IL 3000 Wafer Marking System



The InnoLas IL 3000 (Plus) series laser system is designed to mark 300mm Silicon wafers.

The IL 3000 (Plus) provides deep or debris free marking with the possibility to simultaneously mark the front and backside of a 300mm wafer in a single process step.

A unique InnoLas Semiconductor designed 300mm vacuum or edge grip handling (including aligner) is available. Both handling systems provide front and/or backside marking capability.

The wafer marking system is controlled by a 19" industrial PC. The powerful Windows™ based software package includes user friendly operator and engineer interface along with sophisticated diagnostic features for maintenance and service personal. Software options include wafer sorting and SECS/GEM host interface. Customized software solutions are available upon request.



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Technical Specifications IL 3000 (Plus) Series

HANDLING SYSTEM

Wafer sizes:	300mm (12"), 200mm (8") optional
Wafer transfer:	Robot - double end effector
Wafer alignment:	Opto mechanical aligner
Wafer handling:	Vacuum or edge grip
Number of stations:	4 stations (input / output)
Throughput:	200 wafers/hr (SEMI M13-88 without reading)

LASER AND OPTICS

Laser type:	Nd:YAG 1064nm, 532nm and 355nm (diode pumped) Nd:YAG 1064nm (lamp pumped) Others on request
Laser class:	Class 1 (Class 4 with open cabinet / service access)
Beam expansion:	Two lens system
Focus lens:	F-Theta objective
Galvo head:	Digitally controlled (field: 110x110mm)
Laser stability:	+/- 1% peek to peek

MARKING

Fonts:	Dot Matrix (SEMI 5x9, 10x18, 15x23 and 9x17) Barcode (SEMI 412, IBM 412) 2D Code (SEMI T7) Engrave Mode (optional)
Checksum:	SEMI, IBM, customized (optional)
Serialization:	Numeric, alphanumeric, IBM (ascending or descending)
Text position:	Adjustable in X and Y direction
Repeatability:	+/- 80µm X and Y direction
Marking Depth:	0.1µm - 100µm (depending on material type and process setup)

STANDARD OPTIONS

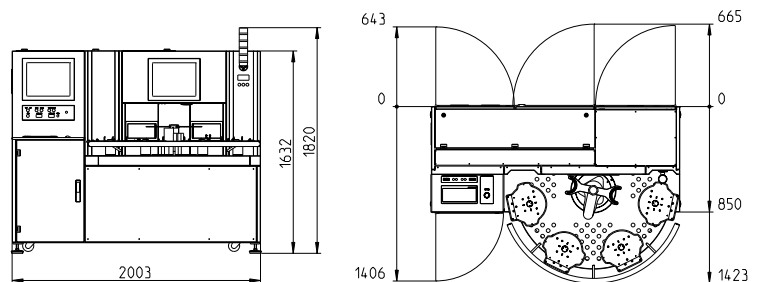
- Reading system for wafer front and / or backside
- Second galvo head for wafer front and / or backside
- Auto laser power controller
- Barcode hand scanner
- Process viewing window with laser safety glass (100x200mm)
- Motorized auto zoom (3 lens system)
- SECS/GEM host software
- Service area control system at backside of machine

FACILITY REQUIREMENTS

Electrical:	400V AC / 3P / N / PE / 50Hz / 16A 208V AC / 3P / N / PE / 60Hz / 25A 208V AC / 2P / PE / 60Hz / 30A
Communication:	Ethernet RJ45 connector
Vacuum:	-800mbar (23.6Hg) - Festo 8mm OD connection
PFO:	Process Fluid Outlet - Festo 8mm OD connection
Exhaust:	75m ³ /hr (44.1ft ³ /min) - 50mm ID connection
Weight:	1200kg (2646 lb) depending on options
For lamp pumped laser only:	
Cooling water:	5.5l/min @ 15°C (1.35gal/hr @ 59°F)
Water pressure:	min. 2bar (29psi)

CERTIFICATIONS

- CDRH accession # 0010530
- CE certified



Dimensions in mm