INNOLAS SEMICONDUCTOR

Development and production

of laser and sorting systems

# IL C3000 Wafer Marking System

The Innolas IL C3000 is a state of the art class 1 mini environment marking system for 300mm Silicon wafers.

The system allows fully automated laser marking of polished 300mm wafers in FOUP cassettes using our debris free processing techniques.

The integrated mini environment has an ionization unit with laminar flow and pressure control.

The two station system can be loaded by the system operator or with an OHT (over head transport) system following the SEMI E84 standard.

The unique InnoLas Semiconductor designed 300mm vacuum or edge grip handling (including aligner) is available. The system offers marking capability on the front and/or backside of the wafer.

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 C 3000 Series

### HANDLING SYSTEM

| | |
|---|---|
| Wafer sizes: | 300mm (12") |
| Wafer transfer: | Robot - single end effector |
| Wafer alignment: | Opto mechanical aligner |
| Wafer handling: | Vacuum or edge grip |
| Number of stations: | 2 stations (input / output) + inspection (optional) |
| Throughput: | 120 wafers/hr (SEMI M13-88 without reading) |

### LASER AND OPTICS

| | |
|---|---|
| Laser type: | Nd:YAG 1064nm, 532nm and 355nm (diode pumped) |
| 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 in X and Y direction |
| Marking Depth: | 0.1µm – 5µm (depending on process setup) |

### STANDARD OPTIONS

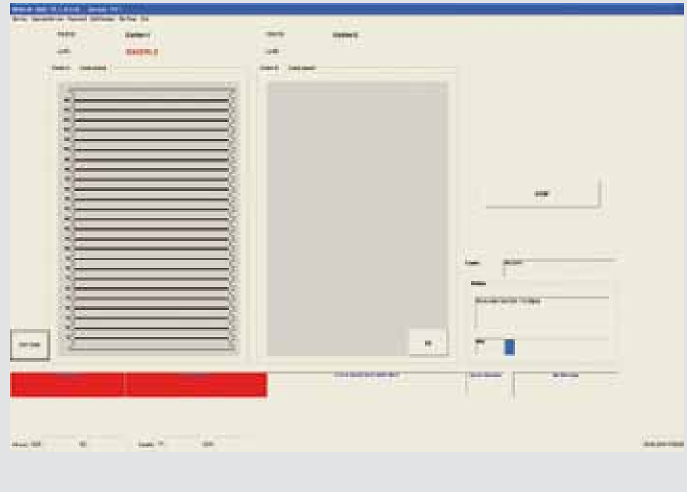
· Reading system for wafer front and / or backside
· Second galvo head for wafer front and / or backside
· 3rd station for wafer inspection
· OHT (Over Head Transport) for cassette loading/unloading
· Auto laser power controller
· Barcode hand scanner
· Process viewing window with laser safety glass (100x200mm)
· Motorized auto zoom (3 lens system)
· SECS/GEM host software
· Service area control system at backside of machine

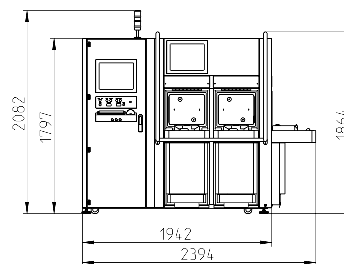
### FACILITY REQUIREMENTS

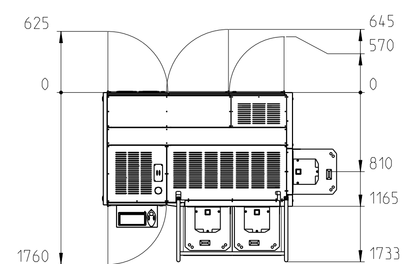
| | |
|---|---|
| Electrical: | 400V AC / 3P / N / PE / 50Hz / 16A |
| | 208V AC / 3P / N / PE / 60Hz / 25A |
| | 208V AC / 2P / PE / 60Hz / 30A |
| Communication: | Ethernet RJ45 connector |
| Vacuum: | -800mbar (23.6Hg) - Festo 8mm OD connection |
| Compressed air: | 8bar (116psi) - Festo 8mm OD connection |
| PFO: | Process Fluid Outlet - Festo 8mm OD connection |
| Exhaust: | 75$m^3$/hr (44.1$ft^3$/min) – 50mm ID connection |
| Weight: | 1250kg (2756 lb) depending on options |

### CERTIFICATIONS

· CDRH accession # 0010530
· CE certified






Dimensions in mm


EUROPE (Headquarter)
InnoLas Semiconductor GmbH
Justus-von-Liebig-Ring 8
D-82152 Krailling/Germany
Phone +49 (89) 899 360 - 0
Fax +49 (89) 899 360 - 16
info@innolas-semiconductor.com
www.innolas-semiconductor.com

NORTH AMERICA
Merritt Precision Technology, Inc.
P.O. Box 5870 Cary
North Carolina 27512
Phone +1 (919) 362 7170
Fax +1 (919) 363 8559
usa@innolas-semicoductor.com

KOREA
Young Woo High Tech
3 rd Floor, Young shin BLDG. 954-4
Dogok-Dong, Kangnam-Gu
Seoul, 135-270, Korea
Phone +82 (2) 3462 0366
Fax +82 (2) 3462 0369
korea@innolas-semicoductor.com

SINGAPORE
InnoLas SEA Pte Ltd
371 Beach Road
15-02 Keypoint
Singapore 199597
Phone +65 6391 0292
Fax +65 6391 0295
sg@innolas-semiconductor.com

TAIWAN
DYT Taiwan Pte., Ltd.
2F., No. 47 Shinjheng 2nd Rd.
Chubei City, Hsinchu 302
Taiwan
Phone +886 (3) 558 7120
Fax +886 (3) 558 7121
taiwan@innolas-semiconductor.com