

Levio Laser

4 sides visual inspection of laser diodes with contactless handling

Levio Laser is a high precision fully automatic inspection machine, developed to match the needs of laser diode's producers. Touchless Automation contactless handling technology allows to manipulate laser bars with a delicacy never reached before in the photonics industry.

Levio Laser can handle multiple standard inputs and outputs media, which allows it to be integrated into any production flow. The trackability of each component enables to have complete control of the process quality.

An ISO 14644-1 Class 6 enclosure and ESD protection complete the machine and reach for even higher process quality.

Component features

- Minimum size: 0.5 mm
- Maximum size: 10 mm
- Minimum thickness: 100 µm
- Contactless handling of any material (GaAs, GaN, Glass, ...)

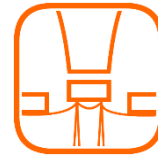
Inspection features

- Visual inspection of 4 sides
- Automatic defect recognition
- Facet defect min size: 0.5 µm

4 SIDES
INSPECTION



CONTACTLESS
DIE EJECTION



CLEANROOM
ENCLOSURE
ISO 14644-1
Class 6



AUTOMATIC
INSPECTION

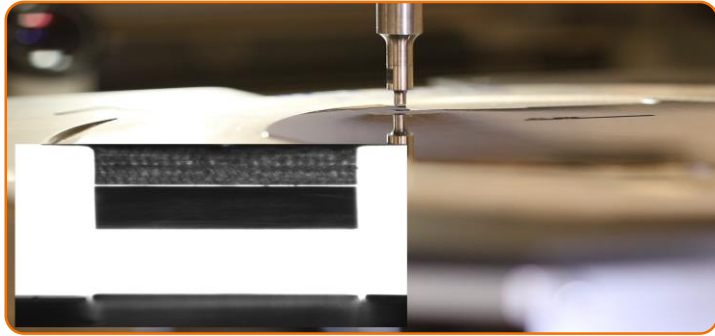


CONTACTLESS
HANDLING



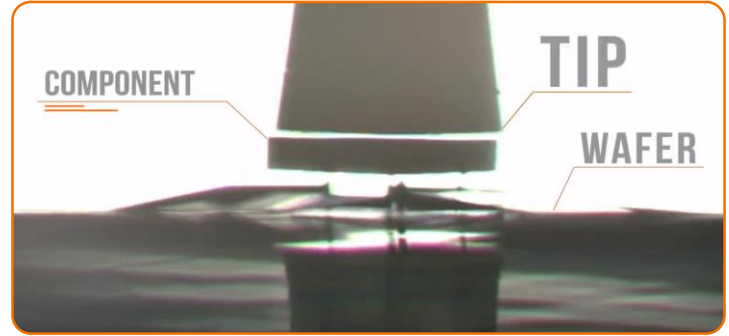
MULTIPLE
OUTPUT





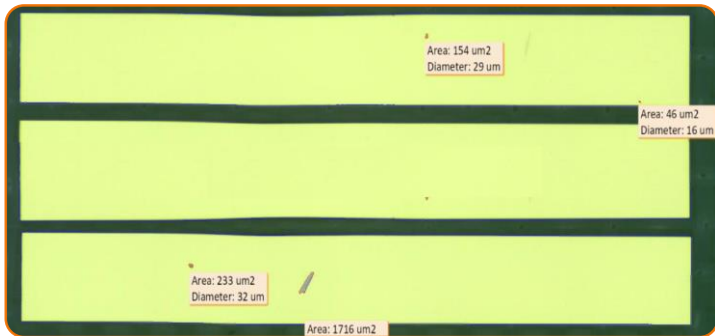
Contactless pick up from adhesive tape

Each bar can be picked up from a wide range of adhesive tapes, all while never touching the top side. An adaptive vision system, with optional OCR, allows for automatic component detection.



Contactless handling

Touchless Automation technology manipulates components without any physical contact. This thanks to a combination of vacuum and air streams that allows for any material to be handled.



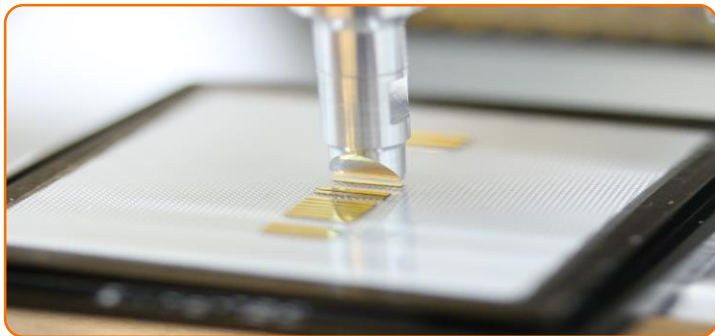
Automatic defect detection

The visual inspection system automatically detects defects on 4 different sides of the laser bar. Top side, bottom side, light emitting facet and back facet.



Process flexibility

The possibility to fit die ejection, inspection, sorting, flipping and placing in the same machine allows for a great process flexibility and maximize yield of downstream machinery.



Multiple output carriers

Automatic sorting of the components into multiple output trays, according to inspection results. Placing precision up to $\pm 5 \mu\text{m}$.

SWISS MADE

Touchless Automation GmbH

Rue David Moning, 8
2504 Biel/Bienne, Switzerland

Machine Dimensions

- Width 1200mm
- Depth 1150mm
- Height 1700mm
- Weight: approx. 900 kg

Input

- 4", 6", 8", 12" input frame
- 6 waffle trays 4"
- 20 waffle trays 2"
- 2 Jedec trays

Die features

- Min size: 0.5 mm
- Max size: 10 mm
- Min thickness: 100 μm
- Any material

Throughput

- 600 UPH with die ejection
- 1000 UPH from tray
- Final throughput depends on inspection requirements

Requirements

- Voltage 220-240 VAC
- Current 12A max
- Air pressure 6 Bars max

Output

- 6 waffle/Gel Pak® trays 4"
- 20 waffle/Gel Pak® trays 2"
- 2 Jedec trays

Placing Precision

- $\pm 5 \mu\text{m}$
- ± 1 degree theta