

LaserScan™

Fast non-contact laser profilometer

Ease of use and reliability make the LaserScan a remarkable tool for fast and accurate surface measurement.

The LaserScan profilometer is a modular surface measuring system for quality assurance and process control. Depending on the specific measurement task it can be equipped with different laser sensors, making it a unique tool to meet a variety of measuring requirements. Its software features allow for automation and flexibility in a production environment.

Using confocal laser technology enables the sensor to distinguish different translucent layers. This unique feature allows for thickness measurements and profiling of secondary and tertiary surfaces under a transparent top layer. As a result the LaserScan tool can adapt to a wide variety of surfaces without sacrificing accuracy.

Customer Applications:

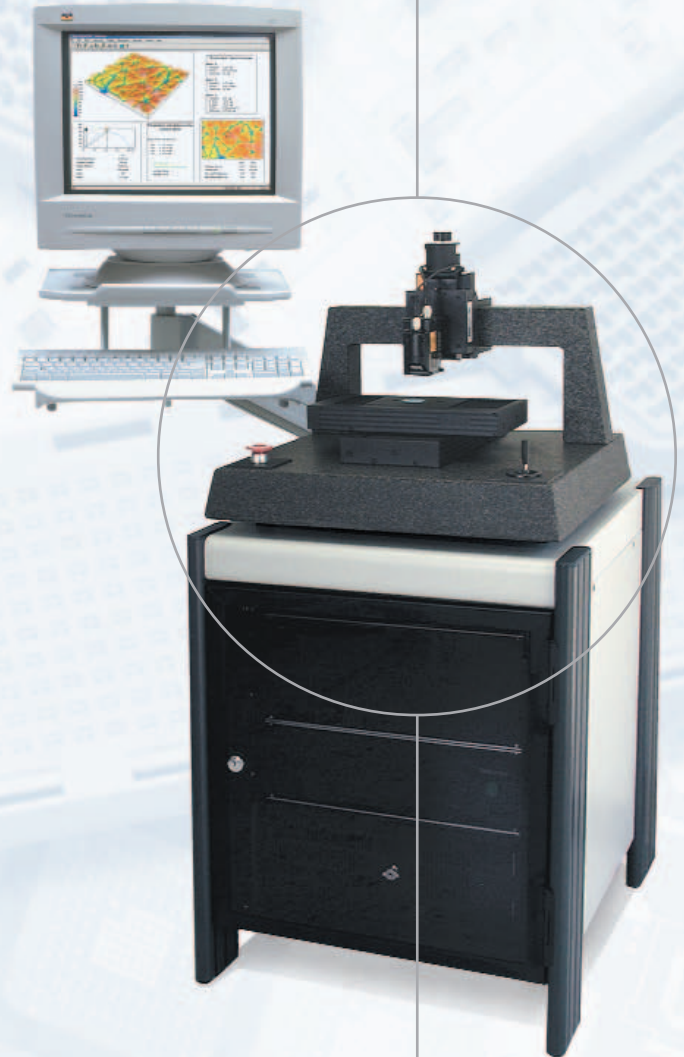
Engineering Surfaces: Measurement of form, flatness and roughness for detailed metal pieces. Form and volume characterization of micro inspection molding, waviness and microtopography of sheet metal surfaces.

IC-Packaging/SMT: Fast and automated characterization of warpage, lead coplanarity, laser marking depth and contact roughness. Solder paste volume and pad location can be measured with sub-micron accuracy.

Thick Film/Hybrid: Automated measurement of production parameters such as printed resistor layers, conductor paths, and laser trim structures, including freshly printed paste. This provides fast and precise control of the screen-printing process.

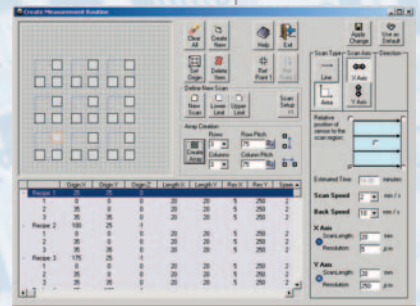
Inkjet Nozzles: Identification of the size, location and structure of nozzles to dispense ink.

- Modular design
- Fast measurement speed
- Non-contact and non-destructive
- Flexible and easy to automate



Software

The LaserScan solution is a combination of two software tools, a measurement creation tool and a flexible analysis tool. This unique combination is ideal for applications in research and development, failure analysis and low volume semi-automated measurement. Designed for useability, the LaserScan software makes powerful 2D and 3D analysis accessible to users of all skill levels.

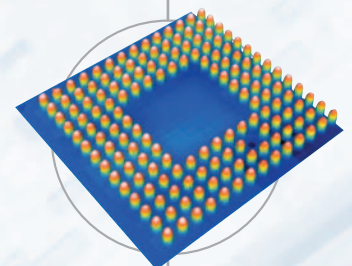


Automated measurement and analysis routines

Sensor

The LaserScan comes with the option of two laser point sensors.

SENSOR	LT8010	LT8110
Measuring range [mm]	0.6	2
Vertical resolution [μm]	0.1	0.2
Spot size [μm]	2	7
Stand-off [mm]	5	28
Measuring frequency [Hz]	1,400	1,400
Linearity of F.S. [%]	± 0.5	± 0.3
Camera	on-axis integrated	on-axis integrated

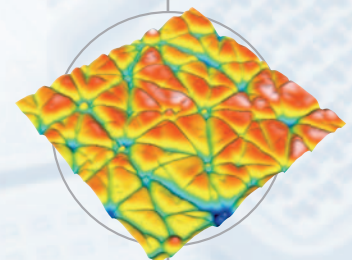


IC soldering tool

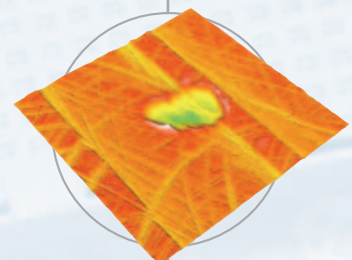
System Specifications

The LaserScan utilizes an interchangeable sensor module, which is mounted on a solid platform. The sample is positioned on highly precise computer controlled x-y stages. Table size and bridge height can be adapted individually to suit the sample size and measurement task. Included in the system is an integrated electronic control with the latest CPU, motion control and Windows 2000® operating system.

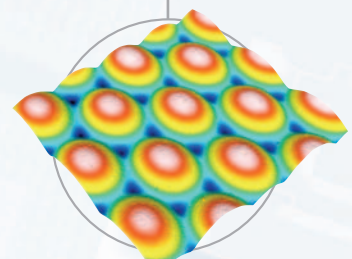
STAGES	L100	L200
Measurable area [mm]	100x100	200x200
Resolution [μm]	0.5	0.5
Flatness [$\mu\text{m}/50 \text{ mm}$]	<2	<4
Maximum allowable load [N]	100	100



Skin



Wear mark on aluminum



Microlens on plexiglass

All specifications subject to change without notice.

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