Viking™

General purpose laser profilometer

An economical 3D surface profiler meets a wide variety of surface inspection needs. Viking is designed with a small footprint making it ideal as a desktop metrology tool.

The tool is designed to meet mid-range accuracy needs using state-of-the-art sensor technology to generate three-dimensional surface maps. Solarius maintains the precision and workmanship of its high accuracy LaserScan system, incorporating the same design methodologies in the Viking.

The productivity benefits of Viking lie in its easy to learn measurement procedures. New operators spend less time learning to use the system and more time measuring components. Once a measuring sequence is performed and saved, the same measuring sequence and analysis can be recalled at any point in the future.

- **Short learning curve**
- **Fast non-destructive testing**
- **Automated measurements**
- **Measurement report generator**
- **Fast replacement for tactile systems**

Customer Applications

Thick Film: Measurement of conductive ink either wet or dry on ceramic surfaces. Measurements can be performed before or after the component has been fired.

Plastic Surfaces: Plastic surfaces give rise to geometric changes due to both stress and wear. Measurements can be performed at high angles of incidence, this allows for 3D forms to be profiled.

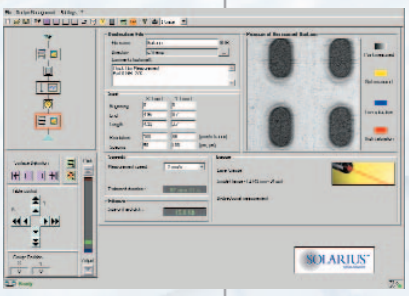
Metal Surfaces: Wear and other form features can be measured rapidly with the Viking system. The system lends itself to post production analysis of small metal parts and identifying microscopic defects.

SOLARIUS™ DEVELOPMENT

Viking™

Software

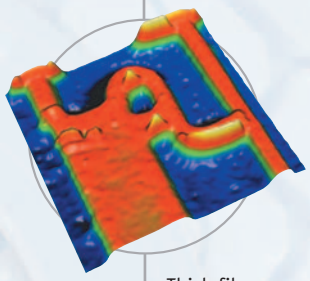
Viking data acquisition software utilizes a unique flow chart technique for entry of measurement specifications. This is a powerful tool for step and repeat applications, more than one measurement can be programmed forming a sequence of measuring steps. The Viking software allows for 3D measurement and 2D analysis (3D analysis optional), results are presented in graphical form. Numerical data can be displayed and then exported in a database format. The measurement routine can be easily edited or saved for future use.



Intuitive user interface

Sensor

SENSOR	T1	T2
Measuring range [mm]	10	30
Vertical resolution [µm]	1	3
Spot size [µm]	30	70
Stand-off [mm]	30	80
Measuring frequency [KHz]	2	2
Linearity of F.S. [%]	± 0.10	± 0.10
Camera (optional)	off-axis	off-axis

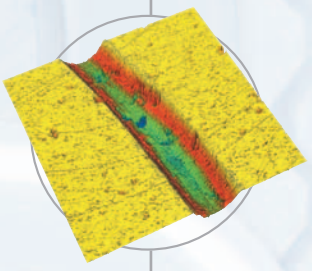


Thick film

System and Measurement

Viking is a stand-alone desktop surface measurement tool. The x-y stages are mounted to a granite base; the sensor is mounted above the tables and supported by a granite column. Surface measurements are made by rasterizing the surface with the tables moving in either the x or y direction as specified.

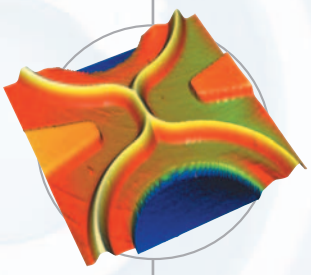
STAGES	V100	V150
Measurable area [mm]	100x100	150x150
Resolution [µm]	1	1
Flatness [µm/50 mm]	< 10	< 10
Maximum allowable load [N]	100	100



Wear analysis

Options

- Camera: Allows for viewing of the surface that is to be measured. This is a useful option for locating specific features to be measured.
- 3D Analysis Software: This option allows you to extend the analysis capability with full 3D functionality.



Rubber gasket

All specifications subject to change without notice.

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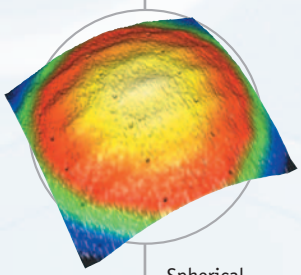

Spherical measurement

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