



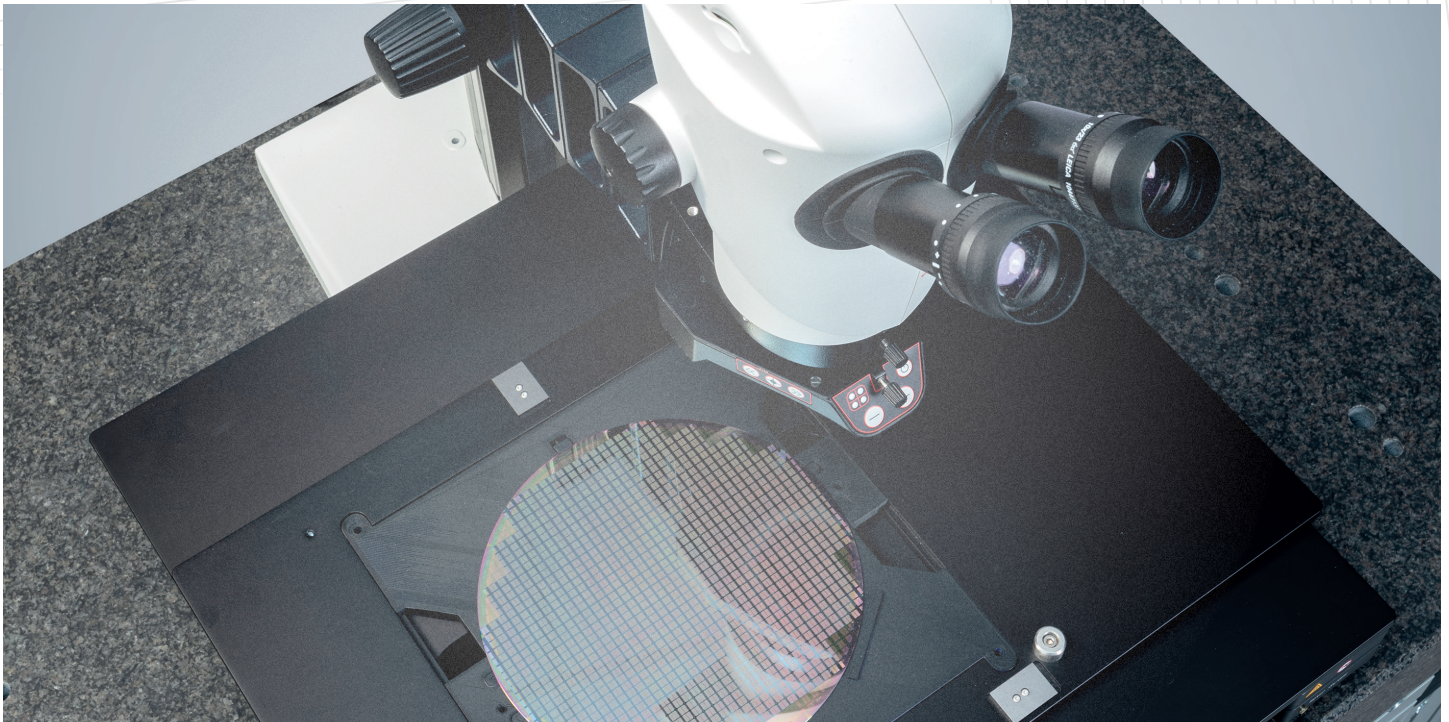
## Positioning systems made to measure.

OEM Machines

Positioning Systems

Modules

Components



# Microscope Stage LMT850

The new LMT850 microscope stage is particularly user-friendly because it has numerous features that make microscopy easier for the operator and enable reliable positioning. These include easy parameter setting and

precise repeatability of travel patterns. The operator can choose between manual and automatic operation. Robust sensors based on the magnetostrictive (MR) effect ensure high precision and dynamics.

### Key Features.

- Direct positioning in two axes by means of two linear motors
- Absolute measurement of the position through integrated measuring system, no more homing drives necessary, simply switch on and position
- Designed for interaction with the latest generation of Andromeda series controllers
- Repeatability up to  $< \pm 1 \mu\text{m}$
- Joystick and handwheel optional
- Easy manual movement of the stage possible at any time
- Very compact design
- Travel range: 205 x 205 mm
- Velocity range: max. 300 mm/s

### Your Advantages.

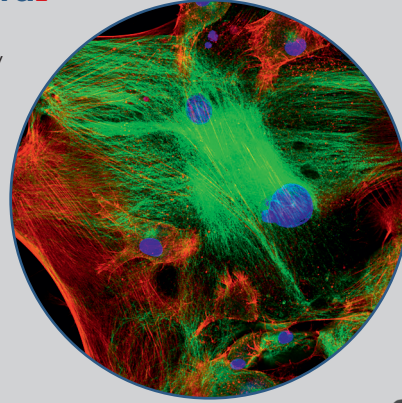
- Unrivalled dynamic acceleration and velocity range
- Space saving on the worktop
- Extremely fast collection of image information
- Precise retrieval of the position in Mark and Find applications
- Ergonomic hand-held control units enable fatigue-free work.
- Quickly, conveniently and precisely reach the relevant position at the touch of a button
- Generates valuable free space above and below the microscope stage
- Low or high acceleration in the blink of an eye - the choice is yours!



## Highlights.

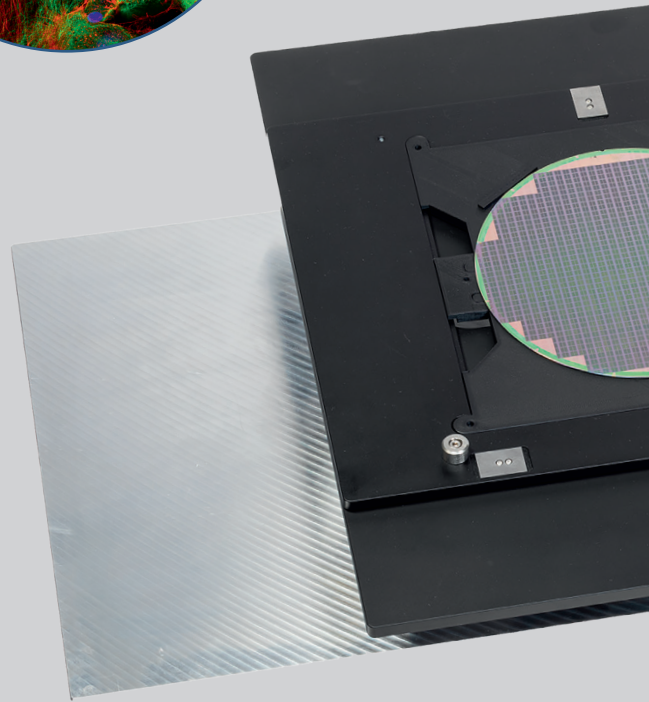
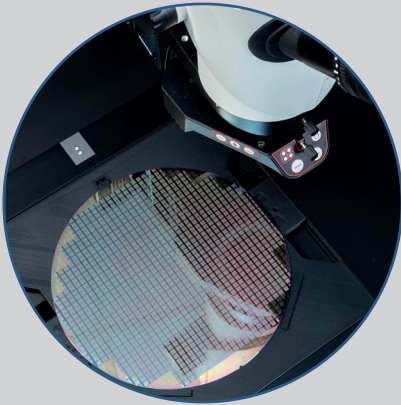
### Accurate triggering of the camera.

High spatial resolution and spatial accuracy in image generation is ensured by a special and extremely fast trigger function in the control unit developed to match the table. This enables outstanding image quality for further analysis. When used in life science or semiconductor applications, the trigger function determines the scanning speed while maintaining high image quality.



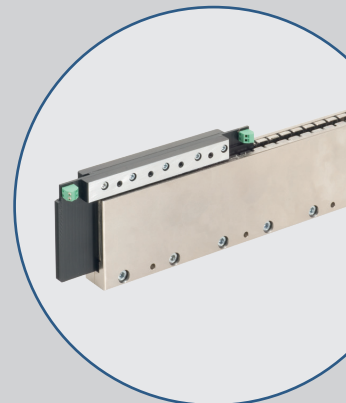
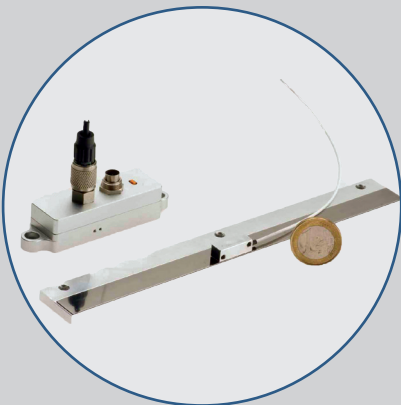
### 8" Wafer format.

The LMT850 microscope stage is designed to meet the current needs of the semiconductor industry for wafers up to 8 inches. The focus is on dynamic and precise fine positioning.



### Integrated absolute measurement system.

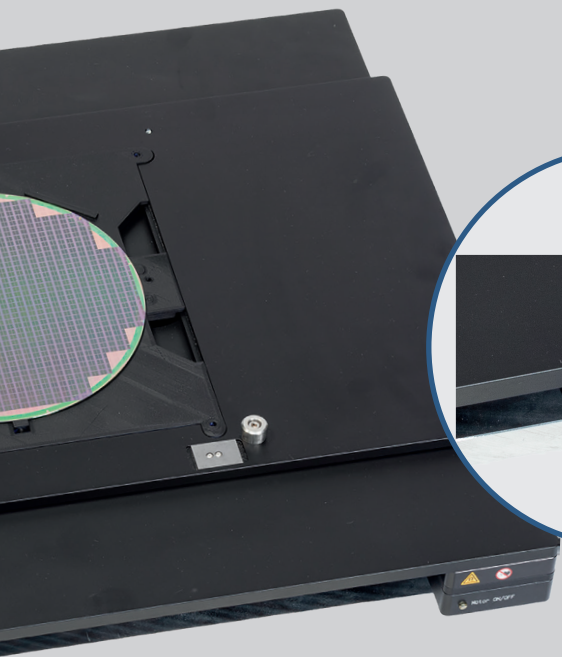
The integrated linear measuring system is based on magneto-resistive (MR) sensor technology and thus uses the special advantages of MR sensor technology such as freedom from maintenance, high dynamics, robustness and freedom from wear. In addition, the absolute measuring system makes time-consuming homing runs and end switches superfluous. The current position is known at all times.





### Extremely flat design.

By using linear motors and cleverly integrated components, the extremely low height leaves valuable free space above and below the microscope stage. Weight saving is just another benefit as consequence of the most compact design.



### Integrated absolute measurement system.

The integrated linear measuring system is based on magneto-resistive (MR) sensor technology and thus uses the special advantages of MR sensor technology such as freedom from maintenance, high dynamics, robustness and freedom from wear. In addition, the absolute measuring system makes time-consuming reference runs and limit switches superfluous. The current position is known at all times.



### Highly dynamic linear motor.

A new motor design ensures maximum performance in the smallest space. Silent, fast and wear-free. The high dynamics is based on ITK power amplifier technology with minimal heat losses.



### Ergonomic operation.

The microscope stage can be operated by hand wheels or joysticks, which are optionally available from ITK. Recurring tasks can be programmed to optimise work efficiency.

## Technical Data .

Property	Unit	Value	Remarks
Acceleration	mm/s <sup>2</sup>	≤ 1000	0.1 g
Velocity			
Maximum	mm/s	≤ 300	Limited by the possible range of movement and acceleration
Minimum	nm/s	≥ 100	
Travel range	mm	205 x 205	
Position resolution	nm	5	
Position accuracy	μm	different classes	Available in different accuracy classes; economically suitable for every application.
Repeatability	μm	different classes	
Peak force	N	20	
Nominal force	N	10	
Dimensions	mm	493 x 495 x 65	Without controller
Weight	kg	12.1	

## Accessories .



### Handwheel

- for moving two axes
- ergonomic and dynamic
- sensitive positioning due to high encoder resolution and precision roller bearings



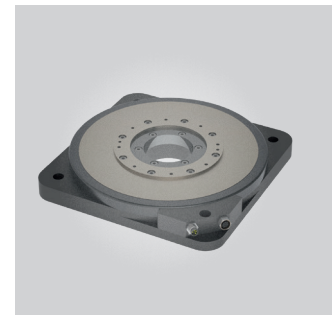
### 2-axis Joystick

- 6 freely programmable buttons
- 8 LEDs
- connected to CAN bus
- versions for normal or heavy use



### Multiwheel

- for moving three axes
- 8 individually programmable buttons
- ergonomical design
- high encoder resolution and precision roller bearings



### FRS200 Rotary Stage

- overall height 25 mm
- 50 mm hollow shaft for cable entry
- torque max. 20 Nm
- outer diameter 200 mm
- can be used for vacuum, clean room and food applications

October 2021  
Subject to technical changes.