



Leica M50, M60 and M80

**Routine stereomicroscopes for manufacturing, assembly, inspection, quality control,
and failure analysis**

Living up to Life

Leica
MICROSYSTEMS

M50 features

- Magnification range 6.3 – 40 ×
- Five defined, step magnification levels
- High depth of field for observing samples over an extended area

M60 Features

- Zoom range 6.3 – 40 ×
- Seven switchable, locking zoom levels
- High depth of field for observing samples over an extended area

M80 features

- Zoom range 7.5 – 60 ×
- Eight switchable, locking zoom levels
- Optics with excellent contrast for a detailed view of the sample

Common features

- Modular product range – the microscope can be perfectly adapted for its intended application
- Parfocally matched optics system: The sharpness remains constant when the magnification is adjusted
- Field number 23 for an even greater overview
- 76 mm standard interface for quick, simple integration
- Wide range of achromatic and planachromatic objectives
- Ergonomic design: best possible adjustment for individual users
- ESD-dissipating design helps prevent damage caused by electrostatic discharge
- Focus column with integrated cable channel keeps the workplace uncluttered

The New Leica M Series

Leica Microsystems introduces the Leica M50, M60 and M80, three new high-quality routine stereomicroscopes of the CMO product line from Leica Microsystems. The optical brilliance and wide range of accessories make them the ideal stereomicroscopes for quality assurance and failure analysis of components in industrial applications.

Magnification in steps or smooth zoom

The Leica M50 stereomicroscope includes precise, reproducible magnification steps for repeated examinations, measurements, drawing or photography of samples under identical conditions. The five easily selectable position levels can be set without moving the eyes from the eyepieces. This ensures that the results remain comparable at all times without great effort.

The Leica M60 and M80 zoom stereomicroscopes can be used for a wide range of routine applications with switchable grid levels. The large working distance and brilliant imaging power show the finest details without losing the field of view over large workpieces.

Common to all three microscopes is the Leica range of accessories. Whether the work requires a variety of illumination types, a wide selection of objectives, or a swing-arm stand – Leica Microsystems has a solution for everything!

Do you already own stereomicroscopic equipment and are thinking of switching to Leica? No problem! The Leica M50, M60 and M80 fit into microscope carriers the same 76 mm diameter interface microscope carriers as with previous models and are therefore compatible with many suppliers. They adapt easily to existing components and add high-quality imaging power to existing inspection processes.

Routine microscopy: the ever-changing challenge



Ergonomic design

- Ergonomic design at the workplace can improve employee welfare, motivation and performance
- Ergonomic can positively affect profitability
- An investment in ergonomically designed instrumentation amortizes quickly

Leica ErgoModules®

- ErgoWedge® ±15°
- ErgoTube® 10° – 50°
- ErgoTube® 45°
- Straight Tube
- ErgoModule® 30 mm – 120 mm
- ErgoWedge® 5° – 25°
- ErgoWedge® ± 15°
- Manual and motorized mechanical stage
- SmartTouch™
- Motorized focus drive

The benefits of ergonomic design

Ergonomically designed workstations and efficient work processes are essential in today's welfare of people in the workplace. A well designed work environment can improve the motivation and performance. When correctly applied, ergonomically designed instrumentation can make a strong contribution to increased productivity and improved profitability.

Occupational medical studies show that workstations with optical equipment place high demands on a person's posture, hands and eyes. Compared to computer workstations, microscope workstations can be much more demanding for users.

Initially higher investment costs for ergonomically designed workstations are amortized very quickly and are a long-term benefit for all involved: with better performance, a higher quality work product, and, last but not least, fewer absences.

The correct viewing height

When matching the viewing height of the microscope to the physical height of a user, a few millimeters are crucial. If the user has to change his or her head position to use the instrument, the entire body can assume an unnatural posture, which may cause headaches, a stiff neck, and reduced work performance. Using a tube with variable viewing heights such as Leica Microsystems' new ergobinocular tube can solve this problem with a few simple twists of the user's wrist.

The correct posture

Routine work while seated at the microscope in an incorrect posture can cause tension in the neck and back muscles, and in the worst case even postural defects of the spine. All the control elements of Leica stereomicroscopes are arranged for the greatest possible comfort of the user. In this way, they actively combat muscle tension and fatigue.



LED illumination

- Minimum maintenance with LED service life of 50,000 hours
- Realistic image with color temperature similar to daylight
- Constant color temperature over the complete brightness range
- Uncluttered workplace with compact design
- Silent operation without fan

KL200 LED

- Modular design gives numerous fiber optic accessory options
- Modular concept: easily replaceable and exchangeable
- Compact, lightweight, integrated design

LED3000 RL

- Very compact design makes for easier side access to the sample
- Simple assembly on all objectives with major diameter of 58 mm
- Very uniform illumination of large object fields
- Latest-generation white LEDs for high color fidelity
- Extra information gained by adjustable segments
- Accessories: Diffuser and polarization set
- Optimized for working distances from 65 – 150 mm

LED3000 NVI™

- Precise, shadow-free inspection of depressions and holes
- Significantly brighter than a 150W cold-light source
- Simple assembly on all objectives with major diameter of 58 mm
- Suitable for working distances from 60 to 150 mm
- On-board control panel for easy operation

The best illumination

Large selection of different illumination

The correct illumination reveals the full power of a microscope – it gives the maximum possible amount of information from a sample. The choice depends on whether the user is viewing large, high-relief sample or reflective metal surfaces for material faults, for example. In each case, a near-vertical or goose-neck illumination will give completely different information and as a result, completely different results.

The modular **Leica KL200 LED** cold-light source is one of the most powerful and compact light sources in its class and is suitable for a wide range of applications in industry. In addition to the oblique illumination with single or double-armed light guides, it is also available for other illumination techniques. The Leica KL200 LED can be integrated directly with the stand – the illumination is transported with the stereomicroscope like a backpack. The range also includes the powerful **Leica KL200 LED**. It operates as an integrated or stand-alone illumination and generates a very bright, natural light without the use of a daylight filter.

The highly compact Leica LED3000 RL ring illuminator uses latest-generation LEDs and a focusing lens specially developed by Leica. This increases the brightness and homogeneity of the illumination. The LED3000 RL is ideally suited for various applications in the routine area. Conveniently adjustable segments (full, half, quarter ring) are used to gain new data about the sample without having to move it.

New and unique: the **Leica LED3000 NVI™**. Optimized for routine stereomicroscopy, this illumination is the ideal solution for viewing holes, indentations or gun barrels.



LEICA M80

Leica

PLAN 1.0x

Leica Stereo Bases

Incident light bases

- Small Incident light base
- Compact standard Incident light base

Transmitted light bases

- Small Incident light base with optional transmitted light base
- TL Series (ST, BFDF, RC™, RCI™) with different transmitted light types for all requirements

Boomstands

- For all applications that require space for large samples
- Various equipment options for different tasks and attachments
- ESD-dissipating equipment helps prevent damage caused by electrostatic discharge

XL Universal Plate

- Stationary Incident light base
- Ample space for very large specimens
- Optional gliding stage with 300 × 300 mm traverse path
- Compatible with all Leica stereomicroscope columns
- Separate ESD-dissipating socket for safety from electrostatic discharge

Stereomicroscopes are required in the electronics industry for visual inspection of large printed circuit boards. The surfaces of engine pistons are optically inspected for quality during manufacture. Dental laboratories fabricate and test implants, dental crowns, and dentures in complex, time-consuming processes. These are just some applications that require an optical inspection system with a large working distance, easily reproducible settings and, depending on the type of samples, specialized stands and illumination.

Leica Microsystems offers the perfect solution for all of these cases with the swingarm stand series and M-series modular routine stereomicroscope line. The large extension of the swingarm, the available attached load, the connection for the focus arm with a wide range of adjustment options, and the outstanding ESD-dissipating qualities are only a few of the numerous features. The Leica Microsystems M-Series stereomicroscopes enable the user to work efficiently and comfortably, with plenty of space for large samples, tools, and work equipment.

Leica M50 with stereozoom incident and transmitted light base



Leica M50 with small boomstand



The correct base

Antistatic coating for sensitive components

When inspecting printed circuit boards and their extremely sensitive components it is important to avoid any risk of damage from electrostatic discharge. Leica products show their strength in this field with their ESD equipment: they have antistatic coatings and prevent the build-up of electrostatic charges.

Incident light or transmitted light?

Leica Microsystems has a wide range of different bases to select from depending on whether the user is inspecting the surfaces of workpieces or viewing thin objects in transmitted light. The small incident light base with optional transmitted light base is a flexible alternative to the Leica swingarm stands. Leica TL bases are available for the Leica M-series: normal transmitted light, dark field or the Rottermann Contrast™ method.

Leica XL Universal Base for extra large workpieces

A new addition to the Leica Microsystems boom stand options is the Leica XL Universal Base. It provides a stationary stereomicroscopy workstation large enough for the inspection of large specimens such as engine pistons. It is compatible with all M-Series columns, and with an adapter to all columns of the swingarm series. The optional XL mechanical stage has a traverse path of 300 × 300 mm. Even large assemblies can be inspected and (with a corresponding socket at the back of the stage) protected against ESD.

Leica M80 with standard swingarm stand



Leica M80 with Leica XL Universal Base and XL extension



Leica OEM products

- Space-saving adaptation to bonders, probes, etc.
- Simple operation
- Fatigue-free viewing and working
- Continuously reliable, smooth operation, and accuracy
- Excellent price-performance ratio

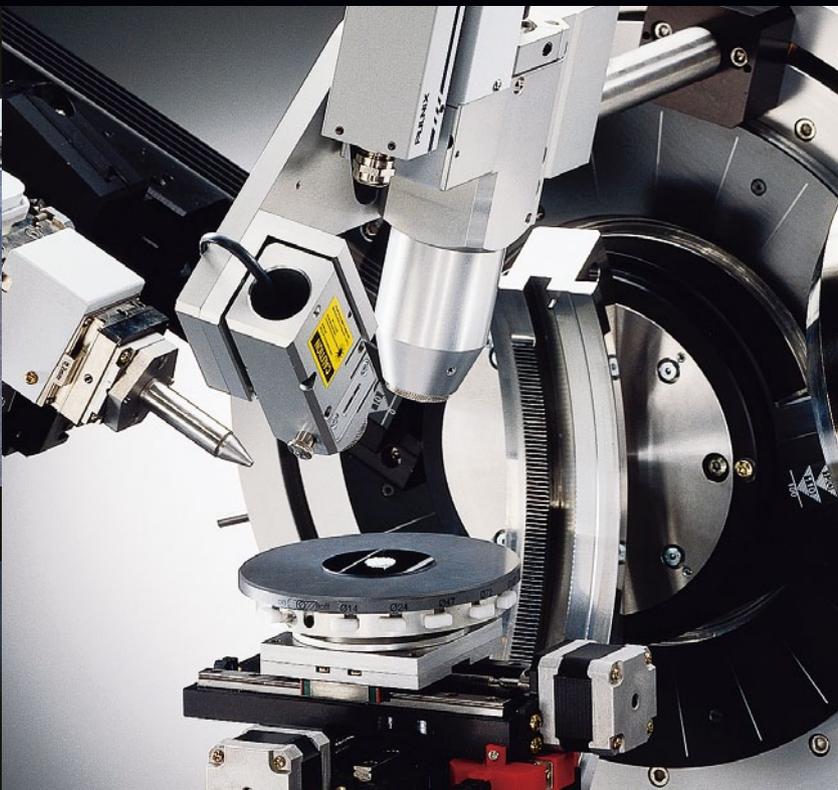
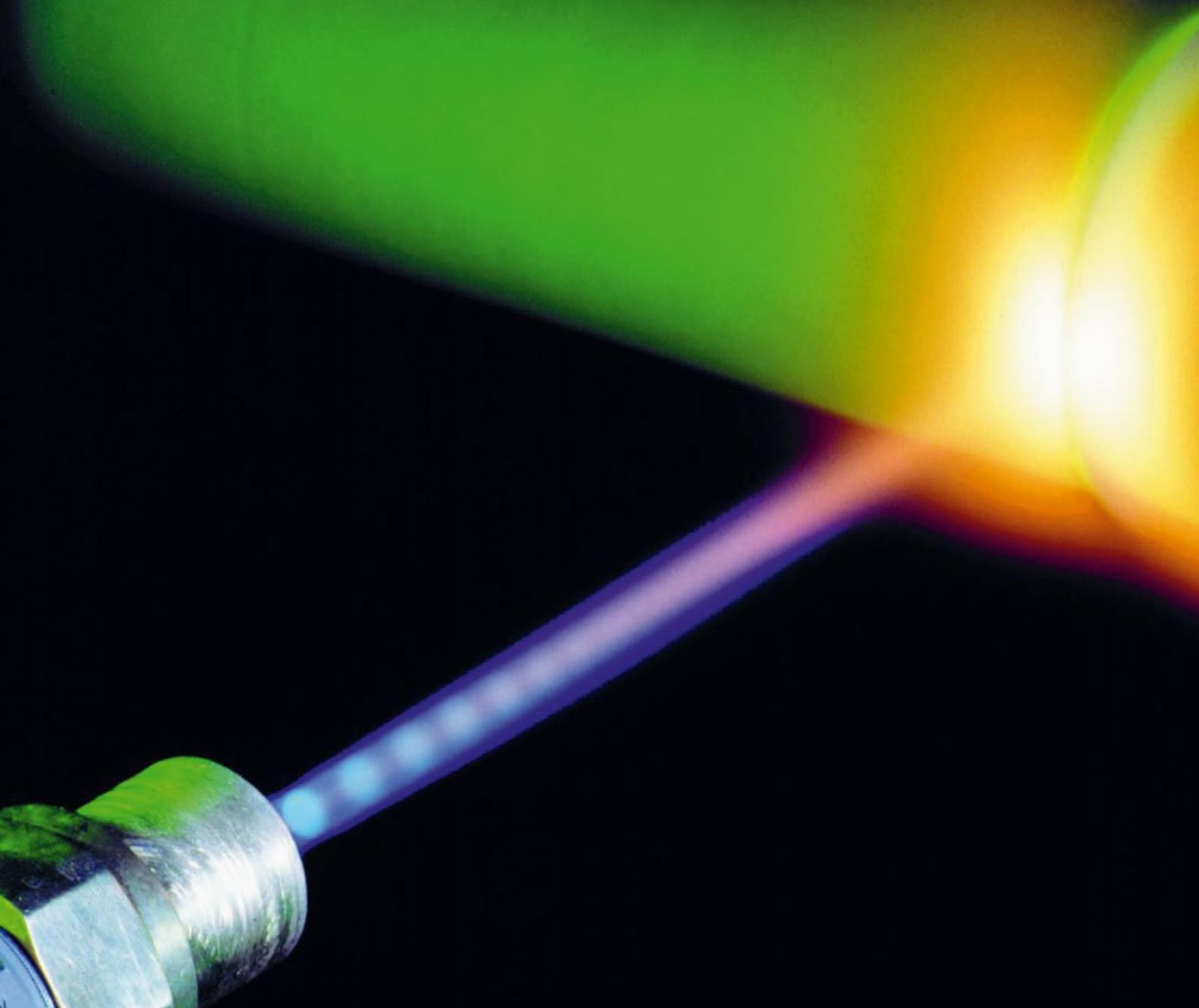
Precision and adaptability

Original Equipment Manufacturers can ensure success with profitable and competitive production or testing plants. An important system component is a high-quality stereomicroscope, which ensures reliable results during assembly, machining, and testing. Powerful stereomicroscopes can be easily integrated with production machines without taking up excessive space. The Leica M-Series offers superior image quality, comfortable viewing, and simple operation, while operating reliably, smoothly and accurately over the long term.

Leica stereomicroscopes – advantages for industrial production

- Simple, space-saving attachment to bonders, probes, machines, and systems
- Tiltable and 360° rotatable
- Excellent price-performance ratio
- Modular design adjusts to precise mechanical requirements
- Selection of five magnification levels or 8:1 zoom
- Very large fields of view and large working distances
- Clear, sharp, undistorted, flat, high-contrast images
- Optimum chromatic correction
- Simple operation for fatigue-free viewing and working
- Ergonomical accessories for optimum viewing comfort
- Continuously reliable, smooth operation, and accuracy

Leica engineers are available to assist in making integration smooth and simple and are pleased to answer any questions about the range of accessories or about customized solutions.



“With the user, for the user”

Leica Microsystems

Leica Microsystems operates globally in four divisions, where we rank with the market leaders.

• Life Science Division

The Leica Microsystems Life Science Division supports the imaging needs of the scientific community with advanced innovation and technical expertise for the visualization, measurement, and analysis of microstructures. Our strong focus on understanding scientific applications puts Leica Microsystems' customers at the leading edge of science.

• Industry Division

The Leica Microsystems Industry Division's focus is to support customers' pursuit of the highest quality end result. Leica Microsystems provide the best and most innovative imaging systems to see, measure, and analyze the microstructures in routine and research industrial applications, materials science, quality control, forensic science investigation, and educational applications.

• Biosystems Division

The Leica Microsystems Biosystems Division brings histopathology labs and researchers the highest-quality, most comprehensive product range. From patient to pathologist, the range includes the ideal product for each histology step and high-productivity workflow solutions for the entire lab. With complete histology systems featuring innovative automation and Novocastra™ reagents, Leica Microsystems creates better patient care through rapid turnaround, diagnostic confidence, and close customer collaboration.

• Medical Division

The Leica Microsystems Medical Division's focus is to partner with and support surgeons and their care of patients with the highest-quality, most innovative surgical microscope technology today and into the future.

The statement by Ernst Leitz in 1907, “with the user, for the user,” describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: **Living up to Life.**

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