



Leica M50 and M80

Routine stereomicroscopes combine legendary Leica Microsystems optical quality, ergonomic design, and an extensive range of accessories

Living up to Life

Leica
MICROSYSTEMS

Leica M50

- Magnification range 6.3x to 40x
- Five defined, locking magnification levels
- High depth of field for observing specimens over an extended area

Leica M80

- Zoom range 7.5x to 60x
- Eight locking zoom levels
- Optics with excellent contrast for a detailed view of the specimen

Advantages

- Modular product range – the stereomicroscope can be perfectly adapted for its intended application
- Versatile illumination options – put a specimen in its best light
- Parfocally adjusted optical system – the specimen stays in focus when the magnification is changed
- Field number 23 for an even greater overview
- Ergonomic design – best possible adaptability for individual users

The New Leica M-Series

Leica Microsystems adds two top-of-the-line stereomicroscopes to its acclaimed M-Series, the Leica M50 and Leica M80. Optical brilliance combines with an array of accessories to create the perfect customized solution for an individual user's experiments.

Exactly reproducible magnification

Consistency and repeatability are always key elements in obtaining accurate results. The Leica M50 stereomicroscope features exactly reproducible magnification levels. The user can set one of five easily definable positions without taking his or her eyes off the specimen. This ensures that experimental results remain comparable at all times.

The Leica M80 stereomicroscope with 8:1 zoom features click stops to handle a wide range of routine applications. The long working distance and outstanding imaging power provide a clear view of the finest specimen details without losing sight of the overall picture.

Science is dynamic and a microscope should adapt to the changing needs of science. Leica Microsystems offers the widest range of stereomicroscopes and accessories available on the market. Your science is unique, and Leica Microsystems ensures that the microscope meets your needs. If your work requires comfort, ease of use, unique lighting requirements, or the need to work around space limitations, Leica Microsystems has the right solution. In addition, Leica Microsystems' accessories allow easy upgrade to meet the future needs of science.

Left: Leica M50 with small swing arm stand.
Right: Leica M80 with incident light base.

Routine Research: Different Challenges Every Day



Ergonomics

- Unsurpassed range of ErgoModules – comfortable microscopy
- ErgoTrinocular Tube – The best observing convenience for different users
- Conveniently placed control elements – unhindered, rapid work on the specimen

Leica ErgoModules®

- ErgoWedge™ ±15°
- ErgoTube™ 10° to 50°
- ErgoTube™ 45°
- Straight Tube
- ErgoModule™ 30mm to 120mm
- ErgoWedge™ 5° to 25°
- Manual and motorized mechanical stages
- SmartTouch control panel™
- Motorized focus drive

Ergonomic Design Promotes Comfort

A good stereomicroscope provides convenience and makes research easier. Microscope workstations for preparing specimens can cause strain on the posture, hands, and eyes of the user. The comprehensive range of Leica ErgoModules addresses the widely varying demands of test setup, equipment heights, individual body size, and work methods. An ergonomically designed workstation can provide a sense of well-being and stamina for long hours at the microscope. Leica ErgoModules help ensure that each user is comfortable in every work situation.

The correct observation height

When matching the viewing height of the microscope with the physical height of a user, a few millimeters are crucial. If the user must bend his or her head toward the instrument, this unnatural body posture can lead to headaches and neck pains, and the quality of work suffers. Leica Microsystems offer a variety of solutions. Using a combination of ErgoModules including the ErgoWedge and ErgoTube™, observation height and angle can uniquely adapt to individual body size and to the application. As a result, each user can experience long-lasting comfort at the microscope.

The best viewing solution

The wide range of available stereomicroscope tubes offers the ideal solution for every application. Leica Microsystems' new Binocular ErgoTube™ with an adjustable viewing angle from 10° to 50° provides an ergonomic, relaxed sitting position. At the same time, oculars with a field number of 23 can be used to provide a convenient overview of the entire specimen.

The most comfortable posture

Long hours of routine work at the microscope can create tension in the neck and back musculature. Using preparation equipment and closely observing specimen details, requires accessible controls with easy movement to actively counteract tension and fatigue. Therefore, the Leica M50 and M80 zoom buttons enable users to precisely select specific magnification levels while maintaining the highest degree of comfort. Easy access to the most frequently used control buttons allows the user to work quickly and without obstruction, even on live specimens.



The Best Illumination

LED illumination

- Minimum maintenance with LED service life of 50,000 hours
- True-to-life image with color temperature similar to daylight
- Constant color temperature over the complete brightness range
- Compact design promotes an uncluttered workplace
- Silent operation without fan

KL200 LED / L2 illumination system

- Illumination system based on fiber optics for the greatest number of applications
- Modular concept: easily replaceable and exchangeable
- Compact, integrated design

LED3000 NVI™

- Precise, shadow-free inspection of specimen recesses
- Significantly brighter than a 150 W cold light source
- Easy to assemble on all objectives with maximum diameter of 58mm
- Suitable for working distances from 60mm to 150 mm
- Operation directly at the device

LED5000 CXI™

- Integrated coaxial illumination for viewing smooth, reflective surfaces
- Brightness is 3 to 4 times greater than comparable 150 W cold light source
- Operation directly at the device
- Settings can be saved with the image and recalled later

Large selection of illumination sources

The correct illumination is essential to obtain the maximum amount of information from a specimen. Whether the experiment involves raised specimens, transparent specimens in a fluid medium, or reflective specimens such as the chitinous exoskeleton of an insect, the user obtains completely different information and draws different conclusions based on the type of illumination used.

The study of embryos, drosophila, zebrafish or thread worms requires powerful **transmitted light bases** to enable brilliant, true color imaging of low-contrast specimens. For example, drosophila wing mutations can be sorted with bright/dark contrast. Even transparent specimens are presented in amazing contrast using the Rottermann relief contrast method.

The **Leica L2** modular cold light source is powerful, compact, and can be used for all scientific applications. Accessories for coaxial and vertical illumination, transmitted light, and diagonal illumination with single arm or dual arm light guides are available. The range also includes the powerful **Leica KL200 LED**. Like the Leica L2, the Leica KL200 LED is either connected to the microscope or used as stand-alone illumination, which generates extremely bright, natural LED light.

New and unique: the **Leica LED3000 NVI**. Developed for stereomicroscopy, this illumination source is ideal for studying cavities and depressions during specimen preparation. It provides shadow-free light for precise manipulation and preparation of even awkward zones of the specimen.

The latest key addition to the Leica **LED5000 family** is a fully integrated coaxial illumination source. Two installed high power LEDs provide excellent illumination. Data for reading and controlling the settings in LAS (Leica Application Suite) software is exchanged over a single cable. This means that when it is used with the coarse/fine focus drive, all information stored with the image can also be output. The user can reproduce experiments with just a few clicks of the mouse.



LEICA M80

Leica

PLAN 1.0x

Leica Microsystems Stereomicroscope 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
- Life Science inserts enable in vivo experiments to be conducted under precise conditions

Swing arm stands

- For all applications with a large radius of action or that require space for large specimens
- Different equipment options for different tasks and attachments

Leica XL Universal Base

- Stationary incident light base
- Ample space for very large specimens
- Optional gliding stage with 300 mm × 300 mm traverse path
- Compatible with all Leica stereomicroscope columns

Preparing and manipulating organ and plant tissues in the biomedical laboratory require that the entire organism be constantly observed throughout a range of continuous magnifications. Both the setup and procedures for preparing specimens require a variety of actions within a large working distance. Development studies or sorting phenotypes of zebrafish larvae, for example, place stringent demands on illumination and contrast procedures. The Leica M50 and M80 modular stereomicroscopes are perfectly equipped for these tasks: the swing arm stand series with variable suspended load enables the stereomicroscope to be positioned exactly where it is needed relative to the specimen.

The extended length of the swing arm, the load it can support, and the connection for the focus arm with many adaptation options ensure flexibility with outstanding vibration-dissipation – and crystal clear images in any work situation. Even for the most demanding applications, work is easier under ergonomic conditions with ample space for setting up the preparation and a large working distance for unhindered specimen manipulation. Easily reproducible settings ensure fast, efficient work processes and provide consistent data for further study or scientific publication.

Leica M50 with incident and transmitted light base

Leica M50 with small boomstand



The Correct Base

Incident light or transmitted light?

A wide selection of stereomicroscope bases is available. For taking biopsies or observing zebrafish larvae in transmitted light, for example, the small incident light base with optional transmitted light sub-base is a versatile alternative to a swing arm stand. Or, use a transmitted light base to view a specimen in the best light, with the option of also using darkfield, diagonal transmitted light or Rottermann contrast, depending on the stand.

Careful experiment control

In vivo experiments must be carefully controlled to maintain the best culturing conditions for the organism. The Leica MATS heating stage keeps specimens at an exact temperature to ensure that study results are as reliable as possible. An adapter is available to enable the use of Leica Microsystems' wide range of accessories for live cell imaging. Accessories include incubation systems and pH level controls for strictly controlled studies of live specimens.

Leica XL Universal Base for extra large preparations

A new addition to Leica Microsystems' swing arm series is the Leica XL Universal Base. This base creates a stationary stereomicroscope workstation for studying even large preparations in complete comfort. It is compatible with all Leica M-Series columns, and with an adapter it can also be used with all columns of the swing arm series. The optional Leica XL mechanical table features a travel range of 300mm × 300mm. This makes specimen positioning easy, even with the most complicated experiment setup.

Leica M80 with standard swing arm stand

Leica M80 with Leica XL Universal Base and XL extension



Requirements

- True-to-life spatial representation
- Large specimen fields
- Ample working space
- Outstanding image quality
- Comfortable viewing and simple operation

Leica M50 / M80

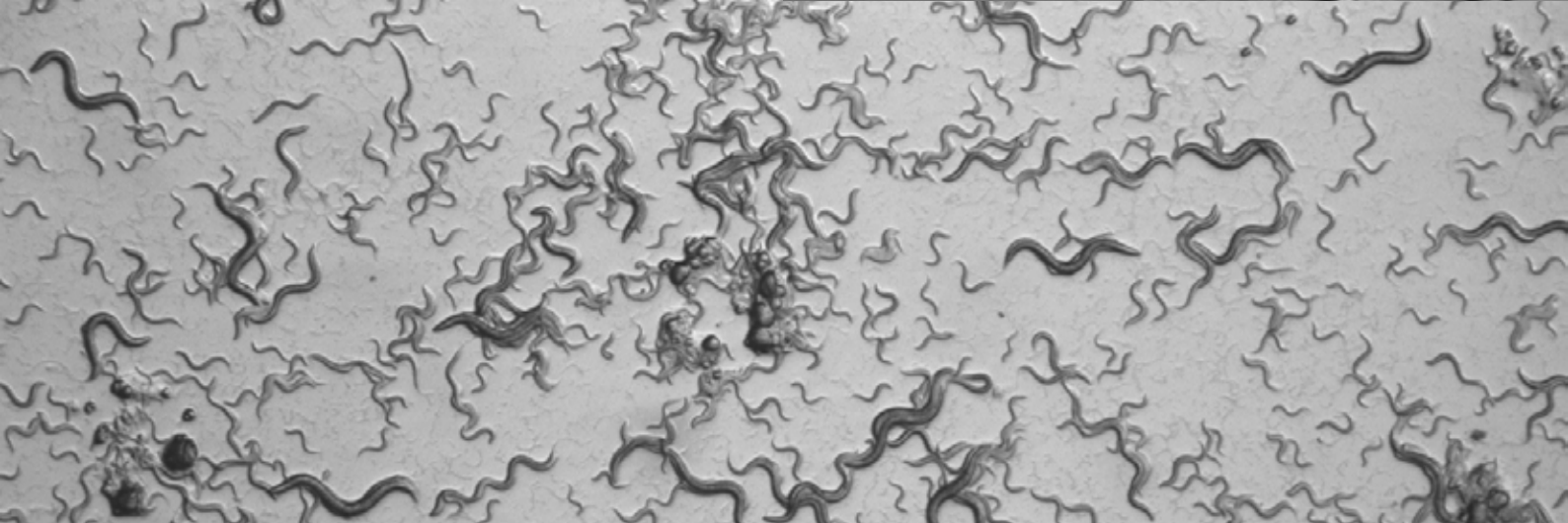
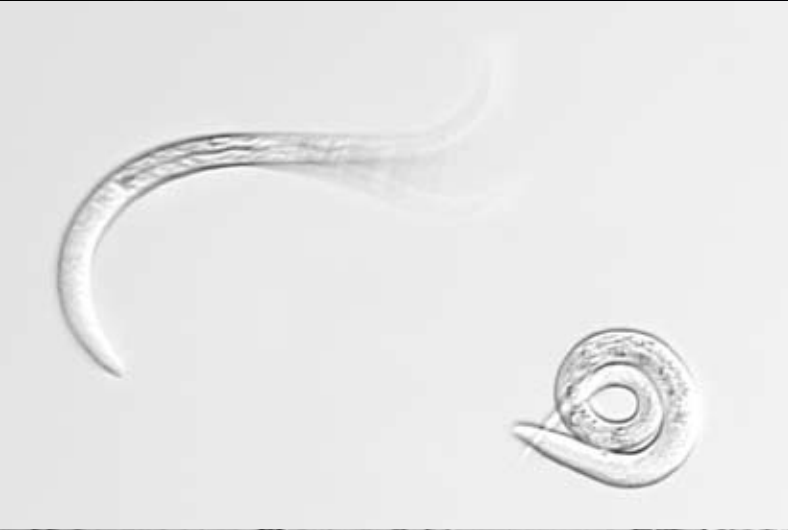
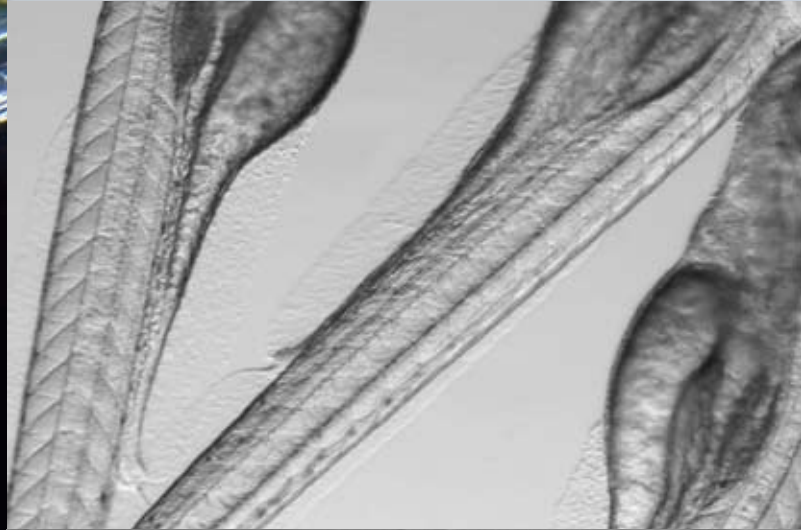
- CMO optics design with parallel beam paths – 3D viewing and full modularity
- Field number 23 for an even greater overview
- Working distance up to 303 mm – observation and preparation of even large specimens
- Consistent achromatic and planachromatic correction – Specimen details reproduced in true color and shape
- Powerful resolution: 225 lp/mm with the Leica M50 and 308 lp/mm with the Leica M80 with constant light intensity – maximum information collection
- Ergonomic operating concept – increased comfort for daily work

Flexible Even to the Smallest Details

Biological specimens place particularly high demands on a stereomicroscope. At the same time, true-to-life spatial representation of large specimen fields and a generous working distance are also required. Outstanding image quality, exceptional viewing comfort, and easy operation are essential for fast, accurate specimen manipulation.

Leica Microsystems offers system components for routine stereomicroscopy that are individually adaptable to a vast range of biological applications.

The largest selection of achromatic and planachromatic objectives enables the stereomicroscope to be tailored to specific test conditions. A large working distance provides a comfortable amount of space for preparing mice, insects, and other model organisms. Leica Microsystems' swing arm stands can accommodate even very large experimental setups. Powerful resolution up to 225 lp/mm with the Leica M50, and 308 lp/mm with the Leica M80, ensure excellent image quality with constant light intensity at all zoom levels. The new Leica LED3000 NVI vertical incident light source provides shadow-free illumination of the preparation field. This enables preparation of specimens in working distances from 60mm to 150mm without distracting shadows.



“With the user, for the user”

Leica Microsystems

Leica Microsystems operates internationally 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.

• Surgical Division

The Leica Microsystems Surgical 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.**

Active worldwide

Australia:	North Ryde	Tel. +61 2 8870 3500	Fax +61 2 9878 1055
Austria:	Vienna	Tel. +43 1 486 80 50 0	Fax +43 1 486 80 50 30
Belgium:	Groot Bijgaarden	Tel. +32 2 790 98 50	Fax +32 2 790 98 68
Canada:	Richmond Hill/Ontario	Tel. +1 905 762 2000	Fax +1 905 762 8937
Denmark:	Herlev	Tel. +45 4454 0101	Fax +45 4454 0111
France:	Rueil-Malmaison	Tel. +33 1 47 32 85 85	Fax +33 1 47 32 85 86
Germany:	Wetzlar	Tel. +49 64 41 29 40 00	Fax +49 64 41 29 41 55
Italy:	Milan	Tel. +39 02 574 861	Fax +39 02 574 03392
Japan:	Tokyo	Tel. +81 3 5421 2800	Fax +81 3 5421 2896
Korea:	Seoul	Tel. +82 2 514 65 43	Fax +82 2 514 65 48
Netherlands:	Rijswijk	Tel. +31 70 4132 100	Fax +31 70 4132 109
People's Rep. of China:	Hong Kong	Tel. +852 2564 6699	Fax +852 2564 4163
Portugal:	Lisbon	Tel. +351 21 388 9112	Fax +351 21 385 4668
Singapore		Tel. +65 6779 7823	Fax +65 6773 0628
Spain:	Barcelona	Tel. +34 93 494 95 30	Fax +34 93 494 95 32
Sweden:	Kista	Tel. +46 8 625 45 45	Fax +46 8 625 45 10
Switzerland:	Heerbrugg	Tel. +41 71 726 34 34	Fax +41 71 726 34 44
United Kingdom:	Milton Keynes	Tel. +44 1908 246 246	Fax +44 1908 609 992
USA:	Bannockburn/Illinois	Tel. +1 847 405 0123	Fax +1 847 405 0164

and representatives in more than 100 countries