Leica Stereozoom® Line

Complete solutions for assembly, quality control, OEM, research, and training

Living up to Life

Leica
MICROSYSTEMS

Cost-effective, Leading Edge Technology

Leica S6 E with 38° viewing angle on a transmitted light stand

The optical system of the StereoZoom® line consists of two beam paths converging at 12°. The objective pairs of each optical path are positioned close together, so the stereomicroscopes are slim in design, especially toward the base. The advantages of this design are the small space requirement for use on bonders and in machine applications, unobstructed access to sample, plenty of space for tools, and a completely clear view of the object field. The Greenough optical system enables the correction of aberrations such as chromasia, image field curvature, and distortion with minimal effort. The StereoZoom® line uses the optimally corrected center of the objective for imaging. The result: superior optical performance; large, level, and undistorted fields of view; and chromatically optimized, high-contrast images.

Microscopes and imaging systems by Leica Microsystems are highly regarded by technology companies and scientists worldwide. Innovative, high-quality, and precisely manufactured instruments offer users a technological edge, increased performance capacity, and greater success in their work. With the StereoZoom® line, Leica Microsystems presents a comprehensive stereomicroscope product range for a wide range of applications.

Leica StereoZoom® – the complete stereomicroscope line
Choose the best optical performance for current and future tasks from among six models and an extensive range of accessories. Application areas served by the StereoZoom® line range from quality inspection during manufacturing and assembly, OEM integration and training, to advanced analysis and documentation for R&D. The StereoZoom® models Leica S4 E, S6 E, S6, S6 D, and S8 APO, including the stand and cold light source, are encased in a patented antistatic housing. For inspecting highly sensitive electronic components, an electrostatic-dissipative model, the Leica S6 T, is also available.

Fully apochromatic, economical research stereomicroscope
The one-of-a-kind Leica S8 APO is the first stereomicroscope on the market with a fully apochromatically-corrected Greenough optical system. This unrivaled instrument offers outstanding resolution of 600 lp/mm (approx. 1 micrometer) and maximum magnification of 640×. Never before has such high performance been available in a cost-effective instrument with a Greenough optical design.

The compact, slim, complete outfit:
Leica S6 E with incident light stand and
Leica KL200 LED cold light illuminator.

Leica Design by Christophe Apothéloz

Leica S8 APO
Economical, high-performance stereomicroscope with 8:1 apochromatic zoom

Leica S6 D
High resolution for video and photography

Only the StereoZoom® line offers:

- Largest object field diameter of 36.5 mm
- Versions with 38° and 60° viewing angles
- ErgoObjectives for comfortable viewing
- Electrostatic-dissipative version
- Transmitted light base with movable reflector
- 40× eyepieces for eyeglass wearers
- Video and photography with coaxial illuminator
- Leica S8 APO with apochromatic Greenough optical system

Leica S8 APO with 8:1 apochromatic zoom for highest requirements

- Apochromatic optical system
- Apochromatic objectives
- Maximum resolution 600 lp/mm
- Magnification 10× to 80×, working distance 75 mm*
- Video/photo output
- Adjustable zoom limits
- Eyepieces for eyeglass wearers
- Antistatic

Leica S6 D with 6.3:1 zoom and video/photo output

- 38° ergonomic viewing angle
- Magnification 6.3× to 40×, working distance 110 mm, object field diameter 36.5 mm*
- Adjustable zoom limits
- Achromatic standard objectives
- ErgoObjectives for variable viewing height, magnification, working distance
- Eyepieces for eyeglass wearers
- Antistatic

Leica S6 T with 6.3:1 zoom

- 38° ergonomic viewing angle
- Magnification 6.3× to 40×, working distance 110 mm, object field diameter 36.5 mm*
- Electro-dissipative surface for optimum protection against ESD
- Adjustable zoom limits
- Achromatic standard objectives
- ErgoObjectives for variable viewing height, magnification, working distance
- Eyepieces for eyeglass wearers

* Basic equipment without additional objective, with 10× eyepieces

One Stereomicroscope Platform, Countless Applications

Leica S6 T
Voltage dissipation for inspecting sensitive electronics

Leica S6
For OEM, features ergonomic viewing angle

Leica S6 E
High productivity for routine tasks

Leica S4 E
Affordable, expandable, powerful for industrial assembly and education

Leica S6 E with 6.3:1 zoom

- 38° ergonomic viewing angle
- Magnification 6.3× to 40×, working distance 110 mm, object field diameter 36.5 mm*
- Adjustable zoom limits
- Achromatic standard objectives
- ErgoObjectives for variable viewing height, magnification, working distance
- Eyepieces for eyeglass wearers
- Antistatic

Leica S6 with 6.3:1 zoom and 60° viewing angle

- Ergonomic 60° viewing angle on the inclined stereomicroscope
- Magnification 6.3× to 40×, working distance 110 mm, object field diameter 36.5 mm*
- Adjustable zoom limits
- Achromatic standard objectives
- ErgoObjectives for variable viewing height, magnification, working distance
- Eyepieces for eyeglass wearers
- Antistatic

Leica S4 E with 4.8:1 zoom

- 38° ergonomic viewing angle
- Magnification 6.3× to 30×, working distance 110 mm, object field diameter 36.5 mm*
- The only stereomicroscope in its class with two ErgoObjectives for variable viewing height, magnification, working distance
- Achromatic standard objectives
- Eyepieces for eyeglass wearers
- Antistatic

Successful Work with Precision Optics

Business success relies on profitable, market-driven, and competitive production. Consistent quality management, including visual quality inspection using high-performance stereomicroscopes, can help eliminate the high cost of quality defects, waste, and insufficient productivity. The high-quality optics and durability of the StereoZoom® line can create cost savings for your work.

Researchers place high demands on instruments while searching for more and more detailed data. The world-class optics and comfortable, versatile StereoZoom® workstations can assist in the next great scientfic discovery.

High-quality optics
The optically powerful and sophisticated StereoZoom® line provides fast and precise viewing, positive and effortless identification of microscopic details, and reliable results in repetitive tasks. Providing clear, sharp, non-distorted, flat, high-contrast images with optimal chromatic correction, the StereoZoom® line offers very large fields of view and long working distances.

Durability
The StereoZoom® line is reliable, easy to use, and rugged. Its versatility is based on an extensive assortment of accessories. The microscope easily integrates with machines and laminar flow cabinets while taking up very little space.

Increased productivity
The StereoZoom® line can increase productivity with fatigue-free, easy operation. Leica Microsystems also provides first class consultation to fit the stereomicroscope to individual needs, rapid delivery, and prompt application and technical assistance.

Leica S6 E with 38° viewing angle
inclined on a swing arm stand


polymeca

The Best Choice for the Long Term

ErgoObjective 0.6× to 0.75×, working distance variable from 77 mm to 137 mm

Leica S6 with 60° ergonomic viewing angle on the inclinable focus drive, for OEM

Standard swingarm stand

For the best performance for a particular task, Leica Microsystems' flexible, modular design enables users to customize the stereomicroscope for countless applications.

Performance made to order
With the StereoZoom® line, the user selects the configuration needed. Even the basic Leica S4 E with 4.8:1 zoom for routine inspection gives access to the StereoZoom® line's entire assortment of objectives, eyepieces, stands, and illuminators. The Leica S6 models with 6.3:1 zoom are optionally available with 38° (S6 E/S6 D/S6 T) or 60° (S6) viewing angle. The patented Leica S6 T is available with an incident light or swingarm stand for work areas subject to ESD. The one-of-a-kind Leica S8 APO with apochromatic 8:1 zoom, apochromatic objectives, and video/photo output is the ideal platform for advanced applications, specifically digital documentation and analysis.

Stands for a wide variety of applications
The stable incident light stand is available in antistatic and electro-dissipative versions. Using a sub-base for transmitted light, the base can be affordably equipped for viewing transparent objects. Using a deflection mirror, the light can be guided through objects at any angle, from vertical to nearly horizontal. Oblique to darkfield-like transmitted light provides contrast to observe certain specimen structures and contours. Semitransparent objects, e.g., foraminifera and fish eggs, gain resolution and information content.

Three swingarm stands for ergonomic working conditions
The StereoZoom® line offers three modular swingarm stands: the ESD swingarm stand, the standard swingarm stand with easy-to-move horizontal arm, and the large swingarm stand with easy-to-move horizontal arm and convenient height positioning. They offer plenty of room for examining and processing large samples (drill cores, workpieces, printed circuit boards, works of art, dental work). The large extension, available load capacity, wide range of adapter options for the focus arm and stereomicroscope, and outstanding electrostatic dissipation are only a few of the swingarms' many benefits.

Convenience
The StereoZoom® line provides large, clear object fields and sharp images. Even inspecting the finest microscopic detail is easy. The standard Leica S4 E and S6 models offer the largest object field diameter in their product class, 36.5 mm, which provides faster and more convenient inspection. Attachable, comfortable soft eyecups prevent lateral stray light and avoid eye infections.

ErgoObjectives with variable working distance
The Leica S4 E and S6 models provide a fatigue-free head posture. The 0.6× to 0.75× Ergo objectives with variable working distances of 77 mm to 137 mm; and 0.7× to 1.0× objectives with variable working distances of 48 mm to 98 mm; allow fine adjustments of magnification and working distance and simultaneously, the viewing height, without time-consuming objective changes. The Leica S6 with 60° viewing angle offers a comfortable posture using the tilted stereomicroscope objectives.

Ease of use
For repetitive inspections at identical magnification, the zoom range can be individually limited on the Leica S6 and Leica S8 APO. Focus and zoom are moved smoothly and precisely, and the controls provide a good grip with a convenient feature: large zoom buttons. The focus drive's movement can be set according to personal preference. For applications that require a lateral working position, the stereomicroscope can be laterally rotated 360°.

Modest space requirements
The slim StereoZoom® with incident or transmitted light stand and the Leica L2 or KL200 LED cold light source, requires minimal space on a work surface, in laminar flow cabinets, or when used for OEM applications.

The lightweight StereoZoom® with outstanding 110 mm working distance provides easy access to the sample, plenty of space for tools, and an unobstructed view. It is readily integrated with machines and easily carried from one workstation to another.

ESD swingarm stand

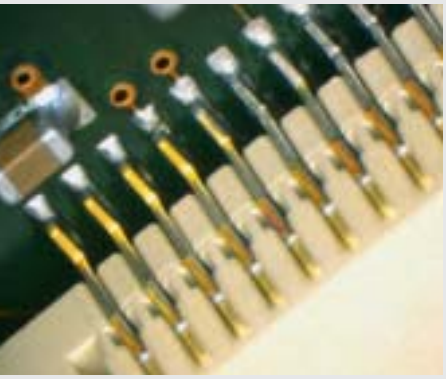
Long working distance and good accessibility

Sub-base for transmitted light and universal light guide for oblique transmitted illumination

6-point ring illuminator with Leica KL200 LED (tabletop version)

Attachment for vertical/oblique observation: all-around visibility without tilting and turning the sample

Leica S8 APO
Top of the Line



The Leica S8 APO's high performance is unrivaled on every level. As the only Greenough stereomicroscope available on the market, the Leica S8 APO is equipped with a fully apochromatically-corrected optical system, apochromatic 8:1 zoom, and apochromatic objectives.

The Leica S8 APO is a cost-effective, high-performance stereomicroscope with great user benefits for demanding quality control and research and development tasks in industry, science, and education.

Precise detail
Apochromatic optics provide the user with the most precise data. The Leica S8 APO corrects chromatic aberration, removes bothersome color seams, and displays ultra-sharp images of even the finest structural detail. Contrast, brilliance, image sharpness, resolution, and color fidelity are unsurpassed. The benefit of apochromatic correction is best seen in specimens that have a fine, low-contrast structure such as large animal cells, cilia plants, or metallic microelectronic structures.

The Leica S8 APO offers magnifications of 3.2 to 640× (10 to 80× standard magnification) and attains an outstanding resolution of 600 lp/mm, at an affordable price.

Easy documentation
The user can document valuable work results and photograph, film, record or transfer important processes. With the built-in video/phototube, the user can add a professional digital image capture system by Leica Microsystems at any time.

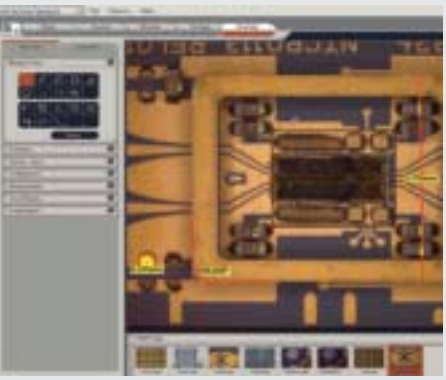
Leica S8 APO with Leica TL BFDF transmitted-light base

Leica S8 APO
with Leica DFC camera and
transmitted-light stand

Professional System Solutions

Leica Application Suite:
Easy camera operation

Leica Application Suite:
Intuitive image captions



Leica Application Suite:
Easy measurement

The Leica S6 D and S8 APO with integrated video/phototube are equipped for all modern documentation and image transmission techniques and for easy, fast setup of conventional video and analog video cameras. The integrated beam splitter guides 100% of the existing light into the camera.

Digital image acquisition and analysis
From stereomicroscope to digital camera, including image management and analysis software, Leica Microsystems offers application-specific, complete solutions for professional image acquisition, archiving, analysis, processing, presentation, and print. The product range extends from standard cameras for universal use to high-end camera software for image management and analysis.

Leica Application Suite – high-performance software
LAS configures a connected digital camera for capturing, analyzing, and processing high-quality digital images in the life science, clinical, and industrial fields. With its modular, scalable design, LAS is easy to learn and use and provides outstanding performance at an affordable price.

The Best Light

Compact Leica L2 cold light source
The Leica L2 modular cold light source is powerful, compact, and can be used for many different applications. Suitable accessories for coaxial and vertical illumination as well as transmitted light are available in addition to diagonal illumination with single-arm or dual-arm light guides.

Leica KL200 LED – fiber optic light source
The range also includes the powerful Leica KL200 LED. Like the Leica L2, the Leica KL200 LED works by coupling directly to the microscope or as stand-alone illumination, but generates extremely bright, natural light via its LEDs (for detailed information, see brochure M1-288-0).

Leica LED1000 – the modular illumination solution
LED illumination is ideal for routine tasks where high light intensity with minimum heat development is required. The following advantages distinguish this technology: color temperature 5,000°K (daylight), no UV radiation, extremely long life, nearly maintenance-free, free of ripple and flicker, noise-free, vibration-free operation, and a compact lightweight design. The Leica LED1000 product line includes a ring illuminator and spotlight and extensive accessories for a variety of applications. The LED ring illuminator (40 LEDs) provides a very bright and homogenous illuminated specimen area. The LED spotlight (19 LEDs) can be attached directly onto the StereoZoom® or used stand-alone. The ring illuminator and spotlight are antistatic.

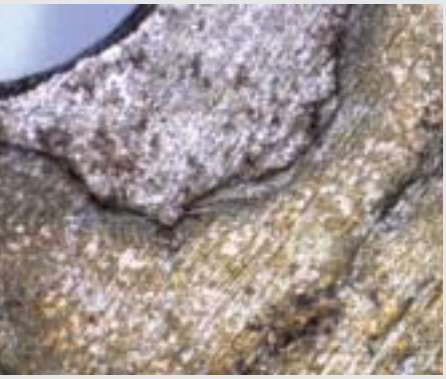
Leica LED3000 NVI™ – one-of-a-kind
Optimized for stereomicroscopy, this illumination source is ideal for studying bores and recesses during sample preparation. It provides shadowless lighting for precise manipulation and preparation of even difficult-to-access sample areas.

Coaxial illuminator for reflective, flat specimens such as ground pieces of metal, wafers, chips, and coated surfaces

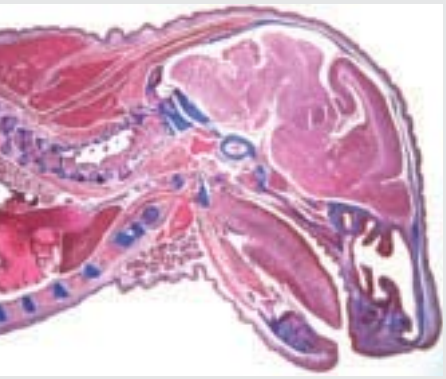
Leica LED1000 combination control unit – spotlight and ring illuminator

Leica LED3000 NVI™ – vertical illuminator for highly structured sample and for illuminating recesses and bores

High-performance LED Illumination



Metal corrosion



Mouse (cross-section)

Passport inspection

The high-quality Leica LED2000/LED2500 illumination stands are robust and suitable for almost any inspection task.

The Leica LED2000 stand is suitable for all incident light applications and is a cost-effective solution when transmitted light is not required. With five illumination options available, the user can choose exactly where and how much light should be applied to a sample. The options include the use of all seven available LEDs for optimum illumination, 4-point incident light for shadowless illumination, two side LEDs for improved contrast, or one oblique LED if low illumination is required. Each illumination option also features dimmer control so that the brightness levels can be adapted to individual requirements. With the light manager touch panel, each setting can be easily selected and reproduced.

The Leica LED2500 includes both incident and transmitted light capabilities, which can be used together or controlled individually. With a 60 mm active light diameter, the Leica LED2500 is perfect for performing detailed inspections at consistent light levels with a large field of view. The 6500°K color temperature means that samples can be examined with true color reproduction.

Moveable arc illumination
The Leica LED2000/LED2500 provides an adjustable arc illumination, which allows the user to increase the contrast level to meet individual requirements. Arc illumination can be optimized for 1.0×, 1.6×, and 2.0× additional objectives.

Maintenance-free
LEDs have a service life of at least 25,000 hours and maintain a constant color temperature, which makes them preferable to conventional light bulbs. With their heat dissipation, the Leica LED2000/LED2500 bases do not require a fan so light vibrations do not interfere.

Daylight quality
The Leica LED2000 and LED2500 illumination stands use state-of-the-art LED technology that closely resembles the light spectrum of daylight. As a result of pulse width modulation (PWM), color temperature remains constant over the entire dimming range. There is no need to readjust the camera's white balance, which makes the complete system easier to handle.

Complete solution

- Easy transport
- Sturdy, compact design
- Integrated power supply
- (100–240V)
- Vibration-free (no fan)
- Adjustable focus torque

State-of-the-art LEDs

- 4-point incident light
- Bright and uniform
- Shadow-free

Integrated LED illumination

- Service life of 25,000 hours
- No bulb changing required
- Natural light quality at 6500°K
- True color reproduction
- Constant color temperature
- Flicker-free
- 5 programmed illumination settings
- Reproducible light conditions

Transmitted light

- Bright and uniform
- 60 mm active light diameter

3-point arc light

- Shows more structures of a sample

Easy illumination control

- 5 different programmed settings

“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**.

In accordance with the ISO 9001 certificate, Leica Microsystems (Switzerland) Ltd, Industry Division, has at its disposal a management system that meets the requirements of the international standard for quality management. In addition, production meets the requirements of the international standard ISO 14001 for environmental management.

www.leica-microsystems.com

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