



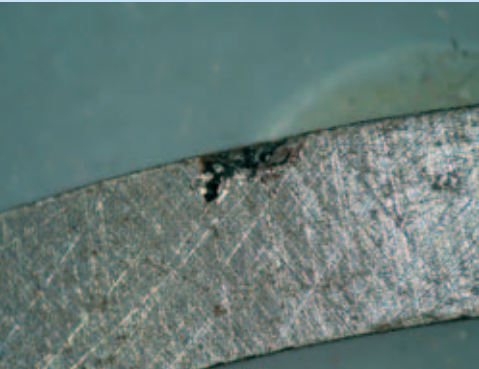
For Quality that Lasts

Leica EZ4 StereoZoom® and EZ4 D (Documentation)

Stereomicroscopes for Assembly, Inspection, and Quality Control

Leica
MICROSYSTEMS

Dependable and Rugged for Industry and Routine Research



Oxidation location on a sample



Offset grid on a print sheet



Introducing the Leica E Series StereoZoom® Systems

Leica Microsystems presents four affordable stereomicroscopes featuring renowned Leica StereoZoom® performance for industrial quality control and routine laboratory applications.

- Leica EZ4 with fixed 10× eyepieces
- Leica EZ4 with fixed 16× eyepieces
- Leica EZ4 with open eyetubes (optional eyepiece selection)
- Leica EZ4 D with integrated digital camera and free LAS (Leica Application Software)

Manufacturers depend on affordable and reliable quality control to insure production profitability. Visual quality control is an important part of a consistent quality management process. The Leica E Series is designed to help you eliminate expensive quality defects, waste, and insufficient productivity. For R&D, the dependable, maintenance-free Leica E Series ensures efficient laboratory operations while minimizing downtime. Providing a bright object field that is rich in detail and a great working distance that allows a variety of microscope tools, the Leica E Series is ideal for sample identification and sorting.

Benefits at a Glance:

- The Leica E Series features a 4.4:1 zoom range.
- The complete product line for quality assurance includes a model for digital documentation (Leica EZ4 D) and measurements (Leica EZ4, optional eyepiece selection).
- Features high-quality image, color, and detail fidelity.
- Mechanical precision provides decades of maintenance-free operation.
- Ideal for learning and performing quality control and routine laboratory techniques.
- Leica's exclusive LED illumination system is dimmable for incident and transmitted light (patent pending).
- Features unique 3-way incident light technology.
- Precise zoom and focus systems provide the finest, most exact control.



The dependable, affordable Leica EZ4
with LED powered illumination.

Leica Design by Christophe Apothéloz

Leica EZ4: Reliable Routine Inspection

Eyepieces

- Provide optimal viewing for those with and without eyeglasses
- Soft eyecups protect eyeglasses and can be removed and cleaned
- Sealed in place (exception: EZ4 with open eyepiece tubes)
- Feature 60° viewing angle and adjustable interpupillary distance from 50mm to 75mm

Optics

- Features a 4.4:1 zoom range
- Magnification changer remains sensitive, precise, and smoothly adjustable, even after years of intense use
- Tension adjustable focus drive is easy to move for comfortable focusing
- Renowned Leica image quality, resolution, and detail definition

Illumination & Microscope Stand

- LED incident light and transmitted light illumination can be activated independently or combined; membrane keypad provides comfortable control
- Base provides excellent stability and has an integrated low handrest for comfort
- Water-tight glass stage plate and membrane keypad are sealed to prevent accidental damage from spilled liquids and are easy to clean
- Vibration-resistant feet prevent sliding and movement while adjusting the instrument
- Built-in hand grip provides easy, safe carrying and transport



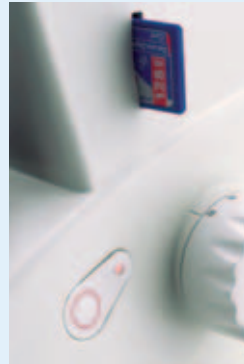
Leica EZ4 D: Digital Documentation Made Easy

Features

- Features a 4.4:1 zoom range
- Acquire button activates image memory
- Features fixed 10× eyepieces

Integrated Digital Camera

- Features a 3-megapixel CMOS sensor
- Provides USB 2.0 connection for image data transfer or live image at the PC (max. 480 Mbps)
- Analog video output (RCA, VCR, composite) connects to a video projector, TV, VCR, etc.
- Features a built-in SD (Secure Digital) memory card slot
- Includes a 128 MB SD card



Built-in SD slot and Acquire button



Back side: EZ4 connections

Software

- Includes free LAS (Leica Application Software)
- User has full control of image parameters: brightness, contrast, focus, panning, cropping, color matching
- Can switch between automatic and manual camera mode
- Capable of digital measuring within an image
- Includes insert arrows and texts
- Saves commentary and image information



Perfect Illumination in Every Situation



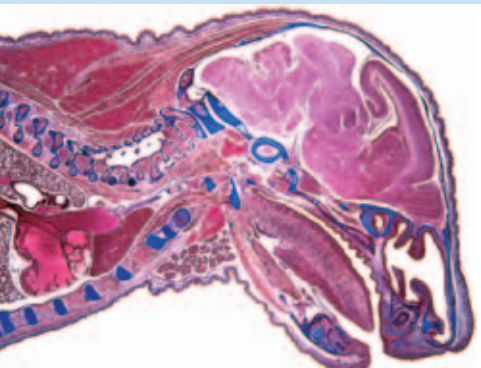
Highest luminosity with all 5 power LEDs



Steep incident light with the 3 upper diodes



Darkfield-like side light



Mouse in transmitted light, profile

Maximum variability

Innovative LED illumination provides many options. The incident light diodes can be activated, as shown in the three examples on the right. The built-in incident light can be used individually or in combination with the transmitted light version. The image does not reflect the incident light LEDs in the glass stage plate. It is also possible to dim the light to desired brightness. With the membrane keypad, illumination settings are easily and exactly reproduced.

Realistic illumination

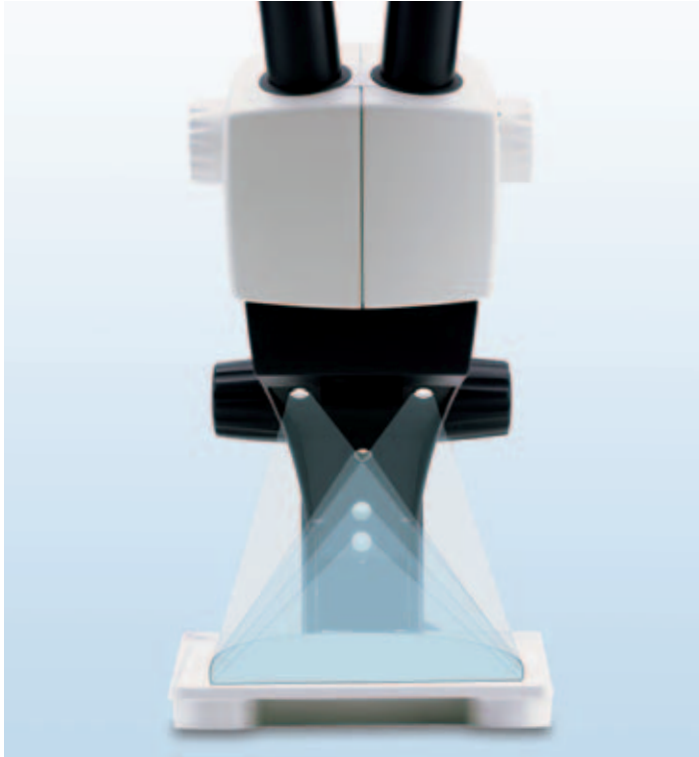
The Leica EZ4 and EZ4 D use the most modern LED technology that provides the light spectrum of daylight. With a color temperature of 6,500° K, it is possible to evaluate and compare samples in true color. Since the illumination is not UV or infrared, warming is minimal and temperature-sensitive samples are well-protected.

Maintenance-free for life

Compared to incandescent light, the light-emitting diodes used in the new Leica EZ4 and EZ4 D are insensitive to vibration. They have a minimum lifespan of 25,000 hours with constant color or temperature throughout their entire life. Due to low heat generation and efficient heat management, Leica EZ4 and EZ4 D do not require a fan. The viewed image remains current-free, and digital recordings are vibration-free.



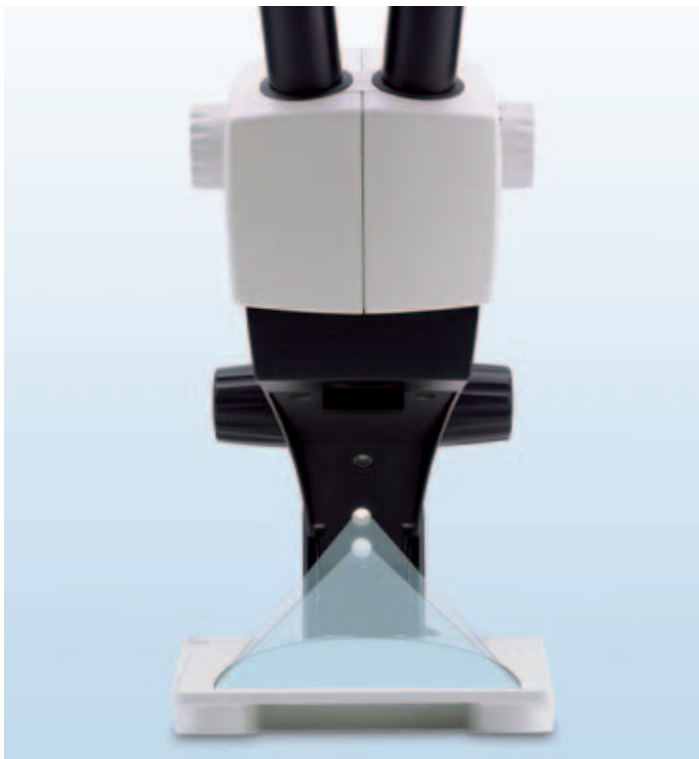
The membrane keypad for comfortable incident and transmitted light adjustment and for dimming the LEDs



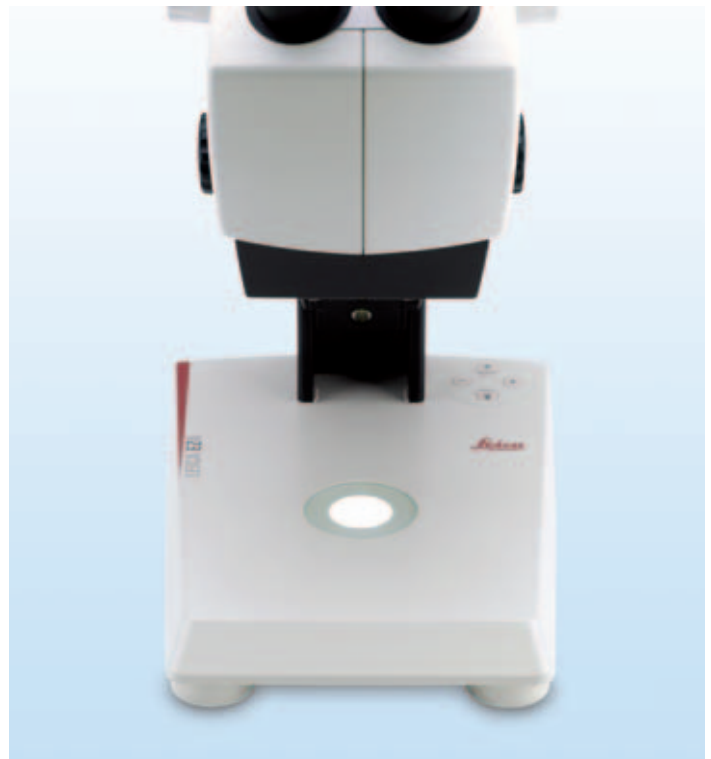
1. All 5 LEDs provide maximum brightness



2. Steep incident light for shadow-free illumination of the sample



3. Side light for surface examination



4. Transmitted light for transparent and semi-transparent samples

Leica E Series – Specifications and Features

Stereomicroscope	Leica EZ4 10×	Leica EZ4 16×	Leica EZ4 open	Leica EZ4 D 10×
Optical system	10°-Greenough, parfocal	10°-Greenough, parfocal	10°-Greenough, parfocal	10°-Greenough, parfocal
Magnification changer	Zoom 4.4:1	Zoom 4.4:1	Zoom 4.4:1	Zoom 4.4:1
Eyepieces for eyeglass wearers	10×/20 fixed	16×/15 fixed	replaceable, fixed or adjustable: 10×/20, 16×/16, 20×/12 eyepieces not suitable for eyeglass wearers	10×/20 fixed
Diopter correction			From +5 to -5 (adjustable eyepieces)	
Viewing angle	60°	60°	60°	60°
Working distance	100mm	100mm	100mm	100mm
Magnification range	8× to 35×	13× to 56×	8× to max. 70×	8× to 35×
Max. resolution	170 Lp/mm	170 Lp/mm	170 Lp/mm	170 Lp/mm
Max. num. aperture	0.057 nA	0.057 nA	0.057 nA	0.057 nA
Object field diameter	5.7 to 25mm	4.3 to 18.8mm	3.4 to 25mm	5.7 to 25mm
Eyecups	replaceable	replaceable	replaceable	replaceable
Interpupillary distance	50mm to 75mm	50mm to 75mm	50mm to 75mm	50mm to 75mm
Optical path	100% visual	100% visual	100% visual	50% visual / 50% video
Focus drive torque	individually adjustable; 75mm stroke (all instruments)			
Grip	integrated	integrated	integrated	integrated
LED illumination system	integrated, independent or combined incident and transmitted light (all instruments)			
Control	membrane keypad	membrane keypad	membrane keypad	membrane keypad
Incident light method	choice of 3 methods: maximum intensity with 5 LEDs, angled incident light with 3 LEDs, or flat side light with 2 LEDs. (Patent pending)			
Dimmer	yes, for incident and transmitted light	yes, for incident and transmitted light	yes, for incident and transmitted light	yes, for incident and transmitted light
Auto OFF	after 60 min	after 60 min	after 60 min	after 60 min
LED service life	approx. 25,000 h	approx. 25,000 h	approx. 25,000 h	approx. 25,000 h
Light quality	homogeneous daylight (6,500° K, 9,200 Lux), free of UV and IR radiation (all instruments)			
Maintenance	maintenance-free			
Power supply	universal from 100V to 240V, voltage-sensitive, integrated (all instruments)			
Digital camera			optional Leica DC150 with adapter	integrated 3.0 megapixel CMOS Camera
Digital output				USB2.0
Analog video port				RCA, VCR, composite for projector, monitor, video
Integrated slot				for SD (Secure Digital) card
Recording				switch for image capture
Software				software for PC/MAC
Graticules, stage micrometer			for length measurements usable in adjustable eyepieces	

Detailed technical specifications and data can be found in the M1-120-4 brochure.

In accordance with the ISO 9001 certificate, Leica Microsystems (Switzerland) Ltd, Business Unit Stereo & Macroscopic Systems 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.

Winner 2005



Innovationspreis
der deutschen Wirtschaft
The World's First Innovation Award

www.leica-microsystems.com/stereomicroscopes

Leica
MICROSYSTEMS