

For Quality that Lasts

Leica EZ4 and Leica EZ4 HD (Documentation)

Stereomicroscopes for Assembly, Inspection, and Quality Control

Living up to Life

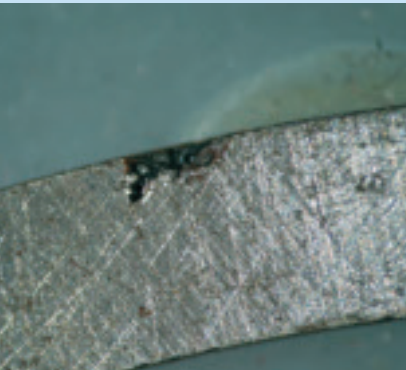
Leica
MICROSYSTEMS

Dependable and Rugged for Industry and Routine Research

Introducing the Leica E-Series Stereomicroscopes

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 HD with integrated high definition digital camera and free LAS (Leica Application Software)



Oxidation location on a sample

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.



Offset grid on a print sheet

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 HD) 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.
- 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 50 mm to 75 mm

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 HD: Digital Documentation Made Easy

The **NEW** Leica EZ4 HD camera offers an economical, integrated solution for viewing fast live images in High Definition (HD). The complete system allows the user to view specimens on a High Definition display and through the eyepieces, with or without a computer connection for versatile workstation possibilities.

Leica EZ4 HD Advantages for Stand alone use:

- Fast, high-resolution (up to 1920 × 1080) live image on an HD display for sample manipulation, observing moving specimens, and viewing the finest details on large screens
- Direct connection to an HD display
- Capture images and movie clips on an SD card
- Control the camera functions via two onboard buttons
- Optional handheld remote for fine tuning the image



Use with Computer and Leica LAS EZ Software:

- NEW – FREE HAND ANNOTATION IS NOW AVAILABLE FOR BOTH LIVE AND STORED IMAGES!
- Capture, archive, and perform image processing for future viewing and analysis
- Intuitive workflow-style user interface minimizes time for imaging tasks
- Add basic measurements and annotations to the stored image
- Define image acquisition preferences such as exposure, gain and gamma for optimum image results
- Image related data and calibration are stored with the image for later reference
- Save and open images directly into any other software application for preparing reports and presentations
- Compatibility with the full range of Leica Microsystems Imaging Software Modules opens the door to more advanced use

Note: Leica Acquire Software with basic functions is available for the Macintosh Operating System

Perfect Illumination in Every Situation



Highest luminosity with all 5 power LEDs



Steep incident light with the 3 upper diodes



Maximum variability

Innovative LED illumination provides many options. The incident light diodes can be activated, as shown in the three examples on the left. 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

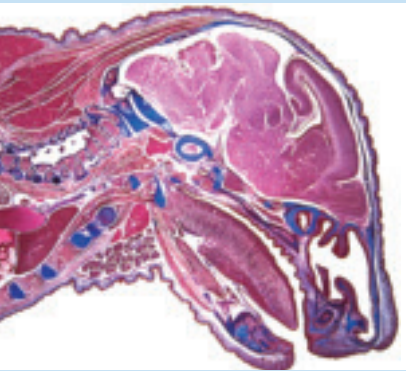
The Leica EZ4 and EZ4 HD use the most modern LED technology that provides the light spectrum of daylight which allows you to evaluate and compare samples in true color. Since the illumination is not UV or infrared, warming is minimal and temperature-sensitive samples are well-protected.

Maintenance-free for life

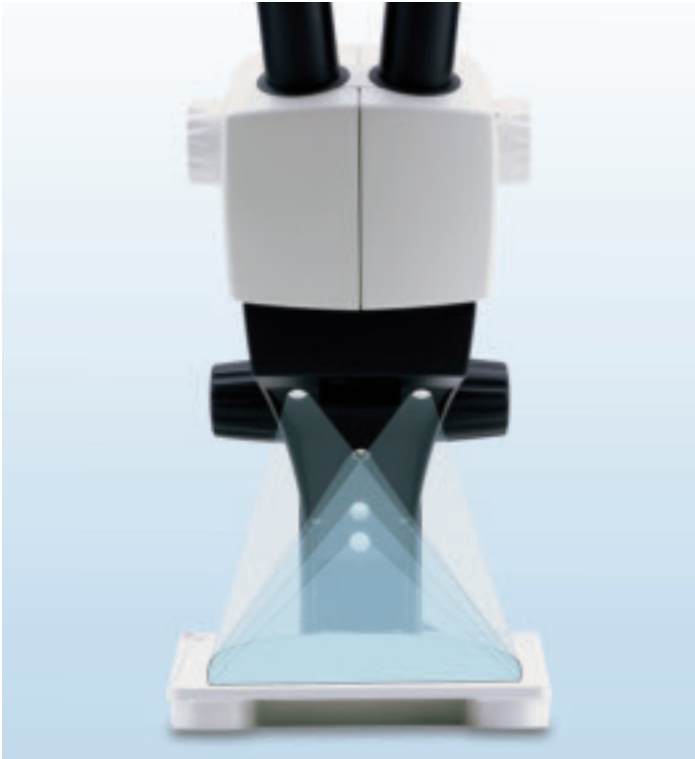
Compared to incandescent light, the light-emitting diodes used in the Leica EZ4 and EZ4 HD are insensitive to vibration. They have a minimum lifespan of 25,000 hours with constant color temperature throughout their entire life. Due to low heat generation and efficient heat management, Leica EZ4 and EZ4 HD 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



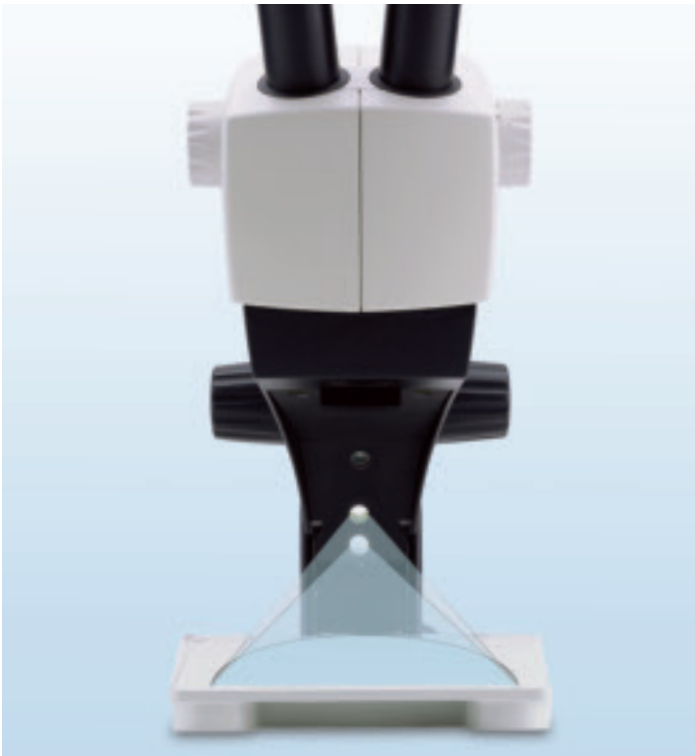
Mouse in transmitted light, profile



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, features

Stereomicroscope	Leica ES2	Leica EZ4 10×	Leica EZ4 16×	Leica EZ4 open	Leica EZ4 HD Digital 10×
Optical system	10° Greenough, parfocal	10° Greenough, parfocal	10° Greenough, parfocal	10° Greenough, parfocal	10° Greenough, parfocal
Magnification changer	2-level, 3:1	zoom 4.4:1	zoom 4.4:1	zoom 4.4:1	zoom 4.4:1
Eyepieces for spectacle wearers	10×/20 fixed	10×/20 fixed	16×/15 fixed	replaceable, fixed or adjustable: 10×/20, 16×/16 20×/12 not suitable for spectacles	10×/20 fixed
Diopter correction				from +5 to –5 (adjustable eyepieces)	
Viewing angle	60°	60°	60°	60°	60°
Working distance	100 mm	100 mm	100 mm	100 mm	100 mm
Magnification range	10×/30×	8× to 35×	13× to 56×	8× to 70×	8× to 35×
Max. resolution	159 Lp/mm	170 Lp/mm	170 Lp/mm	170 Lp/mm	170 Lp/mm
Max. num. aperture	0.053 nA	0.057 nA	0.057 nA	0.057 nA	0.057 nA
Object field diameter	20 mm/6.7 mm	5.7 to 25 mm	4.3 to 18.8 mm	3.4 to 25 mm	5.7 to 25 mm
Eyecups	replaceable	replaceable	replaceable	replaceable	replaceable
Interpupillary distance	50 to 75 mm	50 to 75 mm	50 to 75 mm	50 to 75 mm	50 to 75 mm
Beam path	100% visual	100% visual	100% visual	100% visual	50% visual/50% video
Focusing drive torque	individually adjustable, 75 mm stroke (all instruments)				
Grip	integrated	integrated	integrated	integrated	integrated
LED illumination system	integrated, independent or combined incident and transmitted light (all instruments)				
Control	On/Off switch	membrane switch	membrane switch	membrane switch	membrane switch
Incident light method	angled incident light with 3 LEDs	choice of 3 methods: maximum intensity with 5 LEDs, angled incident light side light with 2 LEDs			
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 2 hours	after 2 hours	after 2 hours	after 2 hours
LED service life	approx. 25 000 h	approx. 25 000 h	approx. 25 000 h	approx. 25 000 h	approx. 25 000 h
Light quality	homogeneous daylight 6500° reflected, 4500° transmitted, 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					integrated 3.0 megapixel CMOS camera
Digital output					USB 2.0
HDMI port					High Definition output for desktop or large HD displays
Integrated slot					SD (Secure Digital) card
Recording					switch for image capture
Software					Leica software for PC/MAC
Graticules, stage micrometer				for length measurements usable in adjustable eyepieces	