

Leica E – Series: FAQ's

General questions for all instruments

1. What is the magnification & field of view (FOV) for each eyepiece/zoom combination?

The Magnification and FOV data for all eyepiece and zoom position combinations can be found in the technical data section in the brochures.

For ES2 and EZ4 D that standard kit has 10x/20 high eyepoint eyepieces.

2. How can I add a camera to the new E - Series?

The EZ 4D model is already equipped with an integrated 3.0 Mega Pixel CMOS camera.

For the EZ4 model with the open eyetubes (10447199), the Leica DC150 camera package can be used.

3. What additional equipment do I need in order to perform measurements with my stereomicroscope?

- With the Leica EZ4 D (digital) instrument you can directly calibrate any acquired image. Once calibrated, you can make measurements, using the included LAS EZ software.
- The EZ4 model with the open eyetubes, eyepieces with dioptr adjustment can be used. These eyepieces can then be used together with reticules.

Further details you get from your local Leica distributor.

4. Will the new Leica E – Series fit in my storage cabinet?

The new Leica E – Series basic stand was designed to fit into most storage cabinets.

Occasionally it may be necessary to lower the position of the microscope body in its carrier in order to close the door of the cabinet.

5. Why do you make your microscope housing out of plastic instead of metal?

The housing of the microscope are just that, covers. They do not effect the optical or mechanical performance of the microscope in any way other than keep out dirt and stray light. Using plastic instead of metal housing on our stereomicroscopes considerably reduces the weight of the microscope and makes it easier to handle.

6. I bought one of your Zoom2000 before and had problems with the mechanics, why should I consider your new E - Series?

The new E - Series has a completely new design, that is based on our S – Series. The position of the internal optics is maintained with precision-ground cam shafts, magnetic linkages, and improved gears as opposed to the spring tension system in the Zoom2000. Our new E - Series has quality instruments with outstanding optical performance for this range. See for yourself!

7. I bought one of your Zoom2000 before and had problems with the brightness, why should I consider your new E - Series?

The new patent pending LED illumination system much brighter (about 3 times) and more homogeneous light. See instrument comparison chart in the selling guide for details.

8. Can I adjust the tension on the focus column?

Yes, the tension can be adjusted. Please refer to the operators manual for complete instructions.

9. I am working with the E-Series instrument in a 230V environment. Can I also use it in a 110V environment?

Yes, the E-Series instruments are equipped with a universal power supply which works in the range 100V (-15%) up to 240V (+10%).

10. Is there a fuse inside the instrument, which can be replaced?

No, there is no need for a fuse as this power supply is electronically protected against short circuiting.

11. What is the expected service life time of the LED's?

The lifetime of white power LED's, used in this product line is a minimum of 25,000 hours. This would equal 50% of the original brightness of the LED's.

12. What is the color temperature of the LED's?

The color temperature is 6500°K. This value is defined as neutral "daylight" and is very constant over the life time period and the dimming procedure.

13. The light manager control panel looks very weak. Are you sure that this will work over several years of use?

Yes ! The supplier of the control field guarantees 500,000 pushes without any impact on the functionality. Please clean it regularly with a damp cloth (no solvent !)

14. Why can't I remove the eyepieces from my instrument?

The eyepieces are first screwed in then glued in. This follows the concept of offering student proof instruments with no removable parts on it.

15. Why do my instruments not have any eyepieces with dioptr adjustment?

All E-series instrument with integrated eyepieces have high eyepoint eyepieces. Therefore users wearing glasses can use the stereomicroscope while wearing their eyeglasses and an adjustable dioptr is not necessary.

Using fixed high eyepoint eyepieces also decreases the possibility of having misadjusted diopters, which can cause headaches and poor performance is eliminated.

16. What is the maximum travel distance of the focus column?

Approx. 75mm.

17. What is the convergent angle of the E-Series instruments?

The angle is 10°.

18. I have lost my dust cover. What is the replacement number?

The order number is 10 447 476.

19. I have lost my rubber eyecups. What is the replacement number?

If you are using E-Series instruments with integrated, non removable eyepieces, the order number for the eyecups (pair) is:

10 447 150 Symmetric rubber eyecups

If you are using low eyepoint eyepieces (fixed or adjustable) the order number for the eyecups (pair) is:

10 447 149 Asymmetric rubber eyecups

Questions specific to Leica EZ4 D

1. Does the software also support Mac OS?

Yes! The Leica FireCam software (Version 2.0 and later) support also MAC environment. You need MAC OS 10.3.9 or later and a USB2.0 interface.

The software download you can find under: www.leica.microsystems.com/education

The download file is located within the EZ4 D section.

2. If I have some questions about the E – Series instruments, where do I get support?

Of course you can ask the company you bought the instrument from, or if you have any other questions you can write to Leica at EZ.Support@Leica-Microsystems.com

3. What are the minimum hardware requirements for the software?

Pentium III, or equivalent PC, with 256Mb RAM.

USB port. High Speed USB (USB 2.0) is needed.

CD-drive.

The computer monitor color depth must be set to 16 or 32-bit (24-bit is not supported).

The graphics adapter must support the use of DirectX 9. (DirectX 9 is supplied with LAS EZ.)

Approximately 150 Mb of disk space for a full installation.

Further space is required for data and image storage. Check free disk space regularly.

Please find further information in the user manual on the software CD ROM.

4. What operating systems are supported by the software?

Microsoft Windows 2000 Professional + Service Pack 4, or

Microsoft Windows XP Professional + SP1, or

Microsoft Windows XP Home + SP1.

You must have Administrator privileges to install this software. Normal operation can be at any level except 'Guest'.

Please find further information in the user manual on the software CD ROM.

5. How can I change the language in LAS EZ?

It is possible to have the text in LAS displayed in a language other than defaulting to your operating system (eg you can install LAS on German XP and set the text in LAS to English)

The procedure for doing this is to open the file "LanguageSetter.exe" which is located in "C:\Program Files\Leica Microsystems\LAS_EZ". Select the required language and then OK. Open LAS EZ and you will see that the text has been changed.

6. Can both interfaces, USB and analog be used simultaneously?

Yes! You can run LAS EZ and at the same time you view a live image on a projector. You can also control the camera in the software and observe the results on the projector.

7. Can pictures be captured and stored on a SD card while a projector (analog video) is connected?

Yes! It is possible to save an image on the SD card while viewing the image on a projector. During the storage process on the card, you may observe a distorted image for a short time.

8. Can pictures be captured and stored on a SD card while the EZ4D is connected to a PC (USB)?

No, this is not possible. The camera chip cannot handle two devices at the same time.

9. Why don't I get the same field of view in the camera as with the eyepieces?

The camera has a field number (FN) of 14mm. The FN of the eyepiece is 20mm.

Because the camera is more sensitive than our eyes, the limitation of 14mm is necessary to have an even and homogeneous image. This configuration covers about 70% of the complete field of view of the eyepiece.

10. Why is the image in the live window moving to the side when I am focussing?

The camera is only in one beam path of the microscope which has an angle of 5°. Therefore, when you focus, you will see a slight shift in the live image window. This is a normal behaviour of a stereomicroscope.

11. I want to use another SD card. Where can I get it?

We recommend to buy this SD card locally. This card is a very common storage device that is used in consumer digital cameras and mobile phones. You will find them in most electronic stores.

12. What is the resolution of the PAL video standard?

The standard resolution of PAL is 720 x 576 pixels.

13. What is the resolution of the NTSC video standard?

The standard resolution of NTSC is 720 x 480 pixels.

14. What does the red LED light mean on the EZ4 D?

This is the storage indicator status. When an SD card is inserted or when the instrument is connected to a PC/MAC, this LED changes to green.

A blinking green LED, and a sound out of the instrument, indicates that the image is in the process of being sent to the SD card after pressing the acquire button on the instrument.

15. What size is the picture saved directly to the SD card when the computer is not used to capture images?

The size of the image is 3 MPixel (maximum). The file format is "jpg".

16. The auto exposure seems to give a dark image. What is wrong ?

Move the slider of the brightness (%) to the right until you get a brighter image.

17. What is the power LCD output "socket" for on the EZ4 D (near the USB and analog outputs)?

This power socket is foreseen for future usage. At the moment, it is not being utilized. Do not connect any other devices at this time.

18. Can the twain driver in the EZ4 D be recognized by say Image Pro or Adobe Photo shop?

There is no twain driver for the EZ4 D available.

Acquire images with LAS EZ and export them directly during the acquiring process to the 3rd party programs.

19. What happens, when my SD card is full?

The status LED from the acquire button switches to red and no more images can be acquired.

Transfer your images to a computer and delete the files from your card. Now you are able to acquire new images to your SD card.

20. How many files can be stored on a SD card?

On a 128MB SD card you can store approx 150 images.

21. When I insert the SD card, the status LED does not switch to green. What is the problem?

- 1.) Maybe the SD card is full. Please check this. If this is the case, copy the files to your computer and delete them on the SD card.
- 2.) Or the files of the SD card has been deleted and the EZ4 D does not recognize the card. Then insert the card and switch off and on the instrument again and the card will be recognized. The LED will switch to green.

22. When using the LAS EZ and choosing the LED optimized button, the image is bad, very yellow/orange?

This happens, when the light of the instrument is not switched on. The colour temperature of the environment is much lower than 5500°K.

For high LED brightness use "LED optimized white balance"

For lower LED brightness and oblique illumination, use "auto white balance"

23. If I acquire an image directly with the SD card, the images are often overexposed. What is the problem?

In this modus, the camera works normally in the automatic mode. It could be, that the camera works for some reason in the manual mode.

You can try following procedure:

- switch on the instrument
- ensure, that no SD card is inserted
- ensure, that no USB cable is connected
- ensure, that the status LED of the acquire button is red.
- press now the acquire button several seconds (approx. 4 sec);
during this time the LED blinks between red and yellow
- then you have a reset of the camera (you will hear a sound)

If there is no improvement, please consider following:

- the camera works only in a automatic mode (an ideal brightness) for the complete field of view
- of course, very bright parts of the image appears maybe too bright
- on the other hand, very dark parts of the image appears maybe too dark
- an over exposed image can also happen with very reflective images
- if you change the light conditions, please wait a few seconds before you acquire an image (because the camera needs a little bit to adjust)

If you have further questions, which are not listed here, please feel free to contact our support team. The email address is EZ.Support@Leica-Microsystems.com