

# ***Pinhole Camera PC-1***

## ***User Instructions***



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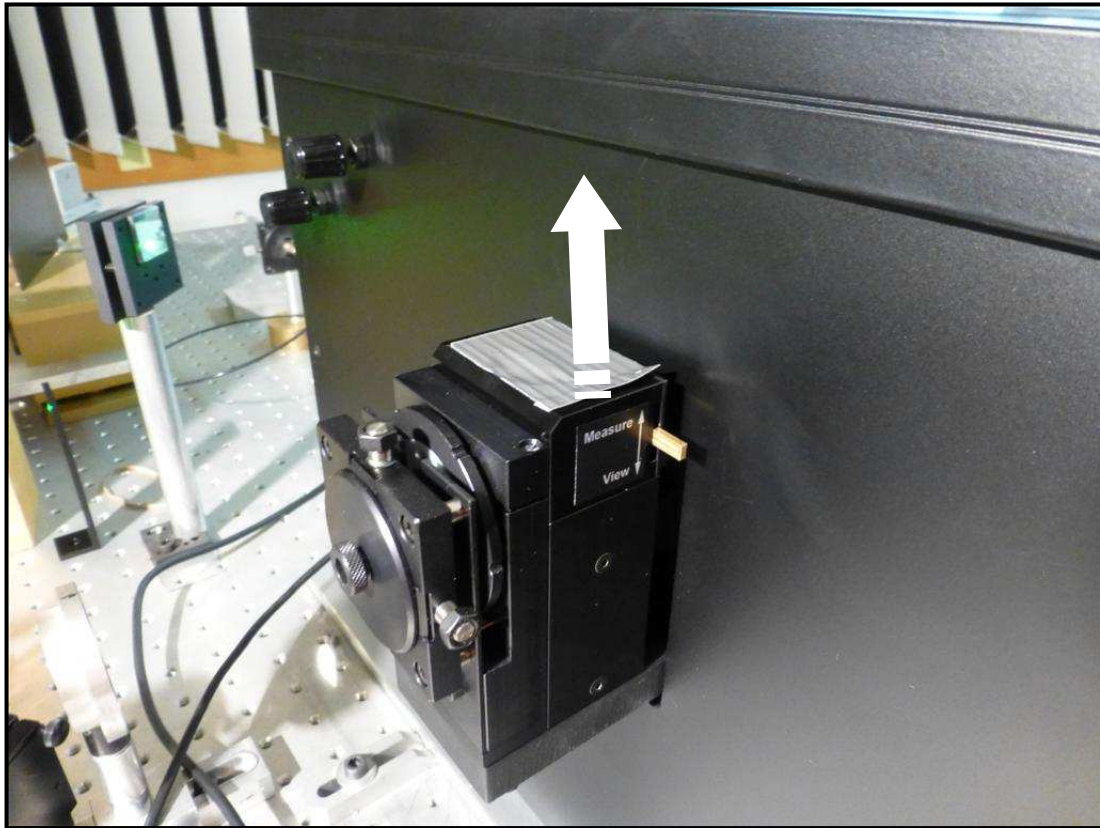
*Fax: +41 44 776 33 65*

*E-mail: [info@jrs-si.ch](mailto:info@jrs-si.ch)*

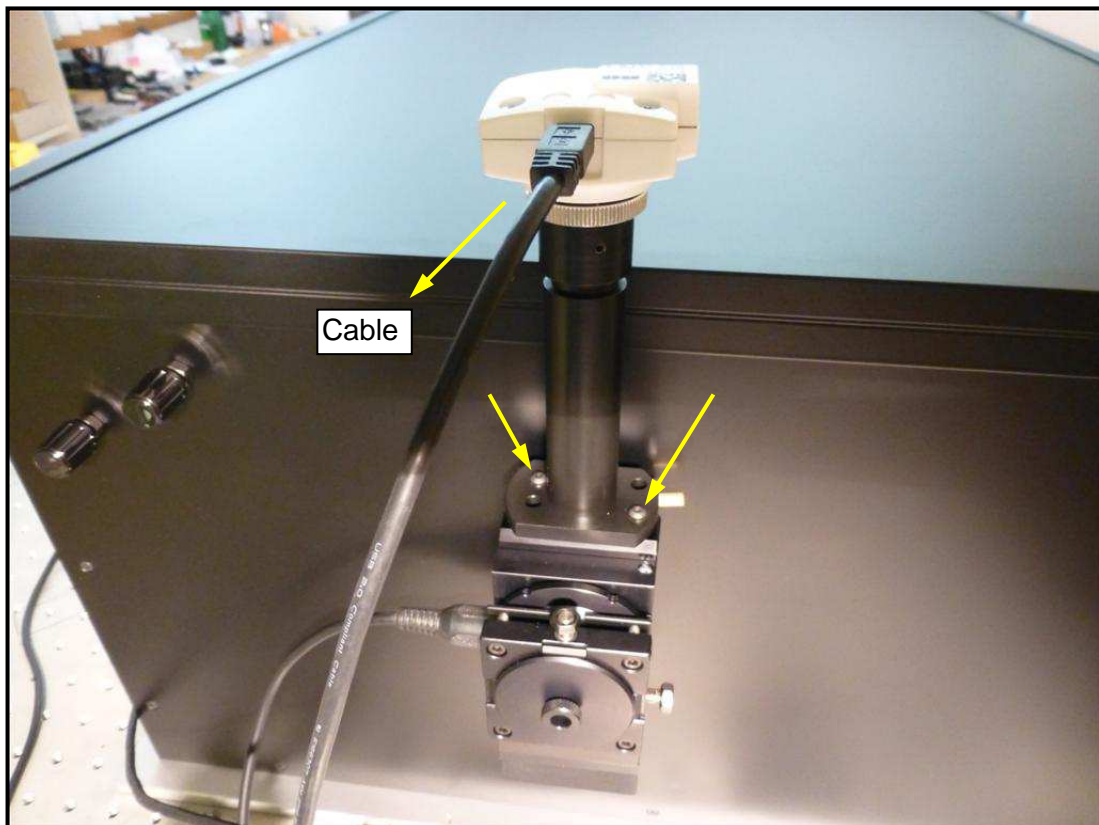
*Internet: [www.jrs-si.ch](http://www.jrs-si.ch)*

### Attaching the camera module

- First remove the protection tape



- Put the camera module into the support as shown below and attach two screws. Do not tighten the screws now, you first have to align the camera module to the right position!



**Install the camera software and launch the program by clicking on the uEye Icon**

You will find the software on the CD provided with the Interferometer or you can download from:  
[www.ids-imaging.com/go/edmund](http://www.ids-imaging.com/go/edmund)

- In the first window click the option on the left side "Optimal colors"



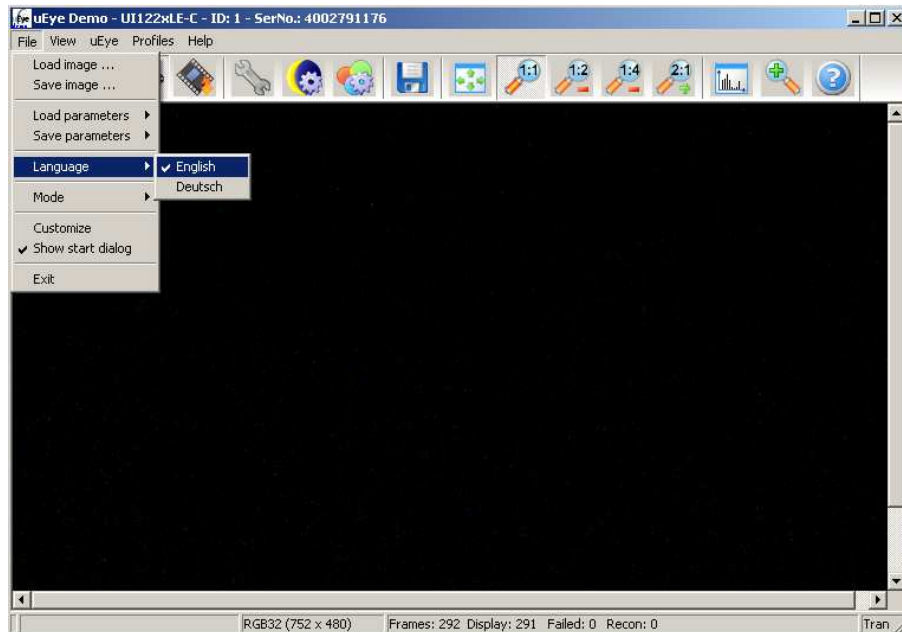
**After you have installed the software you must connect the camera module to the computer.**

- Click left button to open the camera



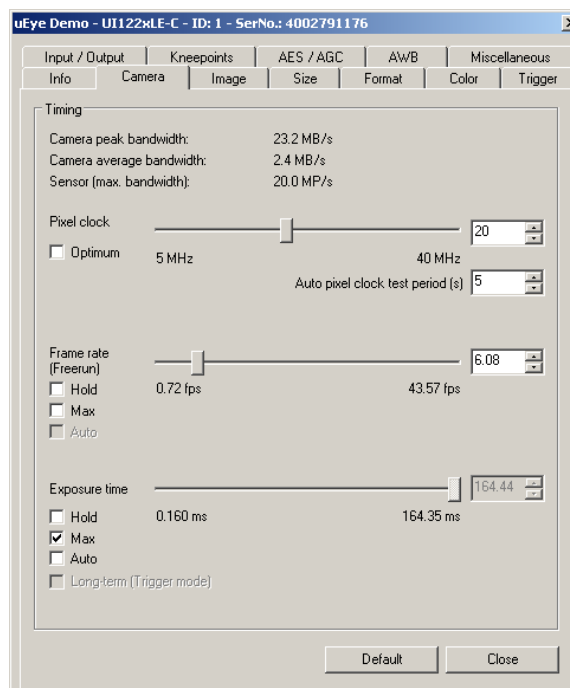
- **Language settings**

Click "File/Language" and choose between German and English



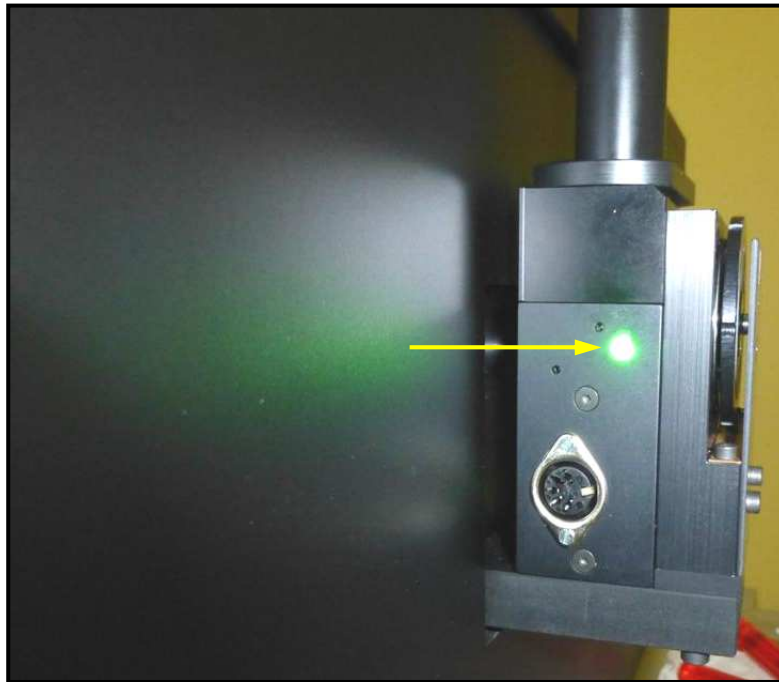
- **Optimum Camera Image**

In order to get good sensitivity from the camera the integration time can be increased by reducing the number of frames per second. Click "Tools/Camera" and choose about 6 frames per second. Set the exposure time to maximum.

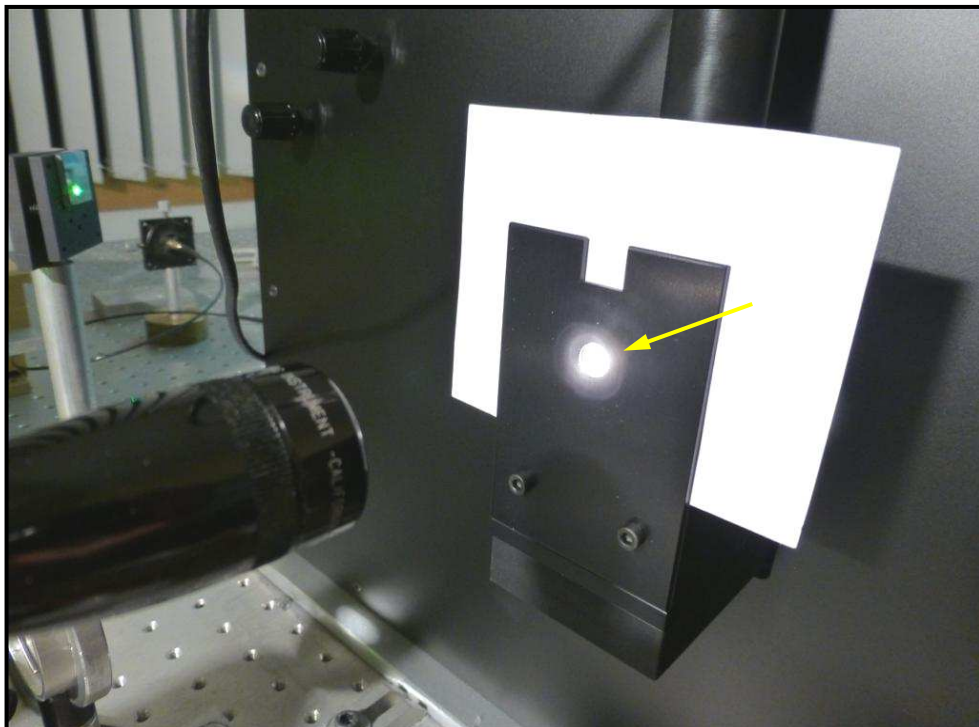


### ***Alignment of the camera module***

- First you need a reference beam hitting the diffuser on the rear side of the shutter unit.

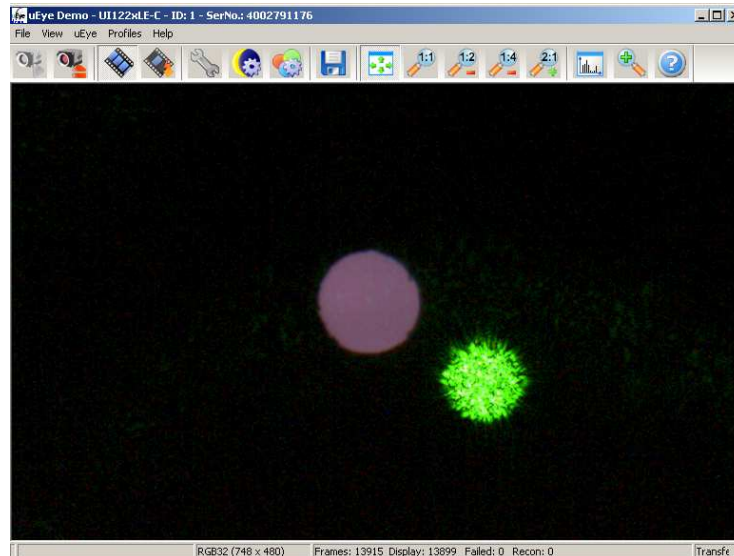


- Slide down the lever on the front of the camera support to the "view" position. Put a piece of paper between the pinhole and the pinhole cover and illuminate the hole in the cover with a flash light or another suitable light source.





- You should be able to see a white spot (from the illuminated pinhole) and a green spot (from the reference beam). Slide the camera module on the support and align the white spot in the centre of the Image. **Now you can tighten the screws of the camera.**

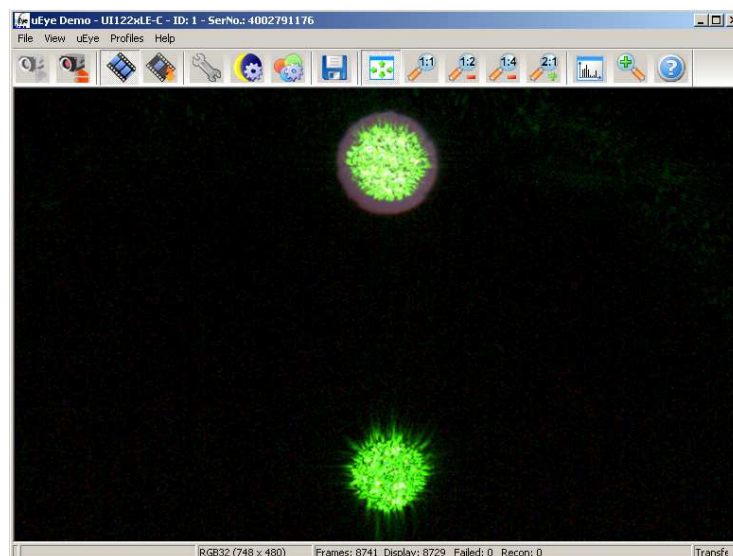


### ***Alignment of the shutter beam splitter***

It is very important that the reference beam follows exactly the same path to the photomultiplier as the measurement beam. Failure to achieve good alignment will result in loss of signal and a small shift in the spectrum.

The reference beam, with an intensity of about 1mW, should be directed onto the diffuser on the side of the input shutter unit. If you look at the camera Image you will see two green spots, corresponding to the beams reflected from the two sides of the beam splitter. Only one of these beams will be used.

Make the entrance pinhole visible by placing a piece of paper next to it and illuminating with white light. Choose a pinhole size of 300 $\mu$ m. If you again look into the pinhole viewer you will see one of the green spots (reference beam) superimposed on a white disc (the input pinhole).



Use a 1.5mm hex key in the two holes indicated in order to align the beam splitter so that the green spot is nicely centred on the white disc. The reference beam is now correctly aligned.

