

Re: Inexpensive 3 Megapixel USB color digital cameras

Source: <http://sci.tech--archive.net/Archive/sci.techniques.microscopy/2007-02/msg00008.html>

- *From:* "Graybald" <r911g@xxxxxxxx>
 - *Date:* 6 Feb 2007 12:38:33 -0800
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On Feb 5, 4:21 pm, "GTO" <grego...@xxxxxxxxxxxxxxxx> wrote:

Most likely, your Periplan ocular was made for the Leitz scopes using a 170mm mechanical tube length and your tried to use it on Zeiss and Olympus scopes that use a 160mm mechanical tube length.

The reason why then the Leitz Periplan does not work well enough with Olympus and Zeiss is the fact that the mechanical tube length for Leitz was 170mm and its optical tube length was 152mm, which is way different from the 160mm mechanical tube length and 150mm optical tube length of the Olympus and Zeiss. Remember, good quality objectives are less forgiving to changes in optical tube length and in order to make a Periplan ocular work on a Zeiss or Olympus requires either significant refocusing (very bad!) or you need to add 10mm spacer to your photoport. With a 10mm spacer added to your photoport, your older Leitz Periplan ocular should work just fine, even with expensive Olympus gears.

If you used a Leitz ocular for 160mm mechanical tube length, there might be yet another reason why you were not successful using it on an Olympus.

Cheers,

Gregor

"Tom" <joe@.com> wrote in message

[news:8oxxh.31557\\$uW.3086@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:8oxxh.31557$uW.3086@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)

Lower cost lenses usually have ghost images. The Ghost images appear as lines that seem to float around. I don't think one camera and lens can work with all microscopes. Different microscope manufacturers have more correction in the eyepiece or the objective depending on the manufacturer.

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I've had good luck mounting my leitz periplan 28mm threaded eyepiece to my Nikon Coolpix 995 camera. It works perfectly with my Leitz microscope but not so well with my Olympus, Nikon, Wild and Zeiss microscopes.

"Graybald" <r...@xxxxxxxx> wrote in message
news:1170448071.304315.169490@xx

There are some 3 megapixel USB 2.0 color digital microscope cameras being listed on eBay for much less than I would have thought possible.

For example, see:

<http://cgi.ebay.com/3-0M-PIXELS-MICROSCOPE-COLOR-DIGITAL-CAMERA-2-0-U>

or

<http://cgi.ebay.com/3-0-MEGAPIXEL-MICROSCOPE-COLOR-DIGITAL-CAMERA-U>

Does anyone have experience with these cameras?

I am considering one for a brightfield reflected light (metallurgical) microscope or on a stereo microscope. Therefore low light capability is not an issue.

Graybald- Hide quoted text -

- Show quoted text -

Thank you all for your comments.

Kevin Cunningham and Beats:

I was hoping that someone might recognize this product. My guess was that it could have begun as an astronomy camera but then was repurposed.

Heinrich:

I had not looked at the Canon Powershot cameras since I already had a Nikon Coolpix 995. However, the Canons are apparently easier to remote control. Are you using Canon software or the Breeze PSR Remote software? (<http://www.breezesys.com/index.htm>)

Gregor and Tom:

Tube length differences are not the only reason why photo eyepieces from another manufacturer may not produce excellent results when used on a microscope. Some microscope designs used compensating eyepieces. Ted Clarke has discussed the topic in the July 2004 issue of Microscopy Today in an article titled "Chromatic Aberration in Digital Photomicrographs from Microscopes Requiring Compensating Eyepieces". You can download the magazine issue (as a giant 15Mb .pdf file) from the archive at <http://www.microscopy-today.com/cgi-bin/MTWWWListingSQL.pl> <http://www.microscopy-today.com/cgi-bin/MTWWWListingSQL.pl>
(Scroll down below the cumulative index to find the back issues).

I have used a Nikon Coolpix 995 with a Mark Simmons eyepiece <http://www.perspectiveimage.com/index.php>
The Coolpix 995 is known to have artifacts under certain conditions. See Gordon Couger's discussion at <http://www.couger.com/microscope/shootout/shootout.html>

My main gripes with the Coolpix is the inconvenience of swapping out CF cards and of trying keep track of the actual magnification including the zoom setting.

I am still looking for the digital equivalent of a Nikon F3 with a DW-4 6X right angle viewfinder and M screen. That "universal camera" setup would let me go from overall views of a subject to macro and micro images, all with one camera. The closest digital equivalent I have seen is the new Olympus Evolt E-330 DSLR with the Live View LCD electronic viewfinder. The viewfinder apparently can be displayed remotely and the camera controlled via a PC.

Graybald

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