

From Eye to Insight

Leica
MICROSYSTEMS

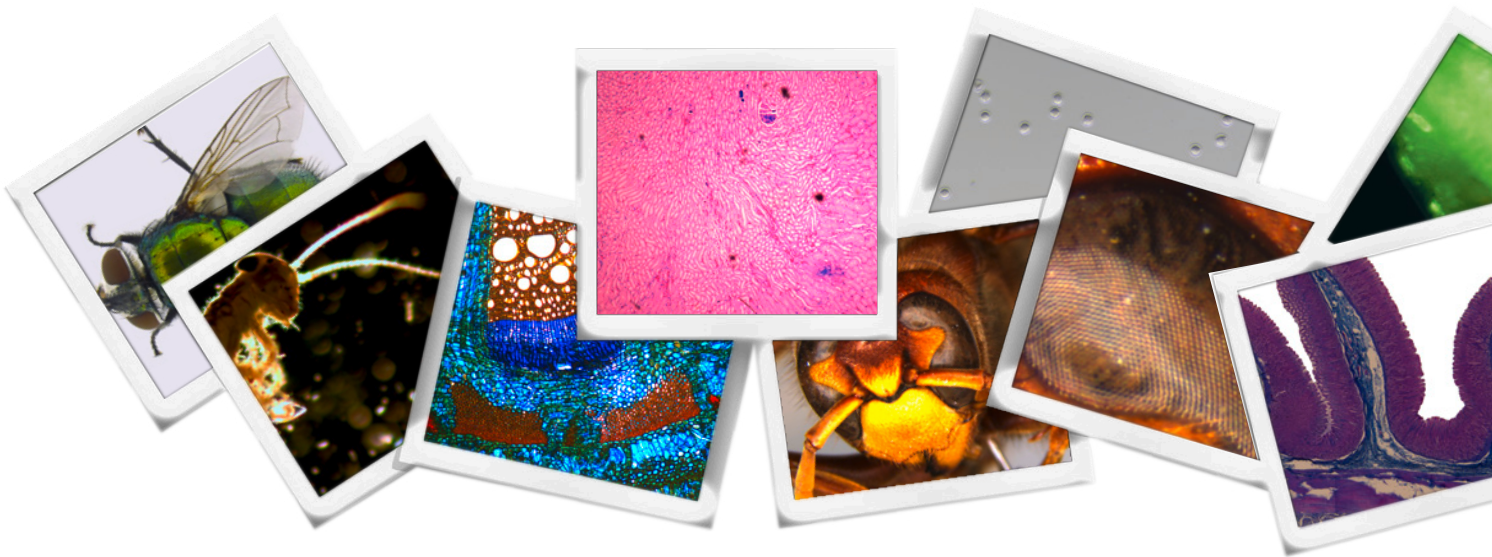


Microscope Cameras for Life Science Research

ADAPTABLE TO EVERY SITUATION

20 MP CMOS Cameras
DMC5400 and DMC6200





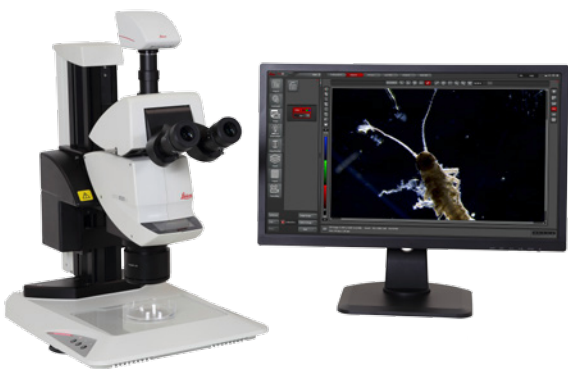
IN A SNAPSHOT DMC5400 VS. DMC6200

Choosing the camera that fits your needs best is critical. There are several important factors to consider when selecting the most appropriate camera for high quality microscopic imaging of a specimen:

- > Specimen size
- > Is the sample fixed or moving, (in vivo vs. ex vivo)
- > Level of detail needed in the recorded and/or live image
- > Illumination method, i.e. brightfield, darkfield, fluorescence, etc.
- > Magnification range

Make every detail count with the DMC5400

Capture the highest resolution images in brilliant color for the finest detail with 4K Ultra-HD high-speed imaging.



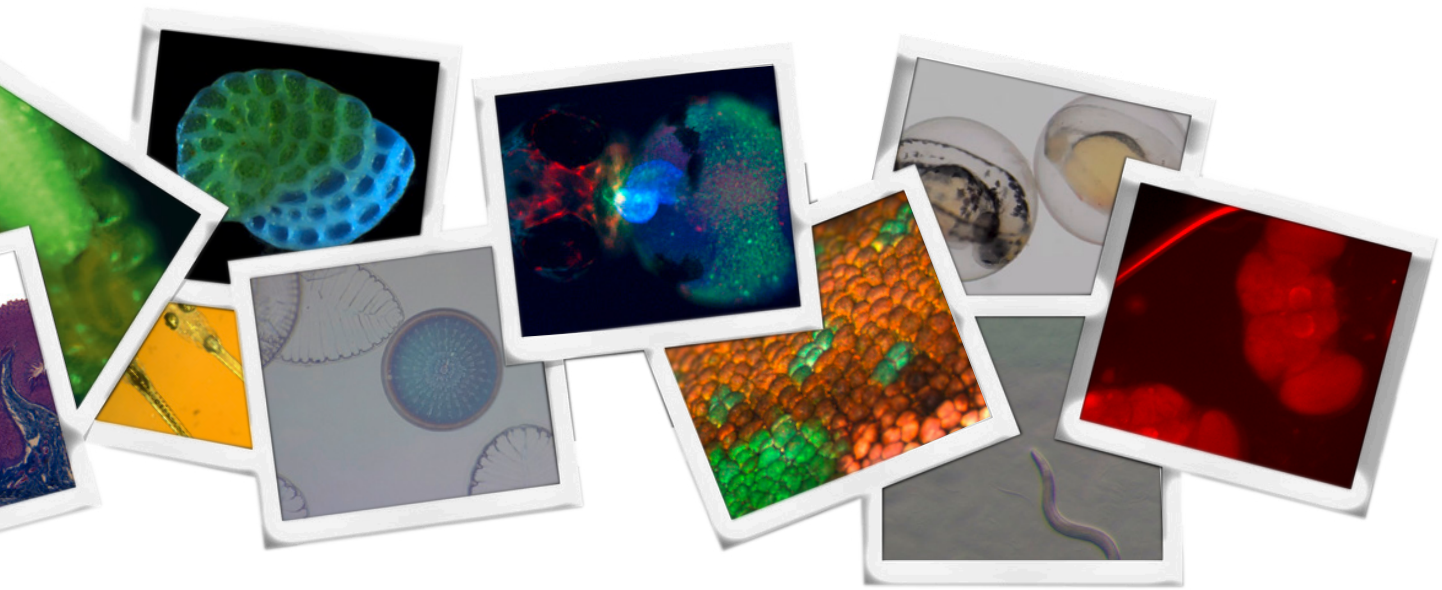
Ephemera larva imaged with the DMC5400 and a M205 A stereo microscope from Leica Microsystems

Enjoy true colors in every pixel with the DMC6200

Capture intense color detail and contrast for brightfield, darkfield and fluorescence applications utilizing cutting edge pixel shift technology.



Transgenic zebrafish larvae with fluorescent proteins imaged with the DMC6200 microscope camera and the fluorescent stereo microscope M205 FA.



FIND OUT WHICH CAMERA FITS YOUR IMAGING NEEDS BEST

This table can help you to find out with which Leica microscope camera you can produce the best imaging results for your needs.

DMC5400	QUESTIONS	DMC6200
<p>Imaging from small cells, e.g. oocytes to large flies</p>	<p>How big is the sample you want to capture in a single frame?</p>	<p>Imaging small, single cells to large organisms, e.g. complete adult zebrafish</p>
<p>Capturing both moving and static specimens with high resolution (in a single shot, up to 20 megapixel)</p>	<p>Is the sample moving or static?</p>	<p>Capturing moving specimens at low resolution (single shot, 2.3 megapixel) Imaging static specimens at high resolution (pixel shift, up to 20.7 MP)</p>
<p>Recording images with fine detail, but some color artifacts (Bayer RGB filter interpolation)</p>	<p>How much detail is required in the image?</p>	<p>No color artifacts due to multiple sampling (pixel shift technology)</p>
<p>Fast live imaging with up to 20 megapixel, 4 K</p>	<p>How much detail is needed in the live image?</p>	<p>Fast live image with 2.3 megapixel resolution</p>
<p>Brightfield and darkfield applications, but no fluorescence</p>	<p>Are you considering fluorescence or are you working with purely brightfield applications?</p>	<p>field, darkfield and basic fluorescence (DAPI, GFP, mCherry) applications</p>
<p>Stereo and light microscopes with up to 200x magnification</p>	<p>Which magnification range are you using?</p>	<p>Stereo and light microscopes with up to 1000x magnification</p>

EVERY DETAIL COUNTS - THE DMC5400 CAMERA



See what you need to see in 4K Ultra-HD

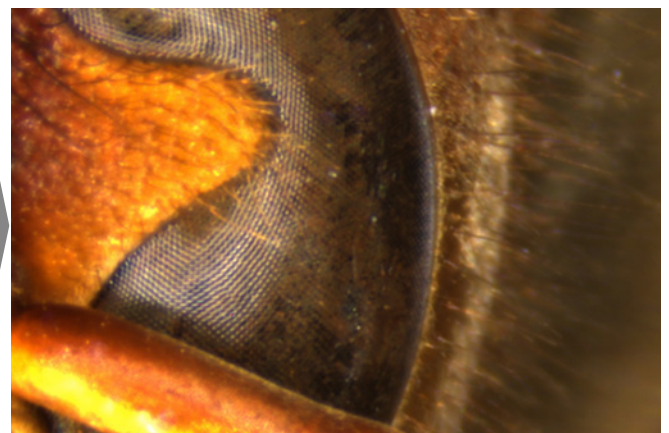
The DMC5400 microscope camera delivers high-resolution color images even at low magnification. Its high frame rate allows you to rapidly produce high quality images for documentation, evaluation, and analysis, for a wide variety of specimens. Complete model organisms like zebrafish or drosophila can be easily studied and documented.

Every pixel counts

Gather all details of your sample in a single image with the DMC5400 featuring 20 megapixel resolution and a CMOS sensor.

- > Enjoy live imaging with 4K resolution (15 fps)
- > Save all information from your microscope in one image - at every magnification
- > Capture images with 4x more digital resolution* - get the same amount of data in fewer images
- > Document the details of your specimen precisely with fewer images to store
- > See high resolution images in real-time with high-speed imaging (15 frames per second @ 20 megapixel)
- > Print images in large poster size with up to 120 dpi, e.g. DIN A0 format

EVERYTHING IN ONE SHOT



* In comparison with industry typical 5 MP microscope cameras.



Get your image fast

Take images with low light at any magnification thanks to the high light sensitivity of the built-in CMOS sensor.

- > See details in light and dark areas clearly due to superb image contrast with high dynamic range
- > Enjoy working with correct image exposure automatically determined in less than one second
- > Record movies and images in 4K Ultra-HD quality even in low light with the latest Sony Exmor R sensor technology
- > Focus and position your sample fast with image speed of 40 frames per second

EVERY PIXEL - TRUE COLORS THE DMC6200 CAMERA



Capture brilliant, crisp images in brightfield, darkfield, and basic fluorescence

The DMC6200 camera delivers amazing images in different application modes, whether at the lowest or highest magnification. The unique state-of-the-art CMOS sensor with a pixel size of 5.86 μm and a resolution of 2.3 megapixels makes the camera ideal for imaging of fusion protein expression, organism dissection, and observations of stained specimens on slides. Experience fast live imaging at up to 60 frames per second when imaging in time lapse mode. For rapid data transfer and compatibility with any computer, the camera is equipped with a USB 3.0 interface.

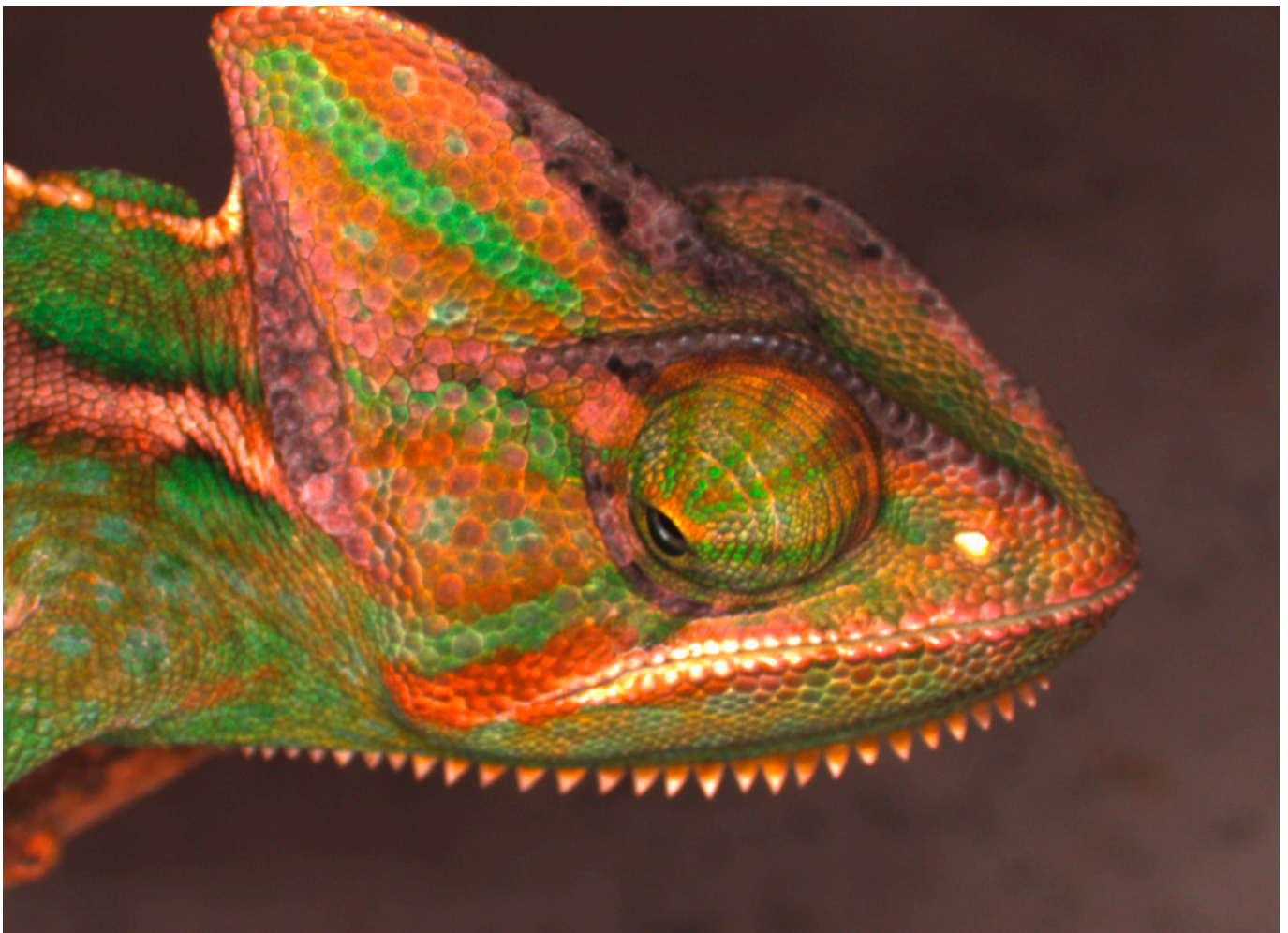
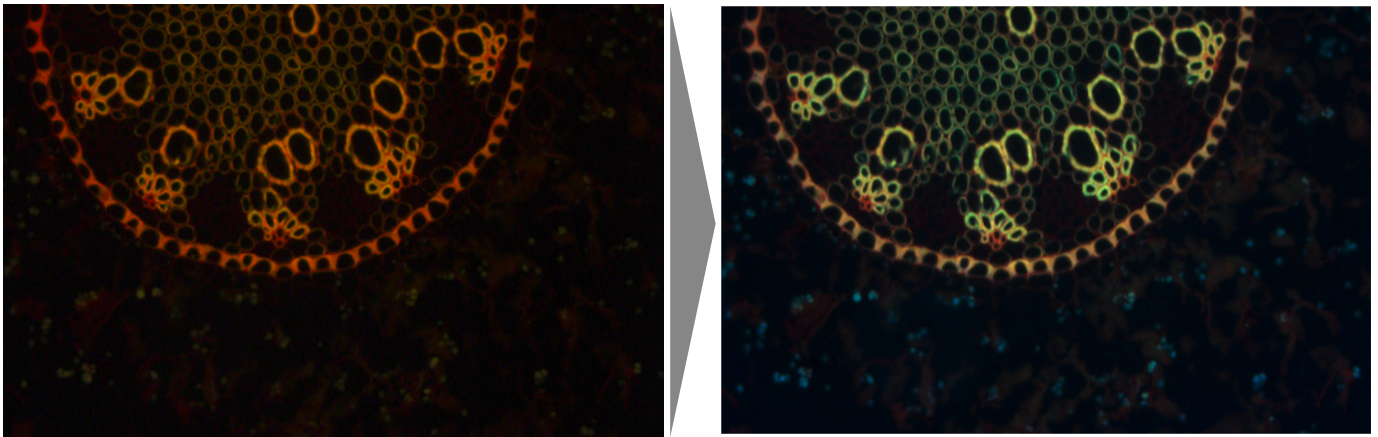


Image of a Yemen chameleon imaged with DMC6200 microscope camera and the Greenough stereo microscope S9 D from Leica Microsystems.

See more details

Stunning images that are true-to-life are essential when documenting your research results. The DMC6200 camera offers:

- > More colors and less noise due to amazing pixel quality achieved by the newest sensor technology from Sony
- > Resolve more grey levels and avoid over and underexposure in an image with an immense dynamic range of 73dB
- > Catch more light because of a huge pixel size of 5.86 μm and high quantum efficiency
- > Get the real RGB value of every pixel at any zoom step and magnification value (20.7 megapixel through pixel stepping)



Convallaria imaged with the Leica microscope camera DFC450 (left) and with the new Leica microscope camera DMC6200 (right), both with identical exposure time.

Faithful color reproduction for impressive image quality

The DMC6200 camera produces outstanding images with exact color measurement for each pixel. It records exactly what you see through the microscope's eyepieces.

- > Astonishing detection of subtle color differences through multiple sampling (pixel shifting)
- > Exceptional light sensitivity
- > Excellent image contrast with clear differentiation between the brightest and darkest points

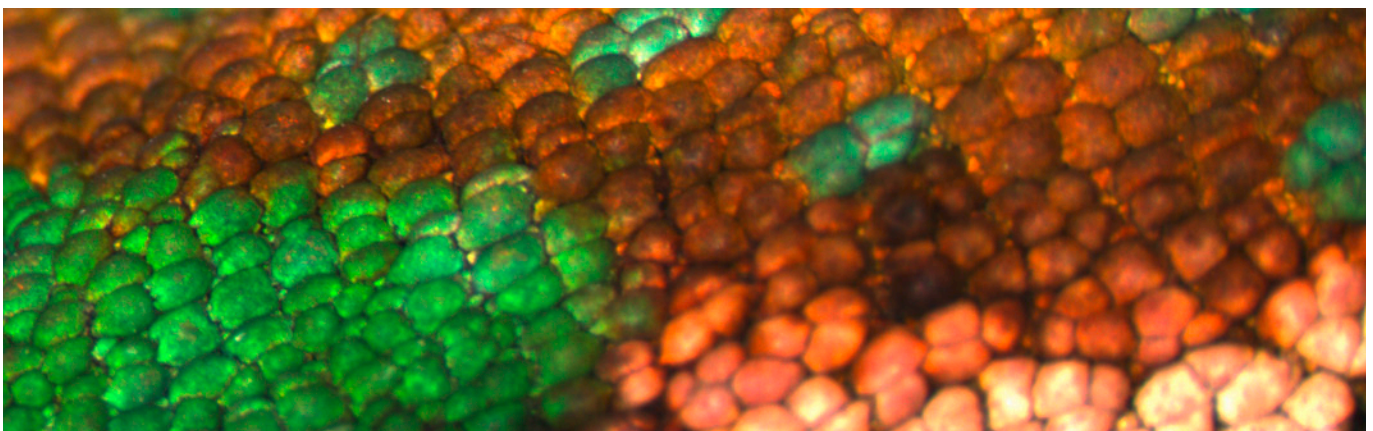
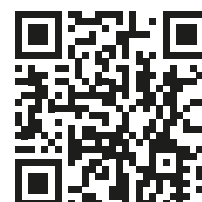


Image of the skin of a Yemen chameleon imaged with DMC6200 microscope camera and the Greenough stereo microscope S9 D from Leica Microsystems.

SPECIFICATIONS

Microscope Camera	DMC5400	DMC6200
Sensor	Sony, CMOS Exmor R rolling shutter	Sony, CMOS Exmor R global shutter
Sensor size	1"	1 / 1.2"
Pixel size	2.4µm x 2.4µm	5.86µm x 5.86µm
No. of pixels	20.5 megapixel	2.3 megapixel up to 20.7 megapixel (with pixel shift)
Live image formats	Aspect ratio 3/2 > 20 MP Full frame 5472 x 3648 - 7 fps > 5 MP 2x2 Bin. 2736 x 1824 - 19 fps > 2.3 MP 3x3 Bin. 1824 x 1216 - 32 fps Aspect ratio 16/9 > 4K 3840 x 2160 - 13 fps > Full HD 1920 x 1080 - 30 fps All formats are also available for image capture mode.	Formats in live and capture, aspect ratio 16/10 > Full Frame 1920 x 1200 - 30 fps Formats only available in capture (pixel shift operation), aspect ratio 16/10 > 4 shot, 2.3 MP 1920 x 1200 > 16 shot, 9.2 MP 3840 x 2400 > 36 shot, 20.7 MP 5760 x 3600
Bit depth image	3 x 8 bit & 3 x 12 bit	3 x 8 bit & 3 x 16 bit
Readout noise	4e-	7e-
Saturation capacity	15'000 e-	32'000 e-
Dynamic range	71 dB, 3500:1	73 dB, 4000:1
Quantum efficiency	67% @ 536 nm	74% @ 536nm
Cooling	none	none
Exposure time	1 ms to 10 s	1 ms to 5 s
Gain	1x to 10x	1x to 30x
Article number	12 730 531	12 730 532
Recommended C-mount	1.0x (10 450 829) stereo microscope 1.0x (11 541 510) light microscope	1.0x (10 450 829) stereo microscope 1.0x (11 541 510) light microscope
Software PC	> LAS X 3.4.1 or higher + Software Update (Win7, Win10) > LAS 4.13 or higher (Win7, Win8/8.1,10) In LAS automatic selection of white balance is not available, frame rates are expected to be lower (70% of the values above is reached).	
Interface	USB 3.0	USB 3.0

CONNECT
WITH US!



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