From Eye to Insight

Leica
MICROSYSTEMS

LEICA DFC3000 G

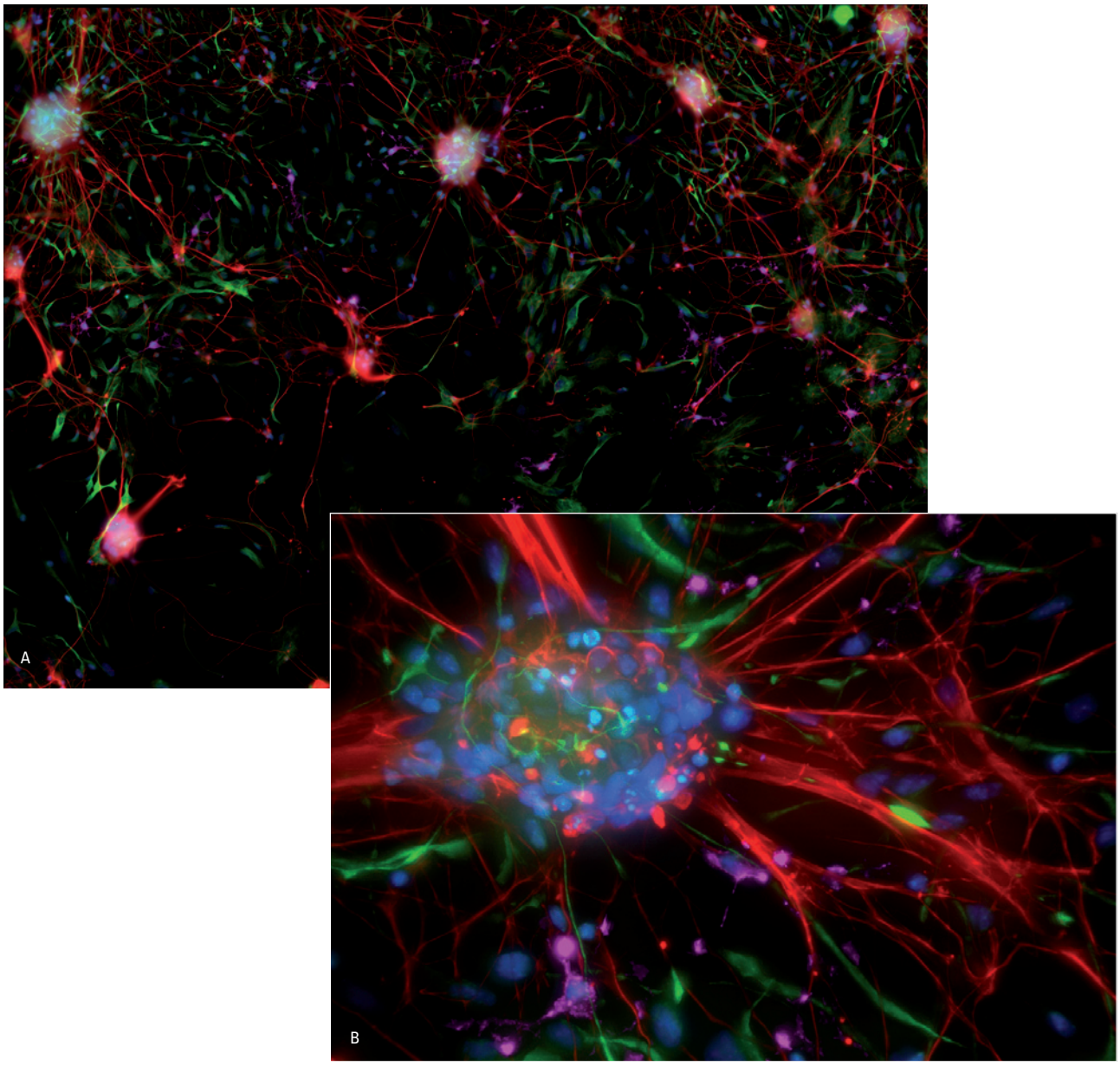
Crisp fluorescence documentation for routine experiments

Leica DFC3000 G – Crisp Fluorescence Documentation for Routine Experiments

The Leica DFC3000 G camera precisely meets the requirements of daily fluorescence microscopy. With a high-sensitivity, high-quality Sony® CCD sensor even weak fluorescence signals can be professionally documented. Leica's unique passive cooling architecture in combination with smart imaging tools ensures excellent quality fluorescence imaging at an affordable price.

IMPRESSIVE IMAGING CAPABILITY

Equipped with a dedicated fluorescence CCD sensor, the Leica DFC3000 G camera provides outstanding imaging quality even under demanding low light conditions. First and foremost designed for daily routine fluorescence documentation, the camera provides advanced features such as image averaging, dynamic hot pixel correction, and external trigger capability.
The camera features Leica's unique passive cooling system with pixel double sampling and enhanced temperature convection – without any compromise on speed of acquisition and power consumption. You'll experience a brilliant fluorescence signal that you wouldn't expect from such a compact system.

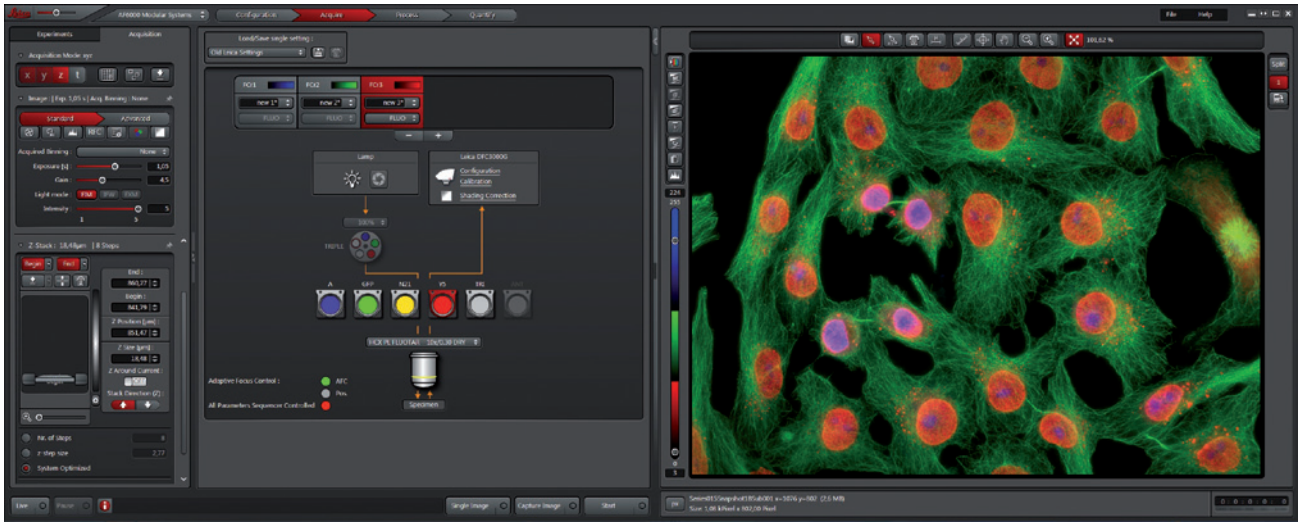


A: Cultured cortical neuronal cells of a mouse. Blue, DAPI, nuclei; green, anti-Nestin-Cy2, Astrocytes; red, beta-III-tubulin-Cy5, mature neurons; purple, NG2-Cy3, immature neurons. Image acquisition was performed using a Leica DFC3000 G digital camera acquiring 7x6 tiles and afterward stitched together using Leica Application Suite X (LAS X) software.

B: Higher magnification of a cultured cortical neuronal cells of a mouse. Stained as above.

AFFORDABLE FLUORESCENCE SYSTEMS

Leica DFC3000 G fits perfectly on all widefield and stereo microscopes. With a standard c-mount thread the camera easily connects to virtually any stand. The Leica DM IL LED manual inverted microscope combined with the camera, for example, creates an affordable fluorescence package for cell transfection studies. Leica's tailor made fluorescence systems fit every budget.



SCALABLE SOFTWARE SOLUTIONS

Leica DFC3000 G is shipped with our standard acquisition and analysis software package Leica Application Suite X (LAS X) for basic documentation and measurement. Other software packages can be upgraded with additional application modules any time later if your requirements grow.

Benefit from these highlights every day:

- Professional fluorescence documentation provided by a high-sensitivity 1.3 megapixel CCD monochrome sensor from Sony® with micro lenses
- Excellent signal to noise ratio due to Leica's unique passive cooling architecture
- Adaptable digitalization with 8, 12, and 16 bit
- Groundbreaking acquisition speed of up to 31 fps in full frame and 54 in 2x2 binning mode
  A live image faster than your eyes
- Advanced camera features such as on-head image buffer, image averaging, sharpening, and high dynamic range acquisition
- Universal scope of application due to standard c-mount interface and data transfer through state-of-the-art USB3 interface

ABSORBING SCIENCE, EMITTING KNOWLEDGE

Leica Microsystems fluorescence technologies and expertise are focused on the one simple certainty of fluorescence – the more perfectly we capture the emitted fluorescence, the more perfectly we capture the image.
The technologies and expertise behind the fluorescence applications of Leica Microsystems systems exist purely to help ensure you can achieve the astonishing imagery you are looking for, as simply as possible.

www.leica-microsystems.com

LEICA DFC3000 G TECHNICAL DATA

Camera type	Digital monochrome, high-sensitivity, passive-cooled camera for fluorescence microscopy		
Housing	Aluminum, Size (L × W × H) 112 mm × 74 mm × 64 mm, Weight 320 g		
Sensor			
CCD sensor	Sony ICX455® interline transfer CCD sensor with EXview HAD technology		
Pixel	1296 x 966 (~ 1.3 MP); 3.75 µm × 3.75 µm pixel size		
Exposure time	7 µsec – 5 sec *		
Bit depth	8 bit / 12 bit / 16 bit		
Binning	2x2; 3x3		
Partial scan	Freely definable ROI (region of interest), combination with binning possible		
Dark noise	8 electrons typical (25 MHz)		
Dynamic range	~ 59 dB (25 MHz); add. High Dynamic Range acquisition mode available via software*		
Pixel clocking rate	25 MHz/ 50 MHz		
Analog gain	1× – 10×		
Advanced features	Image averaging, sharpening, on head image buffer external trigger capability		
Image formats	**Pixel**	**Pixel Clock MHz**	**fps***
Full frame	1296 x 966	50	31
		25	15
2x2 binning	648 x 483	50	54
		25	26
3x3 binning	464 x 346	50	72
		25	35
Supported operating systems	Leica LAS X, MetaMorph (NX)®: SDK available on request		
c-mount	0.35 x or 0.55 x		
Data and power	USB 3.0 single cable		
Power supply	12 V via computer		
Power consumption	~3 W		
Operating temp. range	+5°C .. +50°C		
Air humidity	max 80%, non-condensing		

* depends on software platform

Illustrations, descriptions and technical data are not binding and may be changed without notice.