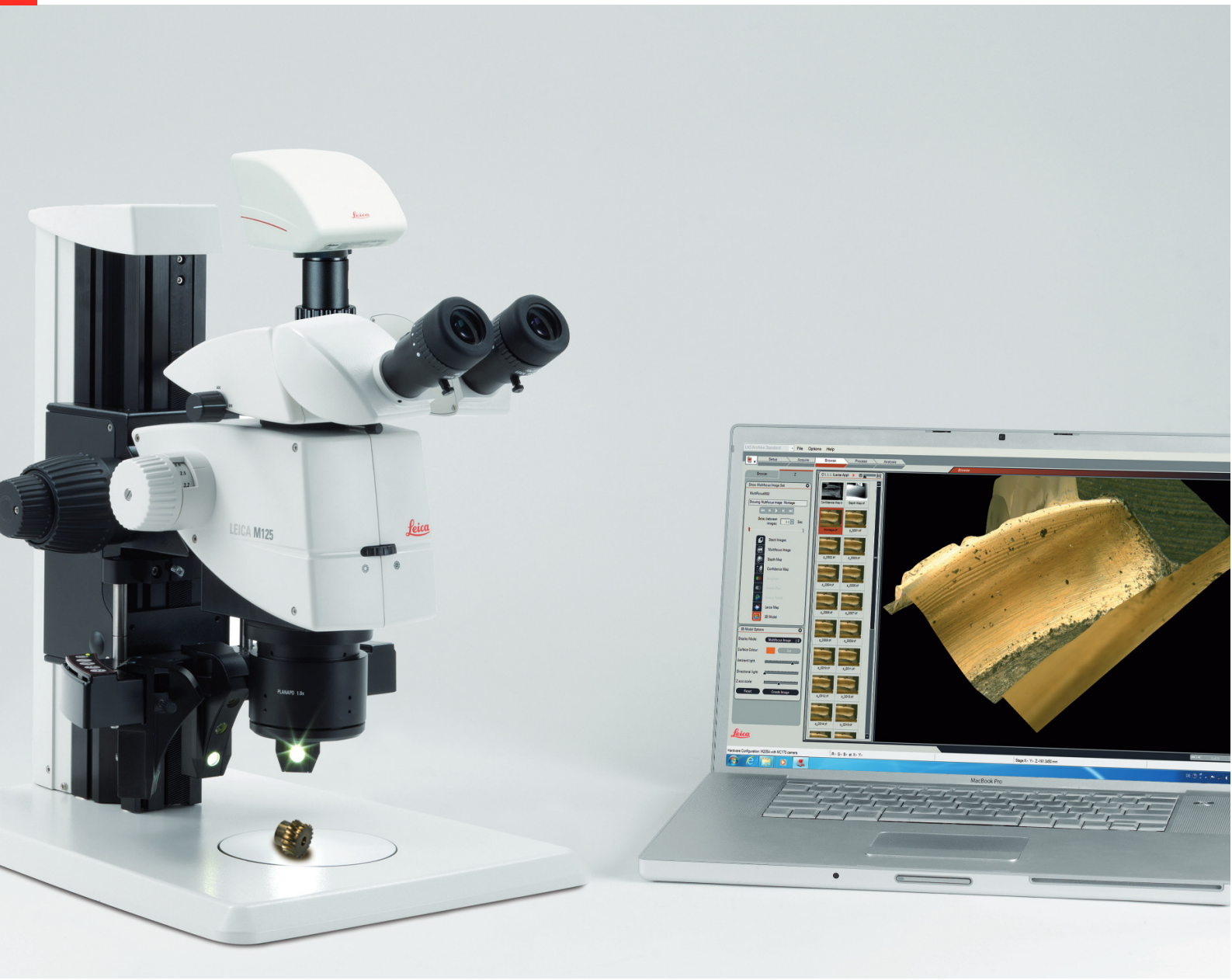
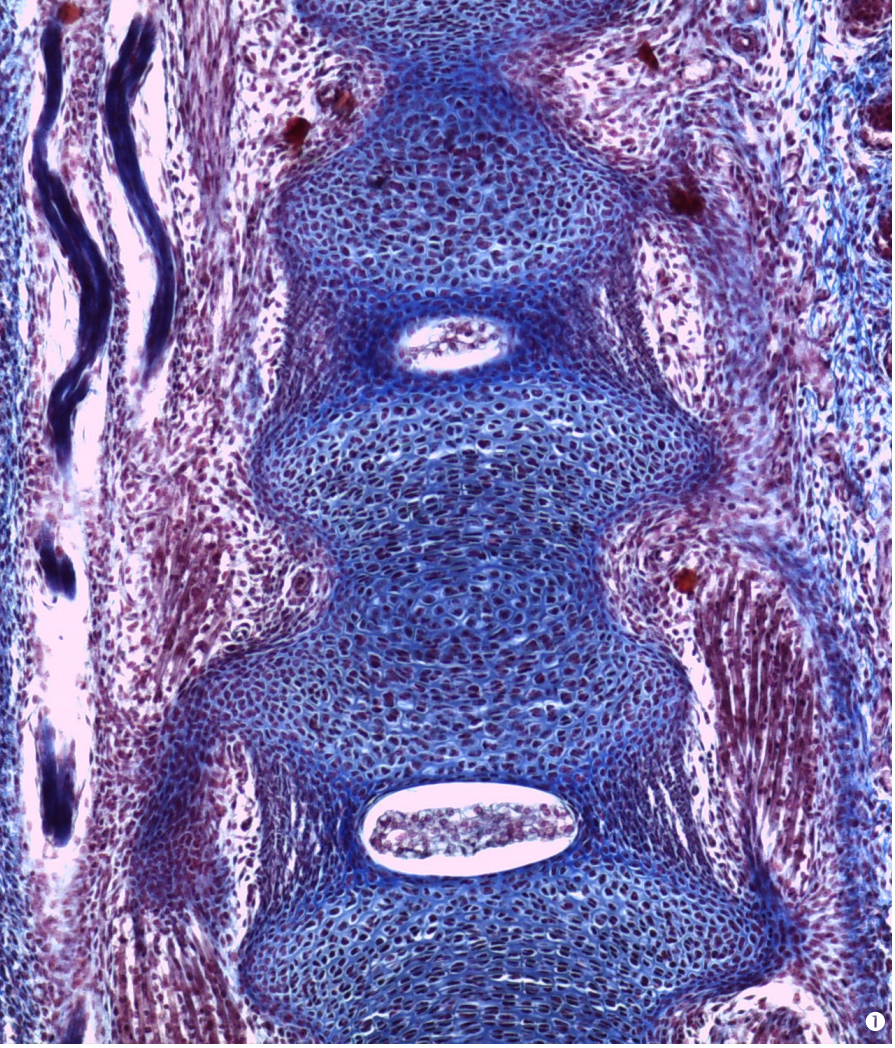
From Eye to Insight

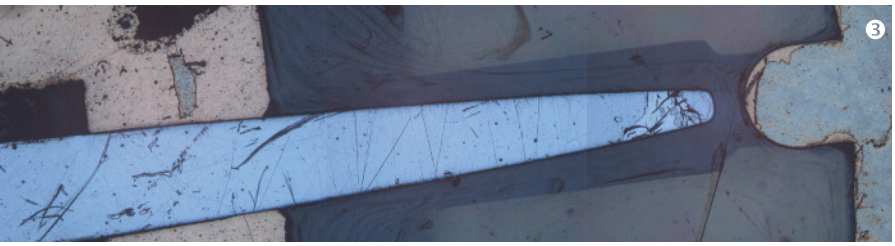
Leica
MICROSYSTEMS

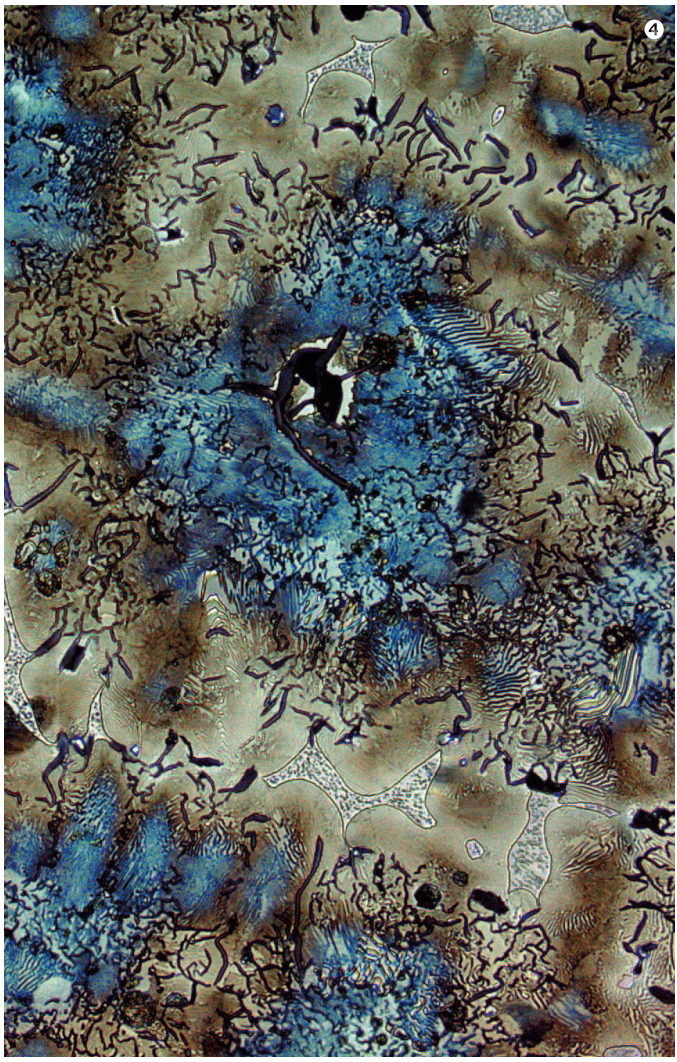


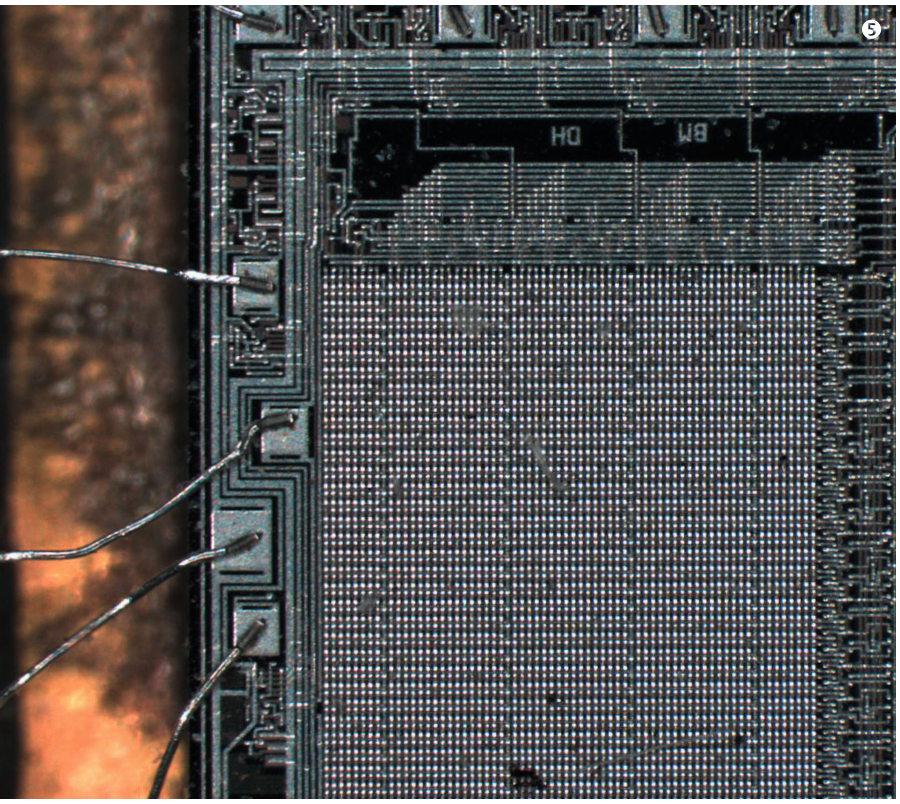
Leica DMC2900

Digital microscope camera for easy, efficient
documentation and presentation in industry and research









High Speed Imaging

Leica DMC2900 with USB 3.0 interface for highest speed in image processing

Leica Microsystems' next generation digital camera features the speed of a USB 3.0 interface, which allows easy image settings and precise documentation of microstructures – and can even be used with modern notebooks. The Leica DMC2900, optimally controlled by the user-friendly software Leica Application Suite (LAS), provides high quality images from all industrial and research samples.

Professional imaging

The Leica DMC2900 digital color camera is optimized for real-time imaging in standard microscopy applications. With up to 30 frames per second, its live preview function allows samples to be easily positioned, perfectly focused, and even manipulated on the computer screen. A reliable 1/2" CMOS sensor with 3 megapixel resolution ensures the optimal processing of standard microscopic applications which require processor-intensive series of single image captures.

The Leica DMC2900 is easily integrated with any microscope system using the universal C-mount adapter.

Leica DMC2900 at a glance

- Digital camera with 3.1 megapixel resolution – optimal for applications using standard microscopes
- Fast USB 3.0 interface for a direct connection between camera and PC or notebook; also backward compatible with USB 2.0 at a lower live imaging speed
- Ideal for precise measurements, analyses, and documentation
- Color interpolation, image sharpening, and shading correction are performed very rapidly by the camera hardware without compromising live imaging speed
- Optimized control of the Leica DMC2900 using powerful LAS software
- Fast live imaging speed of up to 30 frames per second (XGA resolution), allowing authentic real-time sample display on the monitor

❶ Examination of tissue sample (H&E staining)
❷ Examination of zebrafish embryos
❸ Assembled image of a metal sample (LAS-MultiStep)
❹ Structure of brass at 50x magnification
❺ Examination of bonding on a chip

USB 3.0 interface for a fast, secure connection

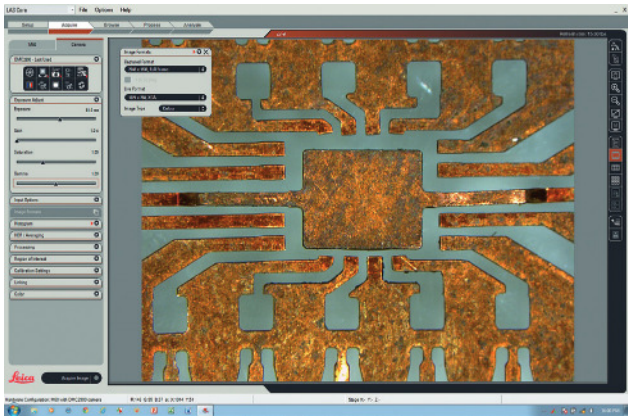
Customized Solutions: Leica LAS software

With its fast reaction time, the Leica DMC2900 is especially suitable for all microscopic applications that require the collection and manipulation of a large number of images.

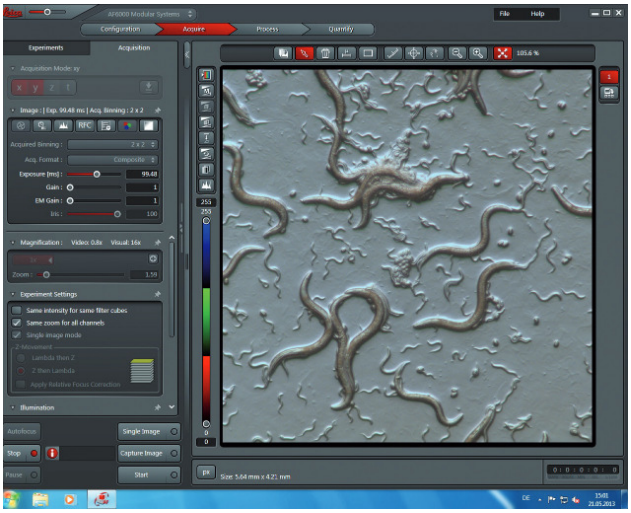
The complimentary software Leica Application Suite (LAS) included in the camera kit enables simple annotations and measurements. This software platform base can be expanded using numerous modules that share a common, easy-to-use, consistent user interface.

The efficient interplay between software and digital camera is apparent when processing assembled images using the Leica software modules LAS MultiFocus, LAS MultiStep or LAS Montage, for example. The high degree of precision and automation saves time and gives the best conditions for industrial applications such as quality control.

Detailed information about LAS and optional modules can be found at our website www.leica-microsystems.com

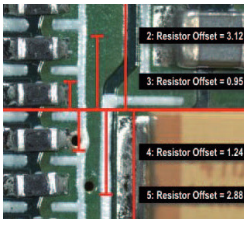


The standard software LAS included in the camera kit is ideal for simple measurements and documentation.



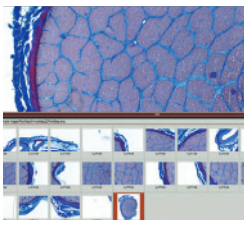
Integrated Platform for Life Science Research:
LAS AF (Advanced Fluorescence) is the easy-to-use software platform by Leica Microsystems for advanced life science research. The Leica DMC2900 is fully supported in LAS AF and is especially well-suited for the documentation and analysis of complex incident light and transmitted light samples (such as the examination of C. elegans).

Other optional LAS modules offer additional functions to meet individual needs:



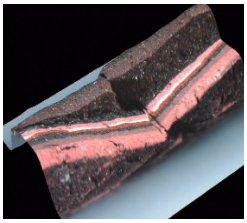
LAS Live Measurement

Test important parameters such as quantity, position or area using the live imaging function prior to image acquisition – and only save the most important images.



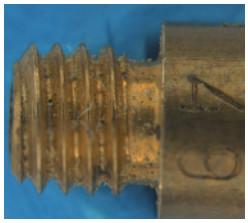
LAS MultiStep

Automatically acquire images at XY coordinates defined by a rectangular template.



LAS Montage

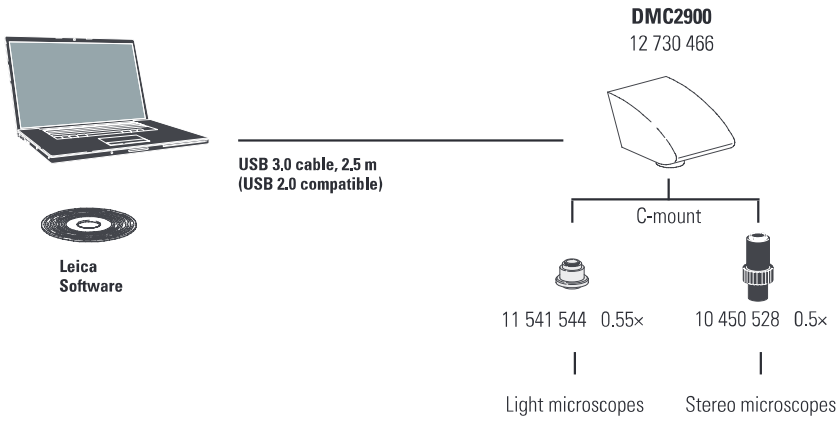
Easily acquire a series of images and use these to create a single extended focus "montage" image of exceptional quality and high resolution.



LAS Multifocus

Create z-stacked images out of a series of images at different focal planes.

Assembly Diagram



Leica DMC2900—Technical Data

DIGITAL CAMERA	
Camera type	Digital camera for microscopy with control software
Sensor	Progressive scan CMOS, Micron (MT9T001)
Sensor type/size	6.55 mm × 4.92 mm (type 1/2")
Color filter	RGB Bayer mosaic
Protective color filter	UV/IR Filter
Shutter control	Electronic rolling shutter/ Progressive scan readout
Number of pixels	3.1 megapixels, 2048 × 1536
Pixel size	3.2 µm × 3.2 µm
Color depth	30 bit
A/D converter	10 bit
Dynamic range	Type > 55 dB/600:1
Readout noise	σ < 1.8 LSB (10 bit) typical
Exposure time	0.1 msec – 2 sec
Gain control	1× – 4× / 0 – 12 dB
Shading correction	yes, stored for all formats
Region of interest	Freely adjustable in 2 pixel steps from 2 x 2 up to full resolution

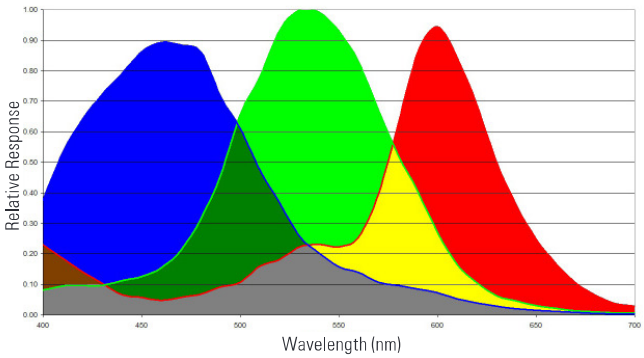
ELECTRONIC INTERFACES	
Optical	C-mount
Recommended video adapter	0.5×/0.55×
Digital output connector	USB 3.0 Micro-B, with screw holes

LIVE IMAGE SPEED		
Image formats*	USB 2.0	USB 3.0
2048 × 1536—Full frame	4	12
1024 × 768—XGA	15	30

* 5 msec exposure time, in frames per second

COMPUTER	
Min. computer configuration	Intel Core 2 Duo 2.4 GHz, or faster 2 GB RAM, high res. graphic card with 128 MB or 256 MB RAM, Direct X V9c or V10, USB 2.0 or USB 3.0 interface or free PCI Express slot Software: Windows 7 and Windows 10 (LAS and LAS X) Windows 8 (LAS only)

TECHNICAL DATA AND OPERATING ENVIRONMENT	
Power consumption	~ 4 W
Power supply	via USB 3.0 cable
Housing	Aluminum die cast
Size	112 × 74 × 68.4 mm
Weight	340 g
Operating temperature	-5°C to +50°C
Relative humidity	10 % to 90 % non-condensing



Relative quantum efficiency of Leica DMC2900 (WB applied)

ORDER NUMBER	
12 730 466	Leica DMC2900 Camera (incl. USB 3.0 PCI Express card for computers with no USB 3.0 Interface, USB 3.0 cable 2.5 m, LAS Software)

MICROSYSTEMS

Leica M60/M80

The ergonomic and modular Leica M60 and M80 routine stereo microscopes feature a large field of view, increased depth of focus, and excellent resolution. The Leica DMC2900 camera can be connected to these microscopes using an HDF or HDV tube.

Leica DM IL LED

The Leica DM IL LED inverted laboratory microscope with LED illumination is ideal for cell and tissue culture examinations. The Leica DM IL LED features a wide array of contrast methods, high stability, and plenty of space to work with tools. The Leica DMC2900 camera can be connected via the camera port or trinocular tube.

Leica DM4 M

The Leica DM4 M microscope combined with the DMC2900 camera can be used for all incident and transmitted light applications. The 6-position mechanical objective turret is coded, which allows immediate recognition of the objective in use. The microscope also recognizes the contrast method used and automatically adjusts all settings accordingly.

Leica S8 APO

The Leica S8 APO stereo microscope with apochromatic 8:1 zoom and 75 mm working distance allows easy access to any sample even at high magnifications of up to 80×. The integrated video/photo port allows the Leica DMC2900 to be easily connected to the microscope.

CONNECT WITH US!

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