



Leica DMS1000 & DMS1000 B

Digital microscope system with integrated high-end optics and high-performance digital camera. Optimized for digital workflows in research and development.







A New Perspective On Things

Experience your work in another dimension — totally digitally! Leica Microsystems unites all advantages of digital technology into one microscope — the Leica DMS1000. As a unit, the Leica DMS1000 impressively shows what a digital system can do. High-end optics and first-class camera performance are united in the shapely design of the Leica DMS1000 as an outstanding microscope with the best digital performance, created for examining biological specimens.

> Working with ease

Fast and easy inspection, documentation and archiving of your work, with or without a computer.

> The perfect combination

With encoded zoom and the FlexAperture[™] technology, you have your specimens optimally in view. Compatible with the high-performance digital camera, the Leica DMS1000 brings your results precisely to the point.

> Everything in (over)view

Leica DMS1000 B — the core piece in *in vitro* diagnostics! Observing your specimens without an eyepiece makes it possible to carry our experiments with precision even in closed laminar flow cabinets. More protection from contamination for people and specimens.

Working with ease

Optimized for digital operations, the new Leica DMS1000 microscope system makes an impression not only with innovative functionality and versatility, but also with astoundingly convenient operation and trendsetting ergonomics. In standalone mode with an HD-monitor or with a computer — the Leica DMS1000 stands for professional documentation of your specimens and work steps. The results are impressive!

DIGITAL SPECIALIST – WITH OR WITHOUT A COMPUTER

With amazing ease, individual work steps can be visualized and documented quickly on an HD-monitor even during an experiment.

While the FlexAperture™ technology guarantees natural reproduction without an eyepiece, the high-performance microscope camera provides ultra-high-speed live images via HDMI-interface on a high definition monitor or on a computer screen via USB-interface.

Depending on the chosen operating mode, the camera can be operated entirely independently at an HD-monitor directly using a remote control or connected to a computer via USB.

The infrared remote control allows comfortable work: faster changeover to other camera modes; running a white balance operation; capturing movie clips for fast documentation and hands-on training; saving directly to an SD-card. In addition, all camera parameters can be controlled directly and conveniently, even advanced settings such as brightness, intensification or contrast of the image.

MODULAR SYSTEM WITH HIGH FLEXIBILITY

Conceptualized as a modular system, the Leica DMS1000 provides an ideal prerequisite to cover the requirements of modern research laboratories for flexible and ergonomic workstations.

Depending on the application and available work surface, the variability of the Leica DMS1000 allows you to configure the instrument exactly as you need it.

Aside from that, with the Leica DMS1000, more than one person can use the same workstation without having to make complex changes.



YOUR ADVANTAGES

- Encoded optics guarantee correct and traceable measurement results
- Parfocal, parcentric and telecentric optics
- Quick and true-to-detail live image
- Standalone operation directly on the HD-monitor
- Intuitive control of all camera parameters via infrared remote control (in HD-mode)
- Programmable preset values and importable templates
- Direct recording of HD-movie clips to SD-card
- FlexAperture[™] technology provides for constant brightness of the image across the entire zoom range







The perfect combination

There is more to the compact unit with the new Leica DMS1000 than you would think: highest imaging performance combined with an optimally matched digital camera in proven high-end quality from Leica Microsystems. This system provides every comfort and convenience — not only for your eyes.



Flex Aperture[™]

The exposure time remains the same during the entire zoom range, no further readjustment is necessary.



Switchable clickstops

facilitate inspection and measurement through defined magnification levels in the zoom range.



Integrated SD-card and programmable operating buttons allow for different functions such as image acquisition, white balance or film start/stop.



Optionally available hand-/
foot switch for quick and easy
operation by hand or foot.
Programmable for different
functions.

THE OPTICS OF THE LEICA DMS1000

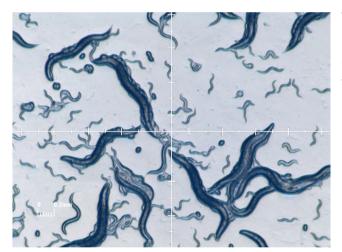
- Quick changeover from overview to detail thanks to an 8:1 zoom range
- Digital magnification range of up to 300×
- Encoded zoom for automatic recording of the magnification
- Parfocal optics no refocusing during magnification change
- Telecentric objectives for more precise measurement results available as accessories
- FlexAperture[™]: automatic settings for consistent brightness of the image

THE HIGH-PERFORMANCE CAMERA OF THE LEICA DMS1000

- Digital camera with 5.0 MP resolution, also suited for recording the finest details at low magnification
- High live-image speed up to 30 frames per second
- User-optimized menu on the monitor
- Programmable preset values and importable templates
- Direct control of all camera parameters via infrared remote control (in HD-mode)
- Direct recording of HD-movie clips to SD-card

Everything in (over)view

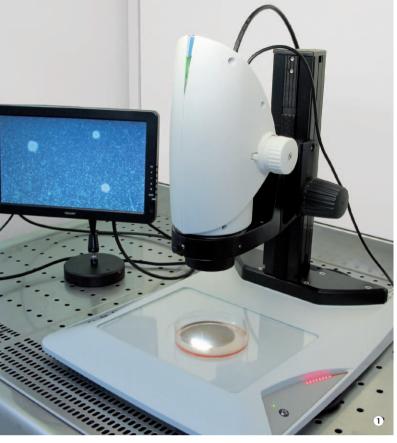
In modern research, the Leica DMS1000 B digital microscope system is the first choice for advanced tasks in a laboratory. Here, precision, reliability and human safety have priority. High-precision zoom optics facilitate advanced workflows and always keep the specimen in the perfect position in the field of view.

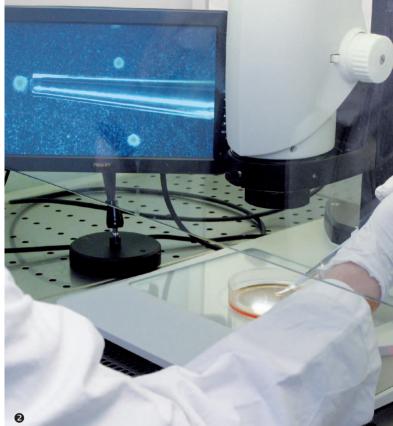


The continuously **encoded zoom** permits fast, easy measurement. In standalone mode without a computer, the zoom position is updated automatically, directly on the HDMI-monitor.



With parfocal, parcentric and telecentric optics you always keep your specimens optimally and sharply at the center of your field of view — no refocusing is needed when changing the magnification.





Ideal for working in laminar flow cabinets, such as for stem cell research or used for artificial reproduction:

- Leica DMS1000 B + TL5000 Ergo transmitted light base + 10"-monitor in open laminar flow bench
- Leica DMS1000 B + TL5000 Ergo transmitted light base + 10"-monitor in closed laminar flow bench
- 3 Human oocyte with granulosa cells
- 4 Human oocyte after decoronization

Images:

- 1 2 IGBMC Strasbourg, France
- **3 4** L'institute Mutualiste Montsouris, Paris, France

FOR THE ADVANCED REQUIREMENTS IN IN VITRO DIAGNOSTICS: THE LEICA DMS1000 B

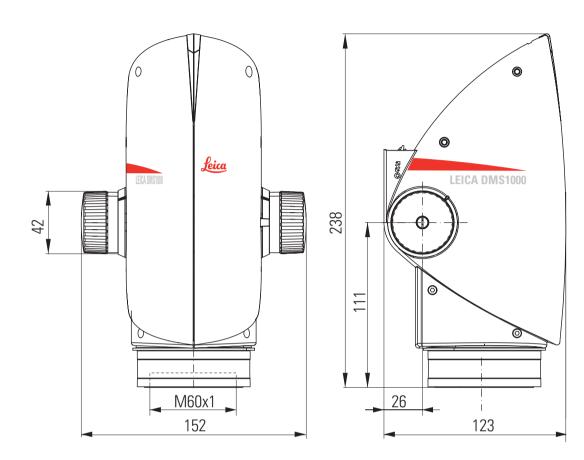
The Leica DMS1000 is also available as a B model variant especially for applications in the area of *in vitro* diagnostics (IVD). The complete system certified in accordance with the IVD directive combines all of the required components under one article number.

Observing the specimen without eyepieces now makes it possible to carry out experiments with precision even in closed laminar flow cabinets. This keeps the risk of contaminating the specimen to a minimum. Optimal prerequisite for working in the clinical field, such as *in vitro* fertilization.

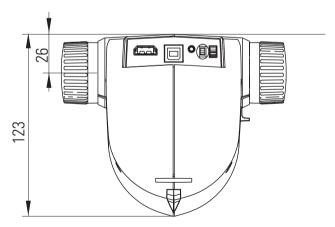




Dimensions



Specified in millimeters



Leica DMS1000 and DMS1000 B - specifications

LEICA DMS1000 AND DMS1000 B

Live image:	Max. resolution	337 lp/mm
(Full HD)	Max. FoVx	82 mm
	Max. FoVy	46 mm
	Max. DoF	34 mm
	Working distance	303 to 27 mm
	Max@22"-monitor	6 - 299

LEICA DMS1000 AND DMS1000 B ACHROMATIC OBJECTIVE (1.0×)

		DMS1000@highest	DMS1000@lowest
		zoom position	zoom position
Live image:	Resolution	159 lp/mm	21 lp/mm
(Full HD)	Max. FoVx	3.2 mm	25.9 mm
	Max. FoVy	1.8 mm	14.6 mm
	Max. DoF	0.05 mm	3.5 mm
	Max@22"-monitor	150×	18×

CAMERA SPECIFICATIONS

Resolution	HD ready	$1280 \times 720 - 50 \; \text{Hz} \; / \; 60 \; \text{Hz} - 30 \; \text{fps}$	
(live images)	Full HD	$1920\!\times\!1080-50$ Hz / 60 Hz / 25 Hz / 30 Hz $ 30$ fps	
	PC	1600×1200 - 10 fps / 1024×768 - 24 fps	
Resolution		5 megapixels (2592×1944)	
(individual		2.5 megapixels (1824×1368)	
images)		1.1 megapixels (1216×912)	
Resolution HD1080 (1920×1080)		HD1080 (1920×1080)	
(movie clips)		HD720 (1280×720)	
Pixel size 2.35 µm×2.35 µm		2.35 μm×2.35 μm	
(resolution)		$3.34~\mu m \times 3.34~\mu m$	
Sensor grade		Aptina 1/2.3" CMOS	
Sensor size		6.1 mm × 4.6 mm	
Exposure time	9	0.5 msec — 500 msec	
Gain		1× – 12×	
Color depth		3×8 bit = 24-bit	
Data format	PC	JPG	
	Movie	MP4	
Operating sys	tems	Windows XP, Windows 7, Mac OS X	
Software	PC	Leica LAS & LAS EZ software	
	MAC	Leica Acquire Software	
Recommende	d	PC / Mac, Intel Core 2 Duo,	
computer		>2.4 GHz, 4 GB RAM, 24-bit graphics card,	
configuration		1248×1024	

ELECTRONIC INTERFACES

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Computer	USB 2.0, standard USB-plug type B	
High-definition connector	HDMI 1.3, standard HDMI-plug type A	
On/off switch	available	
PC/HD switch	available	
Pinhole switch	display for the current resolution,	
	changeover to the next resolution,	
	reset, firmware upload	
Remote control	infrared remote control RC2 pairable with instrument,	
	with button battery type CR2025	
Remote release	hand and foot trigger, with 1.5 m cable	
(optional: 12730229)		
SD-card (Secure Digital)	SD HC compatible, 128 MB – 32 GB	
Status LED	3 colors: green – power on, yellow – busy, red – error	
Power supply	5 V via USB-cable to computer or to external USB	
Power requirement	5 W	
OTHER		
Operating temperature	+5 °C − 40 °C	
range		
Rel. humidity	10 % - 90 %	
Weight	1.3 kg	
Confirmation of	available	
CE Conformity		
Tested standards	IEC/EN 61326-2-6	

IEC/EN 61010-2-101 IEC/EN 62471

ORDER NUMBERS

10 450 596	Leica DMS1000 (incl. USB power supply, USB-cable, HDMI-cable, SD-card, HD RC remote control)
11 524 105	Leica DMS1000 B complete system with TL3000 ST transmitted light base (incl. USB power supply, USB-cable, HDMI-cable, SD-card, RC2 remote control)
11 524 106	Leica DMS1000 B complete system with TL5000 Ergo transmitted light base (incl. USB power supply, USB-cable, HDMI-cable, SD-card, RC2 remote control)



The Leica DMS1000 and DMS1000 B have a 16:9 format image section for the live image on an HD-monitor (represented by a green box). The images are always saved in a 4:3 size ratio (shown with a red frame).

www.leica-microsystems.com



The statement by Ernst Leitz in 1907, "With the User, For the User," describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: Living up to Life.

Leica Microsystems operates globally in four divisions, where we rank with the market leaders.

Leica Microsystems – an international company with a strong network of worldwide customer services:

LIFE SCIENCE DIVISION

The Leica Microsystems Life Science Division supports the imaging needs of the scientific community with advanced innovation and technical expertise for the visualization, measurement, and analysis of microstructures. Our strong focus on understanding scientific applications puts Leica Microsystems' customers at the leading edge of science.

INDUSTRY DIVISION

The Leica Microsystems Industry Division's focus is to support customers' pursuit of the highest quality end result. Leica Microsystems provide the best and most innovative imaging systems to see, measure, and analyze the microstructures in routine and research industrial applications, materials science, quality control, forensic science investigation, and educational applications.

BIOSYSTEMS DIVISION

The Leica Microsystems Biosystems Division brings histopathology labs and researchers the highest-quality, most comprehensive product range. From patient to pathologist, the range includes the ideal product for each histology step and high-productivity workflow solutions for the entire lab. With complete histology systems featuring innovative automation and Novocastra™ reagents, Leica Microsystems creates better patient care through rapid turnaround, diagnostic confidence, and close customer collaboration.

MEDICAL DIVISION

The Leica Microsystems Medical Division's focus is to partner with and support surgeons and their care of patients with the highest-quality, most innovative surgical microscope technology today and into the future.

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