

Living up to Life

*Leica*

MICROSYSTEMS

INDUSTRY DIVISION



# Leica DMS1000

Digital microscope system with integrated high-end optics and high-performance digital camera. Optimized for digital measurement and inspection tasks in industry.



# 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 industrial quality control and metrology.

## › 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 – the core piece for your measurements! With our modular Leica Application Suite (LAS) software, you maintain an overview over your analyses and reports.



## Working with ease

Optimized for digital inspection and documentation, 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 just an HD-monitor or in operation with LAS software with a computer – the Leica DMS1000 stands for absolutely professional measurement and simple processing of your inspections and measurements. The results are impressive!

### DIGITAL SPECIALIST – WITH OR WITHOUT A COMPUTER

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With amazing ease, accurate checks and measurements can be carried out, processed and documented directly in the production process on the HD-monitor.

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 separately, directly with a remote control on an HD-monitor or on a computer with a high-performance Leica imaging software, which was developed for the special requirements in microscopy.

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 HIGHER FLEXIBILITY

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Conceptualized as a modular system, the Leica DMS1000 provides an ideal prerequisite to cover the requirements of the modern working world 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. During training sessions and presentations, the Leica DMS1000 enables participants to network their communications: Simultaneously, several people can follow on their own screen what is being presented on the main screen.



## YOUR ADVANTAGES

- **Encoded optics guarantee correct and traceable measurement results**
- Parfocal, parcentric and telecentric optics
- Optimized for quality control, testing and inspection and documentation
- 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.



## FlexAperture™

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

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- Quick changeover from overview to detail thanks to an 8:1 zoom range
- Digital magnification range of up to 300×
- Encoded zoom for auto calibration of the digital images
- 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

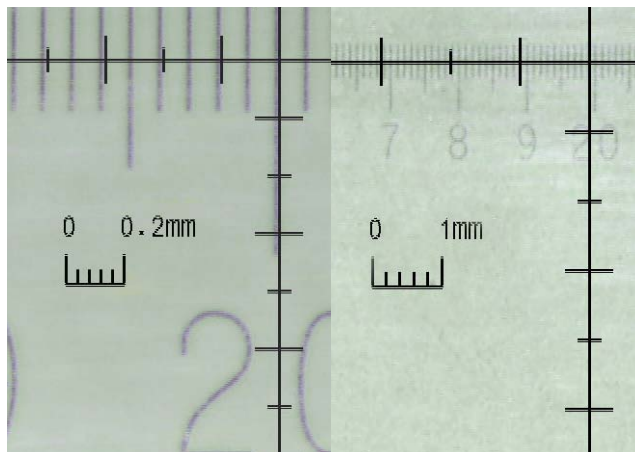
## THE HIGH-PERFORMANCE CAMERA OF THE LEICA DMS1000

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- 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 metrology, the Leica DMS1000 digital microscope system is the first choice for advanced tasks in quality management and research and development. Here, precision, reliability and safety have priority. The parfocal zoom optics always keep your specimen in focus, and the optional telecentric accessories improve your measurement results. In addition, the Leica Application Suite (LAS) supports professional image acquisition and processing with many functions and modules.



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.

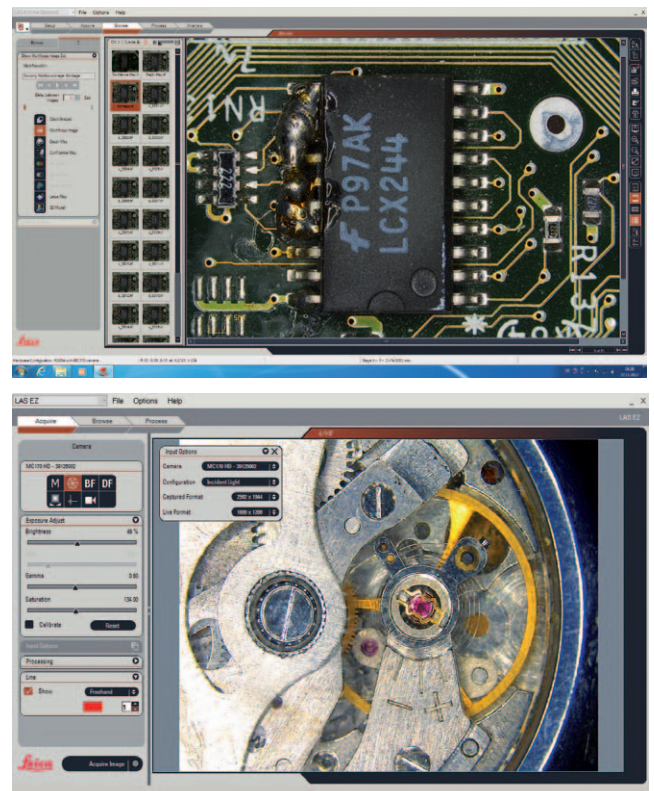




Ideal for modern metrology: the Leica DMS1000 with encoded zoom and telecentric optics. The individual beam path offers a parallax-free 2D viewing.

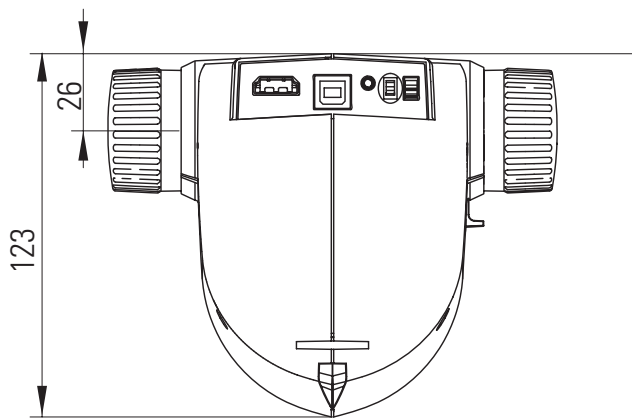
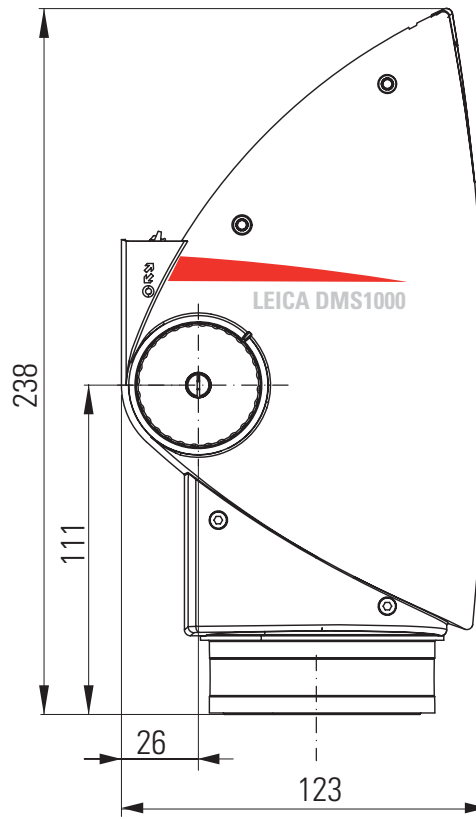
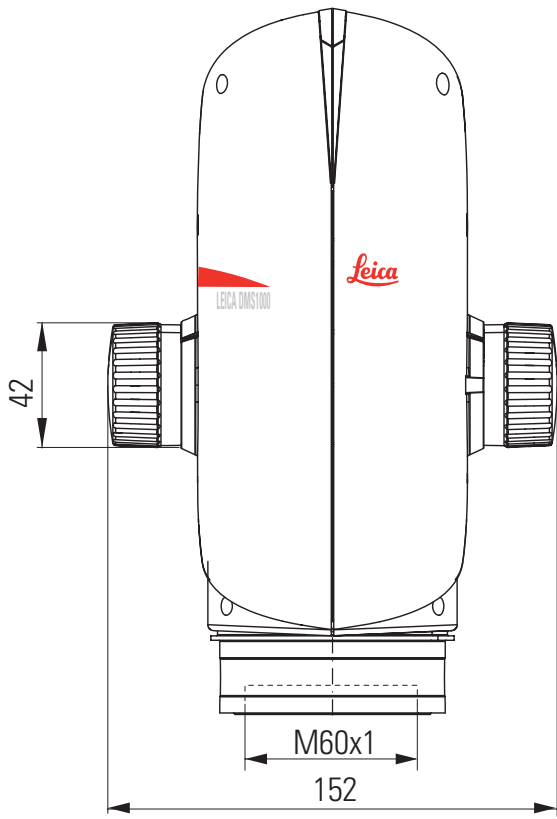
**FOR ALL REQUIREMENTS:  
LEICA APPLICATION SUITE (LAS) SOFTWARE**

The Leica Application Suite (LAS) is the platform for all microscopes and microscope cameras from Leica Microsystems. Precise measurements and analyses are carried out on the digital image with it. Many tools for precision measurement can be configured to fit specific requirements. Line thicknesses, colors, comments, labels and many additional intuitive tools are included. Optional modules make time-saving, continuous display of the live image with overlaid measurement data possible. Measurement templates offer a convenient option to compare current and previous images.



Added value included: LAS "Montage" module

# Dimensions



Specified in millimeters

# Leica DMS1000 – specifications

## LEICA DMS1000

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

## CAMERA SPECIFICATIONS

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

## ORDER NUMBER

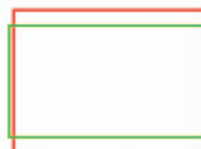
10 450 596	Leica DMS1000 (including USB power supply, HDMI-cable, SD-card, RC2 remote control)
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## LEICA DMS1000 ACHROMATIC OBJECTIVE (1.0×)

		DMS1000@highest	DMS1000@lowest
		zoom position	zoom position
Live image: (Full HD)	Resolution	159 lp/mm	21 lp/mm
	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×

## ELECTRONIC INTERFACES

Computer	USB 2.0, standard USB-plug type B
High-definition connector	HDMI 1.3, standard HDMI-plug type A
Audio	audio signals for recording, white balance, etc. (can be turned off)
On/off switch	available
PC/HD switch	available
Reset button	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 (optional: 12730229)	hand and foot trigger, with 1.5 m cable
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
<b>OTHER</b>	
Operating temperature range	+10 °C – 40 °C
Rel. humidity	10 % – 90 %
Weight	1.3 kg
Confirmation of CE conformity	available
Tested standards	EN 55011 / EN 61010-1 / EN 61326-1



For live imaging, the Leica DMS1000 has an image detail in 16:9 format on an HD-monitor (see green frame). The images are always saved in a 4:3 size ratio (shown with a red frame).



The productive cooperative effort “with the user, for the user” has always been the basis for the innovative strength of Leica Microsystems. On this, we have developed our five corporate values: pioneering, high-end quality, team spirit, dedication to science, and continuous improvement. We call making these values reality: Living up to Life.

#### INDUSTRY DIVISION

The Leica Microsystems Industry Division’s focus is to support customers’ pursuit of the highest quality end result by providing the best and most innovative imaging systems for their needs to see, measure, and analyze microstructures. Its solutions are used in routine and research industrial applications, in materials science and quality control, in forensic science investigations and educational applications.

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

Active worldwide		Tel.	Fax
Australia · North Ryde	+61	2 8870 3500	2 9878 1055
Austria · Vienna	+43	1 486 80 50 0	1 486 80 50 30
Belgium · Diegem	+32	2 790 98 50	2 790 98 68
Canada · Concord/Ontario	+1	800 248 0123	847 405 0164
Denmark · Ballerup	+45	4454 0101	4454 0111
France · Nanterre Cedex	+33	811 000 664	1 56 05 23 23
Germany · Wetzlar	+49	64 41 29 40 00	64 41 29 41 55
Italy · Milan	+39	02 574 861	02 574 03392
Japan · Tokyo	+81	3 5421 2800	3 5421 2896
Korea · Seoul	+82	2 514 65 43	2 514 65 48
Netherlands · Rijswijk	+31	70 4132 100	70 4132 109
People’s Rep. of China · Hong Kong	+852	2564 6699	2564 4163
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Singapore	+65	6779 7823	6773 0628
Spain · Barcelona	+34	93 494 95 30	93 494 95 32
Sweden · Kista	+46	8 625 45 45	8 625 45 10
Switzerland · Heerbrugg	+41	71 726 34 34	71 726 34 44
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