

Living up to Life

*Leica*  
MICROSYSTEMS

# Leica DM750 M

# Leica DM1750 M

# Leica DM2500 M

Upright Microscopes for Routine Applications in Materials Examinations





# Perfectly tailored for your application

Putting your materials examinations in the best light for the best imaging quality is our goal. You will experience how quickly and reliably materials examinations can be carried out with the simple operation of the Leica DM750 M entry-level microscope. With the advanced imaging volume of the Leica DM1750 M, you can see steel samples, for example, with greater clarity than ever before using LED illumination – and from a variety of different angles in the illumination beam path.

The ergonomic operation of the Leica DM2500 M combines brilliant imaging and a new level of comfort while working. It has never been so easy to operate a microscope.

And with a Leica microscope, you can count on a perfectly tailored application system, upgradeable with camera, and documentation and analysis software. The integrated system is ideal for your tasks in quality inspection and assurance, as well as in materials analysis and materials research and development.

## › Brilliance

New LED light for all of your imaging needs

## › Comfort and convenience

Efficiency for your work at the microscope

## › Flexibility

Perfectly tailored systems for specific applications

## › Integration

Upgradeable documentation and analysis systems

# Leica DM750 M

The economic solution for sample preparation laboratories and for simple routines in materials examination

With its unbeatable cost-to-performance ratio, the Leica DM750 M sets a new benchmark in routine materials microscopy. You have all essentials in view – depending on the composition of the sample, even from different LED illumination angles. Simply see more and obtain more meaningful examination results, while performing quality control, damage analysis, and materials testing.

The brilliant optics and the simple, secure handling of this stand will make your work easier.

## INNOVATIVE DESIGN AND ILLUMINATION OF THE SAMPLE FROM DIFFERENT ANGLES

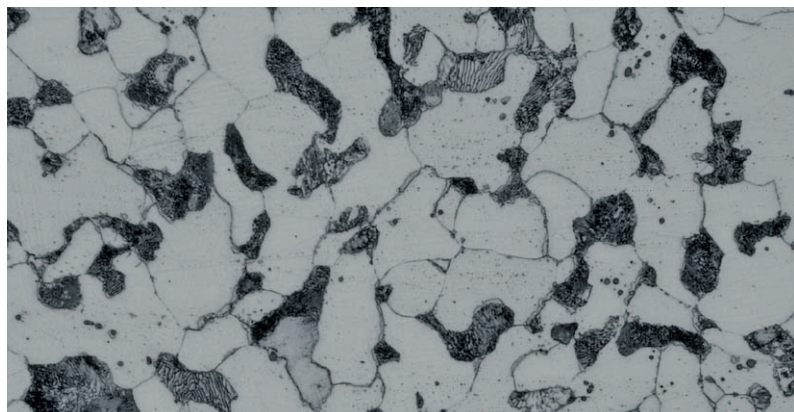
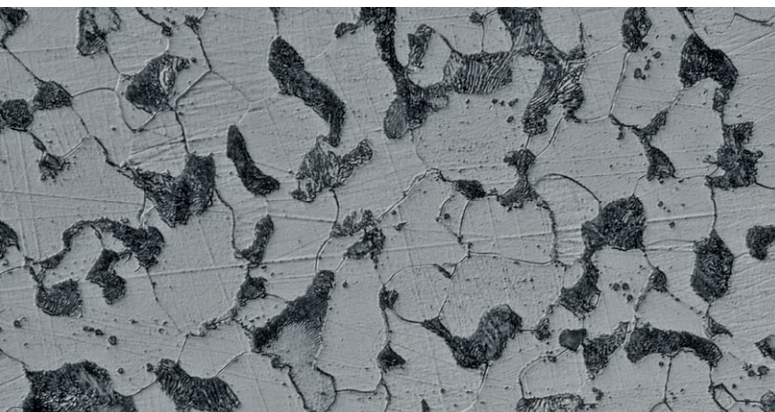
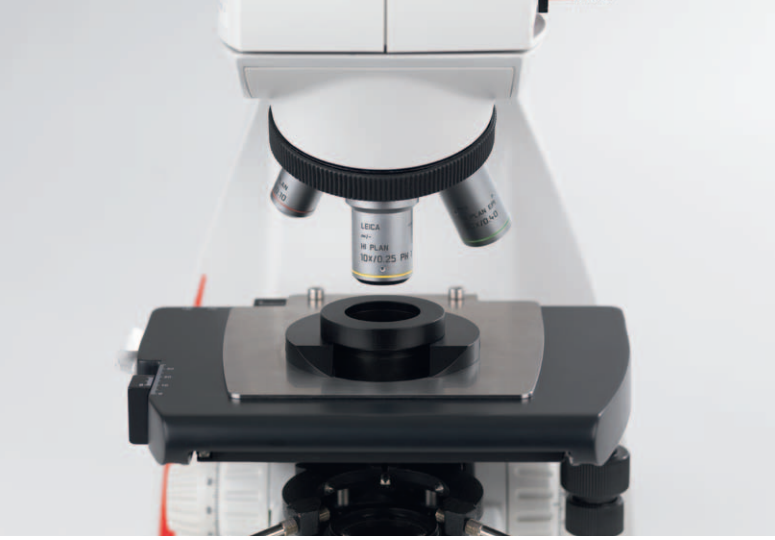
The Leica DM750 M is among the most advanced microscopes of its class – and the first choice for simple operation, stress-free working methods, and fast, reliable results.

## YOUR MAIN BENEFITS

- › Time savings: through easy operation of the complete system
- › Eliminates follow-up costs: through sturdy design with LED illumination
- › Accurate analysis results: through brilliant Leica HC optics
- › Identification of the finest details: through oblique light with LED segmented lighting

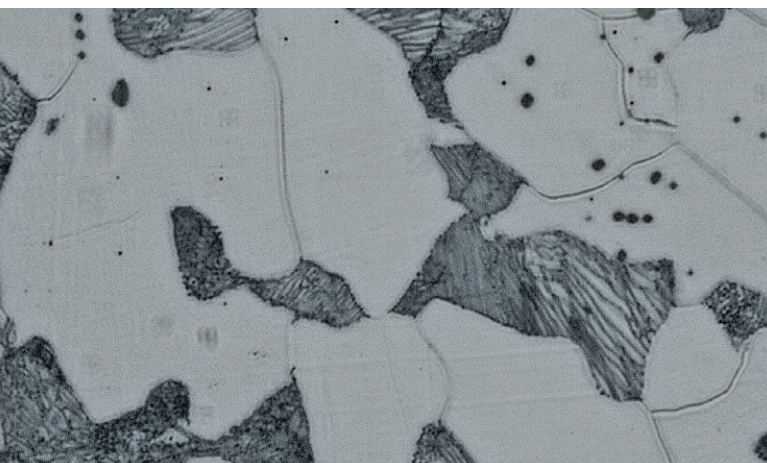
## LEICA DM750 M OVERVIEW

Stand type	Materials microscope in upright configuration. One-piece metal housing for high stability and precision. Handle on the rear side for simple, secure storage of the instrument. Cable holder for increased security at the workplace.
Illumination	High-power LEDs with additional integrated segmented lighting for oblique illumination. 25 000 hour service lifetime, no lamp replacement, integrated aperture diaphragm for contrast control, continuously adjustable intensity without change to the color impression, ergonomic placement of controls for intuitive, hands-free illumination operation.
Focus drive	2-stage, coarse and fine focus. The focus mechanism is made of brass for the highest accuracy and durability.
Microscope table	Cross-stage with integrated xy attachable mechanical stage for samples up to 30 mm height. Innovative sample holder with auto-leveling for standard sample diameters of 25 and 30 mm. Quick change of the samples without refocusing.
Documentation	Live image in HD quality with integrated Leica ICC50 HD camera. Direct capture and movie function. Alternatively: Leica DFC cameras for advanced documentation and measurement when used with Leica Application Suite (LAS) software.

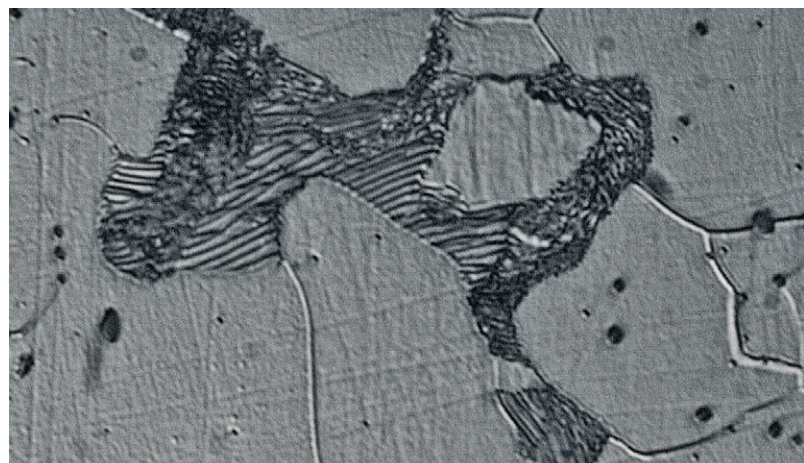


Hypoeutectoid pearlite; lamellar ferrite-cementite structure at  $< 0.6\% \text{ C}$  surrounded by ferrite. N Plan 50 $\times$ , brightfield, oblique illumination.

Hypoeutectoid pearlite; lamellar ferrite-cementite structure at  $< 0.6\% \text{ C}$  surrounded by ferrite. N Plan 50 $\times$ , brightfield.



Ferrite C35, hypoeutectoid pearlite. N Plan 100x, brightfield.



Ferrite C35, hypoeutectoid pearlite. N Plan 100x, oblique illumination.

# Leica DM1750 M

## Focus on the tasks in the lab

The new Leica DM1750 M microscope was developed for routine use, even in difficult ambient conditions, and for imaging large samples. Built sturdy and solid, the Leica DM1750 M has excellent optics from Leica Microsystems and, with regard to the size of your samples, gives you plenty of room to maneuver. You have the option of varying the power LED illumination angle and adjusting it to best view the sample.

Unique for a materials microscope in this class, the Leica DM1750 M can be equipped with many accessories – for example, for digital image analysis and documentation.

### FASTER, EASIER, ONE-HANDED DESIGN FOR QUICK WORK

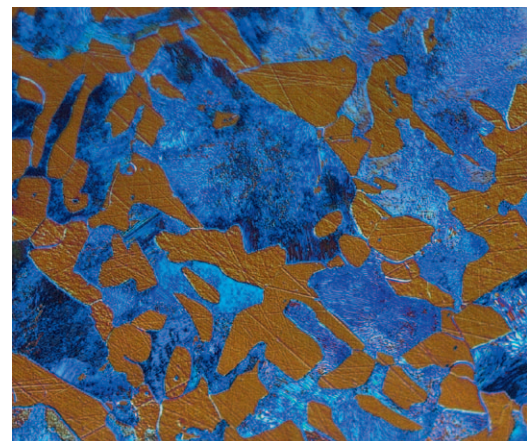
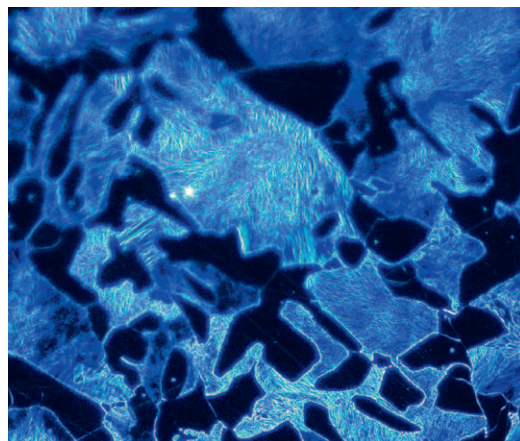
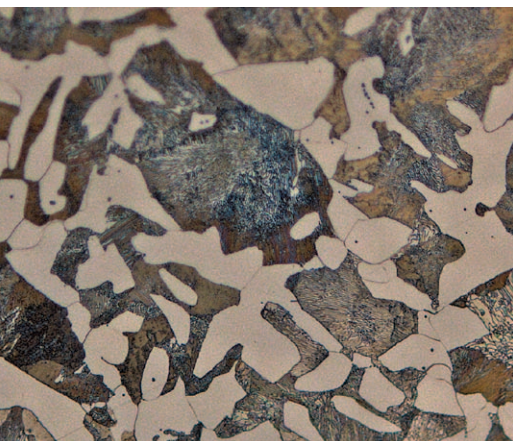
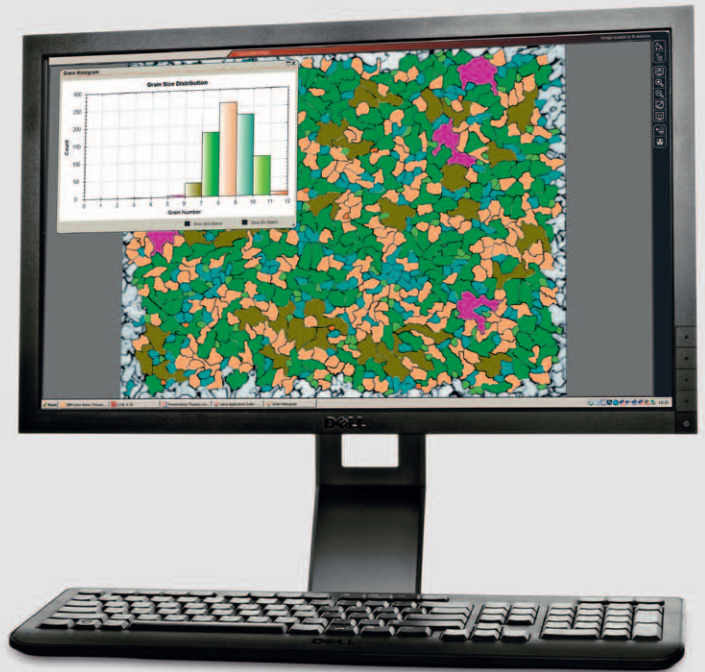
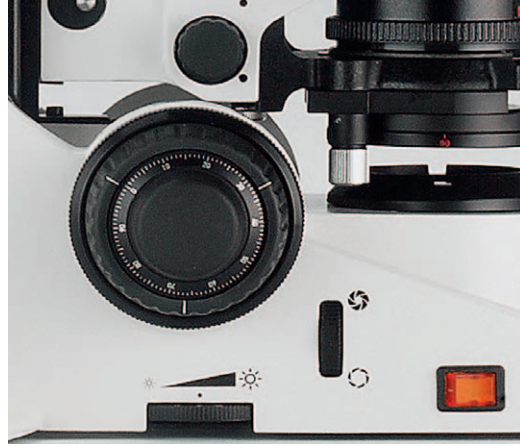
With the Leica DM1750 M microscope, the focus and the stage can be operated with just one hand. The other hand remains free for activities such as taking notes, operating counters, or PC functions.

### MAIN BENEFITS

- › Universal: great variability of the stage configuration for examining larger samples
- › Precise analysis results: through integrated LED segmented lighting
- › Excellent price-performance ratio
- › Comfortable work: through the best ergonomics in every detail

### LEICA DM1750 M IN OVERVIEW

Stand type	Materials analysis microscope in upright configuration for larger samples. With integrated protection and ergonomic features.
Illumination	High-power LEDs with additional integrated segmented lighting for oblique illumination. 25 000 hour service lifetime, no lamp replacement, integrated aperture diaphragm for contrast control, continuously adjustable intensity without change to the color impression, ergonomic placement of controls for intuitive hands-free operation of the illumination.
Contrast methods	Brightfield (RL BF), POL (RL POL), oblique illumination, differential interference contrast (RL DIC)
Focus drive	2-stage, coarse and fine focus, with adjustable precise sample and objective cap; integrated torque adjustment; Height-adjustable focus knobs for the best ergonomics.
Microscope table	Maximum sample height 80 mm, right or left-hand operation, durable, scratch-resistant ceramic coating.
Objective nosepiece	6× BF M25 or 7× BF M25



Ferrite C60, hypoeutectoid pearlite, N Plan 50x, BF

Ferrite C60, hypoeutectoid pearlite, N Plan 50x, DF

Ferrite C60, hypoeutectoid pearlite, N Plan 50x, DIC



# Leica DM2500 M

Comfort and convenience are not a luxury

Along with high-quality optics, the Leica DM2500 M provides working comfort, which is one-of-a-kind in this class. You work with a standard instrument for routine tasks, but make no compromises in performance and configuration. The microscope completely adapts to the individual user to prevent muscle tension, poor posture, and long-term health hazards. Microscopy has never been more comfortable and simple.

## SIMPLE, MORE SECURE, EXTENDABLE: DESIGNED FOR EFFICIENCY

The Leica DM2500 M is a perfectly tailored system, exactly configured to the requirements of your application. Through the extensive modularity, the Leica DM2500 M grows with your tasks, for example through the addition of a camera and documentation and analysis software. It's ideal for all tasks in quality inspection and assurance, as well as in materials analysis and materials research and development.

## MAIN BENEFITS

- › Accurate analysis results: through brilliant Leica HC optics
- › Budget-friendly: through simple retrofit and accessories
- › Fast, time-saving work: with integrated assistance for users
- › Safer examination: through integrated safety functions in the instrument
- › Comfortable work: through completely ergonomic design

## LEICA DM2500 M IN OVERVIEW

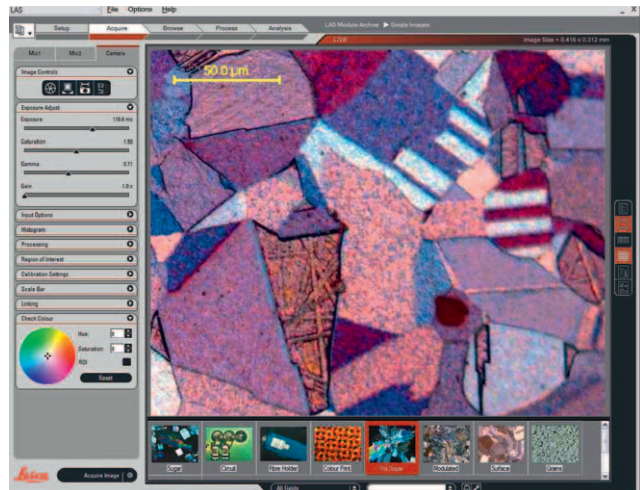
Stand type	Sturdy, retrofittable materials analysis microscope in upright configuration.
Incident light illumination	Incident light axis with 4× (BF/POL/DIC/Fluo) and 5× reflector turret (BF/DF/POL/DIC/Fluo), each equipped with the Color-coded Diaphragm Assistant (CDA). Light sources: 12 V 100 W halogen, Hg 50, Hg 100, Xe 75
Transmitted light illumination	12 V 100 W halogen lamp housing Built-in filter magazine, 3-position filter holder
Focus drive	2-stage (coarse and fine focus); 3-stage (coarse, fine, super fine focus); integrated torque adjustment, precisely adjustable sample and objective cap.
Microscope table	Maximum sample height 80 mm; Right or left-hand operation; Durable, scratch-resistant ceramic coating.
Objective nosepiece	5× BF/DF M32 or 6× BF M25 or 7× BF M25

# The strong team players

One for all – LAS microscope software with many modules

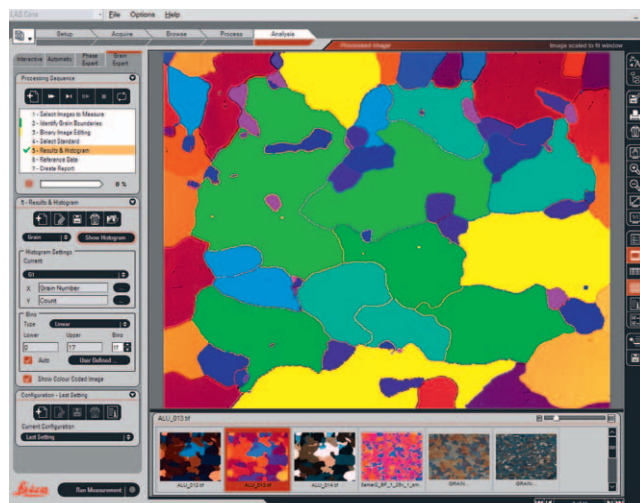
## LEICA APPLICATION SUITE (LAS)

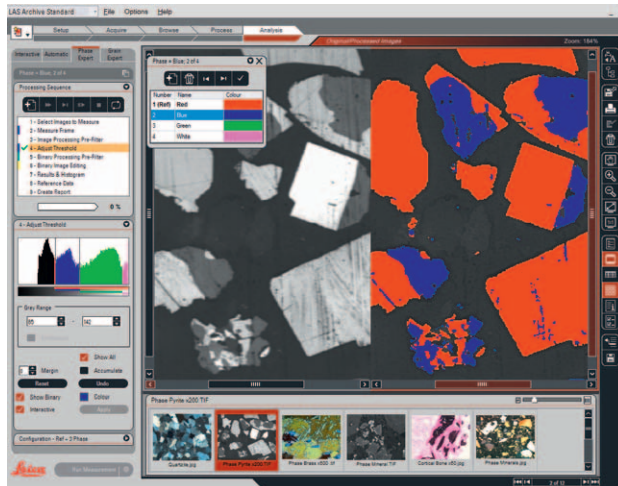
LAS is the universal software platform for microscopes and digital cameras from Leica Microsystems. In combination with Leica DFC cameras with FireWire connection, an optimally matched analysis and inspection system can be designed according to your requirements, for example, to perform grain size determination or for phase control. Expanding a documentation system for the analysis of inclusions in steel, for example, is as easy as adding a module.



## LEICA GRAIN EXPERT

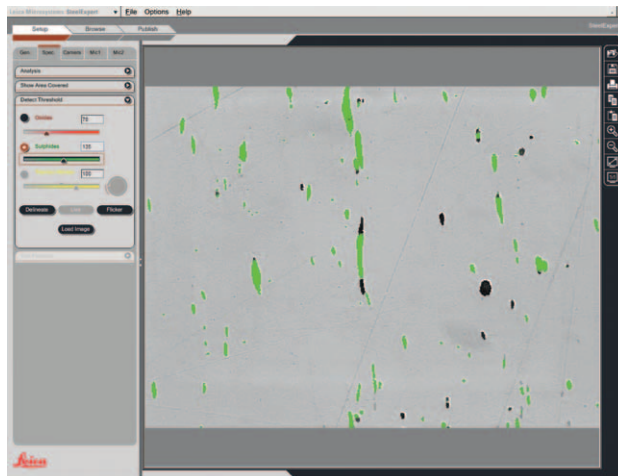
Grain boundary analysis is used for the determination and subsequent monitoring of material properties to draw conclusions about the properties of the end product. With the Leica Grain Expert software package integrated with LAS, you select a compatible method from an extensive range of different analysis techniques. Common industry standards are completely integrated with the software, through which a wide variety of relevant examinations can be carried out in compliance with standards.





## LEICA PHASE EXPERT

Phase analysis is a routine but advanced analysis task for materials and metallurgy labs. Time and efficiency play a big role when carrying it out. With Leica Phase Expert, you can perform automatic, objective, and reproducible measurements of multi-phased microstructures using easily visible colors or contrasts. Different components can be analyzed in oil shale due to their reflectivity just as fast and easily as polarization colors can be analyzed in a stone microsection for modal analysis or bone tissue can be analyzed with dye.



## LEICA STEEL EXPERT

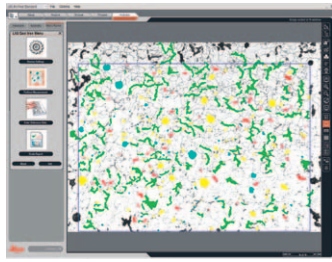
The optional Leica Steel Expert LAS module offers a highly specialized application environment for the automatic inspection of inclusions in steel. When used with a materials inspection microscope and high-resolution Leica DFC digital camera, Leica Steel Expert forms a completely integrated system that provides objective results quickly. The results are available in all common worldwide steel purity standards. It enables the inspection of up to six different types of non-metallic inclusions in steel alloys: sulfides, spherical oxides, silicates, aluminum oxide, and heterogeneous inclusions can be verified, as well as stained TiN inclusions.

## LEICA DIGITAL CAMERAS

Quick live pictures, short response time, high resolution, and clear contrast make the microscope cameras from Leica Microsystems ideal for materials documentation. Together with the intuitive control software, they complement Leica's analysis packages.

In connection with the Leica LAS, you can archive, measure, analyze, and present images, quickly and easily. 100% reproducibility of the images and convenient remote control of the camera and microscope ensure an efficient, cost-effective workflow.





**LEICA CAST IRON EXPERT**

Evaluates the high-quality images provided by the Leica microscopes. The LAS software combines the newest developments in automated microscopy, data processing, and digital image analysis.



**LEICA DMI3000 M**

Inverted, manual microscope for materials analysis, industrial quality inspection and assurance, and the development of new materials.



**LEICA DM8000 M**

Manual or fully automated research microscope with a large sample stage, macro overview optics, and ultraviolet illumination. The motorized microscope can be conveniently controlled with the function key, the SmartMove remote control or the PC.



**LEICA DFC450**

This microscope camera contains a high-quality 5-megapixel CCD sensor for pin-sharp images for documentation and analysis.

**BRILLIANCE AND COMFORT**

Putting your materials examinations in the best light is our foremost goal. The objective of our product development is to offer you the best image quality, and to ensure you the greatest ease when using the instruments. With the ergonomic operation of the Leica microscopes for materials examination, you will experience how quickly and reliably material examinations can be carried out, as well as the excellent visual clarity that Leica Microsystems' optics deliver.

**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.

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
· Shanghai	+86 21 6387 6606	21 6387 6698
Portugal · Lisbon	+351 21 388 9112	21 385 4668
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
United Kingdom · Milton Keynes	+44 800 298 2344	1908 246312
USA · Buffalo Grove/Illinois	+1 800 248 0123	847 405 0164