



# Leica DM2500 M

Microscope for Material Analysis

Living up to Life

*Leica*

MICROSYSTEMS

Brilliance  
Reliability  
Flexibility  
Documentation

## Simple and Reliable: The Microscope for Material Analysis

Viewing your material examinations in the best light is our top priority. Equally important, is our commitment to always offer you the best quality optics and most efficient microscope systems in the business. You need a materials microscope system designed for rapid, accurate results. Leica microscope systems are designed to decrease your bench time and provide optimized results. The Leica DM2500 M will show you how simple and reliable microscopy can be. The DM2500 M allows you to improve your workflow and concentrate entirely on the task at hand. Microscope operation becomes secondary to your investigations.

- **Brilliance you can afford**
- **Reliability you can count on**
- **Documentation simplified**
- **Flexibility is the key—for all specimens:**
  - Materials analysis
  - Quality assurance





Leica Design by Christophe Apothéloz



# Brilliance You Can Afford

## Everything the Eye Desires

- **New achromatic objective series**

### HI Plan EPI

- Magnifications: 5x, 10x and 20x
- FoV: 20 mm
- Flattened image field
- Large working distances



Large working distance and high resolution at the same time

The Leica name has always represented the highest standards in optical performance. The development of HC (Harmonic Components) optics has set a new benchmark for optical microscope standards. A wide selection of the most varied objectives – all of them tried and tested in research microscopy – also guarantees astounding imaging quality for materials microscopy. The HI Plan EPI objectives are both innovative and cost-effective. They combine brilliance and sharp contrast with first-class resolution and an optimized image field.

### What the eye can see – optical delights

Your work demands large working distances with simultaneous high resolution. You will be amazed by the performance of the N PLAN (achromatic) and Plan Fluotar (semi-apochromatic) series of objectives. They deliver unvarying high image sharpness with all contrast methods. Image field sizes, from 20 to 22 and all the way to 25 mm if you prefer, allow you to see exactly what you want to see. Wide image fields reduce the time needed to scan your specimens and determine structures of interest. Images are always high-contrast, pin sharp and full of detail.



N PLAN achromatic objective series

# Reliability You Can Count On

## ...and Convenience is Not a Luxury

Our color coded objectives with CDA, our new feature on the world market with color-coded field and aperture diaphragm adjustment, make the Leica DM2500 M a convenient and reliable microscope for daily use. It can speed up your work processes dramatically. Using a manual microscope has never been easier.

### **Concentrate on your work, not your microscope**

The Leica DM2500 M adds convenience to your investigations that is one-of-a-kind in its class. The CDA makes it easy to determine the proper diaphragm settings, and the built-in focus stop protects both your specimens and the front lens of the objective. For specimens of equivalent height, the focusing plane is easy to relocate. You can concentrate entirely on your application. These features make the new Leica DM2500 M the most advanced and reliable microscope in its class.

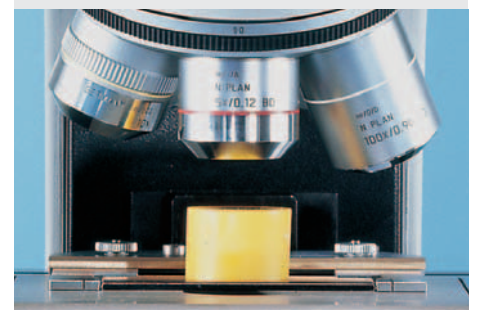
### **Do you need convenience and versatility in the workshop, laboratory or research area?**

We know you do! That's why we developed the new Leica DM2500 M with your needs in mind. If you demand a work horse microscope that is a practical tool for routine tasks as well as demanding research, you need a Leica DM2500 M. Accept no compromises when it comes to operation, performance and features. The Leica DM2500 M is sturdy, durable and ergonomically designed for ease of use.

- **New on the world market: Color-coded Diaphragm Assistant (CDA)**
  - Reliable results
  - Easy operation
  - Minimum orientation time
  - No possibility of incorrect operation
- **Built-in focus stop**
  - Protects your specimens and objectives



New on the world market:  
Color-coded Diaphragm Assistant



Color-coded objective ring ensures that you always have the correct diaphragm setting

# Flexibility Is the Key

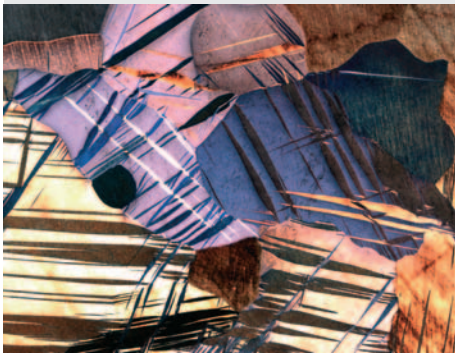
...for All Specimens

- **Flexibility in the stand**

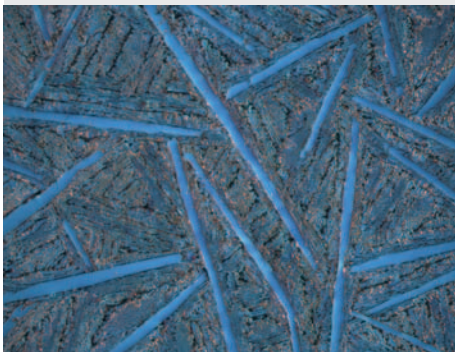
- 2 incident light axes (4x and 5x axis)
- 3 objective turrets
- Optional transmitted light application

- **Flexibility for all specimens**

- Specimen sizes up to 100 x 100 mm
- Specimen heights up to 80 mm
- All microscopic contrast methods available



Cast tin with deformation twins, 200 x



Hypereutectic white pig iron, primary cemented plates, 100 x polarized light, with various Lambda settings

Image source: Ursula Christian, FH Pforzheim, FB Maschinenbau, Pforzheim, Germany

The Leica DM2500 M is a flexible microscope system. With the DM2500 M stand, you can choose between two incident light axes:

1. The 4x incident light axis is optimal for bright field (BF) and dark field (DF) applications or differential interference contrast (DIC), qualitative polarization (POL) or fluorescence (Fluo) applications: the ideal solution for industrial quality control and metallographic examinations.
2. The 5x incident light axis has been specially designed for BF applications and is particularly well suited for use in the pharmaceutical industry, for example, analyzing cell growth on metal surfaces.

Three objective turrets are also available: the BF/DF M32 nose-piece holds up to five objectives; while the (BF/Fluo) can accommodate up to six or seven objectives.

### Flexible in every application

Specimens with a size of up to 100 x 100 mm – such as foils, wafers or PCBs – and a thickness of up to 80 mm, such as machined components, can be examined using the comprehensive stage program.

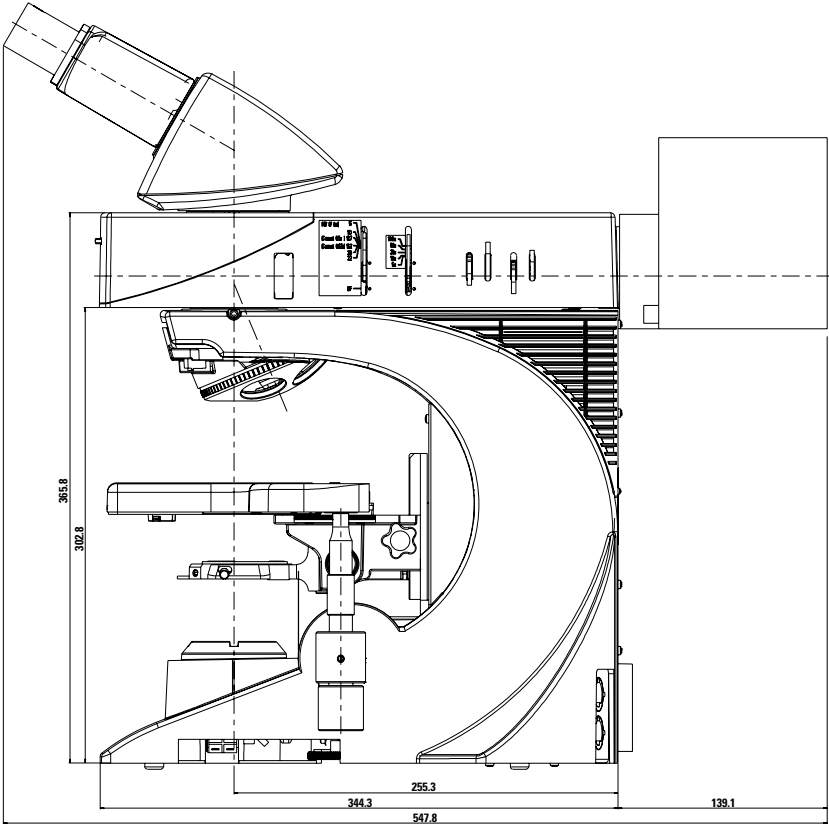
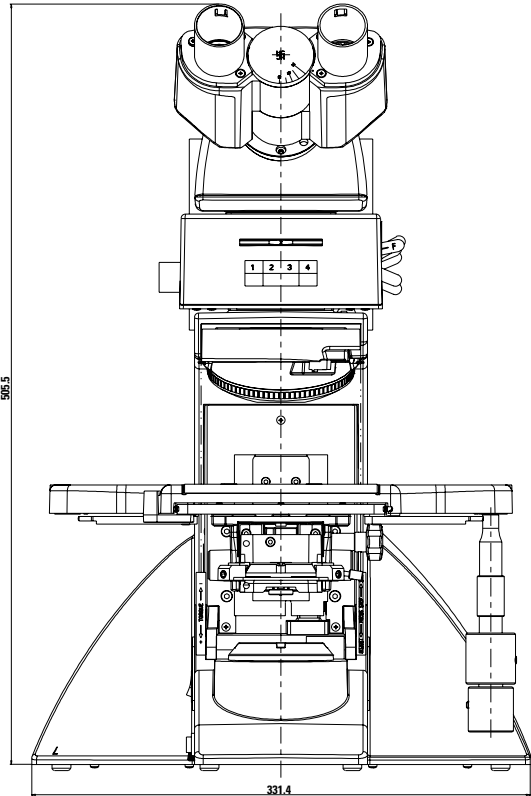
### Lasts a lifetime

The surface of our industrial stages incorporates a new ceramic material with a hardness that has never been attained before. It was specially developed for the demands of heavy-duty industrial use over many years, saving you time and money.

# Specifications

|                                    | <b>Leica DM2500 M</b>   |
|------------------------------------|---|
| <b>Stand</b>                       | Sturdy metal stand  |
| <b>Focusing</b>                    | 2-gear focusing (coarse/fine with 1 µm micrometer scale with top focus stop) or 3-gear focusing (coarse) (focus stop), (medium), fine with 1 and 4 µm micrometer scales, Torque coarse focus, adjustable stage height stop  |
| <b>Stage stroke</b>                | 25 mm   |
| <b>Incident light</b>              | <p>Sturdy incident light axis with 4x and 5x reflector turrets</p> <ul style="list-style-type: none"> <li>– 4x reflector turret for BF/DF/POL/DIC and Fluo</li> <li>– 5x reflector turret for BF/POL/DIC and Fluo</li> <li>– Each equipped with the Color-coded Diaphragm Assistant (CDA)</li> </ul> <p>The field and aperture iris diaphragms are centerable.</p> <p>Filter magazine with 4 filters – ø 32 mm</p> <p>The following light sources can be adapted to all incident light axes:</p> <ul style="list-style-type: none"> <li>– 12 V 100 W Halogen, Hg 50, Hg 100, Xe 75</li> <li>– (Lamp housing series 106Z / 106 / 107/2)</li> </ul> |
| <b>Objective turret/objectives</b> | <p>5x BF/DF M32, 6x BF M25 and 7x BF M25 objective turret</p> <ul style="list-style-type: none"> <li>– HI PLAN EPI Objectives 5x, 10x, 20x</li> <li>– N PLAN EPI Objectives 2.5x–100x</li> <li>– PLAN Fluotar Objectives 1.25x–100x</li> </ul>  |
| <b>Accessories</b>                 | <p>Optional magnification changer (1x, 1.5x, 2x)</p> <p>Fixed ergonomic stage (76 x 50 mm), left and right-hand operation or rotating stage (76 x 50 mm) with wear-resistant ceramic surface belong to the standard product line for industrial tasks with stage brackets and condenser holder.</p> <p>Optional measuring stage with display and USB connection (76 x 40 mm)</p>  |
| <b>Transmitted light</b>           | <p>12 V 100 W halogen (lamp housing 107/2)</p> <p>Built-in filter magazine</p> <p>3-position filter holder, 2 positions with 2 filters → 32 mm</p> <p>The wide range of condensers rounds out the microscope profile for transmitted light applications.</p>  |
| <b>Power supply</b>                | Stabilized universal power supply unit, 90–230 V for 12 V 30 W  |

# Dimensions





# Documentation Simplified

## Documenting, Saving and Retrieving Images

With our specially optimized digital cameras for materials analysis (such as the Leica DFC280 or DFC320) and image archiving software, you can organize your workflow – preparing specimens, examining them under the microscope and finally documenting the results – in an efficient and convenient manner.

### **Quick and perfect image archiving and analysis**

The Leica QWin image processing and analysis software provides you with high-quality solutions, particularly in environments that require high specimen throughput and automated operation. Thanks to its modular structure, the functionality ranges from simple, interactive to automated photogrammetry, for example, characterizing metal surfaces or particle analysis (QClean).

- **Digital cameras**

- Fast live image preview
- Image resolution from 1.3 to 3.3 megapixels
- Exposure time of 100  $\mu$ sec to 30 seconds
- Color depth of up to 36 bits per color channel

- **Image archiving/image analysis**

- From a simple image archiving module to a network solution (Leica Image Management System)
- The routine tool for your materials analysis tasks (Leica Materials Workstation)
- The expert for your materials analysis tasks (Leica QWin)



# “With the user, for the user”

## Leica Microsystems

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

### ● 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.

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.**

### Active worldwide

|                         |                       |                         |                        |
|-------------------------|-----------------------|-------------------------|------------------------|
| Australia:              | North Ryde            | Tel. +61 2 8870 3500    | Fax +61 2 9878 1055    |
| Austria:                | Vienna                | Tel. +43 1 486 80 50 0  | Fax +43 1 486 80 50 30 |
| Belgium:                | Groot Bijgaarden      | Tel. +32 2 790 98 50    | Fax +32 2 790 98 68    |
| Canada:                 | Richmond Hill/Ontario | Tel. +1 905 762 2000    | Fax +1 905 762 8937    |
| Denmark:                | Ballerup              | Tel. +45 4454 0101      | Fax +45 4454 0111      |
| France:                 | Nanterre Cedex        | Tel. +33 811 000 664    | Fax +33 1 56 05 23 23  |
| Germany:                | Wetzlar               | Tel. +49 64 41 29 40 00 | Fax +49 64 41 29 41 55 |
| Italy:                  | Milan                 | Tel. +39 02 574 861     | Fax +39 02 574 03392   |
| Japan:                  | Tokyo                 | Tel. +81 3 5421 2800    | Fax +81 3 5421 2896    |
| Korea:                  | Seoul                 | Tel. +82 2 514 65 43    | Fax +82 2 514 65 48    |
| Netherlands:            | Rijswijk              | Tel. +31 70 4132 100    | Fax +31 70 4132 109    |
| People's Rep. of China: | Hong Kong             | Tel. +852 2564 6699     | Fax +852 2564 4163     |
| Portugal:               | Lisbon                | Tel. +351 21 388 9112   | Fax +351 21 385 4668   |
| Singapore               |                       | Tel. +65 6779 7823      | Fax +65 6773 0628      |
| Spain:                  | Barcelona             | Tel. +34 93 494 95 30   | Fax +34 93 494 95 32   |
| Sweden:                 | Kista                 | Tel. +46 8 625 45 45    | Fax +46 8 625 45 10    |
| Switzerland:            | Heerbrugg             | Tel. +41 71 726 34 34   | Fax +41 71 726 34 44   |
| United Kingdom:         | Milton Keynes         | Tel. +44 1908 246 246   | Fax +44 1908 609 992   |
| USA:                    | Bannockburn/Illinois  | Tel. +1 847 405 0123    | Fax +1 847 405 0164    |

and representatives in more than 100 countries