



# Leica DMI3000 M

Inverted Microscope for Materials Science

Living up to Life

**Leica**  
MICROSYSTEMS

# Exceptional Image Quality and Convenience

The Leica DMI3000 M inverted, manual microscope for materials science is easy to use. The system's intuitively placed controls and ease of operation minimize the need for extensive training and save time during everyday work. The versatile Leica DMI3000 M offers a variety of configuration options that provide a perfectly tailored system for specific user needs and applications such as quality inspection and assurance, materials analysis, or research and development of new materials. The result is exceptional image quality and convenience.

## **Experience and Innovation – The Art of Creating Brilliant Images**

Leica's new incident light axis offers image brilliance, depth of field, and high resolution. The microscope's apochromatically-corrected beam path sets new standards of image clarity over the entire field of view.

## **Versatility – The Foundation for Future Possibilities**

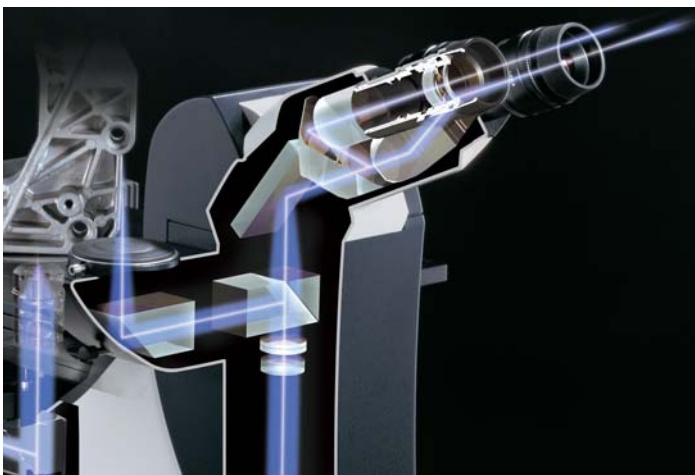
For ever-changing tasks and new applications, the Leica DMI3000 M is the solution. Choose between standard or high-performance objectives and fixed or motorized stages. The system can easily adapt additional contrast methods, such as darkfield or differential interference contrast (DIC).

## **Integration – Achieve more with the Perfect Team**

Every microscope system and accessory by Leica Microsystems meets the most stringent quality requirements. The microscope, camera, and software perfectly match each other, regardless of which components or software modules comprise the system. All components work ideally together.

## **Flexibility – Customized and Individualized**

To fit a particular research task, the microscope has to be one-of-a-kind. Leica Microsystems offers a wide variety of configuration options and works closely with accessory manufacturers to ensure that every accessory reliably integrates with the Leica DMI3000 M.



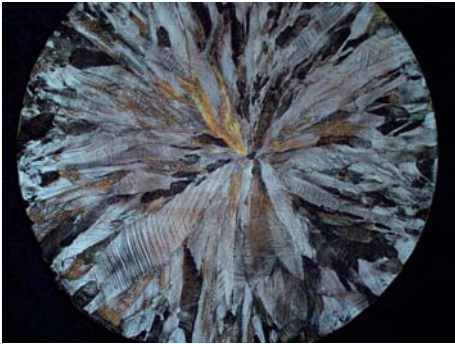
### **Manual Camera Output**

The top camera output is manually operated. It can be equipped optionally with two switch positions (100/0% or 50/50% light division).



### **Side Camera Output**

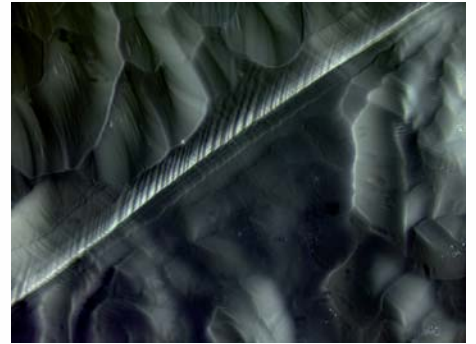
Easily toggle between the camera output and eyepiece. Choose between 100/0% and 80/20% (camera/eyepiece).



Copper-zinc rod, PLAN FLUOTAR 2.5x,  
Pol



Solar cell, PLAN FLUOTAR 50x,  
oblique illumination



Solar cell, PLAN FLUOTAR 50x,  
DIC



# Experience and Innovation – The Art of Creating Brilliant Images

## The Optical Pioneers

For over one hundred years, Leica microscope users have associated Leica products with the highest optical performance. The Leica HC (Harmonic Component) optical system objectives feature the highest numerical aperture available today, which sets completely new standards in high-resolution imaging. In the field of advanced materials microscopy, the reproduction accuracy and contrast of the Leica BD objectives (having Brightfield/Dark-field capabilities) set new limits in modern optical technology.

## The Optical System

Maximum transmission, homogeneity, and optimum correction are hallmarks of Leica's entirely new optical system. Stray light and unwanted reflection are things of the past. The Leica DMI3000 M exceeds the standards for accuracy and color fidelity in reproducing material samples.

## The Optical Innovation

Leica's innovative HC optics are ideal for microscopic viewing that requires a large amount of working distance between the sample and the objective, while achieving high resolution. Leica's HC optics feature a high numerical aperture and create plenty of space on the microscope's stage, while providing high-contrast, sharp, and detailed images of material samples. The user benefits from a high degree of image sharpness for all contrast methods in image analysis.

## The Optical Specialist

The Leica DMI3000 M offers an especially useful feature for materials examination – the stand's built-in oblique illumination is ideal for difficult-to-evaluate samples, which enables the researcher to literally see the sample in a new light.



### Practical, Single-handed Operation

The stage drive and focus knob are located very close to each other, which allows the stage and focus to be conveniently adjusted with one hand. Moreover, the flat design of the right focus knob prevents contact with the stage drive.



Comprehensive line of objectives – from the HI PLAN (Plan Achromat) to the PLAN APO

# Leica DMI3000 M – As Individual as Your Application

## **Versatility: A Standard Feature**

Whether analyzing polished metal samples in incident light or examining powder in transmitted light, the Leica DMI3000 M's new incident light axis allows the researcher to work in brightfield, darkfield, DIC modes or with quantitative polarization. For difficult-to-evaluate samples, a simple press of a button activates the integrated oblique illumination and switches over to transmitted light. Transmitted light, brightfield, darkfield, DIC, polarization, and phase contrast modes provide excellent imaging results and ease of use.

## **Comfortable Work**

The Leica DMI3000 M comes equipped with an ergonomic tube with continuously adjustable viewing angles that adapt to an individual's body height and posture, which provides comfort to the microscope user.

## **Convenient Outlook**

The viewing channel (a notch conveniently located between the eyepieces) allows an unobstructed view of the sample at all times, which increases efficiency.

## **Integrated Ergonomic Tube**

The Leica DMI3000 M is equipped with an ergonomic tube. The continuously adjustable eyepieces ensure the best viewing angle for all users.



## **Unobstructed View of the Sample**

The viewing channel, incorporated within the tube, provides an unobstructed view of the sample. This enables the user to switch between microscopic and visual observation of the sample at any time without having to adjust the tube.



## **5x Objective Nosepiece**

Easy accessibility and accurate operation are the highlights of Leica's 5x objective nosepiece.



## **A Comprehensive Range of Stages**

Since every material sample is different in both surface composition and dimension, a comprehensive range of microscope stages are available for the Leica DMI3000 M. Choose between fixed stages (with or without an attachable mechanical stage) or 3-plate cross-stages. Motorized stages are also available. The DMI3000 M offers versatile configuration options that always provide a perfectly tailored, application-specific system.

## **Dual Camera System**

The Leica DMI3000 M is equipped with two camera outputs to allow a camera for fast live imaging and another camera for video recording. One output is on the side of the stand and can easily toggle between a 0/100% and 80/20% light division. The other output is located on the tube. This outstanding two-output feature allows the researcher to choose which output to use for a particular camera and how much light is sent to the outputs. Leica's product range of thirteen different optical prisms with various transmission levels allows a multitude of possibilities.

**Leica DMI3000 M**

<b>Stand</b>	<b>Power supply</b>	In the stand
<b>Focus</b>		Manual Coarse and fine adjustment
<b>Objective nosepiece</b>		5x M32 Manual operation
<b>Stages</b>	<b>Manual stages</b>	Fixed stages – Optionally with/without attachable mechanical stage – More than 20 different inserts available – Scratch-resistant ceramic coating 3-plate cross-stage – More than 20 different inserts available – Scratch-resistant ceramic coating
<b>Incident light</b>	<b>Contrast methods</b>	Brightfield (BF) Darkfield (DF) Differential Interference Contrast (DIC) Polarization Contrast (POL) Fluorescence (Fluo) Oblique Light (can be combined with BF or DIC)
	<b>Illumination</b>	12 V/100 W halogen lamp Adjustable field diaphragm Adjustable aperture diaphragm 3-step oblique light
<b>Transmitted light</b>	<b>Contrast methods</b>	Brightfield (BF) Darkfield (DF) Differential Interference Contrast (DIC) Polarization Contrast (POL) Phase Contrast (PH)
	<b>Transmitted light arm</b>	12 V/100 W halogen lamp Manually adjustable field diaphragm Filter magazine for 2 filters, manual operation Manual lock
	<b>Condensers</b>	Condenser disk that holds up to 7 optical elements, such as DIC prisms, DF stop, phase rings Integrated aperture diaphragm