From Eye to Insight

Premium Surgical Microscope

STAY FOCUSED FOR BEST RESULTS

Leica M530 OH6 with FusionOptics
As a surgeon you have to remain focused on achieving the best clinical outcome for your patient. And on what matters in every single moment of the surgery. The Leica M530 OH6 has been designed to let you do just that by uniting the exclusive innovation FusionOptics with a truly ergonomic design.

FusionOptics technology combines resolution and depth of field. The result is amazing clarity of images. Along with one other advantage: less need to refocus. Plus, the truly ergonomic design allows you to position the microscope effortlessly and achieve a comfortable upright posture. Less muscle tension or even pain means steady concentration on your patient.

Stay focused with astounding optics
> FusionOptics for high resolution with enhanced depth of field
> Better visibility in deep cavities

See pages 4 to 5.

Stay focused with optimized ergonomics
> More space to work
> Full integration
> Flexible positioning for everyone
> Superior maneuverability

See pages 6 to 7.

Stay focused with customized solutions
> Individually configurable
> Modular for changing needs
> Imaging upgrades made easy

See pages 8 to 11.

Stay focused with integrated fluorescence
> Leica FL400 blue light fluorescence filter
> Leica FL560 green light fluorescence filter
> Leica FL800 for vascular fluorescence

See pages 10 to 11.
The Leica M530 OH6 takes image quality to a whole new level by combining FusionOptics with advanced illumination and apochromatic optics.

**Visualize the finest details with FusionOptics**
FusionOptics makes the impossible possible: large depth of field and high resolution in one image. This exclusive, groundbreaking technology from Leica Microsystems takes a new approach, utilizing the power of the human brain. First, it captures different information from each of the two beam paths. The left beam path delivers an image with the highest possible resolution and the right beam path provides an image with maximum depth of field. The brain then easily merges both images into a single, optimal spatial image. The astounding result: a significantly expanded area in full focus.

**Less refocusing**
FusionOptics technology offers a further unique advantage with the potential to streamline your workflow. A larger area in full focus means less time spent refocusing. FusionOptics helps you to stay focused, in every sense of the word.
FusionOptics Technology

1. Two separate beam paths
2. One beam path provides depth of field
3. The other provides high resolution
4. The brain merges the two images into a single, optimal spatial image

Deep insights

Small Angle Illumination (SAI) combined with bright 400-Watt xenon light provides a concentrated light beam that penetrates to the bottom of deep, narrow cavities. The result is better illumination with less shadow. SAI provides you with more details and an improved depth perception.

Customizable optics

Choose from the range of customizable optics and adapt the Leica M530 OH6 to your preferences:

> Additional 40% magnification boost with the Magnification Multiplier (optional)
> Independent fine focus for the rear assistant with a range of +/- 5 diopters
> Fast focusing with two laser beams acting as a focusing reference to quickly provide a defined focus point for all three viewing positions (surgeon, assistant, camera)
> A range of binoculars, all adjustable to different heights and positioning due to full 360°-rotation
Comfortable working posture and large free working space during a spine surgery

STAY FOCUSED WITH OPTIMIZED ERGONOMICS

Working in the most comfortable position possible is crucial during long surgeries.

That's why the Leica M530 OH6 is designed to fully adapt to you and your individual needs. Its comprehensive ergonomic concept was developed in close cooperation with leading surgeons, transferring their demands into intelligent ergonomic features. With less physical distraction, you can stay even more focused on the critical task at hand.

Easy handling for efficient workflow

> Unobstructed access to surgical area with large 600 mm working distance. Enables use in spine procedures where previously only loupes could be used
> Easy to maneuver and pass large instruments below the instrument
> Compact optics carrier design means less distance from eyepiece to objective lens so arms can remain in a natural position and are not over-extended
> Accommodates different operating positions and body frames with a range of binoculars, all with full 360°-rotation
> Enhanced comfort and flexibility for the rear assistant with improved ergonomic design
LEICA M530 OH6 – ERGONOMICS

**Long overhead reach**

Freely maneuverable
Smooth, effortless positioning reduces the potential strain of harsh movements and optimizes workflow efficiency. The extensive range of movement and tilt of the optics carrier along with the integrated design deliver unmatched flexibility. Fast stabilization keeps workflow interruptions to a minimum.

Comfortably ergonomic
The compact optics carrier provides more room to work and facilitates a more natural, ergonomic working position for the surgeon. All binoculars are adjustable to different surgeon heights and offer superior positioning due to full 360°-rotation.

Perfectly balanced
Leica Microsystems’ single button AutoBalance saves valuable time. With only two pushes of one button, the auto-balance system fully balances all six axes. To quickly and accurately re-balance the microscope intraoperatively, even through a sterile drape, simply push the AC/BC button, conveniently located above the optical head.

OH6 stand designed by Mitaka
STAY FOCUSED WITH CUSTOMIZED SOLUTIONS

Equipped for the present, ready for the future, with maximum modularity for individual configurations.

Configure your Leica M530 OH6 to meet your needs perfectly. Its sleek, cable-free, fully integrated optics carrier was developed with a highly modular structure to specifically guarantee maximum configuration flexibility. Plus, keeping your imaging technology up-to-date just became so much easier. The OpenArchitecture and unique upgrade-ready design give you the possibility to upgrade whenever you choose.

**Tailored for your surgical needs**
Thanks to the different optic carriers available for the Leica M530, you can customize your surgical microscope to best fit your requirements whether neurosurgery, spine procedures, ENT, or plastic and reconstructive surgery.

**Ultraobserver**
The Leica ULT530 is the standard configuration for neurosurgery, spine and plastic reconstructive surgery. Left, right and rear assistant interfaces and optional integrated Leica HD C100 camera, Leica FL800, Leica FL400 and Leica FL560 fluorescence modules offer maximum flexibility.

**Integrated video adapter**
The compact design of the Leica IVA530 offers an ideal solution for otolaryngology and neurotology. With no opposite assistant, more light is directed to the main surgeon and side assistant for even greater visual enhancement. The integrated video adapter has a built-in depth enhancer, for outstanding screen display and recording.

**Image injection**
The top plate configuration is designed for attachment of the Leica DI C500 dual imaging color module. The Leica DI C500 allows the surgeon to inject data directly into the eyepiece, from external and internal sources, such as MRI, CT, IGS, endoscopes and Leica FL800 video sequences.
Three-dimensional view for all
Integrated TrueVision 3D visualization and recording is also available. 3D imagery can greatly enhance microsurgery education, providing staff and students with the same 3D view as the surgeon during live surgery or a seminar. With TrueVision Smart 3D built in, set-up time is minimized and OR space freed up. 3D functions are controlled directly via the handles, avoiding workflow interruptions.

Fully integrated and under control
All cameras, fluorescence modules and cables are fully integrated inside the optics carrier to provide a sleek, clean appearance, maintain cable integrity and deliver greater freedom of movement. Control the HD 2D and 3D image recording functions or switch between white light and fluorescence via the handgrip or optional mouth and foot switches.

Ready for today and tomorrow
The modular, OpenArchitecture design of the optics carrier allows easy integration of systems such as the user-friendly Med X Change HDMD full HD digital recording system or Image Guided Surgery (IGS). Upgrade easily when your requirements change or when new imaging techniques or surgical guidance applications become available.
BEYOND THE VISIBLE

Well-prepared for current and future types of surgical fluorescence - the Leica M530 OH6 with TriFluoro*.

The Leica M530 OH6 can be supplied with three types of fluorescence fully integrated: Leica FL400 blue light fluorescence, Leica FL800 for vascular fluorescence and Leica FL560 green light fluorescence filter. With only a few button clicks, you can easily switch from white light to fluorescence mode or between fluorescence filters. The brilliant HD fluorescence video can be easily viewed on screen and recorded. For best viewing results, the built-in Mode Control video technology automatically optimizes the settings of specific, optional cameras according to the selected mode.

* For all fluorescence modules, please check the status of regulatory approval for your country with your local Leica Microsystems representative
**FL400 oncological fluorescence**
The fluorescence module Leica FL400 for M530 is used in conjunction with 5-ALA fluorescent agent for characterization of tumor tissue in open neurosurgery.

**FL800 vascular fluorescence**
The Leica FL800 ULT intraoperative videoangiography module is used in conjunction with ICG fluorescent agent and allows surgeons to see blood flow through vessels in real-time during surgery.

**FL560 fluorescence**
The Leica FL560 for M530 module is designed to enable fluorescence observation of fluorophores with an excitation peak between ~460 nm and ~500 nm (blue) and fluorescence emission observation comprising the green, yellow, and red spectrum in a spectral band above ~510 nm.
The Leica M530 OH6 offers innovative design features, system back-up solutions, and illumination options to help you optimize patient safety and minimize interruptions.

**Luxmeter for consistent lighting**
BrightCare Plus compensates for decreased light intensity as bulbs age to ensure consistent lighting. With the internal luxometer providing real-time light intensity data to the BrightCare Plus system, light intensity is calculated on actual bulb output, not by using an algorithm or formula.

**Protection for team and patients**
The Leica M530 OH6 features a special AgProtect coating for superior hygienic conditions. This surface coating with antimicrobial nano silver minimizes pathogens on the microscope as well as possible transmission to team members using it.

**Made to withstand**
The microscope’s solid, full metal construction is highly robust. Designed and built for intensive use in the operating room, all the while maintaining its high level of precision and value.
Maximum brightness at all times
The efficient light transmission of the Leica M530 OH6 ensures that the maximum possible amount of light is always being provided. Therefore, you can operate at safer light levels and still see more than ever before.

Reliable illumination system
The Leica M530 OH6 features two redundant 400 W xenon arc-lamp illumination systems, with independent lamps and boards. In case of lamp or board failure, the microscope automatically switches to the second illumination system.

Stay operational
To ensure full operability the microscope and the video have fully independent operating systems. In case of a video system failure, the microscope retains full functionality and surgery can continue uninterrupted.
## OPTICS AND ILLUMINATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FusionOptics</td>
<td>For increased depth of field and high resolution for main surgeon</td>
</tr>
<tr>
<td>Fully apochromatic optics</td>
<td>For high contrast, natural colors without chromatic aberrations</td>
</tr>
<tr>
<td>Magnification</td>
<td>6:1 zoom, motorized</td>
</tr>
<tr>
<td>Total magnification</td>
<td>1.0x to 12.1x with 10x eyepiece</td>
</tr>
<tr>
<td>Magnification multiplier</td>
<td>1.4x (optional)</td>
</tr>
<tr>
<td>Focus</td>
<td>Motorized via multifocal lens, with manual adjustment</td>
</tr>
<tr>
<td>Fine focus</td>
<td>±5 diopter available for opposite assistant (ULT)</td>
</tr>
<tr>
<td>Objective / working distance</td>
<td>225–600 mm, motorized multifocal lens, continuously adjustable and manual adjustment option</td>
</tr>
<tr>
<td>Field of view</td>
<td>17.4 to 210 mm Φ with 10x eyepiece</td>
</tr>
<tr>
<td>Eyepieces</td>
<td>Wide-field eyepieces for persons wearing glasses 8.3x, 10x and 12.5x dioptric adjustment, ±5 diopter settings and adjustable eyecup</td>
</tr>
<tr>
<td>Integrated 360° rotatable adapter</td>
<td>For main surgeon binocular (IVA, ULT) and opposite assistant (ULT)</td>
</tr>
<tr>
<td>Illumination</td>
<td>High-output 2x 400-W redundant xenon arc-lamp systems via fiber optics cable</td>
</tr>
<tr>
<td></td>
<td>Continuously variable illumination field diameter with Gaussian distribution</td>
</tr>
<tr>
<td></td>
<td>Continuously adjustable brightness at constant color temperature</td>
</tr>
<tr>
<td>SpeedSpot</td>
<td>Laser focusing aid for fast and exact positioning of the microscope</td>
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## MANEUVERABILITY

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optics</td>
<td>540° rotation</td>
</tr>
<tr>
<td></td>
<td>50° lateral tilt to left and right</td>
</tr>
<tr>
<td></td>
<td>-30° /+120° inclination tilt</td>
</tr>
<tr>
<td>XY speed</td>
<td>Zoom linked XY speed</td>
</tr>
<tr>
<td>Balancing</td>
<td>One button/two push complete automatic balancing of stand and optics</td>
</tr>
<tr>
<td>Intraoperative balancing</td>
<td>Automatic intraoperative AC/BC balancing of AC and BC axes</td>
</tr>
<tr>
<td>Brakes</td>
<td>Floor stand with 6 electromagnetic brakes</td>
</tr>
<tr>
<td>Microscope carrier</td>
<td>“Advanced Movement” system with vibration damping technology</td>
</tr>
<tr>
<td>Carrier for monitor</td>
<td>700 mm flexible arm with 4 axis for rotation and inclination</td>
</tr>
</tbody>
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## MODULARITY

### Leica ULT530
- Full stereo view for main surgeon and opposite assistant, semi stereo view for 2 side assistants
- High sensitivity, built-in IR video camera with 1/2” CCD
- Optional integrated HD Camera (Leica HD C100)
- Light distribution: 50% for main surgeon, either 20% for each side assistant or 40% for opposite assistant

### Leica FL800 ULT
ULT with the Leica FL800 vascular fluorescence observation filter module

### Leica FL400
Leica FL400 blue light fluorescence observation filter module

### Leica FL560
Leica FL560 green light fluorescence observation filter module

### IVA530
- Full stereo view for main surgeon, semi stereo view for 2 side assistants and C-mount interface for camera (HD or SD)
- Light distribution: 67% for surgeon, 23% for side assistant, 20% for C-mount port

### Top plate with Leica DI C500
- Full stereo view for main surgeon and opposite assistant, semi stereo view for up to 2 side assistants
- Data injection
- Optional: C-mount interface for camera (HD or SD), FL800 function, FL400 function

### OpenArchitecture
- Easy integration of IGS and laser systems (please ask your Leica Microsystems representative)
- Prepared for integration of video camera system and digital recording system

### Connectors
- Numerous built-in connectors for video, IGS and control data transfer
- Internal power supply 12 VDC, 19 VDC and AC terminals

### 2D/3D HD Video
Fully integrated 2D HD and/or 3D HD video and recording
SAFETY

AutoIris
Built-in automatic zoom-synchronized illumination field diameter, with manual override and reset feature

BrightCare Plus
Safety function through working distance-dependent limitation of the brightness, controlled by a built-in luxometer

CONTROL

Control unit
- Programmable touch-screen with user-friendly Graphical User Interface for control of microscope and stand
- ISUS Intelligent Setup System
- Built-in electronic auto-diagnosis and user support
- Software independent hard keys for illumination and auto-balancing
- Indicator for main/backup illumination and fluorescence modes

Control elements
- Pistol handle with 10 programmable functions
- Optional mouthswitch
- Optional 12-function wireless footswitch

IR sensor
Leica FL400 oncological fluorescence observation filter module

CONSTRUCTION

Base
720 × 720 mm with four 360° rotating castors with a diameter of 130 mm each, one parking brake

Materials
All solid metal construction coated with antimicrobial paint

Load
Min. 6.7 kg, max. 12.2 kg from microscope dovetail ring interface

Weight
Approx. 320 kg without load

Indicator
LEDs for fluorescence mode status and video record status

TECHNICAL DATA

Ambient conditions in use
- +10 °C to +40 °C
- +50 °F to +104 °F
- 30% to 95% rel. humidity
- 800 mbar to 1060 mbar atmospheric pressure

Power connection
- 1600 VA 50/60 Hz
- 100 V, 120 V, 220 V, 240 V (+10 %/−15 %)
- 2 × T10 AL 100/120 V
- 2 × T8 AL 220/240 V

Protection class
Class 1