

# OPMI Lumera® T

Let there be light



The background of the image is a full-page photograph of a sky during a sunset or sunrise. The colors are a mix of deep purples, magentas, and bright oranges, with some lighter, wispy clouds visible near the horizon. The overall texture is soft and painterly.

**Welcome to the future  
of red reflex**

## **OPMI Lumera® T**

The new OPMI Lumera® T surgical microscope from Carl Zeiss features revolutionary red reflex technology. Experience the red reflex in an entirely new way: more contrast, brilliance and stability than ever before.

**Precision** For optimum results

**Performance** For a smooth treatment routine

**Patient care** For satisfied patients



# Let there be light

*SCI™ (Stereo Coaxial Illumination)  
in the OPMI Lumer® T surgical micro-  
scope: a revolution in red reflex  
technology. For brilliant stability  
and brightness. For outstanding  
contrast.*



## Shedding light on the details

The OPMI Lumera® T surgical microscope is a true revolution in the quality of illumination. Carl Zeiss is the first and only company to develop surgical microscopes with Stereo Coaxial Illumination (SCI™). You benefit from the unique detail recognition, high-contrast brilliance and stability of the red reflex – even with strongly pigmented, decentered and ametropic eyes. This technology enables you to see all the details of a patient's eye.

### Instant red reflex

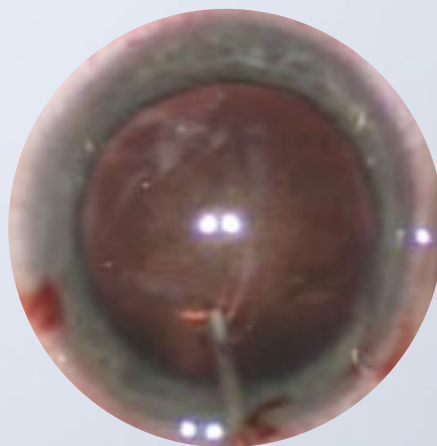
Simply position the OPMI Lumera® T surgical microscope over the patient's eye and turn on the light. The eye illuminates brightly as if you had just turned on a lamp – even with more mature cataracts.

### Natural color impression

The integrated Superlux® Eye xenon illumination allows you to see the anatomic structure of the eye in its natural colors and highly accurate detail. The use of the HaMode™ filter enables surgeons who prefer halogen to quickly switch to a light spectrum equivalent to halogen. This is particularly beneficial when several surgeons with different preferences regarding the light source use one system.



*Unique contrast and outstanding  
brilliance thanks to SCI™:  
a comparison of red reflexes.  
(Cincinnati Eye Institute, OH, USA)*



Standard microscope



OPMI Lumera® T



### **Even deeper insights**

It couldn't be any easier: the integrated DeepView depth-of-field management system allows you to choose between maximum depth of field or optimum light transmission at the push of a button.

### **Always light**

If the system is equipped with halogen illumination, it automatically switches to the backup bulb if necessary. Surgery no longer needs to be interrupted when a bulb goes out.

## Optimum workflow in the OR

The surgical flow is best when all staff are informed of the progress of the procedure and are able to prepare upcoming steps independently. Therefore, it is possible to equip the floor stand for the OPMI Lumera® T surgical microscope with an integrated video monitor. It can be placed in various positions, enabling all staff to follow the operation. This results in an improvement of the entire workflow and eliminates the need for an additional monitor.

### Intuitive operation

All illumination settings are configured on only one control element which can be easily reached on the microscope. SCI™ is intuitive and easy to understand.

### Independent second view

The OPMI Lumera® T surgical microscope can be equipped with a completely integrated assistant's microscope. The second surgeon selects the focus and magnification independently of the main surgeon, thus enabling active assistance. The assistant enjoys full 3D quality without limiting the light of the main surgeon.

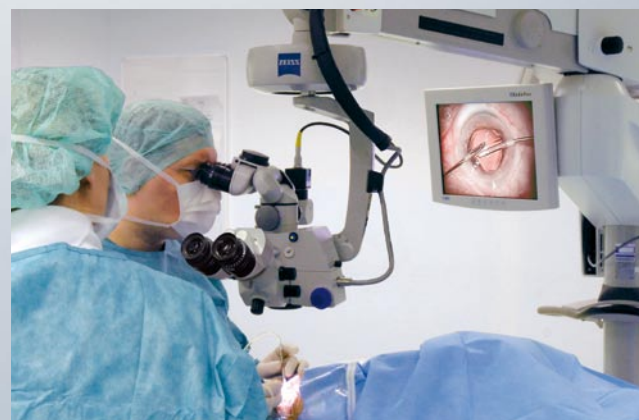
### Effortless positioning

The magnetic brakes make positioning the surgical microscope very simple. When the brakes are released, the system smoothly glides into a new position; when locked, the microscope remains firmly in place. The brakes for the XY and Z directions can be released separately, providing you with even more comfort for minor positioning changes.





*Operating the magnetic brakes*



*The integrated monitor allows all staff members to follow the progress of a procedure as shown here with Prof. Auffarth at the University of Heidelberg Eye Clinic in Germany*

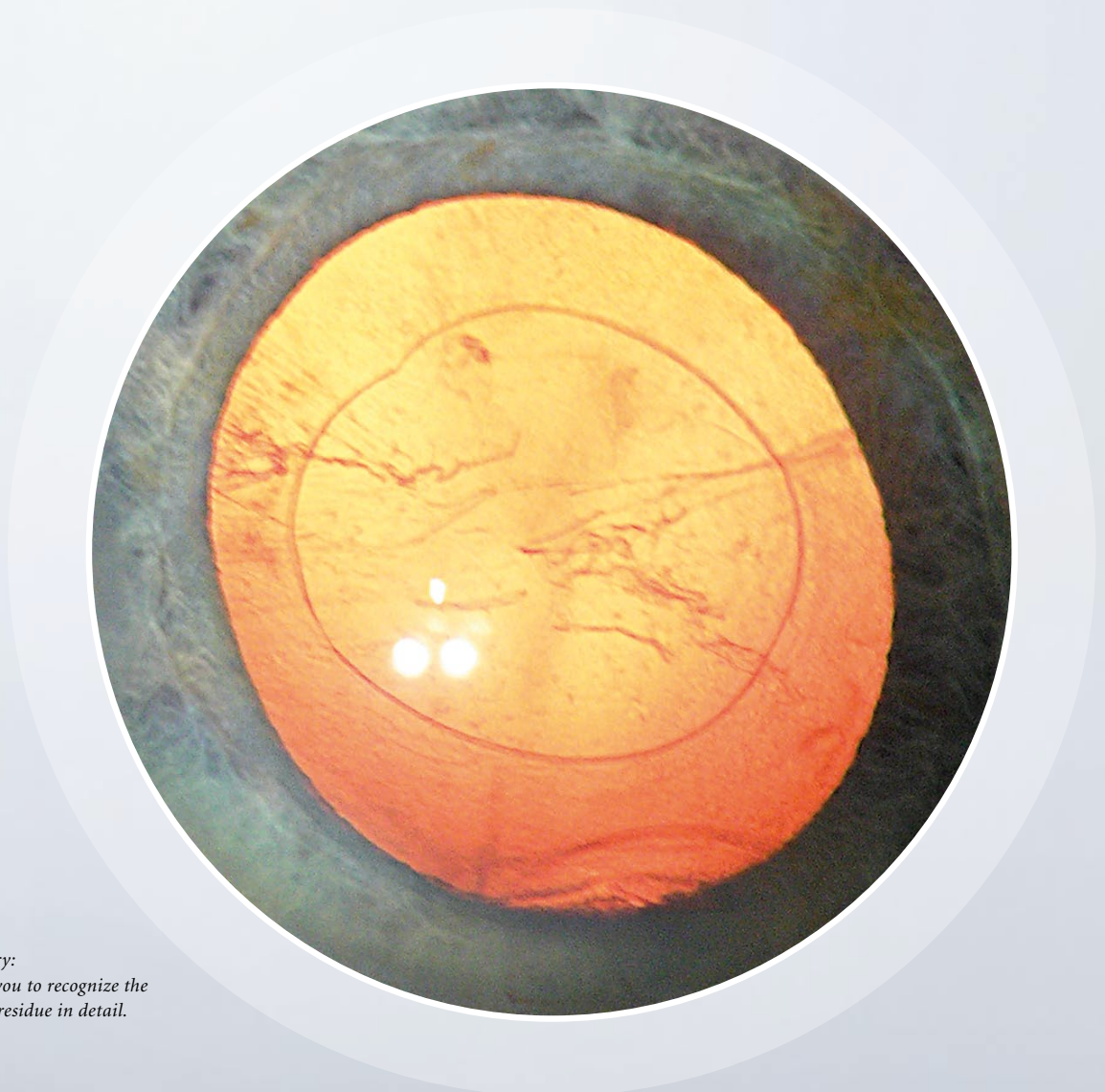


## Safely in the right light

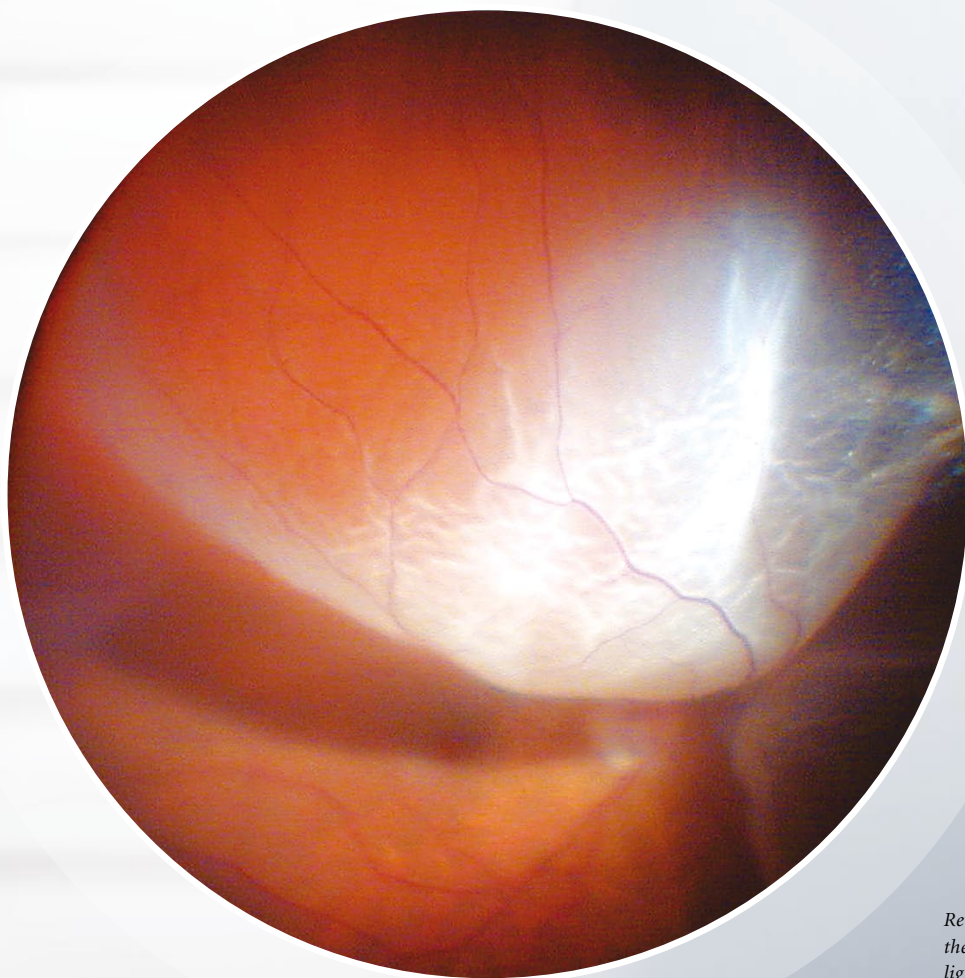
**The eyesight of patients often depends on your skills and expertise. Our surgical microscopes provide optimal support for everything you do.**

### **Optimum foundation for optimum results**

The high contrast and excellent detail recognition supplied by SCI™ enables you to reliably see and completely remove tissue residues in the capsular bag with unparalleled accuracy.



*Cataract surgery:  
SCI™ enables you to recognize the  
slightest tissue residue in detail.*



*Retinal surgery:  
the high optical quality and  
light intensity allow you to  
see the retina in full detail.*



**The leading light for  
increased efficiency**



The OPMI Lumera® T surgical microscope represents the ultimate in microscope versatility. The flexible surgical microscope can be used in all ophthalmic surgical procedures. The optional integrated assistant's microscope makes it the ideal solution for teaching institutions.

#### Alternative suspension system

The OPMI Lumera® T surgical microscope can be combined with any of the following suspension systems depending on your personal requirements and the conditions in the OR: S88 floor stand, and the S8 and S81 ceiling mounts. All offer high load capacity and the possibility of saving settings for up to nine users or applications (including starting magnification, focus speed and defaults for the foot control panel). There is also a selection of different light sources: single or dual halogen illumination, Superlux® Eye xenon illumination or a combination of both. This enables you to configure the OPMI Lumera® T surgical microscope to your needs and wishes.

#### Your options for an even better workflow

When the OPMI Lumera® T surgical microscope is equipped with the optional Invertertube™, switching between cataract and retinal procedures requires no conversion.

The MediLive Trio Eye® video camera specifically developed for ophthalmic surgery is the ideal system add-on when video recording is needed. The defaults for the posterior and anterior segments of the eye allow you to adjust the camera to the different light conditions at the push of a button.

*The Invertertube™ improves the workflow and comfort (1)*

*The OPMI Lumera® T surgical microscope on the S88 floor stand provides more flexibility (2)*







## **“A unique red reflex”**

Where the quality of the red reflex is concerned, none of the surgical microscopes that I have worked with for longer or shorter periods until now has had such a lasting impression on me. The new microscope with the xenon illumination achieves an unparalleled level of contrast and detail recognition in the red reflex.

*Prof. Dr. Thomas Neuhann, Munich, Germany*

## **“I was able to visualize the anterior segment in amazing detail”**

The depth of field is impressive. The distances between objects are much larger than the impression given by older microscopes. With OPMI Lumera® T, I was able to much better estimate the entire depth of the lens capsule. I have never seen an eye like this – it is simply amazing. The depth of field, the contrast, the red reflex – it is really unique in ophthalmology.

*Dr. Warren Hill, Phoenix, Arizona, USA*



## **“A totally new view of the eye”**

The new surgical microscope is great. Not only could I see the very fine folds in the posterior lens capsule, I could also easily differentiate the tissues in the posterior segment. Therefore, I used very little light – the high light transmission optics are really unsurpassed.

*Prof. Tano, Osaka, Japan*





# Focus on more demanding tasks

All doctors have their own special everyday clinical routine. Therefore, the OPMI Lumer® T surgical microscope can be equipped with a variety of helpful accessories. Select the configuration that provides you with the comfort and benefits you desire.

## **MediLive® MindStream – the comprehensive documentation center**

MediLive® MindStream permits the simultaneous recording of video (up to 120 hours) and images to a hard drive, DVD or CD-ROM for the uninterrupted documentation of operations. For presentations, data can be easily accessed, edited and saved, for example, on a USB stick or other media.

### **(1) FlexioStill™ Adapter**

With this lightweight, easy-to-use adapter, a compact digital camera quickly and easily becomes a part of the OPMI Lumer® T surgical microscope. Image documentation couldn't be any easier.

### **(2) Tilttable tube – for flexible viewing**

This binocular tube with a tilt range of 180° enables a comfortable posture in any position.

### **(3) Invertertube™ – the ergonomically designed tube**

The OPMI Lumer® T surgical microscope can be equipped with a completely integrated inverter. The inverter function is already integrated, providing surgeons with enhanced, comfortable, ergonomic seating. The Invertertube™ is also available for the assistant's microscope.

### **(3) MediLive Trio Eye® – for all video requirements**

Specially developed as a video camera for ophthalmic surgery, MediLive Trio Eye® offers easy-to-select defaults for the posterior and anterior segments of the eye. Despite the typically low light intensities used during retina procedures, the image on the video monitor is bright and rich in contrast. Details of the sclera in the anterior segment of the eye are shown without blooming. The ability to allocate different white balance levels to users is particularly beneficial. As a result, when users switch from halogen to endo illumination with xenon light, the video camera is correctly set quickly and easily. MediLive Trio Eye® is also very practical on surgical microscopes equipped with a wide-angle observation system that leads to an inversion of the video image. Simply activate the rotate function and the video image is once again displayed in the correct position.

### **(4) VISULUX™ motorized fiber slit illuminator**

The VISULUX™ slit lamp is an ideal illumination system for bimanual retinal surgery. It offers great visualization of membranes and vitreous strands.

*FlexioStill™ Adapter (1)*



*Tilttable tube/  
digital SLR camera (2)*

*MediLive Trio Eye® (3)*

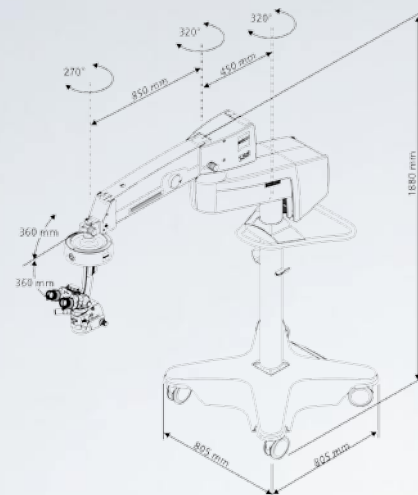
*VISULUX™ (4)*



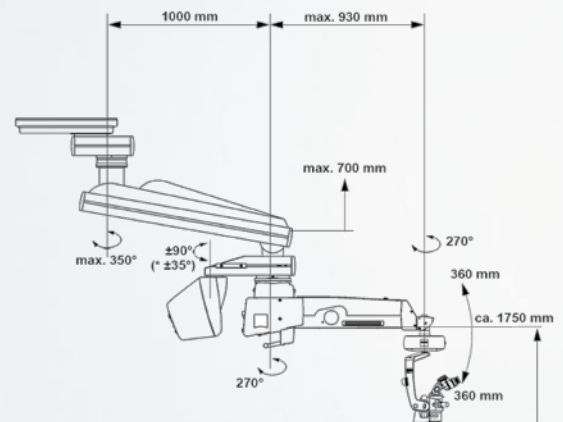
## Technical Data

Surgical microscope	<ul style="list-style-type: none"> <li>- Apochromatic optics</li> <li>- Motorized zoom system, 1:6 zoom ratio, magnification factors <math>\gamma=0.4</math> to 2.4</li> <li>- Focusing range: 50 mm</li> <li>- Binocular tube: Invertertube™ (optional 0-180° tiltable tube)</li> <li>- Eyepieces: 10x (12.5x optional)</li> <li>- Objective lens <math>f=200</math> mm (<math>f=175</math> mm optional)</li> <li>- DeepView: depth of field management system</li> <li>- Integrated assistant's microscope</li> </ul>
Illumination	<ul style="list-style-type: none"> <li>- SCI™: red reflex illumination and surrounding field illumination, both dimmable, patent pending</li> <li>- Integrated 408 nm UV barrier filter</li> <li>- Blue blocking filter</li> <li>- Retinal protection device</li> <li>- Fiber optic illumination</li> <li>- Optional: fluorescence filter</li> </ul>
Light source	<ul style="list-style-type: none"> <li>- Superlux® Eye xenon illumination with manual bulb change, including HaMode™ filter</li> <li>- Optional: 12V, 100W halogen illumination with fully automatic bulb change if necessary</li> <li>- Option: dual halogen illumination</li> <li>- Optional: xenon/halogen combi illumination</li> </ul>
X-Y coupling	<ul style="list-style-type: none"> <li>- 40 mm x 40 mm adjustment range</li> <li>- Button for starting positions of the X-Y coupling and focus</li> </ul>
Weight	13.7 kg (30.2 lb) (with Invertertube™, integrated assistant's microscope, objective lens and eyepieces)
Suspension systems	<ul style="list-style-type: none"> <li>- S88 floor stand</li> <li>- S8 ceiling mount</li> <li>- S81 ceiling mount</li> <li>- Maximum load: 20 kg (44.1 lb) (complete microscope equipment, including accessories)</li> </ul>
Compliance	 

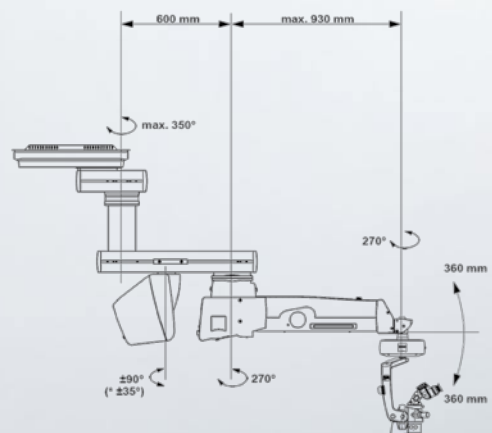
S88 floor stand



S8 ceiling mount



S81 ceiling mount



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Subject to change in design and scope of delivery and as a result of ongoing technical development.

We extend our thanks to Prof. Auffarth at the University of Heidelberg Eye Clinic in Germany for the application photos.

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