



*You perform.  
Does your equipment?*

**ZEISS**

"To achieve the best possible outcomes,  
I must see every detail of the patient's eye."

"To ensure that an eye procedure goes perfectly,  
I must be able to concentrate on the patient, not on the technology."

Perform?

"I don't want to have to constantly interrupt a procedure  
just because I need to readjust the microscope."

"Everyone in the team needs  
access to all relevant data  
during the surgery."

"To keep intervals between surgeries to a minimum, the system must be ready  
for the next procedure after only a few minor adjustments.  
Also, we need to be efficient when we switch between retinal and cataract surgery."







*Perform!*

## **With the integrated ophthalmic solution from ZEISS.**

For more than half a century, ophthalmic surgeons all over the world have been using surgical microscopes from Carl Zeiss to preserve and enhance their patients' vision. Surgical microscopes must constantly evolve to meet the new demands posed by innovative surgical techniques, higher patient expectations and increasing cost pressure in the OR. The ZEISS answer to this challenge: customized integration. With its uniform, leading edge design, OPMI LUMERA® 700 combines a high-quality basic configuration with extensive options for procedures in the anterior and posterior segments. The integration of special functions not only offers you an ergonomic workflow. It also lays the foundation for new treatment methods that allow you to fully utilize your skills in the OR.



### **Eye.z is the platform of the future.**

Our vision is to combine individual units into single, all-in one solutions, to create ophthalmic systems that exchange information and provide additional functions – for better clinical outcomes and a smoother workflow. With OPMI LUMERA 700, you will take your first step into this exciting future.

With the link to the CALLISTO eye OR management system and optionally integrated components such as the keratoscope and slit illuminator, the system offers you outstanding assistance options in the OR – all to ensure that you obtain excellent results. After all, satisfied patients are your best recommendation.

A large, white surgical microscope (OPMI LUMERA 700) is positioned in a bright, clinical setting. The microscope is mounted on a tall, grey, adjustable stand with a black handrail and a dark blue base with four casters. A monitor is attached to the side of the microscope, displaying a close-up image of an eye. The background shows a clean, white surgical room with overhead lights.

## Only the best will do - for cataract and retinal surgery

**OPMI LUMERA 700 is a superb, dedicated surgical microscope for all areas of ophthalmic surgery. It provides:**

- **SCI (Stereo Coaxial Illumination)** for constant brilliance and brightness: every detail of the patient's eye becomes visible
- **Optimized workflow and maximum ease of use:** thanks to CALLISTO eye and the wireless foot control panel
- **Integration:** perfect interaction of RESIGHT fundus viewing systems, Invertertube E and integrated video camera
- **Space for surgery:** cables and optional functions are integrated into the system
- **Future:** OPMI LUMERA 700 is an essential component of the **eye.z** platform concept

# Integrated comfort and versatility

With the functions integrated into OPMI LUMERA 700, you are optimally prepared for anything: not only for the next day's cataract or retinal procedures, but also for the future. The system is extremely versatile and, with the appropriate accessories, provides you with exactly the right tool for both the anterior and posterior segments. The system's advanced technology is concealed behind a clearly contoured design – all to ensure that nothing limits or impairs your work.

## Integration – also of information

For us, the information flow is part of the integration principle. This is precisely why OPMI LUMERA 700 is an essential component of the eye.z platform concept. In the future, for example, you will be able to change settings of OPMI LUMERA 700 on the touch screen of CALLISTO eye.

## Already integrated: the assistant's microscope

This offers ideal work conditions for training or active assistance. Depending on the needs of each individual situation during surgery, the magnification can be either coupled to the main microscope or set separately.

## Always in the picture – video cameras

Video documentation is an important verification tool for quality assurance in hospitals. And when you are presenting your skills and expertise to colleagues, moving pictures are more convincing than words can ever be. If you want top-quality video images, make sure you opt for the integrated Medilive Trio Eye video camera – either in the top-of-the-line HD version or in the SD version as a 3-chip camera.

## A second pair of eyes

Would you like to have an assistant or student sitting opposite you in some special situations during surgery, or do you wish you had an additional viewing possibility? No problem with the stereo coobservation tube. It is mounted on the integrated beam splitter and provides a direct view of what is happening during the procedure.

## More mobility

The wireless foot control panel makes it easier to position the system. Forget the days when everyone in the OR had to take care not to trip on or damage irritating floor cables.



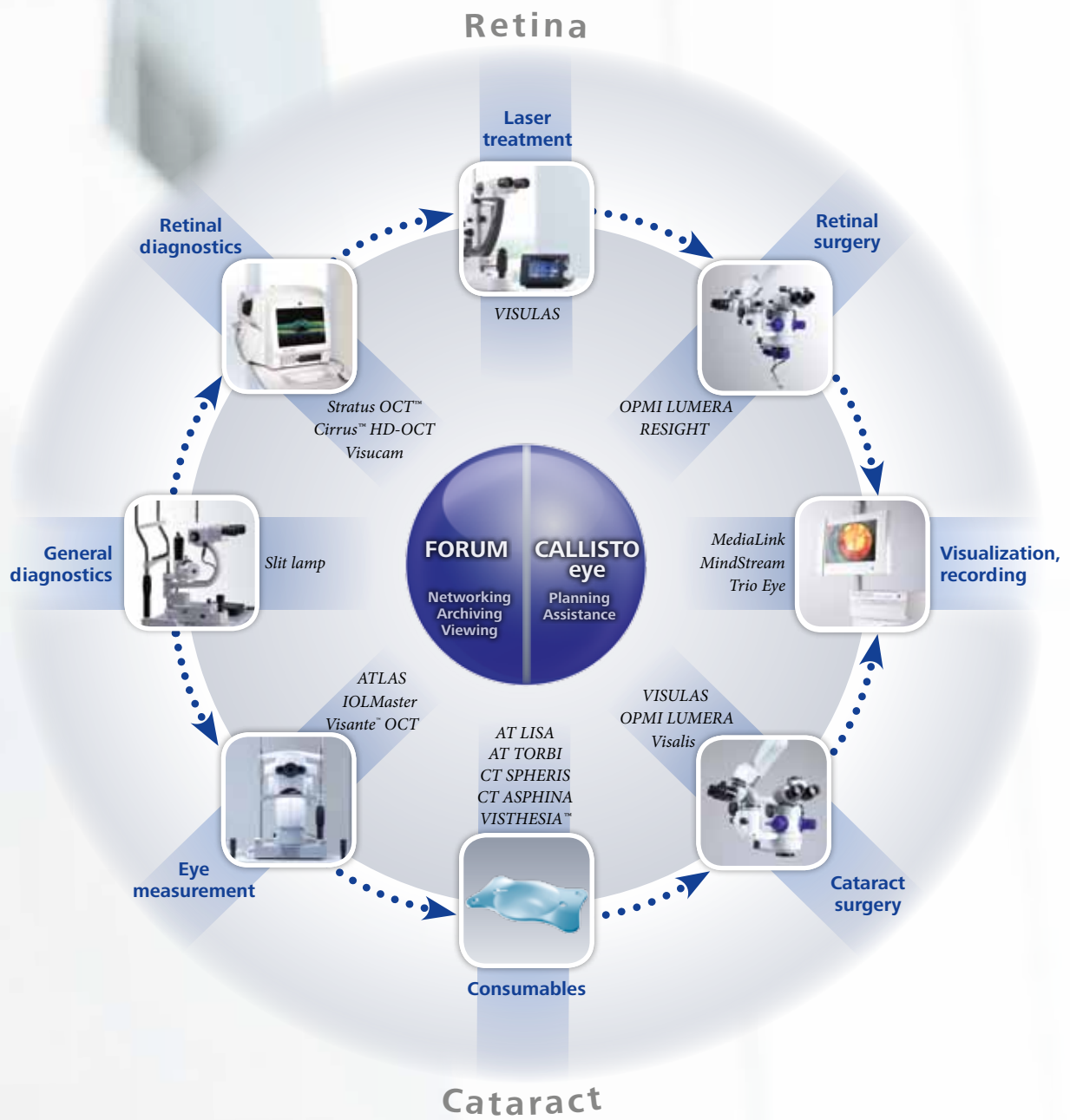
## **OPMI LUMERA 700 - your entry into eye.z**

Our vision is to create ophthalmic systems that exchange information and provide additional functions for better clinical outcomes and to combine individual units into all-in one solutions. With OPMI LUMERA 700 you will take your first step into this exciting future. It offers the ophthalmic surgeon everything he or she needs for cataract and retinal surgery. Our leading edge products for diagnosis also set new standards in precision, safety and efficiency: the IOLMaster™, Cirrus™ HD-OCT, Visucam FF 450<sup>plus</sup> and the broadest IOL portfolio on the market are just a few examples.



Individually, our products are strong – together, they are unbeatable. Perfect system interaction ensures smooth workflows with one paramount goal: **perfect vision for your patients.**





**Technical  
Data**



**OPMI LUMERA 700**

Surgical microscope	Motorized zoom system with apochromatic optics, Zoom ratio 1:6
	Magnification factor $\gamma = 0.4 - 2.4$
	Focusing: motorized, focusing range: 70 mm
	Objective: $f = 200$ mm (options: $f = 175$ mm and $f = 225$ mm with support ring)
	Binocular tube: Invertertube E (options: Invertertube, 180° tiltable tube, $f = 170$ mm, inclined tube, $f = 170$ mm)
	Widefield eyepieces 10x (option: 12.5x)
Light source	SCI: red reflex illumination and field illumination, both are adjustable (patent pending)
	Halogen fiber optic illumination: <ul style="list-style-type: none"> <li>- Lamp housing with 2 halogen bulbs (1 back-up bulb) in quick-change modules</li> <li>- Blue barrier filter</li> <li>- Option: fluorescence filter</li> <li>- Fully automatic lamp replacement if first halogen bulb fails</li> </ul>
	Superlux® Eye fiber optic illumination <ul style="list-style-type: none"> <li>- Xenon short arc reflector lamp with HaMode filter</li> <li>- Blue barrier filter</li> <li>- Option: fluorescence filter</li> <li>- Backup lamp in lamp housing, swung in manually</li> </ul>
Keratoscope	Wavelength 610 nm
Slit illumination	Slit width: 0.2 mm, 2 mm, 3 mm, 4 mm Slit height: 12 mm
XY coupling	Travel range: max. 61 mm x 61 mm Automatic centering at push of button
Video monitor	17" LCD display Resolution: 1280 x 1024
Suspension system	Maximum permissible load on the articulated arm: with mounted surgical microscope (without tube, eyepieces, objective lens) and mounted XY coupling, the additional load on the arm resulting from accessories must not exceed 9 kg
Compliance	Complies with the safety requirements of EN 60601-1, 3rd issue

**RESIGHT 500 and RESIGHT 700**

Mechanical Data	Focusing range with LH175/LH200 aspheric lens holder: 31 mm/38 mm (position of intermediate image)
	Rotation angle, aspheric lens turret and holder: 0° – 360°
Existing aspheric lenses	60 D, 128 D
Weight	RESIGHT 500 (manual): 0.45 kg /RESIGHT 700 (electrical): 0.50 kg
Safety range	Minimum 110 mm

**FCP-WL Wireless foot control panel**

Power supply	3 x C type 1.5 V alkaline-manganese batteries
Transmission frequency	2402 ... 2480 MHz
Battery service life	approx. 2 to 6 months – depending on operating time of the foot control panel

We would like to thank Prof. Dr. med. Peter Esser, St. Elisabeth Hospital in Cologne-Hohenlind, Germany for the application photos.

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**EN\_30\_010\_1081** Printed in Germany CM-CZ-X/2009 Noo  
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**OPMI LUMERA 700**

**Total integration  
for total satisfaction**

# Perfect interaction for optimum visualization

Thanks to an unparalleled integration process, the configuration of our retina solution has been exactly matched to your requirements. The result is the perfect interaction of fundus viewing system, inverter and video camera. A fast focus functionality, optionally also a slit illuminator and a HD video camera, is additionally integrated. For you this means: better ergonomics and excellent optics with legendary ZEISS quality.

## The RESIGHT 500 and RESIGHT 700 fundus viewing systems

With a fundus viewing system from Carl Zeiss, you will enjoy a clear, detailed image of the retina.

## Light in the microscope, not in your hand

The integrated slit illuminator provides you with additional fundus illumination. You choose between four slit widths – and whether the slit is to be incident from the right or left. This allows you to





perform membrane peelings or vitrectomies comfortably and conveniently using bimanual techniques. Your work area is not restricted by additional attachments, and the interaction of the optical components is nothing short of perfect.

**Video in HD quality?****Yes, it's all integrated.**

Would you like to use leading edge video technology that is fully integrated into the microscope? Then choose the MediLive Trio Eye HD video camera. Alternatively, you can opt for the SD version. Both have been specially designed for ophthalmic surgery. At the push of a button they

adapt to different light conditions – for a bright, crisp image on the monitor.

**Fast to move**

Do you want to move your microscope quickly upwards and downwards and then return again to the starting position of the focus? The fast focus is the answer – to insert an endo light probe, for example, or to manually turn the aspheric lens turret of RESIGHT 500 or RESIGHT 700.

# The RESIGHT fundus viewing systems

## See the surgical field at a glance

With the RESIGHT systems, you no longer need to refocus when the fundus viewing system is swung in or out of position. The Varioscope optics of RESIGHT ensure that the microscope always stays in the same focal plane. The benefit for you: the size of the patient's pupil does not change during focusing.

## Hands-free focusing

With RESIGHT 700 you can use the foot control panel to focus while your hands remain in the surgical field. Alternatively, you can select RESIGHT 500 and use its manual focusing.



## Change your point of view

With the innovative aspheric lens turret of the fundus viewing system, changing the aspheric lens during surgery is no problem. You have fast, convenient and sterile access to a second lens.





### **Optical quality? First-class**

With the RESIGHT systems you use excellent optics to view the retina. As only part of the optical system is sterilized, the service life of the optical components is very long. The bottom line: you save money.

### **Always the right orientation**

Both the microscope and video images are automatically inverted when you use RESIGHT 700, Invertertube® E and MediLive Trio Eye video cameras. As a result, you automatically see an upright image in the eyepieces and on the monitor at all times.

### **Safety is our no. 1 priority**

RESIGHT 500 und RESIGHT 700 have been designed so that the safety mechanism is activated when contact is made with the patient's eye – the fundus viewing system folds up automatically. This results in a very large safety distance, therefore ensuring maximum patient protection.

# Efficient workflow – perfectly integrated

**Comprehensive documentation is becoming more and more important, not least because it enables effective quality management. With the integrated video camera, you receive first-class images and videos of the procedure, which you can then view and edit on your office computer and use to present your surgical skills at congresses or in journals. The integrated assistant's microscope offers optimal conditions for a second surgeon; the Inverter tube means more convenience and less reconfiguration between surgeries. And with the integration of CALLISTO eye into the workflow, diagnostic and patient data is available to everyone in the OR.**

## **Assistant's microscope included**

The completely integrated assistant's microscope supports two scenarios:

- The independent work of a second surgeon who can perform his or her own zoom and focus settings independently of those of the main surgeon.
- The training of students by coupling of the zoom in the assistant's microscope to that of the main surgeon. This enables both surgeons to see the surgical field with the same magnification.

**Ergonomics – already integrated**

Sitting upright with minimal fatigue at a microscope – this is the promise that the inverter tube will keep in your everyday work in the OR. The inverter functionality is already integrated into the binocular tube – this means reduced overall height of the system and relaxed, comfortable work. As the tube can be used for all ophthalmic procedures, there is no need for reconfiguration when switching between cataract and retinal surgeries.

**Insert. Save. Use.**

Via the integrated USB interface you will receive excellent videos of your procedures, which you can subsequently view and edit on your office computer.

**Information always at your fingertips**

Integrate CALLISTO eye into your workflow and make diagnostic images, e.g. from a Cirrus HD-OCT system, also available in the OR. Video recordings are automatically allocated to the patient data.

**Seamless expansion**

Do you want to add further components to the microscope without impairing the ergonomics of your eyepieces? No problem with the integrated beam splitter. It can be used to attach a stereo coobservation tube, for example, without increasing the height of the system by the addition of an external beam splitter.



# The ultimate for retinal surgeons

OPMI LUMERA 700 is a superb, dedicated surgical microscope for the retinal surgeon:

- **Optimized workflow and the highest level of ergonomic convenience**  
(e.g. through the coupling or independence of the assistant's microscope)
- **Integration: perfect interaction of the RESIGHT 700 fundus viewing system, Invertertube E and integrated camera**



**OPMI LUMERA 700**

**Let there be light**

# See the patient's eye in a new light

Thanks to revolutionary SCI technology, you as a cataract surgeon will experience the eye in more detail than you ever thought possible before. In addition, the integrated keratoscope allows you to examine the corneal curvature, while the optional slit illuminator offers an alternative illumination system. Even an HD video camera is integrated on request. And a fast focus capability is also an integral part of OPMI LUMERA 700's functionality.

## The revolution: SCI

More contrast and stability than ever before: the red reflex with SCI. You will see details of the eye anatomy that otherwise remain hidden. The different structures of the anterior segment can be easily recognized – even with dense cataracts. Even the smallest tissue residue



can be visualized in the capsular bag and then reliably and completely removed.

## Video in HD quality?

**Yes, it's all integrated.**

For an optimal workflow, total integration of a large video screen and the video camera is available as an option for OPMI LUMERA 700. This makes it possible to follow the surgery live on screen. You receive first-class images of the procedure which you can then view and edit on your office computer and use to present your surgical skills at congresses or in journals. Opt for the MediLive Trio Eye® camera in the HD or SD versions – and opt for leading edge documentation.

**Fast in focus**

For individual stages of surgery, e.g. the folding of the IOL prior to implantation, you need a different focal plane as quickly as possible and then return rapidly again to your previous setting. This high-speed intraoperative focusing is performed by the fast focus functionality which you can conveniently operate via the foot control panel.

**We've thought of everything**

The integrated slit illuminator provides you with additional illumination. During lens extraction, for example. Thanks to its seamless integration, the slit illuminator is immediately available without any need for system reconfiguration or additional attachments.

**Pinpoint precision –  
integrated keratoscope**

In order to visualize corneal astigmatism, a keratoscope is optionally integrated into OPMI LUMERA 700. This means that procedures no longer need to be interrupted in order to attach accessories – and the compactness of the system is in no way compromised.



# Everything is integrated

**OPMI LUMERA 700 features a large number of integrated functions – for an optimal workflow in your OR.**

## **Two microscopes in one**

The optionally integrated assistant's microscope offers a second surgeon his or her own microscope with independent adjustment of the zoom settings. Alternatively, the zoom and focus settings can be coupled to those of the main microscope – the ideal solution for training.



**Insert. Save. Use.**

You can save recordings made with the integrated video camera directly to a USB medium. The integrated USB recording function makes this possible.

**Hands-free and wireless**

The perfect practical solution: you do not need to interrupt the procedure to control the field or red reflex illumination of SCI. You perform all changes intraoperatively via freely programmable handgrips or the wireless foot control panel. Thanks to its low weight of just 2.8 kilos, this can be positioned with the ultimate ease.

**Optimal ergonomics – perfectly integrated**

Integration of the inverter function makes system conversions between cataract and retinal procedures a thing of the past. The tube's design allows you to sit in an upright position and work with minimal fatigue.



# All information in the OR

**CALLISTO eye is a modular OR management system that has been specially tailored to the needs of ophthalmic surgery. Planning, surgery assistance and documentation are integrated to provide a smooth work routine on the basis of a seamless flow of information. And it's all fast, simple and safe.**

## **CALLISTO eye – for a paperless OR**

The OR Cockpit of CALLISTO eye provides you with a central information and control terminal. If this is upgraded with the OR Manager, current OR plans are displayed and modified on the touch screen, patient and diagnostic data accessed, consumable materials recorded and surgeries documented on a patient-specific basis. Documentation includes, for example, videos and still images that are assigned

to the patient's medical record and can be exported via a USB interface.

## **Toric IOLs – perfectly positioned\***

An innovative, video-supported module (Z ALIGN) supports you in the rotational positioning of toric lenses. This intra-operative method makes the alignment easy as the reference and target axes are projected directly into the video image and follow the movements of the eye.



*\* Also available as a stand-alone solution*



### **OR Manager – the planning unit of CALLISTO eye**

- Paperless OR planning with data transfer from practice management systems
- Connection to diagnostic systems (e.g. IOLMaster) and FORUM® archive
- IOL planning and selection

### **OR Cockpit – the information center in the OR**

- Patient and diagnostic information available on a touchscreen in the OR
- Display and recording of live video images\*
- Documentation of procedures (video recordings, scanning consumable materials) with direct assignment to the patient data
- Control of specific devices (MediLive Trio Eye)
- Z ALIGN tool as an intraoperative aid for the alignment of toric IOLs\*

## **The ultimate for cataract surgeons**

OPMI LUMERA 700 offers the cataract surgeon:

- **SCI for constant brilliance and brightness – every detail of the patient's eye becomes visible**
- **Optimized workflow and maximum ergonomics – thanks to CALLISTO eye and the wireless foot control panel**
- **Integration: additional functions such as the HD video camera or the keratoscope are fully integrated**