

OLYMPUS

Your Vision, Our Future

VISERA 4K UHD

4K

GET CLOSER

Four Times the Resolution of Full HD.



VISERA 4K UHD – IMPROVEMENT OF VISIBILITY

The Concept of the VISERA 4K UHD System

Olympus is always trying to achieve laparoscopic visibility that is equivalent to open surgery by providing HD video imaging systems with advanced technologies.

With the 4K technology, Olympus is now striving to make laparoscopic visibility even better than open surgery by adding features such as Ultra High Definition, Wider Color Gamut, and Magnified Visualization.

Ultra High Definition

This improves visibility and allows for more precise and safe surgery.

Wider Color Gamut

This realizes rich color reproduction and provides suitable colors for each clinical discipline.

Magnified Visualization

This improves visibility and operability with a large screen and electronic zoom.

Innovation by Sony & Olympus

Sony Olympus Medical Solutions aims to align Sony's cutting-edge electronics technologies in areas such as digital imaging with Olympus' manufacturing and R&D expertise in the area of medical products including lenses and optical technologies in order to bring high-quality medical care to as many people as possible, and contribute to medical advancement.

Innovation by
Sony & Olympus



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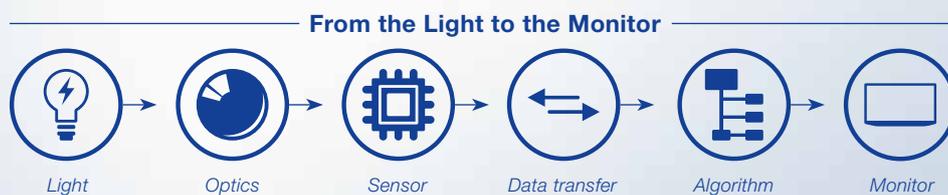
VISERA 4K UHD – IMAGING CHAIN



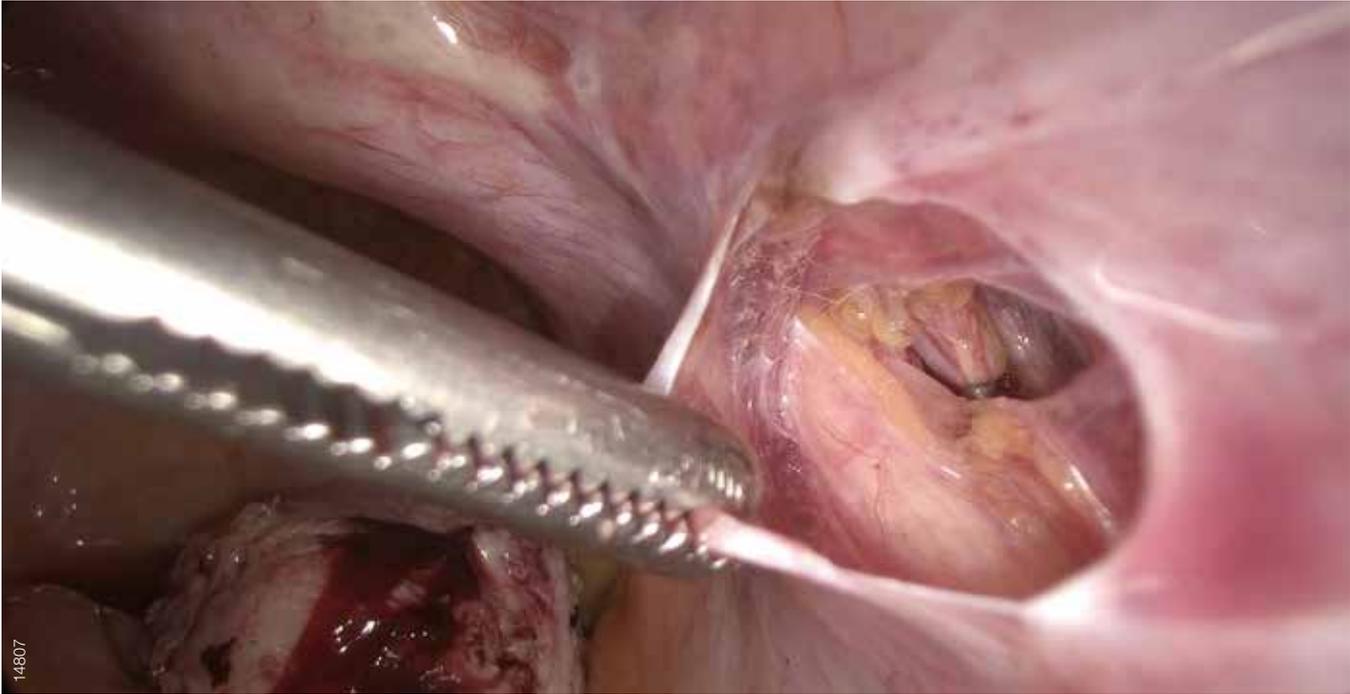
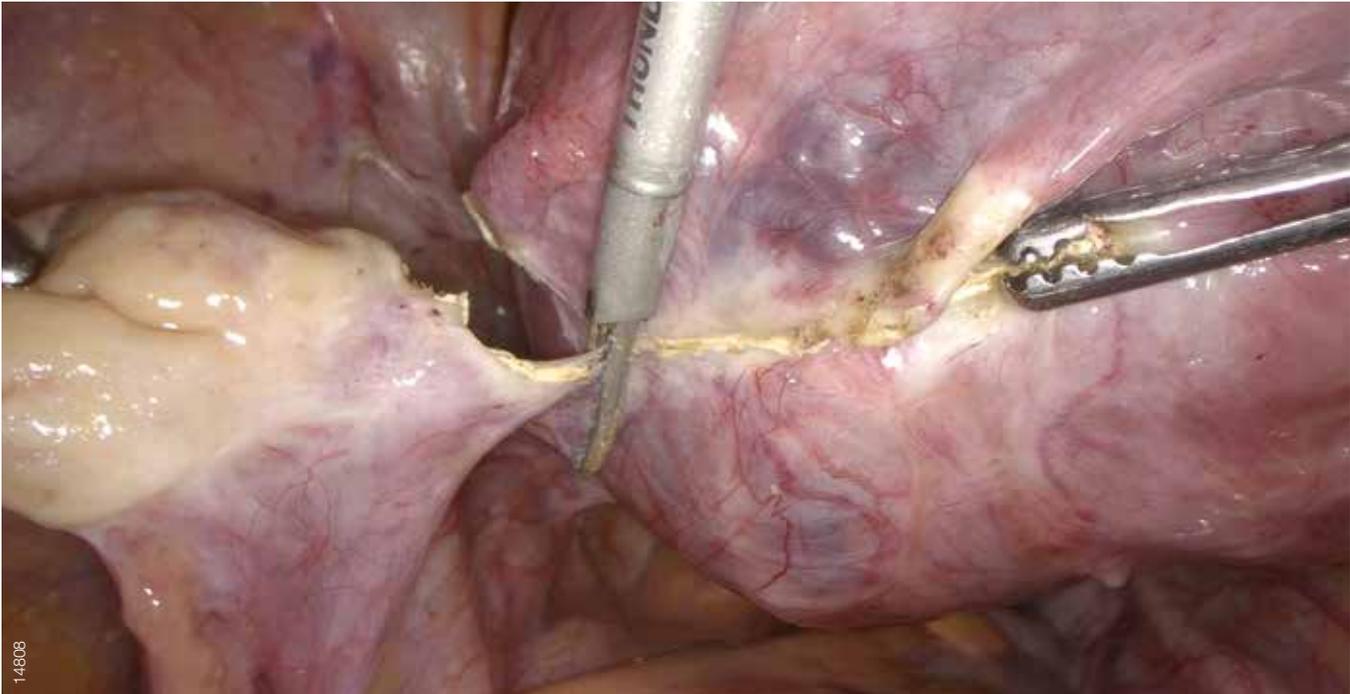
VISERA 4K UHD – Imaging Chain

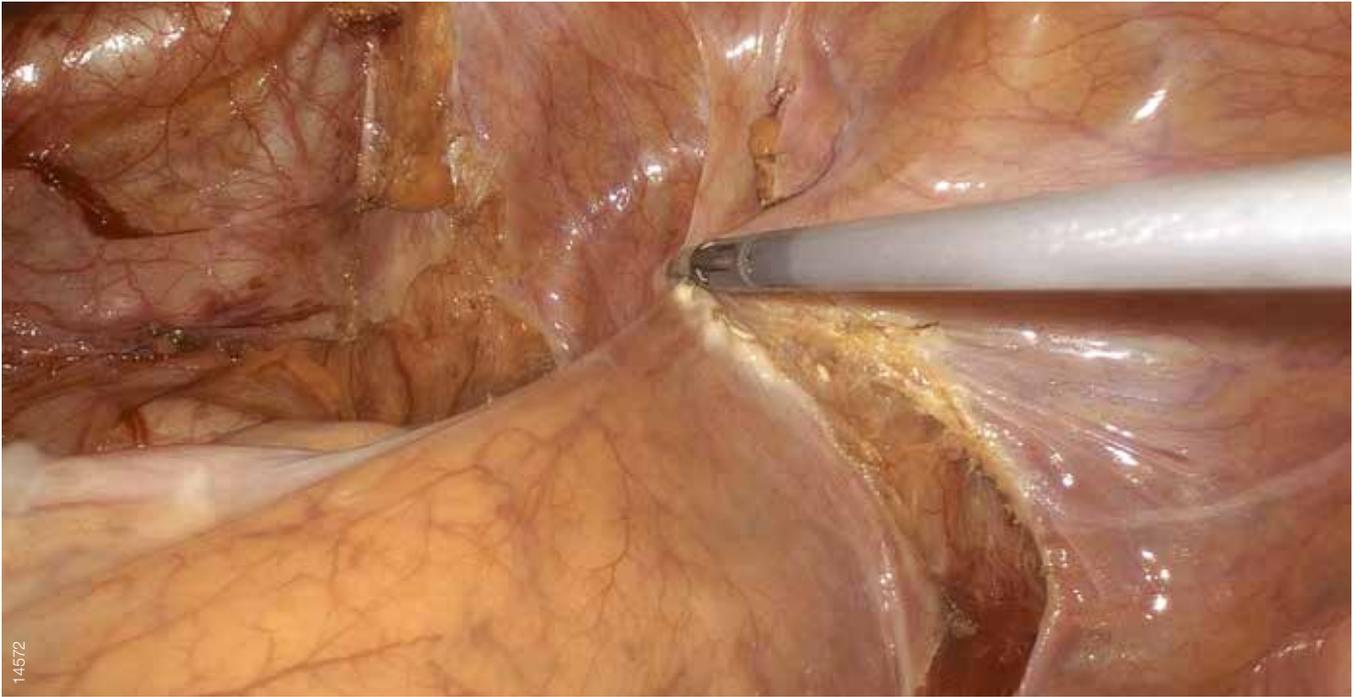
All of the components work together seamlessly to generate improved visibility. Each component, **from the light to the monitor**, is built specifically for the 4K UHD/Full 4K.

- ① CLV-S400 – Xenon Light Source
- ② ULTRA Telescope
- ③ CH-S400 – Camera Head
- ④ OTV-S400 – Camera Control Unit
- ⑤ LMD-X550S / LMD-X310S – LCD Monitor



IMPROVEMENT OF VISIBILITY – IN DIFFERENT COLOR MODES

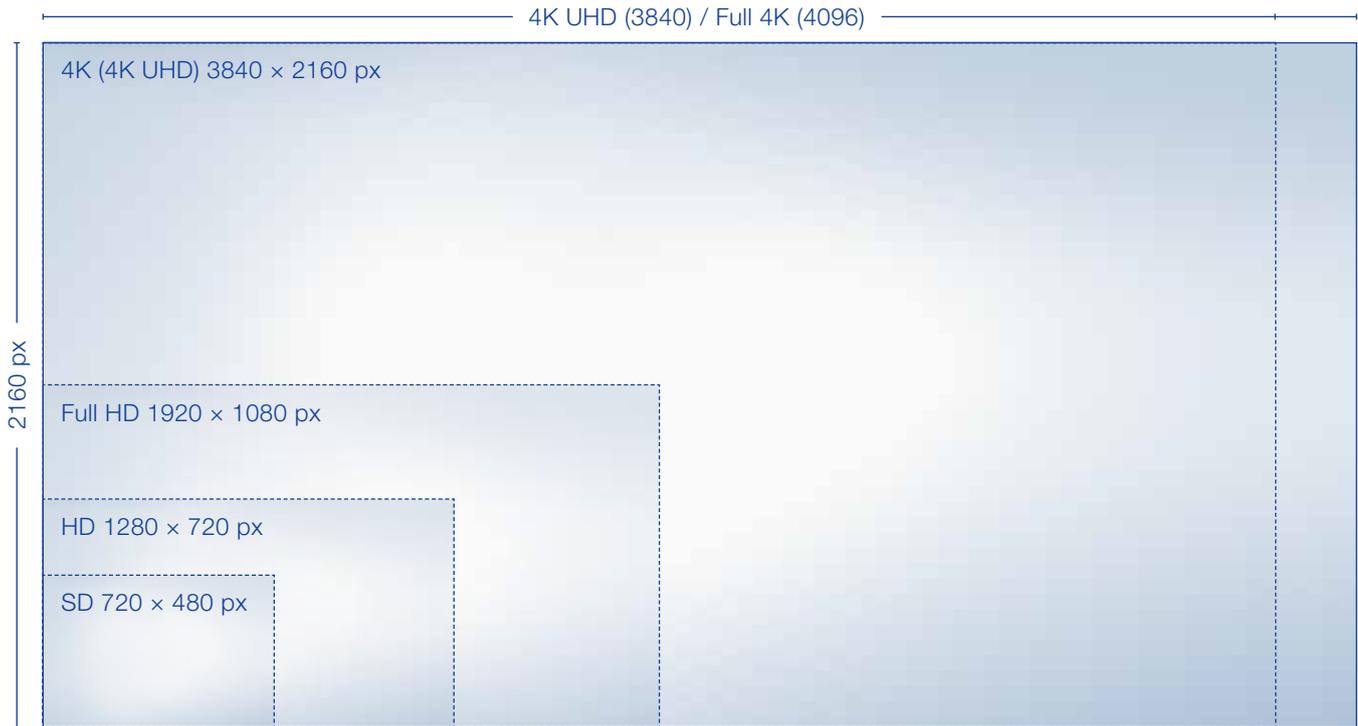




ULTRA HIGH DEFINITION

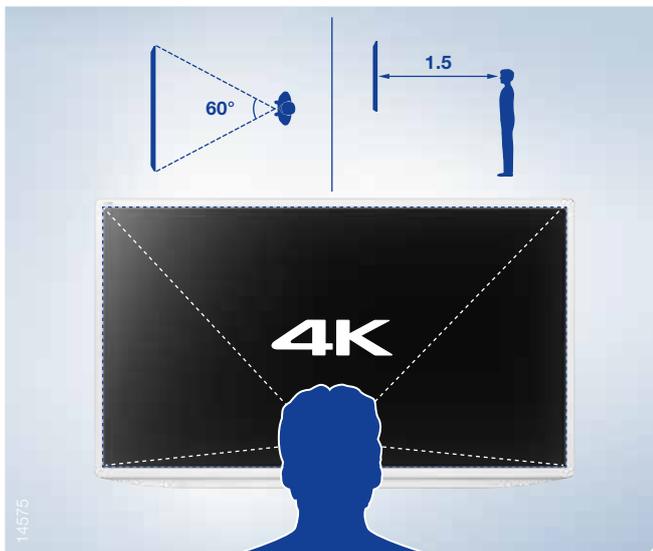
4K – Four Times the Resolution of Full HD

- Provides four times more information than conventional Full HD imaging systems
- Visera 4K UHD supports both 4K UHD (3840 × 2160) and Full 4K (4096 × 2160) resolution

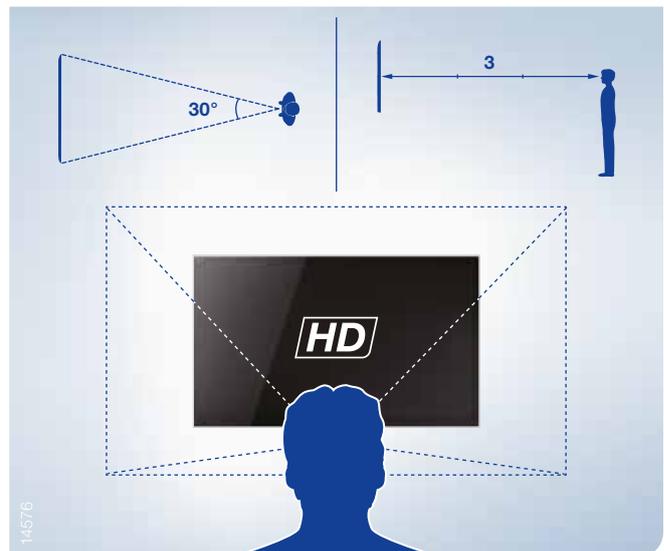


An Immersive Experience with a Closer Distance

Four times more detail than Full HD – an immersive experience with a closer distance (half the distance of HD).



Viewing distance: 1,5 x screen diagonal

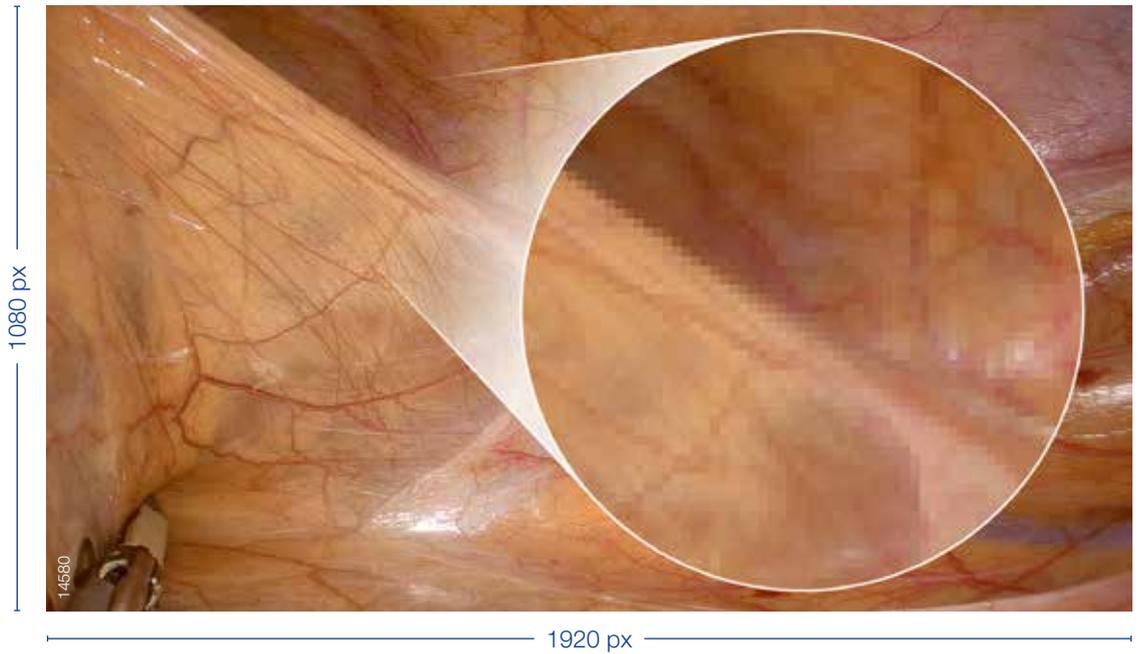


Viewing distance: 3 x screen diagonal

4K



HD



4K Get Closer: www.olympus.eu/4K

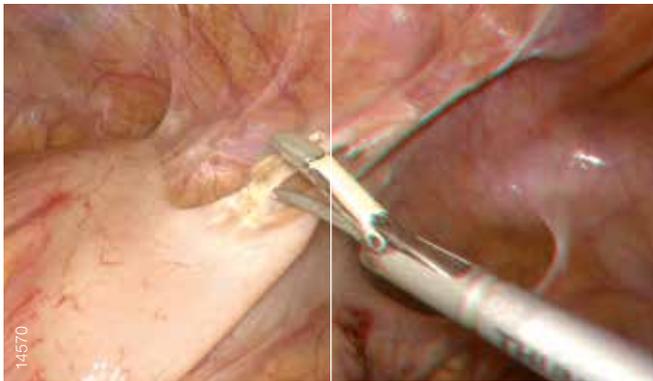
ULTRA HIGH DEFINITION

Optimizing the Entire 4K Imaging Chain

The fine-tuning of each layer of imaging and the ideal design of every function mean optimized images for surgery.

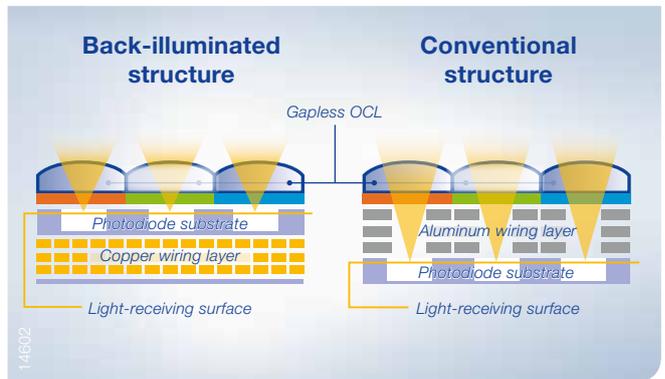
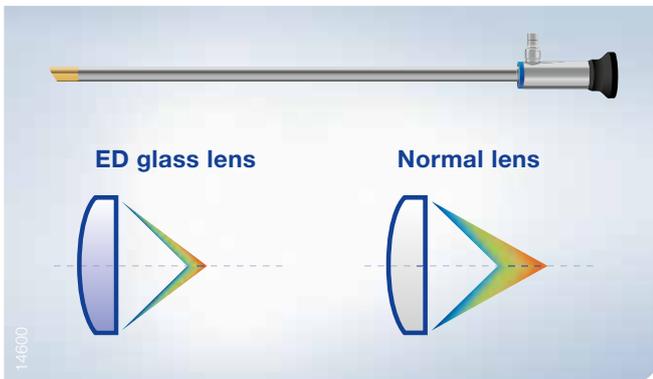
ED Glass Lenses – Razor-Sharp Images

- Optimized for high-resolution imaging
- High contrast at high spatial frequencies



Exmor R® Sensor – Clearer Images in Every Condition

- Twice as sensitive as conventional sensors
- Higher image quality in low light conditions



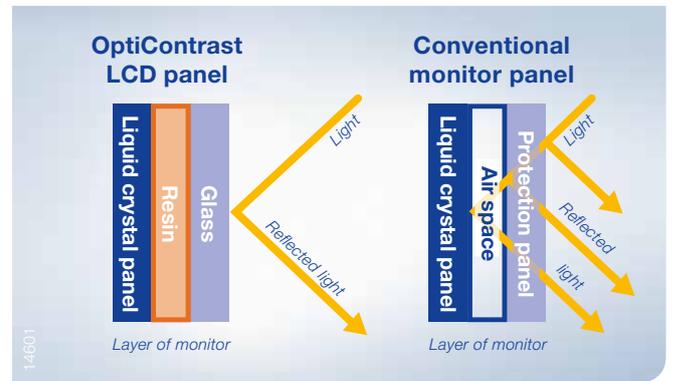
One-Touch Auto Focus – Fast and Accurate

- Achieves the optimal view
- Immediate focus of the image center
- Simplified usability during surgery



OptiContrast™ LCD Panel – Ideal Contrasts

- Reduced reflections
- Unclouded images during surgery

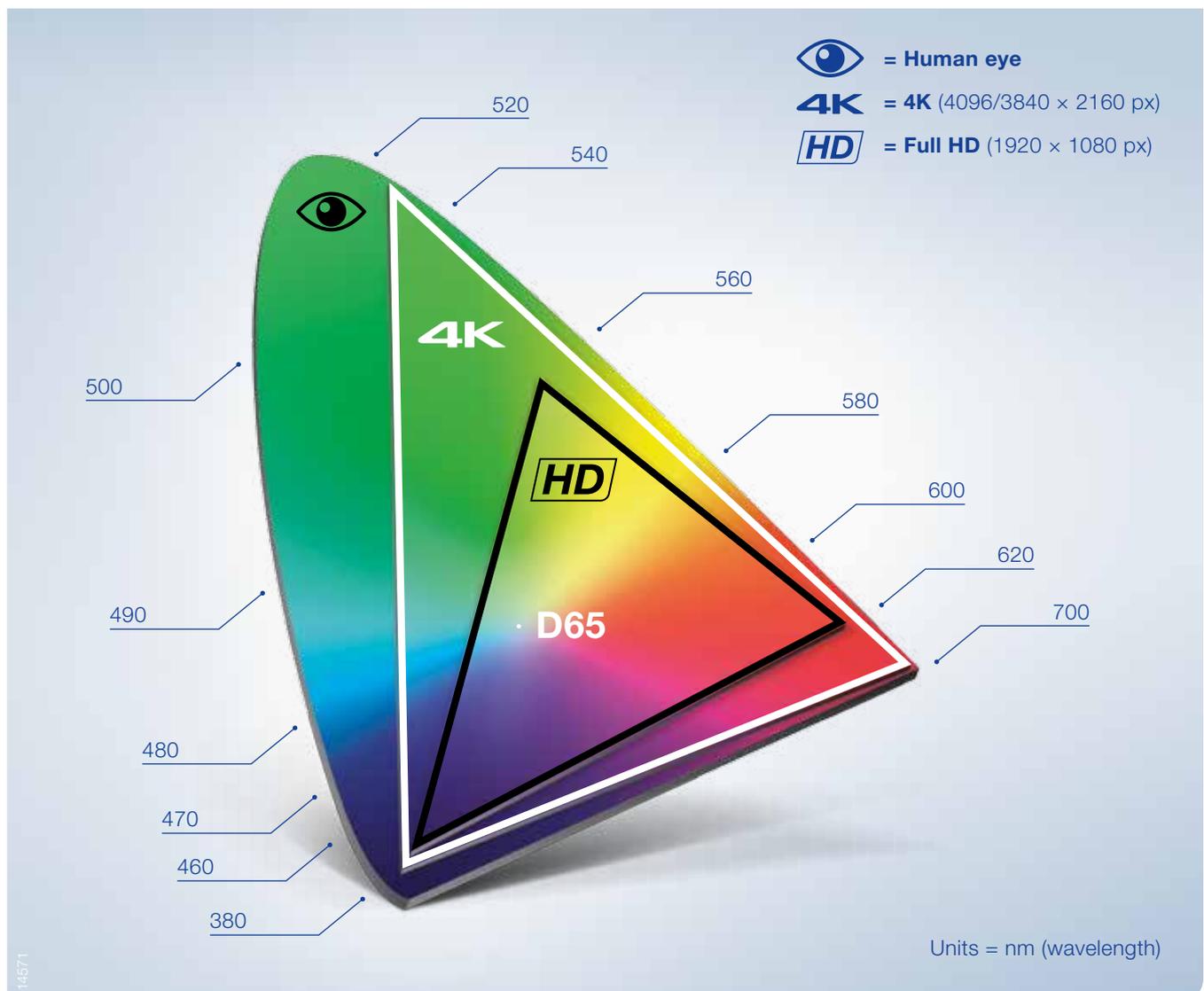


WIDER COLOR GAMUT

More Details, More Difference

The VISERA 4K UHD generates a wider color gamut by adopting the 4K color format (BT2020). This enables rich color reproducibility and provides suitable colors for each clinical discipline.

- Easier determination of tissue boundaries (fat, nerves, vessels, etc.)
- Better visualization of blood vessels and lesions



MAGNIFIED VISUALIZATION

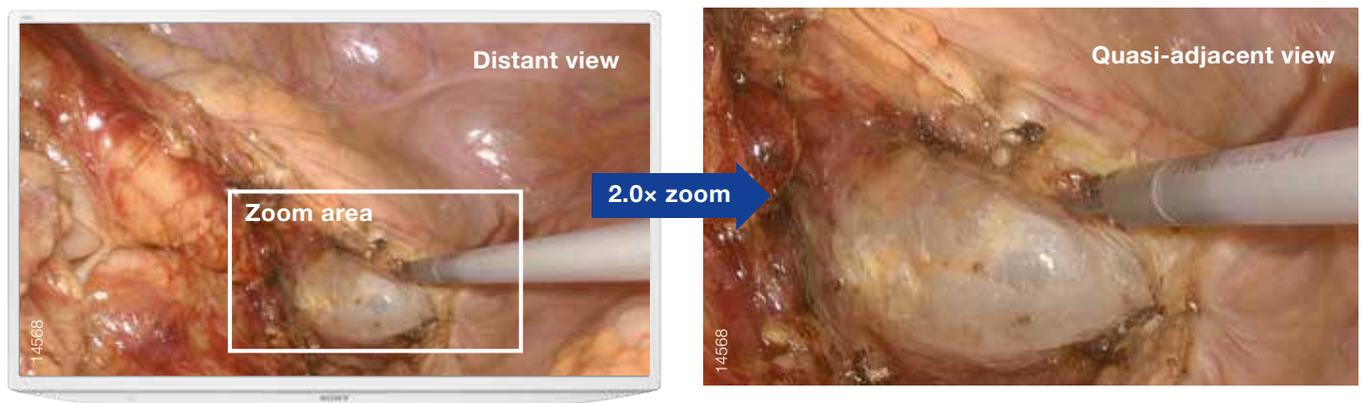
55" 4K UHD Monitor – Extend Your View

- The image creates a sense of immersion, allowing the OR team to focus entirely on the surgical procedure
- Panoramic view for the whole OR team with optimal viewing distance and wide viewing angle
- The lesion appears physically larger than on current monitors, enabling the surgeon to operate more precisely

Closer to Every Detail

- Equivalent to Full HD resolution, even at 2.0x zoom – zoom in and move scope away from operation field
- Safer and more visible operating field, reducing “sword fighting” of hand instruments and preventing mist and smoke
- Allows surgeons to observe fine patterns and structures of tissues in the body in high precision even when enlarged

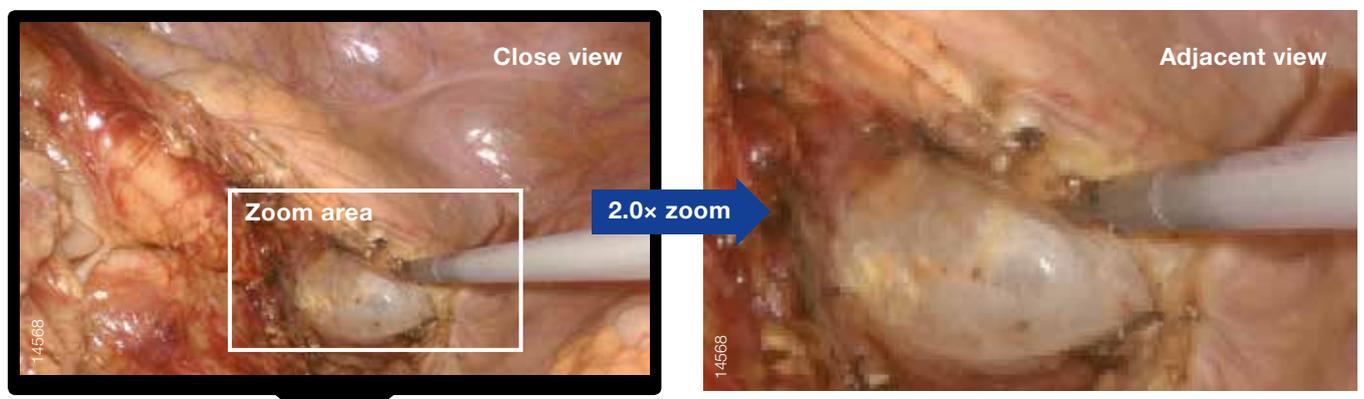
4K



Scope pulled back from working area

2.0x zoom; scope still pulled back – equivalent to Full HD resolution

HD



Scope pulled back from working area

2.0x zoom; low resolution



MAGNIFIED VISUALIZATION



PRODUCT OVERVIEW

ULTRA Telescope

ED Glass Lenses – Razor-Sharp Images

- Optimized for high-resolution imaging
- High contrast at high spatial frequencies
- Comparable working length for 5.4 mm and 10 mm

Wide Field of View

- Visual field increased by 20% compared to conventional HD endoscopes*

Full Autoclavability

- Reduced waste due to full reusability of the telescopes

Distortion-Free Images

(5.4 mm telescope)

- Clear images even at the edges
- No barrel or pincushion distortion



CH-S400 – 4K Camera Head

Sharper Images with Less Noise with the 4K Exmor R®

CMOS Sensor and Optical-Fiber Transmission

- High sensitivity compared to normal CMOS sensor
- Less noise (dual noise-reduction function)
- No delay (4K high-speed transmission)

Optimal View (Fast and Accurate)

- One-Touch Auto Focus function always enables surgeons to see the fine details of tissue/texture
- Electronic zoom allows surgeons to observe the fine patterns and structures of tissues in the body – in high precision even when enlarged

Improved Operability (Ergonomic Design)

- Small, compact camera head
- New coupler design



* 5.4 mm ULTRA telescope compared to endoscope with 70° field of view and 10 mm ULTRA telescope compared to endoscope with 75° field of view.

OTV-S400 – VISERA 4K UHD Camera Control Unit
4K High-Quality Image Processing

- Wide color gamut
- 16-axial color-phase adjustment (more precise color setting based on surgeon's preference)
- Improved AE (automatic exposure) function

Improved Operability

- Touch panel enables adjustments during procedure
- Easy registrations and loading of user presets



CLV-S400 – VISERA 4K UHD Xenon Light Source
Custom Light Source for the 4K System

- 300 W xenon lamp
- Automatic light control
- NBI compatibility



LMD-X550S / LMD-X310S – LCD Monitor
Medical Monitor

- Provides a higher contrast with less color blurring with the OptiContrast™ panel technology
- Supports 4K resolution (4096 x 2160 / 3840 x 2160) and a wider color gamut
- Thinner and lighter compact design



VISERA 4K UHD – GET CLOSER

www.olympus.eu/4K

Specifications, design, and accessories are subject to change without any notice or obligation on the part of the manufacturer.

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