

VISERA 4K UHD – GET CLOSER

4K

GET CLOSER
Four Times the Resolution of Full HD.



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

VISERA 4K UHD – IMPROVEMENT OF VISIBILITY

The Concept of the 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 by adding features such as Ultra High Definition, Wider Color Gamut, and Magnified Visualization.

Ultra High Definition	Wider Color Gamut	Magnified Visualization
This will improve visibility and support for precise and safe surgery.	This realizes rich color reproduction and provides suitable colors for each clinical discipline.	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.

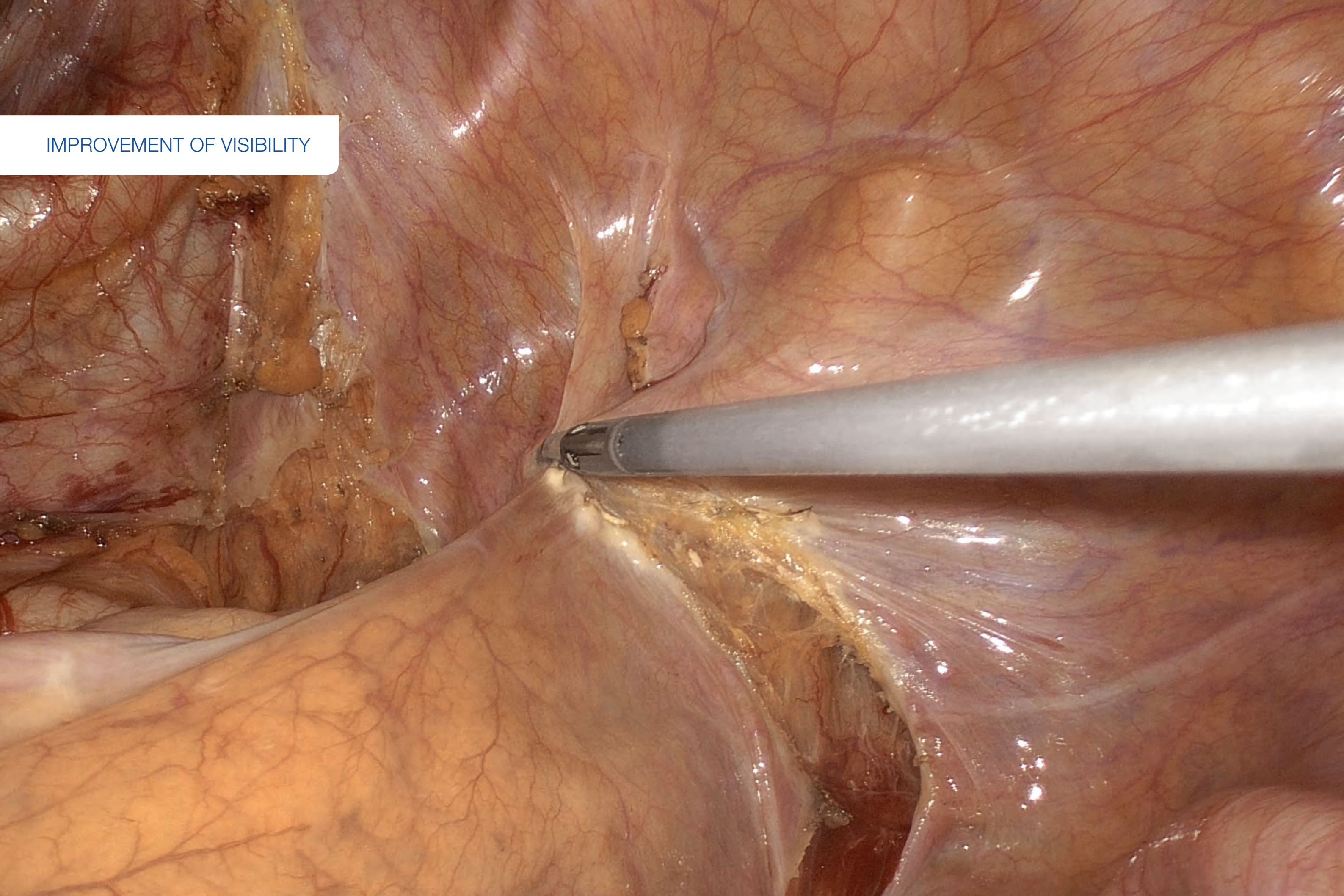
Innovation by
Sony & Olympus



VISERA 4K UHD – IMAGING CHAIN



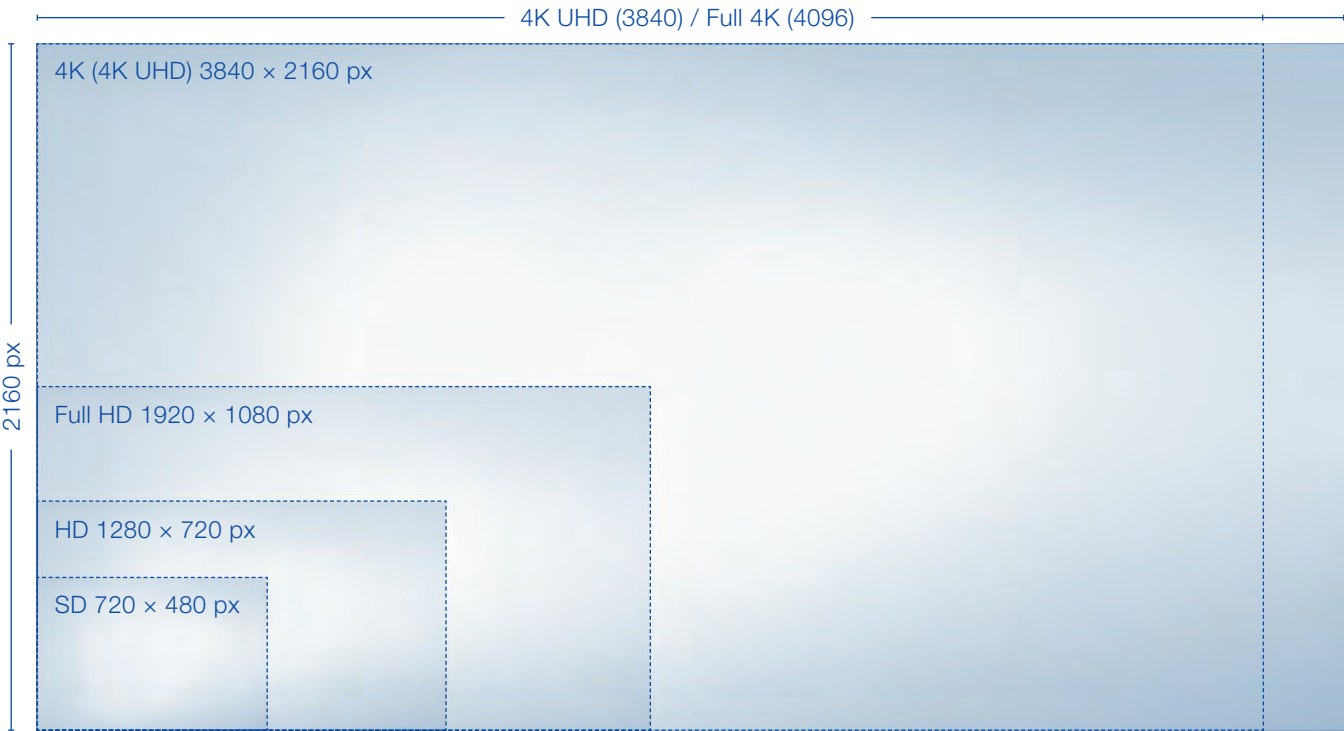
IMPROVEMENT OF VISIBILITY



ULTRA HIGH DEFINITION

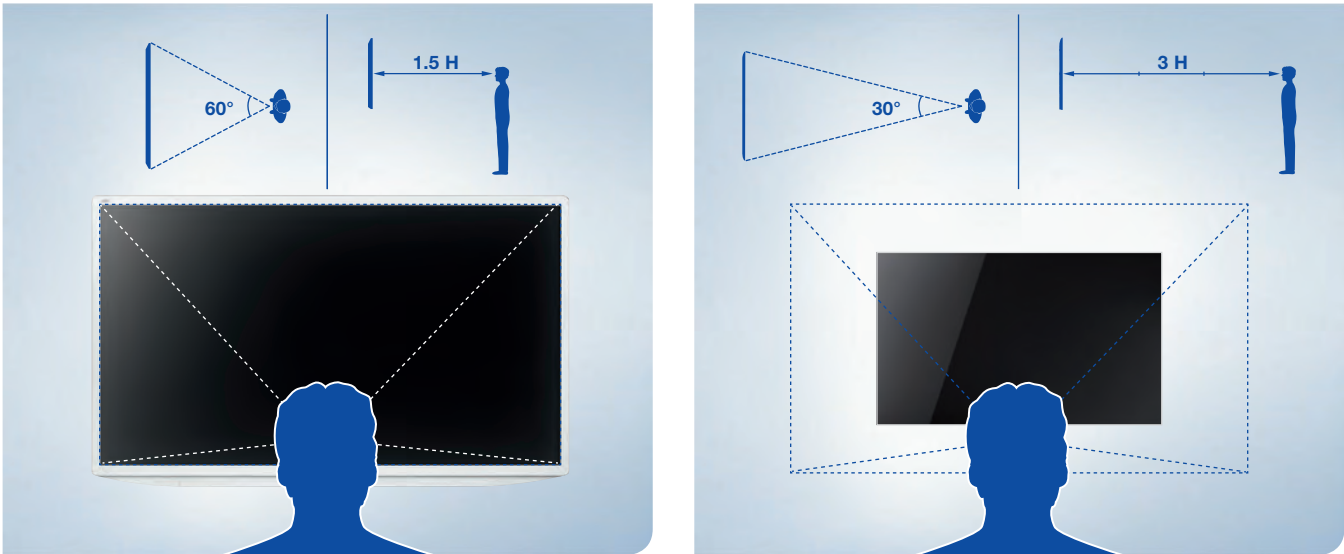
4K – Four Times the Resolution of Full HD

- 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

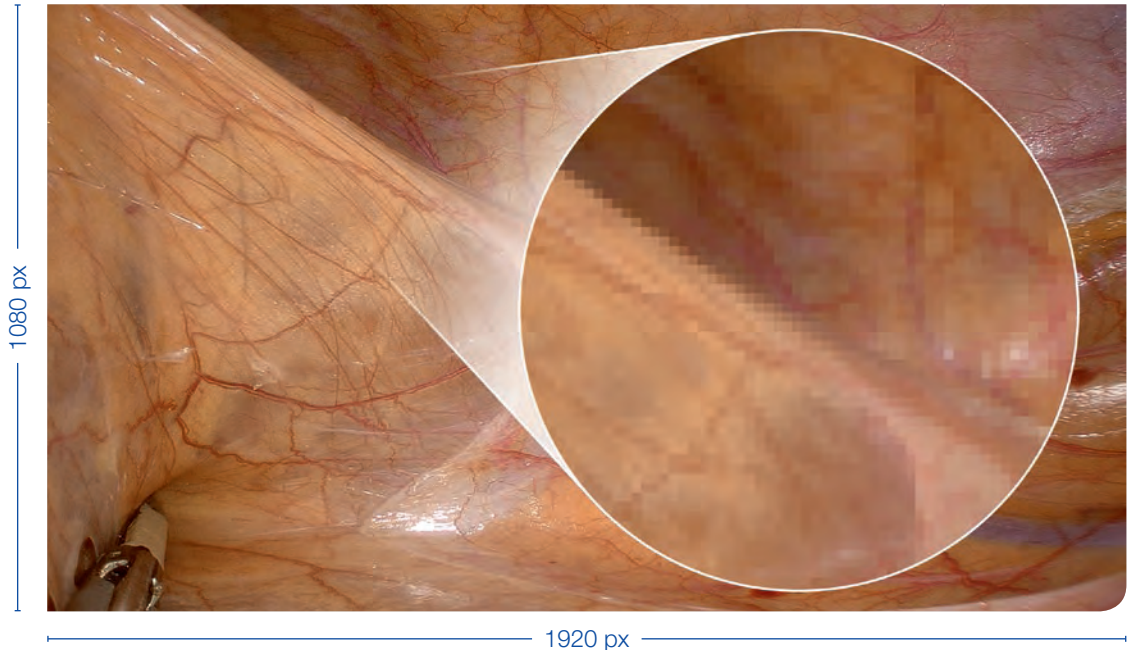
Four times more detail than Full HD – enjoy an immersive experience with a closer distance (half the distance of HD).



4K



HD



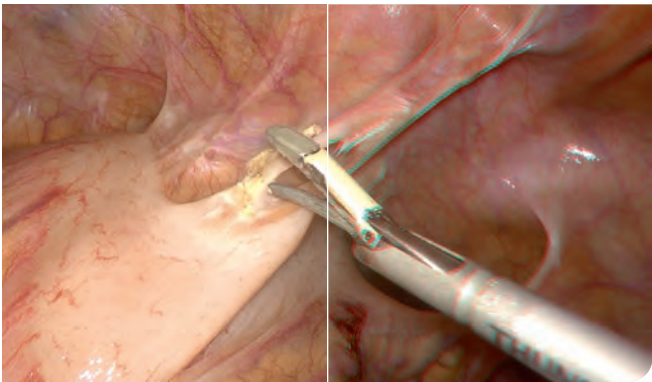
ULTRA HIGH DEFINITION

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.

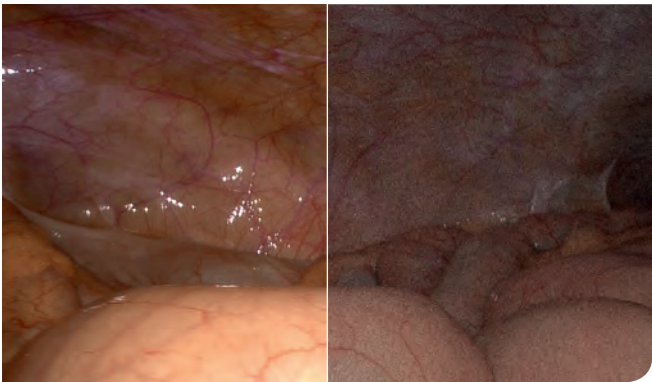
ED Glass Lenses – Razor-Sharp Images

- Optimized for high-resolution imaging
- Decreased chromatic aberration
- 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



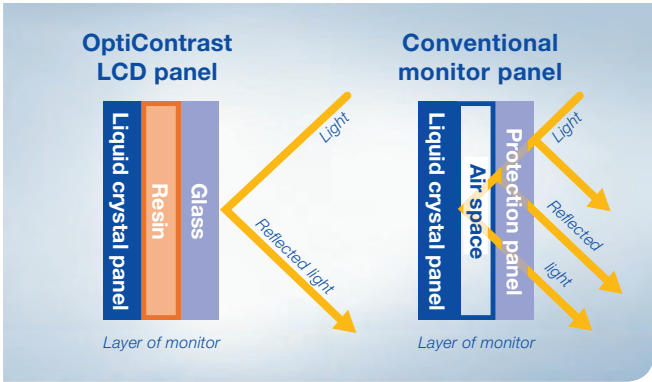
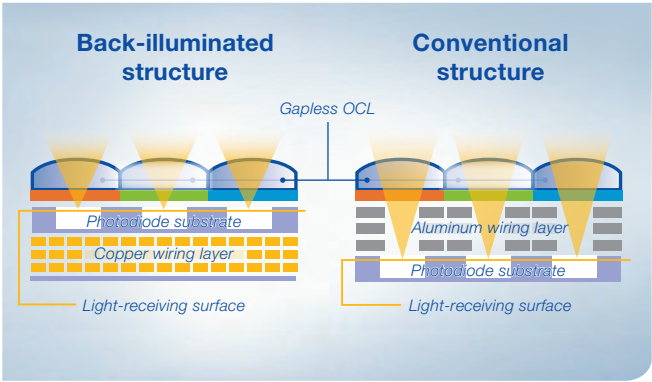
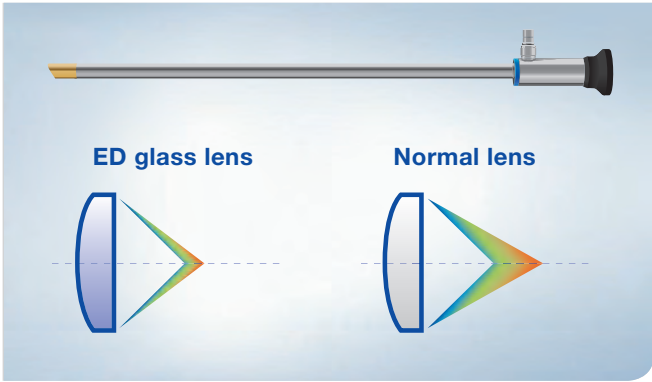
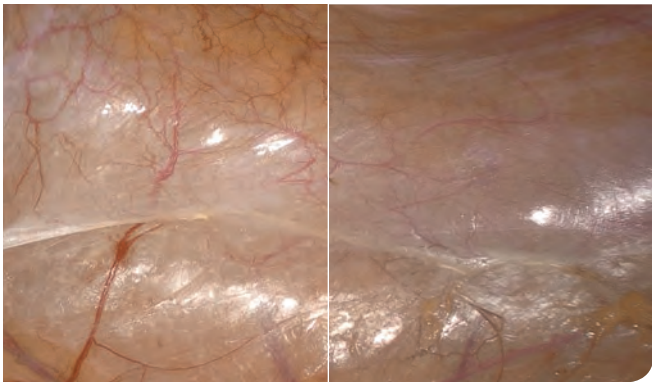
One-Touch Auto Focus – Fast and Accurate

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



OptiContrast LCD Panel – Ideal Contrasts

- Reduced reflections
- Uncolored images during surgery

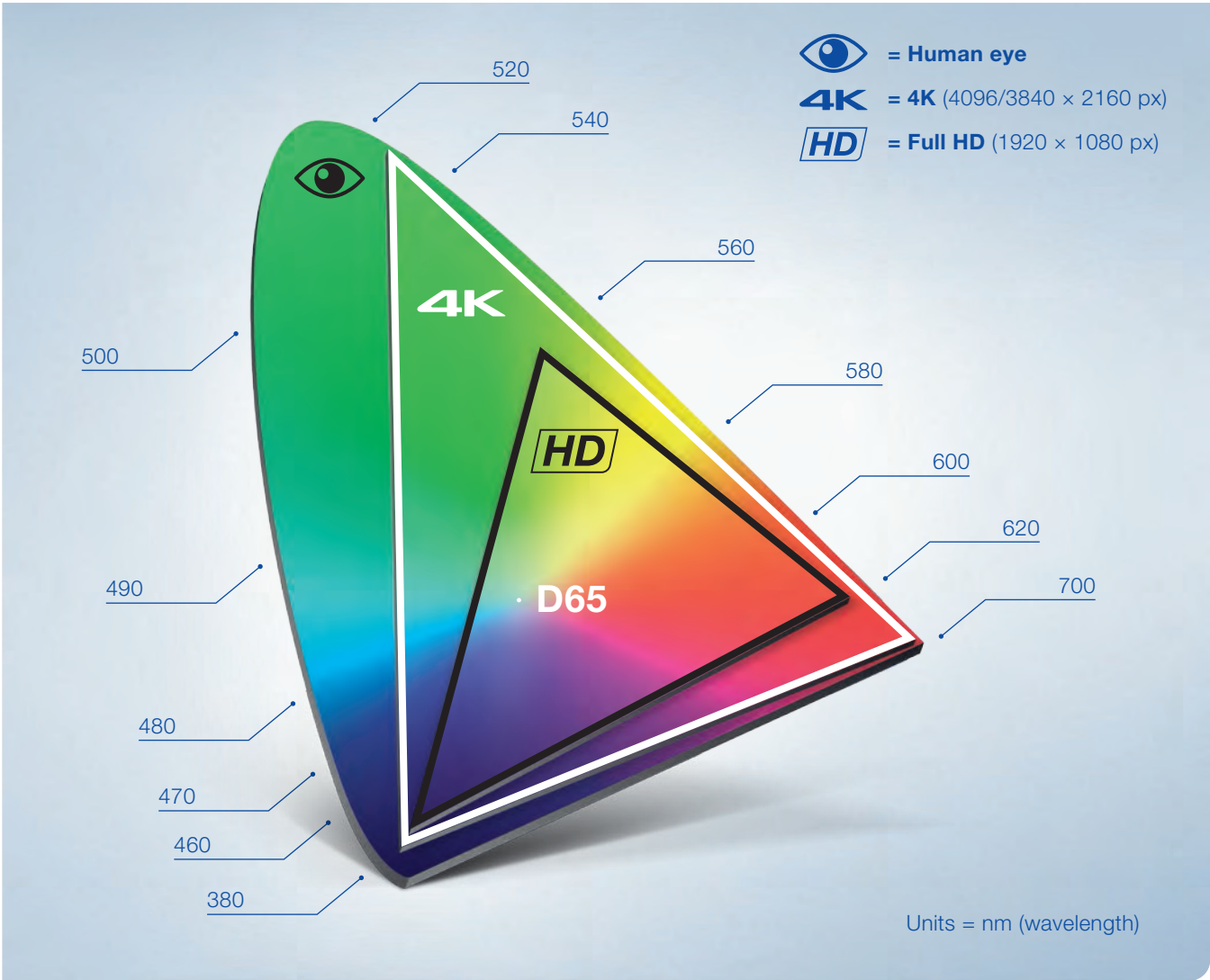
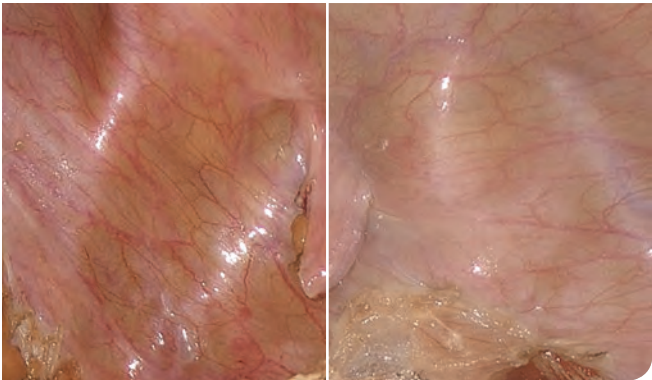


WIDER COLOR GAMUT

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.

- Supports surgeons to identify tissue boundaries (fat, nerves, vessels, etc.)
- Better visualization of blood vessels and lesions



MAGNIFIED VISUALIZATION

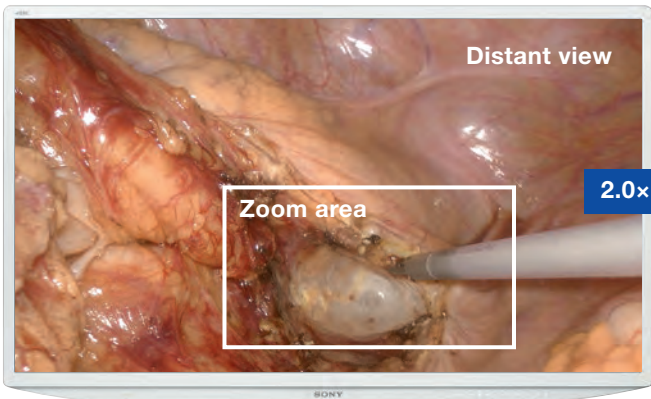
55" 4K UHD Monitor – Extend Your View

- 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

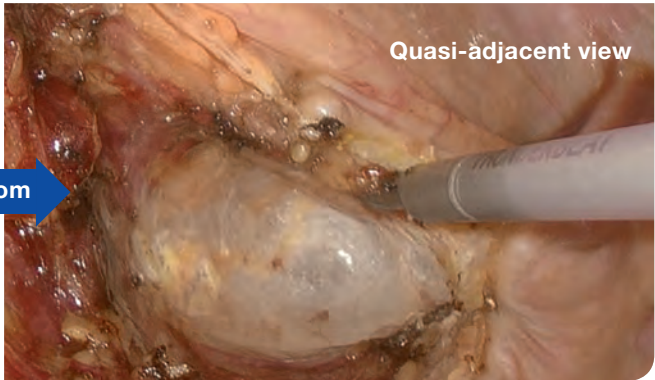
Closer to Every Detail

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

4K

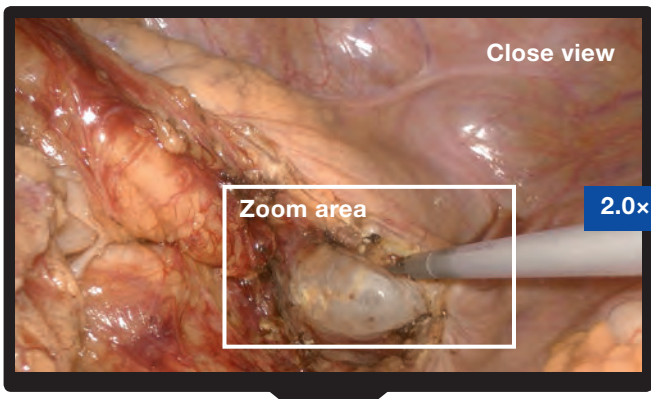


Scope pulled back from working area



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
- Decreased chromatic aberration
- High contrast at high spatial frequencies
- Comparable working length for 5.4 mm and 10 mm

Wider Field of View

- 20% wider field of view than conventional HD telescopes*

Full Autoclavability

- Reduced waste due to full reusability of the telescopes

Nearly Distortion-Free Images (especially for 5.4 mm telescope)

- Clear images even at the edges



CH-S400-XZ-EB – 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 – even when enlarged

Improved Operability (Ergonomic Design)

- Small, compact camera head
- New coupler design



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 × 2160 / 3840 × 2160) and a wider color gamut
- Thinner and lighter compact design



* Compared to an endoscope with 70° (5.4 mm) or 75° (10 mm) field of view