VISERA 4K UHD – GET CLOSER

GET CLOSER
Four Times the Resolution of Full HD.
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.

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.

Ultra High Definition
This will improve visibility and support for 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.

VISERA 4K UHD – IMAGING CHAIN

VISERA 4K UHD Key Benefits
- Ultra High Definition
- Wider Color Gamut
- Magnified Visualization

From the Light to the Monitor
- From the light to the monitor, is built specifically for the 4K UHD/Full 4K.

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.
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 x 2160) and Full 4K (4096 x 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).
**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
- 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.

- 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
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
(evenly 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 x 2160 / 3840 x 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