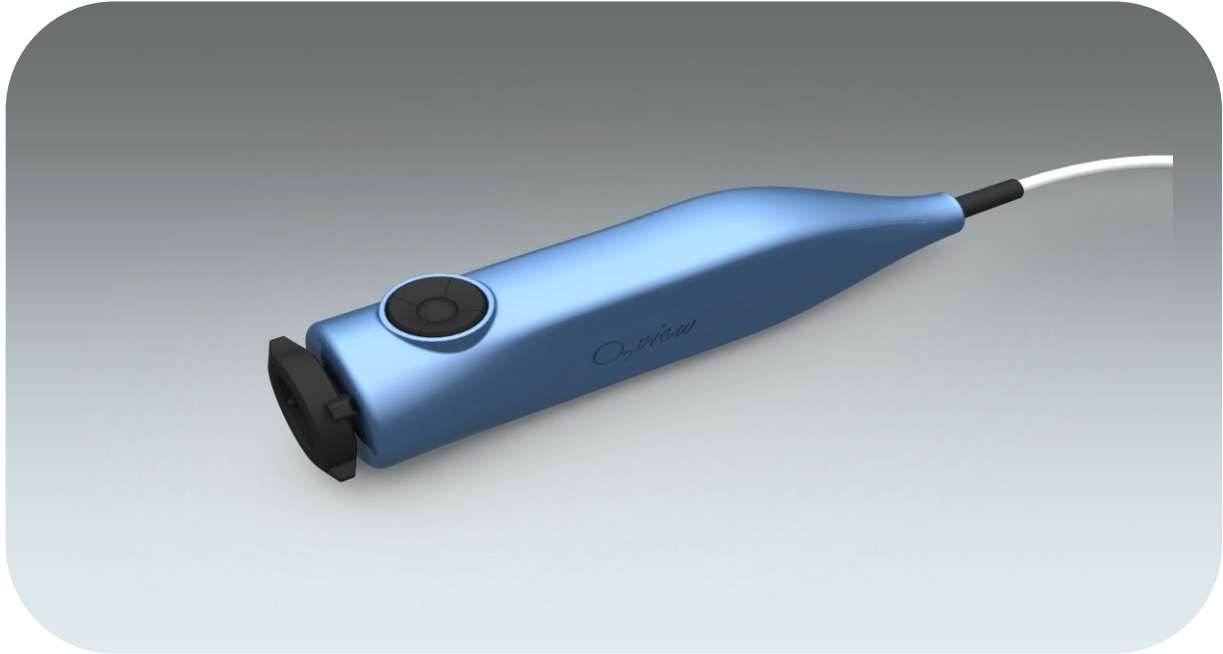




# Technical Data

## ArteMIS Handheld



### A One-of-a-kind Handheld Medical Fluorescence/Color Dual Wavelength Camera

**Performance:** The ArteMIS Handheld 2-channel Camera is a fast, VGA resolution, high-sensitivity color / fluorescence camera. The ArteMIS incorporates two Sony EXview HAD CCD sensors (one B/W and one RGB). The Sony sensors have particularly high quantum efficiency and excellent NIR response for excellent image quality and sensitivity.

**Safety:** O<sub>2</sub>view's unique "NIR-Safe" feedback mechanism protects you and your patient from unintended over-exposure with invisible NIR light. Based on our proprietary white light feedback mechanism, the combined ArteMIS Camera / Media Center / Light Engine measures and adjusts the required NIR-light irradiance. A safe excitation light intensity is obtained at all working distances (working distances may vary between 1.5 cm and more than 25 cm).

**State of the Art:** The Handheld Camera is the center of the fully integrated ArteMIS Platform, providing you with maximum flexibility for the visualization of fluorescent markers like ICG. The solid state Light Engine, being synchronized with the frame rate of the camera, will deliver white and NIR light as needed. The Media Center records and displays images as you require.

- ▶ **Dual channel camera with prism technology: Color and fluorescence imaging**
- ▶ **Certified pixel-to-pixel camera alignment for sharp vision**
- ▶ **ArteMIS "NIR-SAFE" unique protection against overexposure**
- ▶ **Works with all ArteMIS Laparoscopes and Vision Probes for external use**
- ▶ **Camera is a "master" in Light Engine synchronization**
- ▶ **Optical (glass-fiber) connection to the Media Center; TTL connection to the Light Engine**
- ▶ **Protection with sterile camera cover**



Innovators in Bio-Photonics

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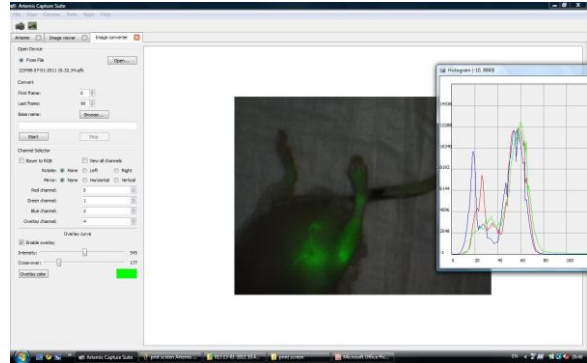
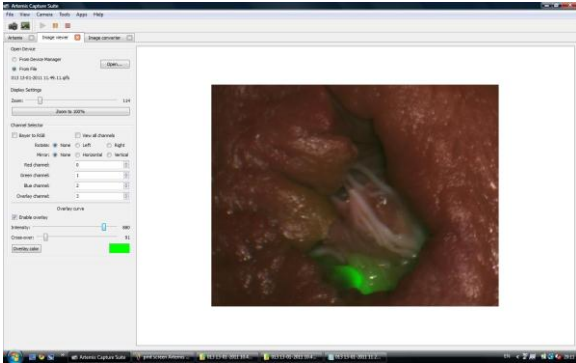
MD 553312



ISO 13485  
MD 553312



# Technical Data



Pre-clinical color / fluorescence images made with the ArteMIS Camera / ArteMIS Laparoscope (left, lamb's hart) and ArteMIS Vision Probe (right, mouse)

Type numbers	<ul style="list-style-type: none"> <li>• Art-HH-dual 618-700</li> <li>• Art-HH-dual 618-800</li> </ul>
Imaging device	<ul style="list-style-type: none"> <li>• 1x Sony ICX618 RGB</li> <li>• 1x Sony ICX618 B/W</li> </ul>
Number of pixels	659(H) x 494(V); approx. 330,000 pixels
Cell size	5.6 x 5.6 $\mu\text{m}$
Frame rate:	5 – 60 fps
Readout noise	30 electrons
Full well capacity	25,000 electrons
Dynamic range	833:1 typ. (1x1)

A/D converter	14 bits
External controls	<ul style="list-style-type: none"> <li>• TTL triggering to Light Engine</li> <li>• Software controlled by camera</li> </ul>
Interface	3.125 Gbit optical interface for high speed data transport
Ambient op. temp.	0 – 35 °C
Menu	<ul style="list-style-type: none"> <li>• On / off</li> <li>• VIS; NIR; VIS/NIR merged;</li> <li>• % overlap</li> <li>• Light intensity</li> <li>• Record; stop; interval</li> </ul>
Power supply voltage	24 V DC
Standards	<ul style="list-style-type: none"> <li>• EN-IEC 60601-1 (safety)</li> <li>• EN-IEC 60601-1-2 (EMC)</li> </ul>

Information furnished by O<sub>2</sub>view B.V. is believed to be reliable. No responsibility is assumed, however, for possible inaccuracies or omissions. Specifications and external appearances are subject to change without notice.