



# Technical Data

## ArteMIS Light Engine



**"Solid State Light Engine: Light Where You Need It the Most"**

**Performance:** The ArteMIS solid state Light Engine is a versatile source of high intensity, uniform, monochromatic light across a broad Vis-NIR spectrum. The Light Engine has been developed to deliver visual and near infrared light for minimally invasive imaging as well as for probe imaging using the ArteMIS Handheld Camera in combination with the ArteMIS Laparoscope or Vision Probe.

**Tailoring:** The wavelength range from VIS to NIR can be tailored to provide sufficient of excitation light for all of today's and future (near infrared) probes for image-guided surgery.

**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 combination of ArteMIS Camera / Media Center / Light Engine, measures and adjusts the required NIR-light irradiance.

**State of the Art:** The Light Engine is the first solid state, camera-frame synchronized, light source for laparoscopy. Bandwidths are as narrow as 10 nm.

- **Proprietary technology for color and fluorescence imaging**
- **Works with all ArteMIS Laparoscopes and Vision Probes for external use**
- **White light-balancing through ArteMIS Capture Suite; Adjust the light to your like**
- **Powerful, pure and discreet**
- **Stable, robust long-lived outputs, no maintenance**
- **Facile, fast color switching and frame-synchronized with ArteMIS Handheld Camera**
- **ArteMIS "NIR-SAFE" unique protection against overexposure**
- **Spectral output of 1 - 10 W/cm<sup>2</sup>**



O<sub>2</sub>view B.V.  
Marken  
the Netherlands

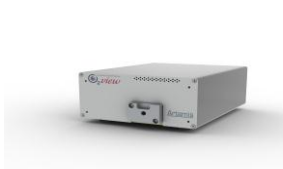
internet: [www.o2view.com](http://www.o2view.com)  
email: [info@o2view.com](mailto:info@o2view.com)



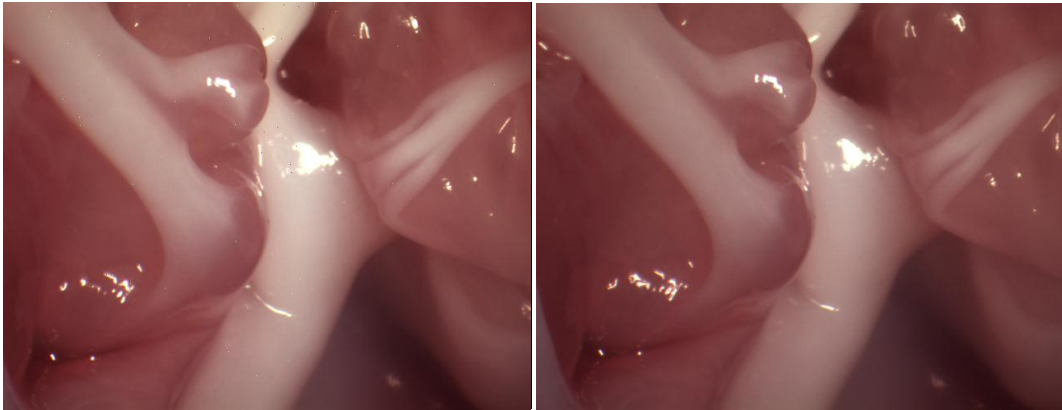
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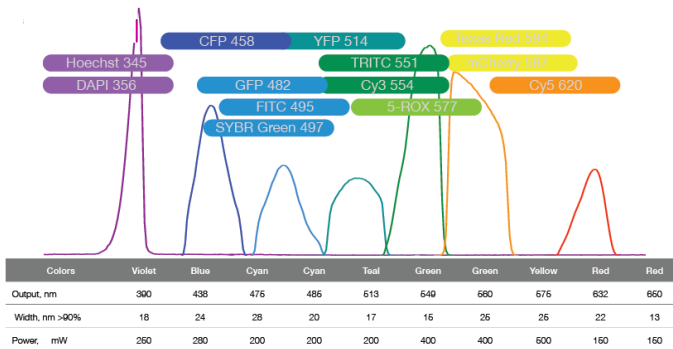
ISO 13485  
MD 553312



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Pre-clinical images made with ArteMIS Camera / ArteMIS Laparoscope. Standard Xenon light (left) versus the Light Engine as laparoscope light source



Graph showing standard outputs in VIS and most frequently used probes in VIS

Light Engine Models [article number]	<ul style="list-style-type: none"> <li>• Art-LE-800</li> <li>• Art-LE-700</li> <li>• Art-LE-700/800</li> </ul>
Spectral bands	Maximum of seven bands in the 430 nm to 950 nm range
Switching speed	5 kHz with turn on/off ~ 10 µsec
Stability	< 2% peak to peak
Out of band rejection	> 10 <sup>-6</sup> with no UV
Field uniformity	< 5% peak to peak
Output adapter	Storz connector 4.8 mm

Computer interface	TTL, RS232, USB
Power monitoring	Instantaneous or dosage
Power requirements	120 W, 24 volt, 5 Amp
Lifetime	> 10,000 hours
Standards	<ul style="list-style-type: none"> <li>• EN-IEC 60601-1 (safety)</li> <li>• EN-IEC 60601-1-2 (EMC)</li> <li>• EN IEC 60601-1-6 (usability)</li> <li>• EN-IEC 60601-2-41 (luminaires)</li> <li>• NEN-EN-IEC 60825-1/C1 (safety of laser products, if applicable)</li> </ul>

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ArteMIS Light Engine

93/42/EEC medical devices

CE-mark pending