

LEDVISION® – Light in Focus

STORZ
KARL STORZ – ENDOSKOPE

LEDVISION® 202 and LEDVISION® 203



LEDVISION® OR lights from KARL STORZ

OR lights play a central role in the operating room. Finding the right support and expertise from a provider for integrated operating rooms that will offer standardization, equipment continuity for all OR personnel, and better offerings to the hospital

with complete financial product packages is important. No one understands the complex demands in and around the OR better than KARL STORZ.

Benefit from an operating room that is tailored to your needs, from the OR lights to the instruments,

the medical devices and the imaging systems through to upstream and downstream processes.

Our solutions support you in all areas to enable you to work successfully and to optimize work processes.



LEDVISION® – An essential component of the integrated operating room from KARL STORZ

There is no compromise when human lives are at stake.

LEDVISION® OR lights meet all of the surgical team's requirements regarding state-of-the-art lighting for the surgical field:

- Light for large or small surgical fields, for critical cases and even deep body cavities
- True-color light for an accurate display of even the tiniest nerve and vessel structures
- Cool light that is gentle on the patient during longer procedures and provides the surgeon with a comfortable work environment
- Low-shadow lighting with sharp contours thanks to multiple LED light sources
- Integration into the KARL STORZ OR1™ system allows flexible control, even from the sterile field
- No interference when using the ICG/NIR camera systems
- Documentation of the surgical procedure under sterile conditions through a centrally integrated HD camera
- Indirect light with the Endo mode for fatigue-free work during endoscopic procedures
- Suitable for mobile use



LEDVISION® – A constant companion in the operating room

Whether for endoscopic or open surgery, in a multidisciplinary setting or in a highly specialized operating room, at certain times the surgical team requires illumination of the surgical field. Depending on the situation, the lighting can be easily adjusted – from maximum

light with maximum light intensity through to the Endo light that offers indirect ambient light in the operating room during endoscopic procedures. LEDVISION® OR lights are modular, expandable, very low-maintenance and highly durable. LEDVISION® grows with your

medical requirements and surgical workflows – whether it is used for illumination, documentation, control, or display in a hybrid operating room.



Highly efficient LEDs offer outstanding color rendition

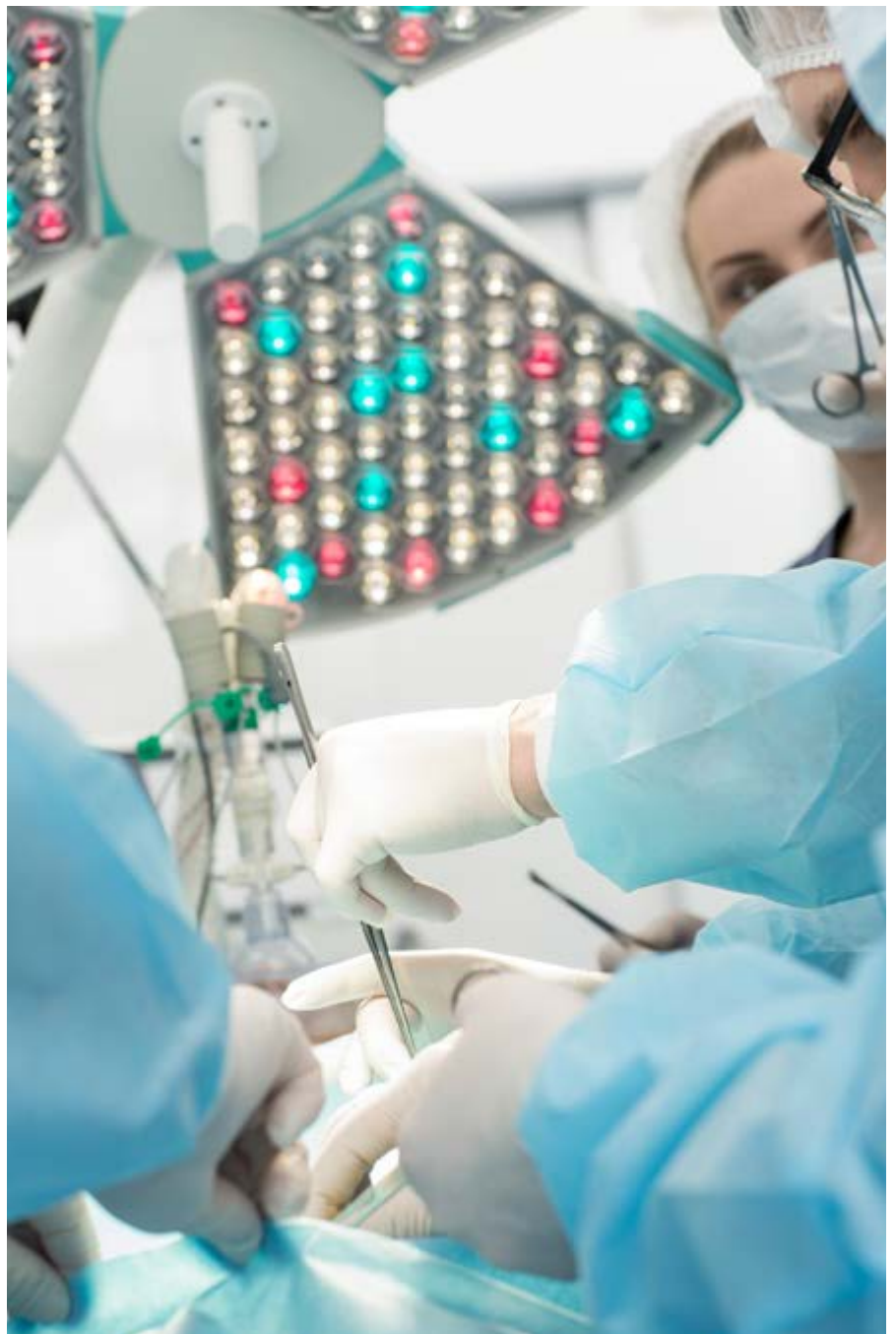
OR lights based on LEDVISION® technology offer several advantages:

- Low power consumption and high efficiency results in less heat emission
- Tissue-sparing UV radiation
- Low-shadow lighting of the surgical field due to the shape and design.
- Less manual operating steps thanks to LEDVISION® Constant Light Management (CLM)
- Lifespan of more than 60,000 hours, corresponding to ten years of operation in the OR
- Easy to position lights due to low net weight thanks to state-of-the-art materials and manufacturing technologies

With LEDVISION®, the variable color temperatures enable illumination to be precisely adapted to diverse tissue types and their reflection properties. If a combination of light heads is used, the color temperatures of all the light heads integrated in the system are synchronized.

This enables a continuously differentiated, visual display of the tissue during the surgical procedure and the precise removal of biopsies for subsequent pathological diagnosis.

The deliberate integration of LEDs in the colors green, red and white and a higher total number of LEDs results in color rendering properties (CRI 98) that are almost 100% identical to daylight while maintaining constant illumination for various operating field sizes thanks to the CLM system.



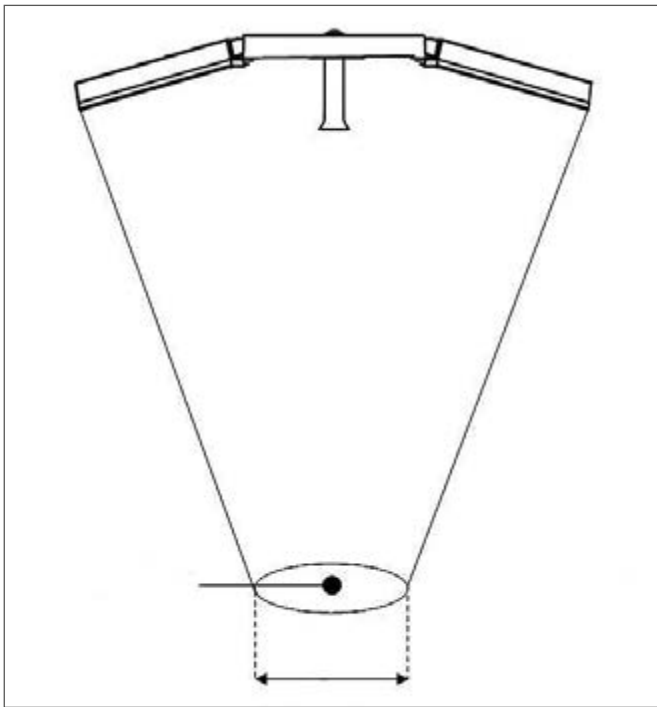
Constant Light Management

Variable light in its purest form

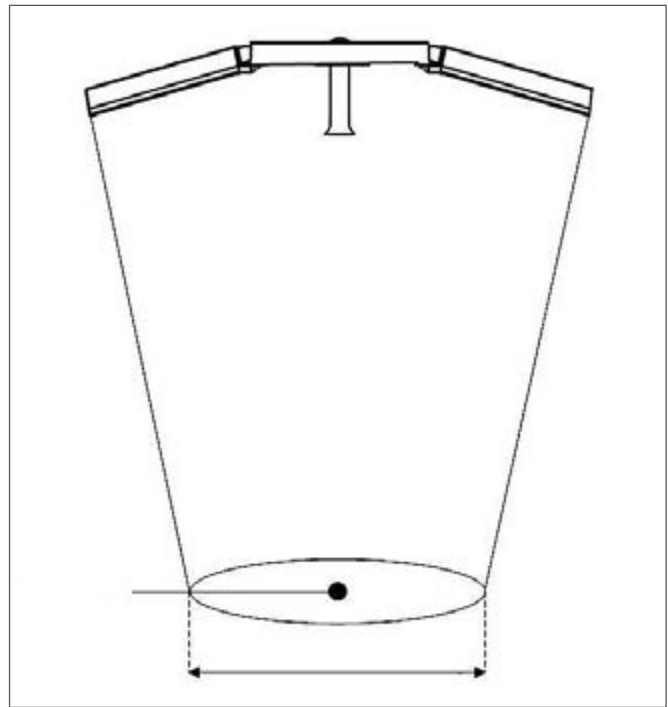
Conventional lighting systems lose intensity when the current light field is adapted to fit a larger surgical field. The patented CLM system keeps the central illuminance constant, regardless of the chosen

light field size. The surgeon is always supplied with the same, pre-selected light quantity and quality, without having to make any adjustments. LEDVISION® lights solve this task in a unique way.

Even changes in distance do not require manual readjustment of the light intensity.



160,000 lux
at a small light field of 28 cm



160,000 lux
at a large light field of 33 cm

NIR/ICG

Near-infrared fluorescence in combination with LEDVISION® – Your real-time guide for everyday use

You can leave LEDVISION® OR lights switched on!

Benefit from an intelligent operating room suite with Opal1 technology and the IMAGE1 S™ Rubina® system.

Benefits for you:

- No interference
- Uninterrupted workflow
- Better orientation in the operating room
- Fatigue-free work
- Focus on the patient

Detecting structures earlier and differentiating them better is a necessity in both minimally invasive and open surgery. Alongside an optimal image, it is helpful to receive additional information that increases the precision of the surgical technique. This information is supplied, for instance, by NIR/ICG fluorescence imaging – an Opal1 technology from KARL STORZ.

The use of indocyanine green (ICG) together with light at wavelengths in the near-infrared range (NIR) permits the visualization of anatomic structures, for instance. KARL STORZ considers fluorescence technology a future standard imaging technique.



LEDVISION® for easy, convenient handling

LEDVISION® supports you in the operating room thanks to its sophisticated user concept:

- Sterile control of the surgical light and the light camera by the surgical team via a central touch screen



- Non-sterile control of the surgical light and the light camera via the wall control panel



- Non-sterile control via a control panel on the light head



Camera

Documentation of the surgical procedure, live transmissions, or intraoperative consultation with a colleague are part of daily routine. For this purpose, KARL STORZ offers an integrated camera system with zoom telescope and image capture in the light's sterile handle or alternatively on a separate additional arm.

The LEDVISION® camera head is mobile and can be used in various operating rooms with LEDVISION® lights according to user needs. The LEDVISION® FULL HD camera system plus surgical light can be attached to any arm of the central axis and offers unlimited rotation.

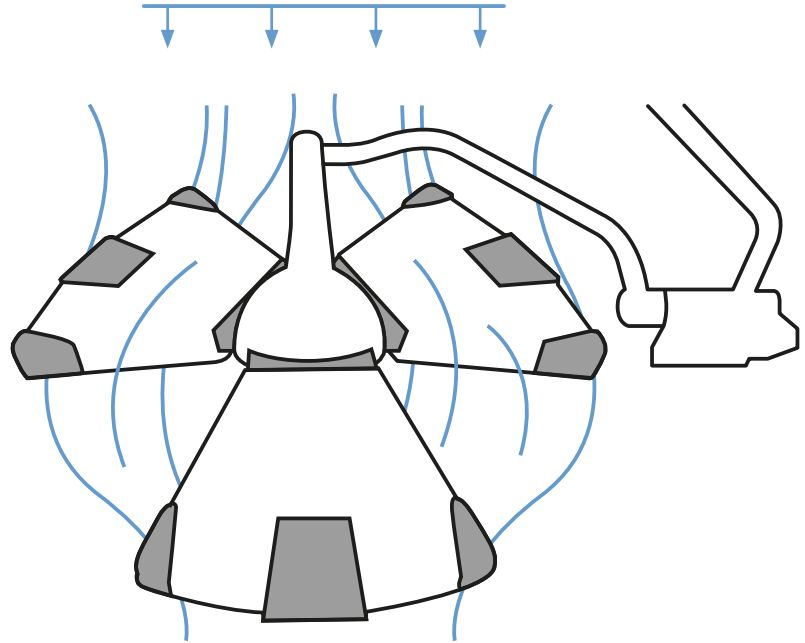
Functionality	Specifications
Transmission	Image and control signals wireless
Image sensor	1/3" CMOS
Number of pixels	2.4 megapixels
Resolution	1080p60
Zoom factor	10x optical, 32x digital
Focal length	f = 5.1-51 mm



Hygiene

Germ transmission and postoperative infections are particularly important issues in extended procedures near the bone or involving implants.

Operation under laminar flow ceilings with germ-free air flow presents special challenges for lamp design. LEDVISION® meets these requirements with its open housing concept with reduced flow surfaces, smooth surfaces, and an energy-efficient lighting concept with moderate heat development. It thereby supports sterility of the surgical site.

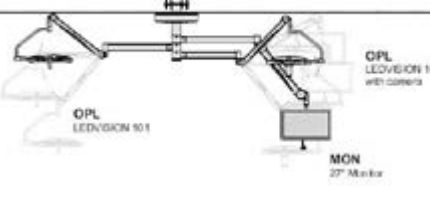
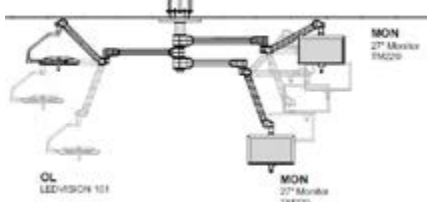
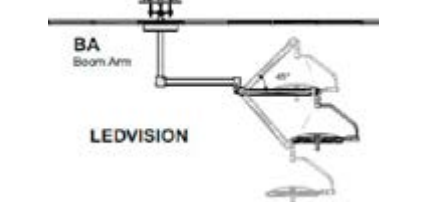


LEDVISION® support arm systems for maximum flexibility

The lights from the LEDVISION® product family can be used as single lights in a treatment room, for endoscopic procedures, major open surgeries or with up to four holding systems.

Mounted on a central ceiling supply unit via support arms or outside the airflow field, every room characteristic can be taken into account.

To meet individual needs, our support arm systems are divided into three solution-oriented variants:

Standard solution	Premium solution	Single solution
		
<p>The standard solution meets practically all current requirements in the operating room</p>	<p>The premium solution is used for long extension arms in, for example, hybrid operating rooms</p>	<p>For fast and small installations</p>
<p>Designed for general surgery, usually as a three-model configuration – 2 OR lights, 1 monitor</p>	<p>Spring arms for higher loads</p>	<p>For single installations (lights or monitor), e.g., in the case of renovations</p>
<p>Monitors can be mounted on the highest or lowest axis positions</p>	<p>Larger cable conduits in the PLUS spring arms</p>	<p>Short delivery times</p>
<p>Shorter installation times</p>	<p>Spring arms with greater upward and downward deflection</p>	<p>For smaller budgets</p>
<p>Four-model configuration option (also applies to premium solution)</p>	<p>Monitors can be placed on the highest, the second highest or lowest axis positions</p>	<p>Booms for LEDVISION® 65/65+</p>

KARL STORZ Service

KARL STORZ offers you a full service that meets all quality standards and lets you focus on what matters most:

The wellbeing of the patient.

Our products should be precise and enjoyable to use at all times and we would like you to be able to count on the customary quality provided by KARL STORZ.

To this end, we have developed an innovative and modular service program to complement our products; this program is customized to meet each individual customer's needs.

The OR lights are designed in such a way that they require very little maintenance. Temperature sensors constantly monitor the full functionality of the LEDs and automatically ensure their operability.

The long lifespan of approximately ten years allows sustainable investment and conserves environmental resources.

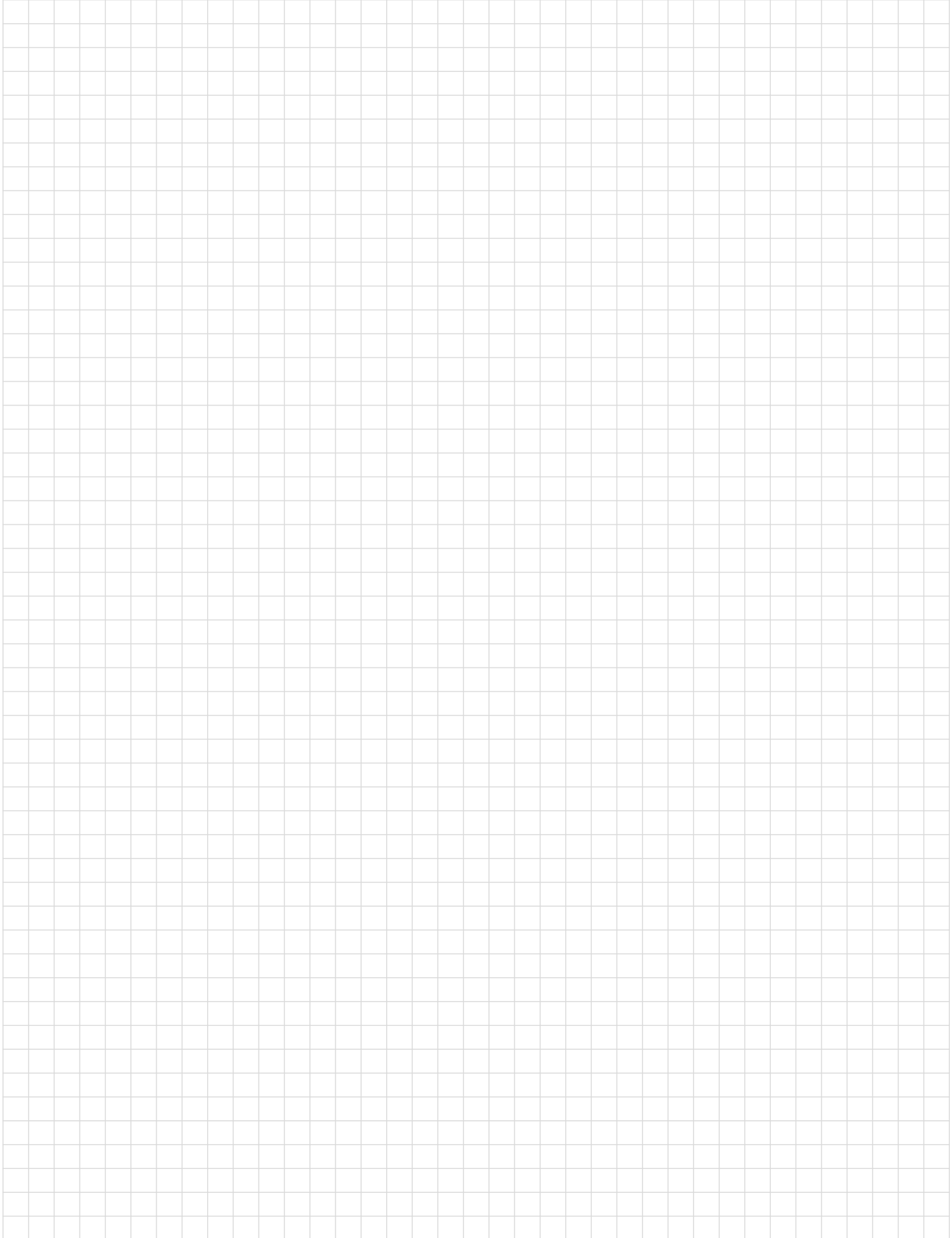


Specifications



		LEDVISION® 203	LEDVISION® 202
Central illuminance at 1 m distance	lx	160,000	160,000
Central illuminance electronically dimmable from/to	%	31-100	31-100
Illuminated field	cm	28-33	27-31
Color rendering index Ra		98	98
Color temperature	K	3500-5000	3500-5000
NIR/ICG-optimized		yes	yes
Depth of illumination in accordance with EN 60601-2-41 (L1 + L2) at 20% Ec	mm	1300	1100
Depth of illumination in accordance with EN 60601-2-41 (L1 + L2) at 60% Ec	mm	700	670
Endoscopy mode		yes	yes
Wireless HD/4K camera		optional	optional
Fully cardanic suspension of the light head		yes	yes
Retrofitting of camera possible		yes	yes
Weight of individual light head	kg	15	11
Diameter of light head	mm	700	640
IP rating of light head		54	54
Classification in accordance with MDR		I	I
Conformity		CE	CE
* all values according to IEC/EN 60601-2-41 -10% tolerance			

Notes



Notes

A large grid of graph paper, consisting of 20 columns and 40 rows of small squares, intended for taking notes.

It is recommended to check the suitability of the product for the intended procedure prior to use.
Please note that the described products in this medium may not be available yet in all countries due to different regulatory requirements.

More than
75
Years

*Shaping the Future
of Endoscopy with you*