

LEDVISION®

OR lights from KARL STORZ

Visions of light



LEDVISION® – OR lights 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 within the surgical field.

Key Features:

- Abundant 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.
- Integrated in the KARL STORZ OR1™ system – with convenient control, even from the sterile field.
- Documentation of the surgical procedure under sterile conditions through a centrally integrated HD camera.
- Gesture control for maximum hygienic safety offered by the latest OR light, LEDVISION® 101.



LEDVISION® 101/101 with 32" monitor holder places the patient in the right light.

Benefits – ergonomic and well-designed

Support arm systems for any OR

With 3 model configurations and many combinable options, the LEDVISION® family of lights meets all lighting needs.

LEDVISION® grows with your medical requirements and surgical workflows – whether it is used as a single light in a treatment room, for endoscopic procedures, in major open surgeries, or in a hybrid operating room with up to 4 support arms, providing exceptional illumination, documentation, control, and display capabilities.

The mounting of a central ceiling pendant system via support arms or outside the laminar airflow field provides options that work for any room.

Highly efficient LED technology

The newest-generation, energy-efficient system consumes little power, produces less heat than conventional systems, and ensures low-shadow illumination of the surgical field.

The LEDs have a lifespan of more than 60,000 hours, corresponding to ten years of operation in the OR. Thanks to their low weight, the light fixtures are very mobile.



Obvious user advantages

Highly efficient LEDs offer outstanding color rendering. Variable color temperature in all models permits better adaptation to the various tissue types and their reflection properties. For example, in endoscopic procedure rooms, the Endo mode supports the operator with indirect ambient light. There is no thermal radiation so that tissue dehydration does not occur.



3000 K



4500 K



6000 K

Designed to optimize sterility

Postoperative infection is a particularly important issue in extended procedures near the bone or involving implants. Operation under laminar flow ceilings with germ-free air flow presents special challenges for light fixture design. LEDVISION® meets these requirements with its open housing concept with optimized air flow design, smooth surfaces, and an energy-efficient lighting concept with moderate heat development. It thereby supports the sterility of the surgical site.



Preventive maintenance functions

Intelligent software takes precautions to ensure a long, uninterrupted service life. Short-term lighting fluctuations as well as age-related degradation are permanently monitored and compensated through the LED light sources' pulse-width modulation. In addition, the temperature of the light modules is monitored. If necessary, individual LEDs are preventively switched off before they are seriously damaged.

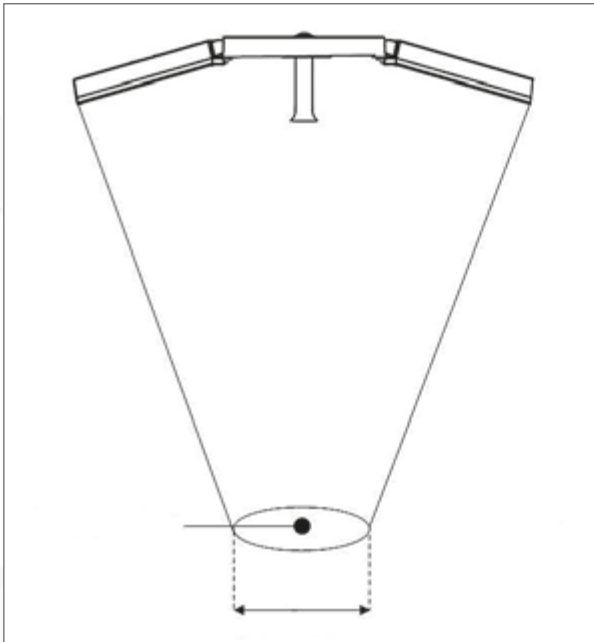
This novel LED lighting concept implements the fully electronic, variable adjustment of light field size. This means no more maintenance of movable mechanical light fixture components. With LEDVISION®, you are sure to have a fully functional medical device across all photometric values, even decades from now.

Advantages – unique and efficient

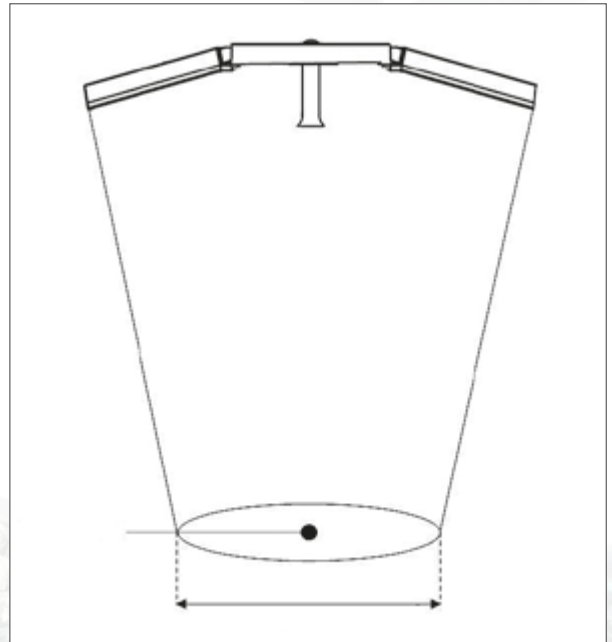
Variable light in its purest form – Constant Light Management is the answer

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 refocusing the light head.



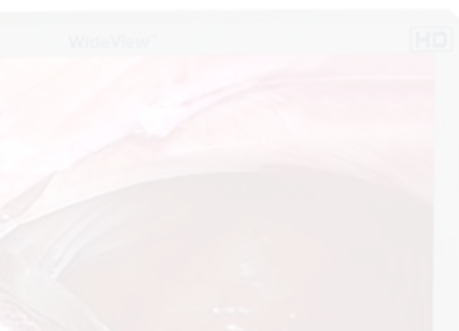
160,000 lux at a small light field of 28 cm



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

Safety in power outages

Voltage fluctuations, power failure or other technical defects occasionally interrupt the power supply. We eliminate this risk with an optional off-grid uninterruptible battery backup that runs the lights for two hours to allow unproblematic completion of the surgical procedure.



LEDVISION® is another component of the KARL STORZ OR1™ integrated operating room system

Central control of the OR light



*Applies to types 203, 202, 101

Gesture control



Touchless control of illumination, color temperature and size of the illuminated field.

*Applies to type 101

Options – flexible and expandable

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 ORs with LEDVISION® lights according to user needs.

The LEDVISION® FULL HD camera system plus OR light can be attached to any arm of the central axis and offers unlimited rotation. Handling and positioning are thus made easy.



Control

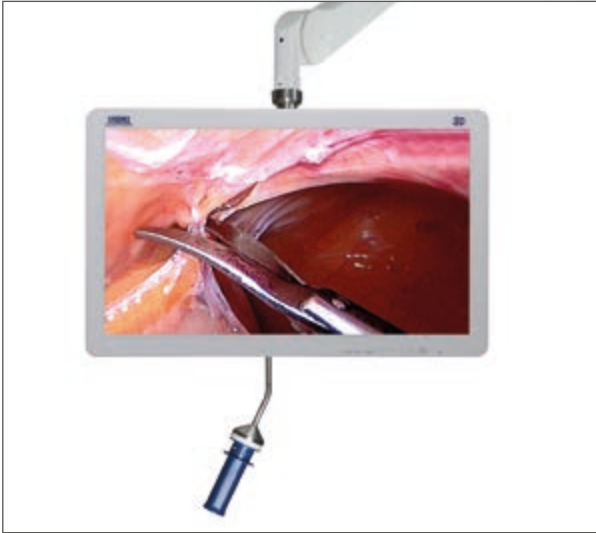
The infection risk for patients rises with the frequency of people approaching the sterile area during the procedure. The optional wall control unit can reduce this risk.



Integration

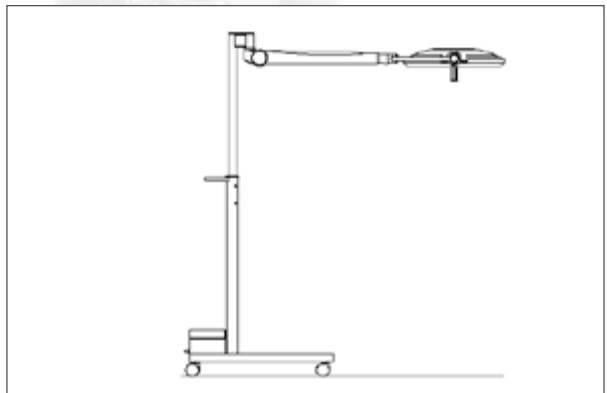
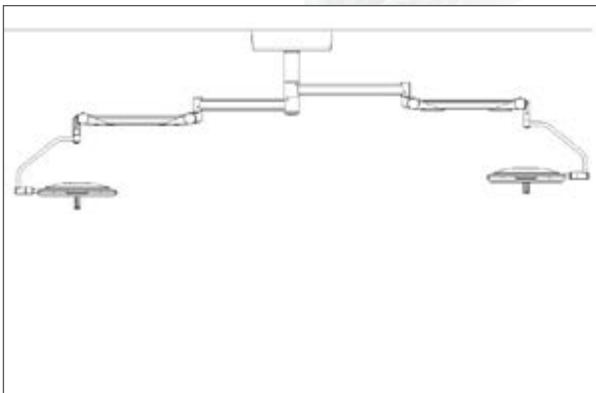
The LEDVISION® light can be controlled via a control panel in the light head or a wall panel. In addition, the light settings can be adjusted via the touch screen of the KARL STORZ OR1™ integration system; if required, this can be effected by the user in the sterile surgical environment.

The integration of the LEDVISION® lights and cameras in the KARL STORZ OR1™ integrated surgical system offers cutting-edge control options with greater flexibility.



Monitor support arms

KARL STORZ offers arms with mounts for monitors and touch screens of various sizes. A key advantage is the fact that our support and spring arms have an optimized inner diameter for power and data cables. Systems with fiberglass technology facilitate attachment and retrofitting of end devices and are part of the KARL STORZ OR1 FUSION® architecture.

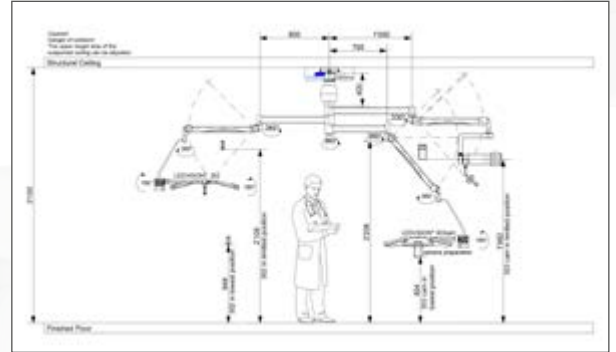
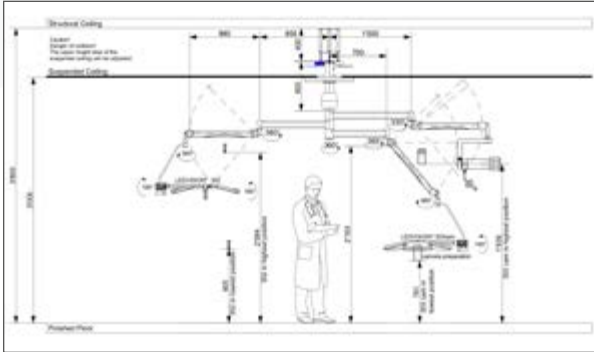


LEDVISION® 101 with/without battery backup

Floorstand light

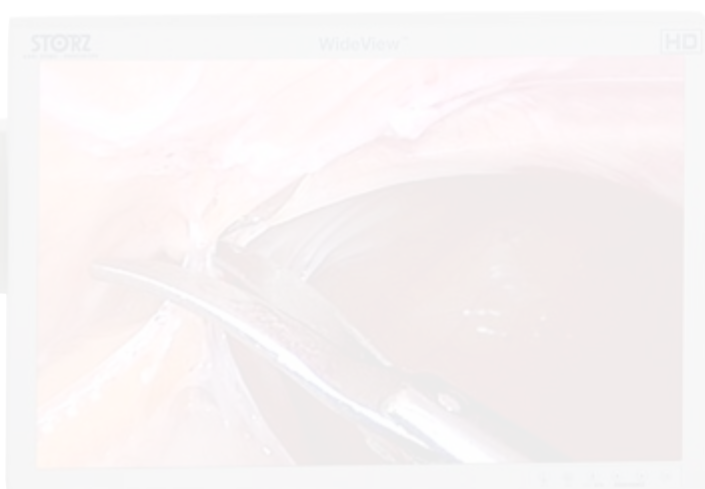
Various configurations

- Ceiling-mounted light with one support arm or lamp combination with up to four support arms for the main light, auxiliary lights, monitor support arm, or other end devices
- Mobile floorstand light, optionally also with battery backup that operates for 2 hours



Customer-specific room solutions

Every operating room looks different. Refurbishments of old buildings present the manufacturer with different challenges compared to new constructions. Low ceiling heights may require special supports. In cases of very high bare ceilings or statically inadequate ceilings, KARL STORZ will be happy to offer advice and suitable solutions.



Technical data

		LEDVISION® 203	LEDVISION® 202	LEDVISION® 101
Central illuminance at 1 m distance	lx	160,000	160,000	160,000
Central illuminance electronically dimmable from/to	%	31-100	31-100	31-100
Illuminated field	cm	28-33	27-31	22-26
Color rendering index R _a		98	98	96
Color temperature	K	3500-5000	3500-5000	3500-4500
Depth of illumination in accordance with EN 60601-2-41 (L1 + L2) at 20% E _c	mm	1300	1100	1280
Depth of illumination in accordance with EN 60601-2-41 (L1 + L2) at 60% E _c	mm	700	670	690
Endoscopy mode		Yes	Yes	Yes
Fully cardanic suspension of light fixture		Yes	Yes	Yes
Weight of individual light fixture	kg	15	11	13
Diameter of light fixture	mm	700	640	685
IP rating of light fixture		54	54	54
Classification in accordance with MDD		I	I	I
Conformity		CE	CE	CE

HD camera integrated in the light head or separate arm

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

It is recommended to check the suitability of the product for the intended procedure prior to use.



75
Years

*Shaping the Future
of Endoscopy with you*

STORZ
KARL STORZ — ENDOSKOPE

THE DIAMOND STANDARD

KARL STORZ SE & Co. KG
Dr.-Karl-Storz-Straße 34, 78532 Tuttlingen/Germany
Postbox 230, 78503 Tuttlingen/Germany
Phone: +49 7461 708-0
Fax: +49 7461 708-105
E-Mail: info@karlstorz.com
www.karlstorz.com