POWER LED 300

Light-emitting diode (LED) technology is rapidly becoming the modern day benchmark in the consumer industry and is now used in numerous products. The trend towards LED technology can also be observed in minimally invasive surgery. Products such as LED Nova, POWER LED 175 and, more recently, CO₂mbi LED provide KARL STORZ with many years of experience in the development of endoscopic light sources using LED technology. POWER LED 300 is the first light source to combine the light intensity of 300 Watt light sources with the benefits of LED technology.
Similar to headlamps in the high-end automotive industry, LED lighting is in part generated by an integrated Laser. This offers several advantages, for example, the system delivers up to twice the light intensity of conventional LED light sources. Combined with intelligent color management, high-performance light diodes create daylight-equivalent light. Furthermore, this LED Laser hybrid technology ensures a homogenous color temperature throughout the entire operating life.

KARL STORZ considers all components in the endoscopic optical chain to be one system. Optimal coordination at all times is an important factor here. A communication interface enables POWER LED 300 to be controlled via IMAGE1 S* or OR1™ and facilitates data transfer and display.

In conjunction with the light cables from KARL STORZ, POWER LED 300 achieves protection class CF defib. This is the highest protection class in electrical safety and ensures optimal protection of the user and the patient as well as the equipment.

The color temperature defines the perceived color appearance. The reference value for daylight is 5,777 Kelvin (K). With 6,000 K, POWER LED 300 is within this range.

* Control via IMAGE1 S will be enabled by software, however, it is already possible to display the light intensity.
**Touch display**

The touch display of the POWER LED 300 provides an intuitive and user-friendly interface that directly displays relevant data.

**Service life vs. costs**

At 30,000 hours, the service life of the POWER LED 300 is 60 times longer than comparable Xenon light sources (approx. 500 hours). As a result, POWER LED 300 does not require the frequent replacement of expensive lamp modules associated with Xenon light sources. Over its entire lifespan, the costs of POWER LED 300 represent a fraction of the total costs incurred by Xenon lamps. Furthermore, POWER LED 300 consumes approx. one-third of the energy of a comparable Xenon light source. Consequently, economy and ecology go hand in hand.

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**Costs**

![Graph showing service life vs. costs](image)
Whereas POWER LED 300 maintains a constant light output over the entire service life, the intensity of the Xenon light source decreases dramatically over time. This results in poor illumination and dark or grainy images.

**Luminous flux in Lumen**

![Graph showing luminous flux in Lumen over service life in hours for POWER LED 300 and 300 Watt Xenon. The graph illustrates the decrease in light intensity over time for the Xenon lamp, while POWER LED 300 maintains a consistent output.]

**Intelligent Cooling Management**

Intelligent Cooling Management features low volume and minimal heat generation. Low temperature development reduces the need for a fan and thus generates an extremely low noise level (similar to the noise level in a quiet reading room). Less exposure to noise provides a more pleasant working environment and allows greater concentration. The optimized coupling combined with the exclusive use of the visible light spectrum results in a very low temperature development at the light guide.
POWER LED 300

Cold Light Fountain POWER LED 300,
with integrated KARL STORZ-SCB, high-performance LED module and one KARL STORZ light outlet,
power supply 100-240 VAC, 50/60 Hz,
including:
Mains Cord
SCB Connecting Cable

Recommended accessories

495 NCSC  **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm

495 NAC  **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, with safety lock, enhanced light transmission, can be used for ICG applications, diameter 3.5 mm, length 230 cm

495 TIP  **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 300 cm, for use with TIPCAM®

495 VIT  **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 550 cm

TL 005  **Triple Adaptor**, for use with POWER LED 300 cold light fountain in conjunction with KARL STORZ, Olympus, Stryker and Wolf light cables
Recommended accessories

**TM 323**

32” 3D Monitor, color systems PAL/NTSC,
max. screen resolution 1920 x 1080, image format 16:9,
Video inputs: 2x DVI, 2x 3G-SDI, VGA, S-Video, Composite,
Video outputs: DVI, 2x 3G-SDI, VGA, S-Video, Composite,
power supply 100-240 VAC, 50/60 Hz, 5 V DC output (1 A),
wall-mounted with VESA 200 adaptor,
for use with Monitor Stand 9832 SFH
including:
Monitor Power Supply, external, 24 V
Mains Cord
3x 3D Polarization Glasses, fogless, passive
Cable Cover

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**9826 NB**

26” FULL HD Monitor, color systems PAL/NTSC,
max. screen resolution 1920 x 1080, image format 16:9,
video inputs: DVI, 3G-SDI, VGA, S-Video, Composite,
video outputs: DVI, 3G-SDI, Composite,
power supply 100-240 VAC, 50/60 Hz,
5 V DC output (1 A),
wall mount with VESA 100 adaptor
including:
External 24 VDC Power Supply
Mains Cord
Recommended accessories

TC 200EN*  
**IMAGE1 S CONNECT™**, connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated KARL STORZ-SCB and digital Image Processing Module, power supply 100-120 VAC/200-240 VAC, 50/60 Hz including:
- **Mains Cord**, length 300 cm
- **DVI-D Connecting Cable**, length 300 cm
- **SCB Connecting Cable**, length 100 cm
- **USB Flash Drive**, 32 GB
- **USB Silicone Keyboard**, with touchpad, US

TC 300  
**IMAGE1 S™ H3-LINK**, link module, for use with **IMAGE1 FULL HD** three-chip camera heads, power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with **IMAGE1 S CONNECT™ TC 200EN** including:
- **Mains Cord**, length 300 cm
- **Link Cable**, length 20 cm

TH 100  
**IMAGE1 S™ H3-Z Three-Chip FULL HD Camera Head**, progressive scan, soakable, gas- and plasma-sterilizable, with integrated Parfocal Zoom Lens, focal length \( f = 15-31 \text{ mm} \) (2x), 2 freely programmable camera head buttons, for use with **IMAGE1 S™** and **IMAGE 1 HUB™ HD/IMAGE1 HD**

TC 302  
**IMAGE1 S D3 LINK™**, link module, for use with **TIPCAM®1 S 3D LAP**, power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with **IMAGE1 S CONNECT™ TC 200** including:
- **Mains Cord**, length 300 cm
- **Link Cable**, length 20 cm

* Also available in the following languages: DE, ES, FR, IT, PT, RU
Recommended accessories

26605 AA  TIPCAM®1 S 3D LAP, with two distal FULL HD image sensors, direction of view 0°, diameter 10 mm, autoclavable, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S

26605 BA  Same, direction of view 30°

7240 AA 3D  TIPCAM®1 S 3D ORL, direction of view 0°, diameter 4 mm, length 18 cm, two FULL HD image sensors, autoclavable, S-technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S

7240 BA 3D  Same, direction of view 30°

TH 200  VITOM® 3D Exoscope, with zoom and focus function, integrated illumination and horizon adjustment, working distance 20-50 cm, fiber optic light transmission incorporated, wipe-disinfectable, for use with IMAGE1 S CONNECT™ module (TC 200) and IMAGE1 S D3-LINK™ (TC 302)
Notes
It is recommended to check the suitability of the product for the intended procedure prior to use.