

The new reference



ENDOLIGHT LED

LED technology in perfection

ENDOLIGHT LED_{2.2}

LED technology in perfection

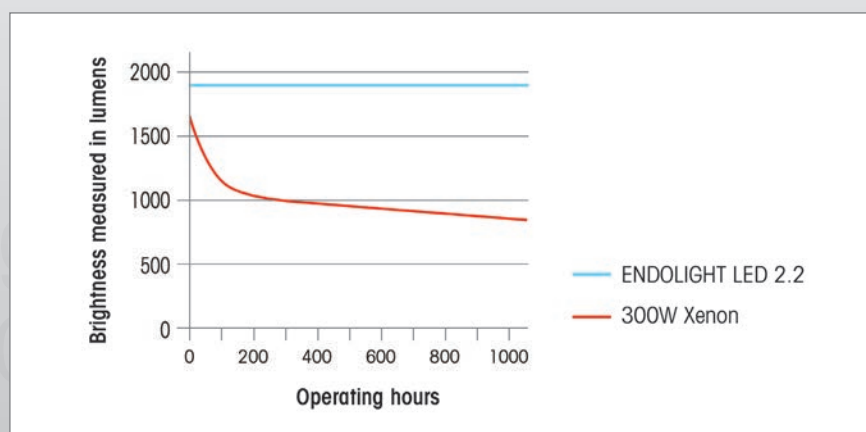
Xenon light sources were the technology of choice to date for endoscopic lighting.

All performance requirements for light sources generating white light are fulfilled with the ENDOLIGHT generation LED 2.1 and LED 2.2. Xenon light sources should be regarded as obsolete from now onward.

ENDOLIGHT LED 2.2 – The new reference.



Maximum brightness according to operating hours¹

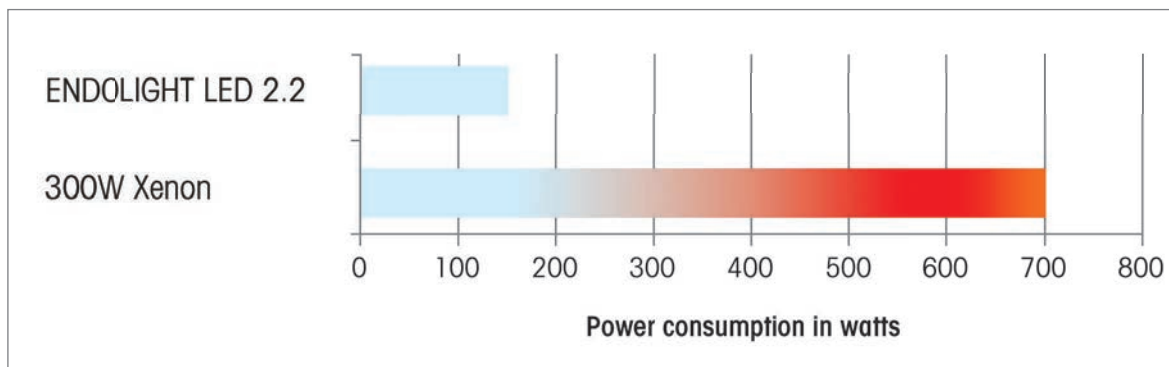


- Hygienic: Less dust turbulence due to efficient use of fans
- Automatic shutdown if the light cable is unplugged

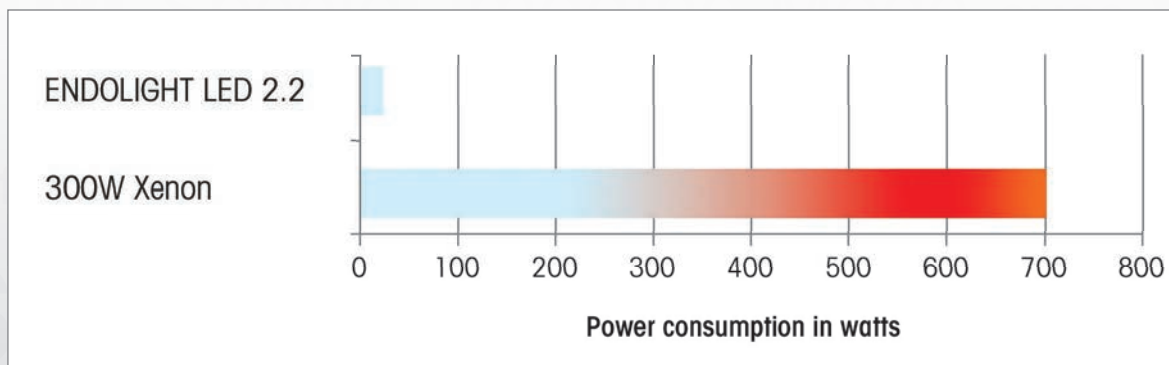
What advantages can you expect from all ENDOLIGHT LED models?

- No follow-up costs as a result of the long service life of the LED lamp (typically: 30,000 hours)
- Approx. 80% less electricity consumption compared with xenon

Energy consumption at 100% brightness¹



Energy consumption at 20% brightness¹

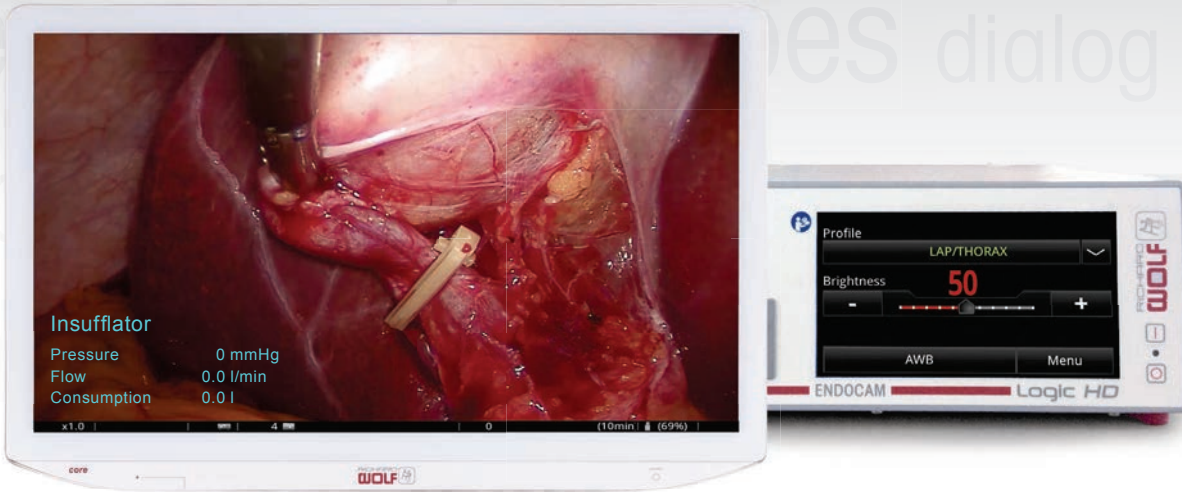


- Virtually inaudible as a result of innovative cooling system (only 25 dB(A))
- Homogeneous illumination without black spots or white spots in the center of the light cone
- Flicker-free consistent brightness
- Realistic detail: Improved visualization of the operation site as a result of homogeneous illumination and color temperature of 6500 K, similar to sunlight
- No loss of performance: The light power of xenon light sources already begins to significantly deteriorate after approx. 100 operating hours. The light power of the LED lamp only deteriorates very slowly

¹ Source: laboratory measurements Richard Wolf GmbH

Communicative

Devices in *dialog* operation



Richard Wolf endoscopy devices work automatically as a system in *dialog* operation. *dialog* offers the following functions in networked operation:

- *dialog*.status

ENDOCAM Logic HD displays status values of light source, insufflator, pump and more in the monitor.

- *dialog*.brightness

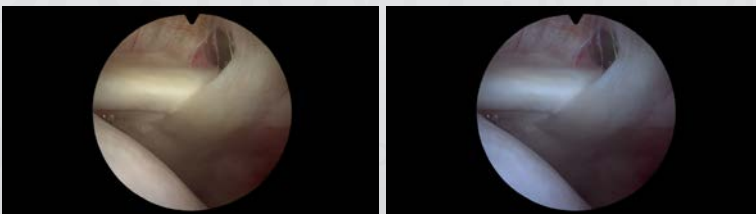
ENDOCAM Logic HD directs the light volume optimally onto the operation scene. The advantage: Optimum protection for the endoscope and the light cable. The user is able to use the buttons on the camera head to switch the LED light source on and off.

- *dialog*.lightbalance

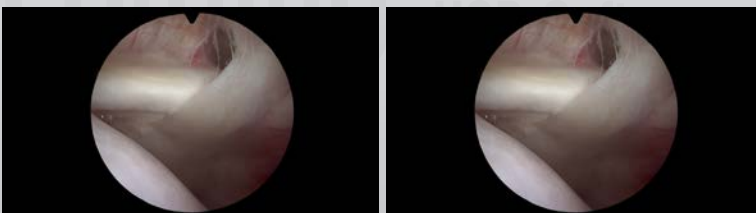
LEDs with controlled light power are subject to slight fluctuations in color temperature. ENDOCAM Logic HD automatically balances these color fluctuations in LED 2.2 with *dialog*.lightbalance.

The result: A consistent color impression.

Color shift through brightness change of the LED



dialog.lightbalance automatically corrects the color change







More flexibility

You have the choice



The ENDOLIGHT LED Series offers the right option for any requirement. The model series LED 1.x uses a new lamp to provide light power which is **comparable** with a **180 watt xenon** light source. It is ideal for endoscopic applications in small body cavities, such as arthroscopy, ENT or the spine.

<p>ENDOLIGHT LED 1.1</p> 	<p>The basic model</p> <ul style="list-style-type: none"> ■ Efficient and cost-saving ■ Manual light volume control ■ Richard Wolf light socket <p>ENDOLIGHT LED 1.1 Set Comprising: ENDOLIGHT LED 1.1 (5160001) and power cable (2440.03)51600011</p>
<p>ENDOLIGHT LED 1.2</p> 	<p>The version with smart details Like 1.1, also with:</p> <ul style="list-style-type: none"> ■ Multifunction light socket for light cables from different manufacturers ■ Remote Standby at the camera head for light on / off ■ Light cable recognition – Standby if the light cable is unplugged ■ Safe Start function² <p>ENDOLIGHT LED 1.2 Set comprising: ENDOLIGHT LED 1.2 (5161001) and power cable (2440.03)51610011</p>
<p>ENDOLIGHT LED 1.3</p>  <p>³ </p>	<p>High-end with intelligent regulation Like 1.2, also with:</p> <ul style="list-style-type: none"> ■ CAN BUS dialog function³ ■ dialog.brightness: Automatic light volume regulation³ ■ dialog.status: Status display at the main monitor³ <p>ENDOLIGHT LED 1.3 Set comprising: ENDOLIGHT LED 1.2 (5162001), CAN BUS Connection cable (103.701), CAN BUS Terminator (5590.989) and power cable (2440.03)51610011</p>

² Safe Start: If the operating voltage is interrupted for less than 10 seconds, light source switches back on again automatically. After longer voltage outages, the high-power light source initially switches to standby for safety reasons.

³ **Please note:** Simultaneous operation of **core nova** using Ethernet is not possible.

Maximum illumination

ENDOLIGHT LED 2.1 and LED 2.2

The high-power model series ENDOLIGHT LED 2.x offers light power comparable with a 300 watt xenon light source with a new lamp. It can therefore be used universally for all endoscopic applications, also for bigger body cavities, such as laparoscopy, thoracic surgery, urology or TEM.



ENDOLIGHT LED 2.1



The basic model – High Power

- Manual light volume control
- Richard Wolf light socket
- Light cable recognition – Standby if the light cable is unplugged
- Remote Standby at the camera head for light on / off

ENDOLIGHT LED 2.1 Set

comprising:
ENDOLIGHT LED 2.1 (5163001)
and power cable (2440.03)51630011

ENDOLIGHT LED 2.2

core nova



High End – High Power

- *dialog*.brightness: Automatic light volume regulation
- Multifunction light socket for light cables from different manufacturers
- Light cable recognition – Standby if the light cable is unplugged
- Remotely controllable in **core nova**
- *dialog*.lightbalance: Always constant color impression
- *dialog*.status: Status display on the main monitor
- Safe Start function²

ENDOLIGHT LED 2.2 Set

comprising:
ENDOLIGHT LED 2.2 (5164001)
and power cable (2440.03)51640011