RICHARD WOLF

spirit of excellence

Guides
your way

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System green

**Real-time fluorescence imaging with the
ENDOCAM Logic 4K camera platform**

System green

Real-time fluorescence imaging with the ENDOCAM Logic 4K camera platform
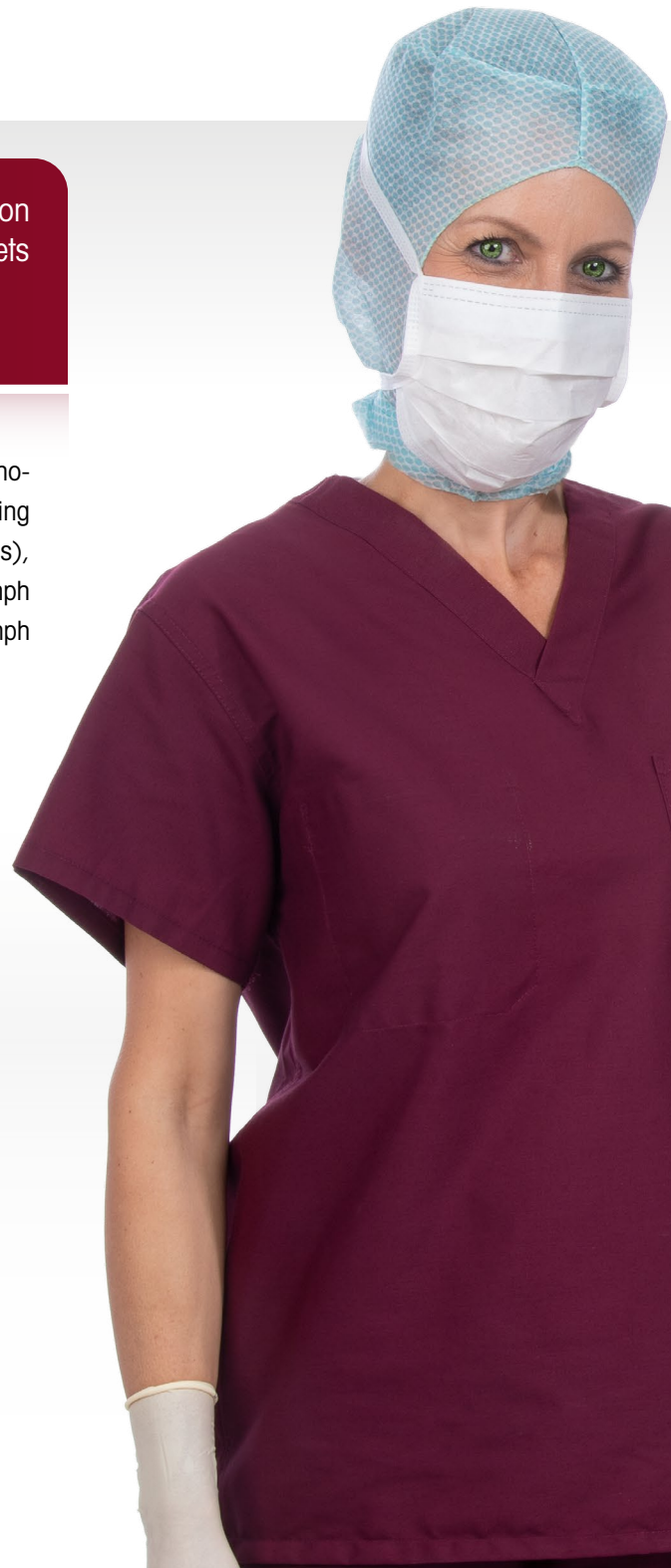
System green from Richard Wolf is an excellent visualization solution for real-time ICG/NIR fluorescence imaging which meets the highest standards of endoscopic imaging.

ICG/NIR fluorescence imaging has become one of the most valuable technologies in the field of minimally invasive surgery for applications including intraoperative assessment of visceral perfusion (e.g., enteroanastomosis), visualization of biliary structures in fluorescence cholangiography, or lymph node mapping in oncological procedures (e.g., visualization of sentinel lymph nodes in case of lymphadenectomy).

High-resolution image quality meets groundbreaking imaging

System green, a new member of our ENDOCAM Logic 4K camera platform, enables first-class fluorescence imaging in real time.

- **Simultaneous ICG/NIR and white light endoscopy with crystal-clear image quality**
- **Excellent visualization of visceral perfusion**
- **Superior exposure of biliary anatomy in fluorescent cholangiography**
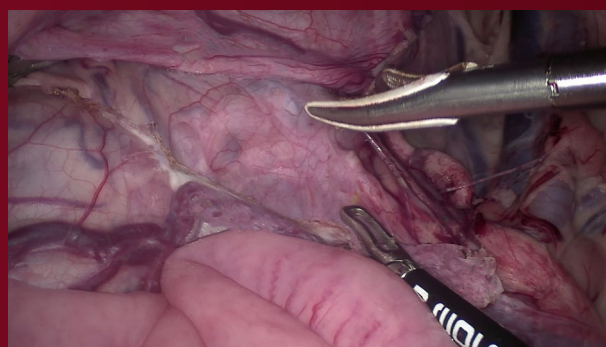- **Precise sentinel lymph node mapping**

RIWO AR

Learn more about our new **augmented reality app: Download now!**

GET IT ON
Google Play

Download on the
App Store

greenICG

White light

System green enables standard white light endo-scopy with high-resolution image quality at any time. The system can therefore be used without limitations even in white light mode.
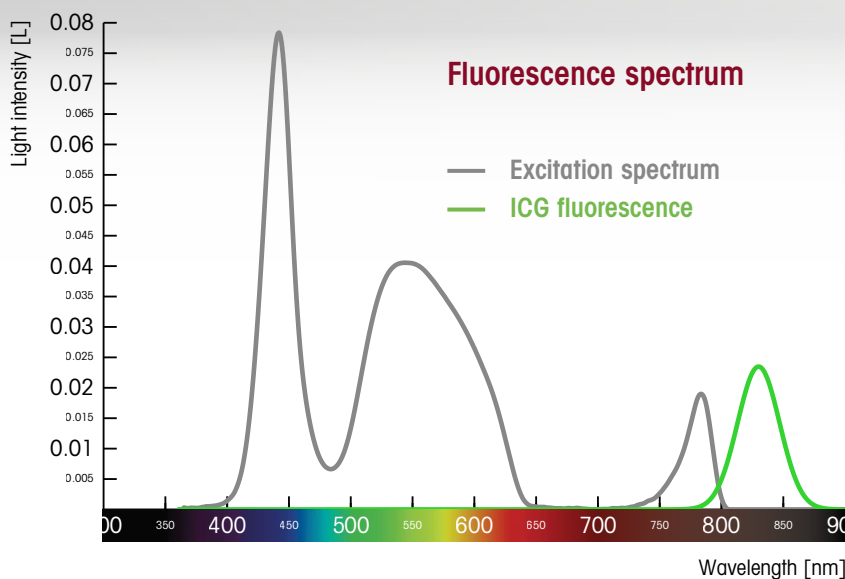
ENDOLIGHT LEDgreen

Perfect illumination for perfect results

ENDOLIGHT LED green satisfies the stringent requirements for a high-resolution endoscopy system in both white light and fluorescence applications.

Thanks to the use of special LEDs, there is no need to use a laser diode to visualize the ICG/NIR information. The powerful LED lighting produces a homogeneous, consistently bright endoscopic image. This allows the user to cover two applications with one system – standard white light endoscopy and ICG/NIR fluorescence imaging.

- **Powerful, laser-free LED light source for perfect illumination in ICG/NIR and white light endoscopy**

- **Detailed fluorescence imaging regardless of ICG concentration thanks to automatic regulation of the NIR and white light intensity**

- **Latest LED technology reduces service and operating costs thanks to its long service life (up to 15,000 hours)**

- **Virtually silent for a pleasant working environment**

- **Compatible with the core nova operating theater integration system**

Fluorescence spectrum

— Excitation spectrum
— ICG fluorescence

Light intensity [L]

Wavelength [nm]

The absorption spectrum of ICG (indocyanine green) is located in the near-infrared range (NIR). Basically ICG absorbs the light in the range of 600 nm to 900 nm and emits the fluorescence between 800 nm up to 850 nm. Thus, it is possible to detect the fluorescence intraoperatively and to visualize with **System green.**

Profile

greenICG

LAP/THORAX

greenICG

greenICG pure

ENDOCAM ▬▬ Logic 4K

ENDOLIGHT ▬▬ LEDgreen

"A key advantage of System green is that it enables the user to clearly distinguish tissue with a good blood supply when performing an enteroanastomosis."

Priv.-Doz. Dr. med. Dirk Jentschura //
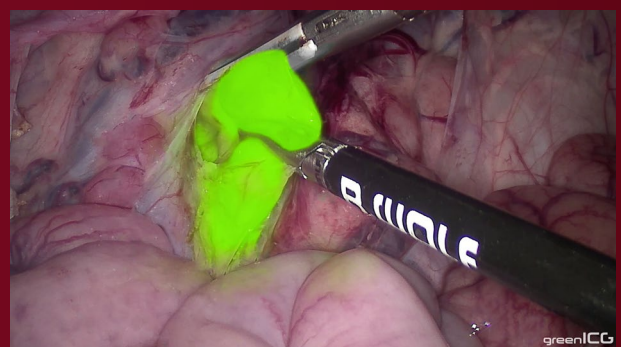*General Surgeon, Mannheim, Germany*

Further information can be found on our website:

richard-wolf.com/systemgreen

greenICG

In greenICG mode, the conventional white light endoscopic image is simultaneously combined with the ICG/NIR image information in real time at the touch of a button. This allows the tissue to be differentiated with a high level of detail and contrast with the usual outstanding image quality.

greenICG

Scan with **RIWO AR**

System green

Groundbreaking fluorescence imaging technology

The components of **System green** are designed with the day-to-day challenges of an operating theater in mind. Thanks to their modular concept, they guarantee efficient, flexible, future-proof use in all departments where laparoscopic procedures are performed.

Logic camera head green

- **For ENDOCAM Logic camera platform**
- **Also suitable for use in white light endoscopy with no limitations**
- **Digital image processing and signal transmission** with dedicated powerful NIR sensor for high fluorescence sensitivity
- **Extremely light and ergonomic** for excellent handling
- **Integrated lens (f = 24 mm)** tailored to use in laparoscopy

ENDOCAM Logic 4K

ENDOCAM Logic 4K enables endoscopic imaging in native 4K/UHD resolution with the simultaneous provision of additional ICG/NIR image information in two different Special Imaging Modes.

- **Richard Wolf Special Imaging Modes:**
  greenICG (white light image with ICG overlay)
  greenICG pure (grayscale image with ICG overlay)
- **High-resolution endoscopic image with crystal-clear 4K/UHD quality**
- **ICG-ready:** Existing devices can simply be upgraded by means of a software update

PANOVIEW ULTRA telescopes

The new fiber design and a particularly bright lens system ensure crystal-clear images and a longer service life.

- **4K/UHD endoscope** for a bright, crystal-clear, razor-sharp image

- **Optimized for ICG/NIR applications**

- **Also ideal for standard white light endoscopy**

- **Natural color visualization** in white light mode as well as in **System green** mode greenICG

"The image quality and the excellent contrast levels in the case of lymph nodes that have not yet been dissected represent a quantum leap forward compared to existing systems."

Dr. med. Uwe Eissler // Chief Physician of Gynecology and Obstetrics, St. Elisabethen-Krankenhaus (St. Elisabethen Hospital), Frankfurt, Germany

Fusion fiber light cables

Fusion fiber light cables meet the highest standards in endoscopy.

- **Extremely high temperature resistance**

- **Much longer service life**

- **Easier to handle** thanks to improved flexibility and steel kink protection

- **Recommended for 4K systems** due to improved efficiency

- **High light transmission** for uniform illumination

greenICG pure

The greenICG pure mode enables specific, high-contrast visualization as well as differentiation of tissue structures, e.g., in the case of lymph nodes and the lymphatic channels. The grayscale visualization enables detailed examination of the key structures.

greenICG

Scan with **RIWO AR**

System green

System overview

Light source

Light source LEDgreen bndl
Comprising:
Light source LEDgreen (5165002),
Patch cable, RJ45 SFTP, 0.5 m
(72325378), Power cable
(2440.03) **51650021**

Camera

Logic 4K Camera Controller bndl
Comprising:
Logic 4K Camera Controller
(5525301), USB handheld remote
control (5525401), power cable
(244003), USB flash memory
32 GB (72321829), HDMI/HDMI
cable, lockable,
3.0 m (103847) **55253011**
For this:
**Logic HD camera head
green** **85525812**

PANOVIEW ULTRA telescopes

**Telescope Ø 10 mm,
WL 305 mm**
0° **8934461**
30° **8934462**
50° **8934463**

**Telescope Ø 10 mm,
WL 440 mm**
0° **89344416**
30° **89344426**
50° **89344436**

Fiber light cable

Fusion fiber light cable bndl

Comprising:
Fiber light cable, projector-side
adapter (8095.07) and endoscope-
side adapter (809509), fibre bund-
le Ø 5.0 mm and
color code gray
2.3 m long **806550231**
3.0 m long **806550301**
3.5 m long **806550351**

Monitors

LCD monitor 4K 31"
4,096 x 2,160 pixels / 17:9,
WxHxD: 754 x 456 x 69 mm,
Weight: 11.8 kg **LMD-X310NB**
or:

LCD monitor 4K 55"
3,840 x 2,160 pixels / 16:9,
WxHxD: 1,265 x 772 x 86 mm,
Weight: 35.2 kg **LMD-X550NB**

Accessories

**Reprocessing basket
for camera head**
(L x W x H)
445 x 200 x 73 mm **38047111**

Specifications subject to change without notice.

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Social Media
richard-wolf.com