

ICG **CONSENS**
ICG/NIR
FLUORESCENCE
CAMERA SOLUTION



The improved vision

ICG/NIR FLUORESCENCE CAMERA SOLUTION



THE IMPROVED VISION

Indocyanine Green is a fluorescent substance visible in near-infrared light. It is useful for the identification of anatomical structures, the tissues vascularization for plasties and flaps in abdominal wall surgery, liver resection, in strangulated hernias and in intestinal ischemia¹, for tumor identification², sentinel node identification and lymphatic mapping in malignant tumors³.

The use of ICG (Indocyanine green) fluorescence imaging has been demonstrated as a tool for the detection and treatment of cancer

as well as for other diagnostics in endoscopic imaging. The ICG/NIR (near-infrared fluorescence imaging) has become an important technique in diagnostics in soft tissue endoscopy. The CONSENS ICG Camera solution provides a state of the art visualization system combining 4K resolution, a laser-free LED light source and NIR technologies in the All-in-One solution.


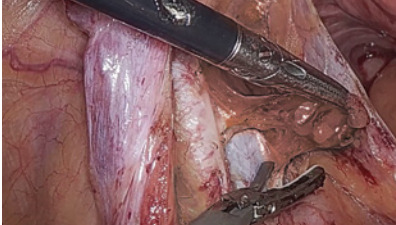
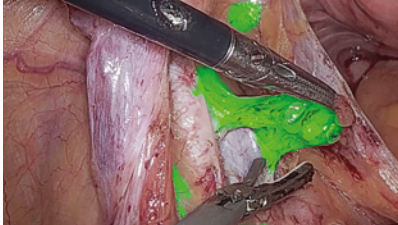
¹ Intraoperative use of indocyanine green fluorescence imaging in rectal cancer surgery: The state of the art
Roberto Peltrini, et al 2014

² The primary application of indocyanine green fluorescence imaging in surgical oncology
Zhang-Yi Dai, et al 2014

³ Indocyanine green (ICG) fluorescence guide for the use and indications in general surgery: recommendations based on the descriptive review of the literature and the analysis of experience
Salvador Morales-Conde, Eugenio Licardie, Isaias Alarcón, Andrea Balla

4K/ICG for advanced visualization

- True 4K UHD resolution enables visualization of anatomical details
- ICG fluorescence can visualize blood flow beyond the limits of white light
- Fusion of 4K and ICG improves depth perception and tissue differentiation
- Real-time overlay supports continuous assessment without workflow interruption

FULL HD	4K	4K + ICG/NIR
		
<ul style="list-style-type: none">■ Established imaging standard■ Reliable image quality for routine procedures■ Limited image detail and depth perception	<ul style="list-style-type: none">■ Four times higher resolution for significantly increased image sharpness■ Improved visualization of anatomical details■ Digital zoom with preserved image quality	<ul style="list-style-type: none">■ Combination of high-resolution imaging and fluorescence information■ Simultaneous display of native and fluoroscopic data■ Additional visual information beyond white light imaging
FULL HD	4K	ICG/NIR

Key aspects in surgery



Tissue perfusion

Visual assessment of tissue vascularization to support viability decisions



Lymphatic mapping

Visualization of lymphatic channels and sentinel lymph nodes



Bile duct identification

Fluorescence cholangiography for clear biliary anatomy



Tumor localization

Support of identification for tumors and resection margins



Critical anatomy visualization

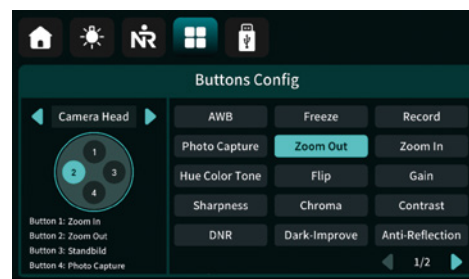
Identification of structures such as the ureter to support surgical safety

ICG/NIR FLUORESCENCE CAMERA SOLUTION

Engineered for focus in surgery

CONSENS Dual Chip Camera Head

- Dual CMOS Technology 4K-UHD & NIR
- Resolution 3840 x 2160
- 4 programmable buttons
- Camera weight < 350g with ICG TV adapter
- Fixed cable length 2.8m
- Splash-proof design
- C-mount



CONSENS ICG/NIR-compatible TV adapter

- Parfocal TV adapter f14-32
- Focus and zoom ring
- For standard ocular, lockable
- Axial rotation of the optic
- C-mount

Key benefits: designed for seamless surgical imaging



Native UHD CMOS sensor

High-resolution surgical imaging



Dedicated ICG/NIR CMOS sensor

Reliable 4K and ICG/NIR visualization



Compact Design

Lightweight and ergonomic components



Four-button control concept

Intuitive integration into the surgical workflow

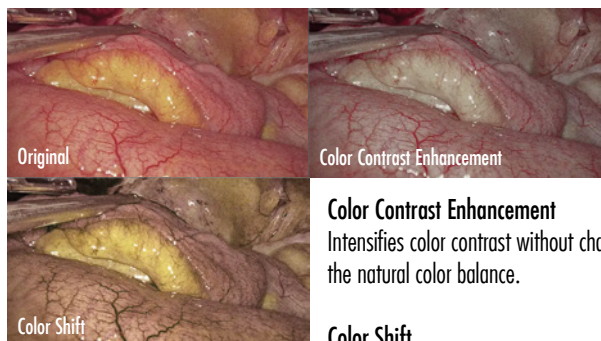
Platform for advanced surgical imaging

- Compact integrated solution
4K/NIR Camera unit with Dual LED/NIR light source (laser-free)
- One-touch Fusion
instantly overlay fluorescence on the live white-light view
- 4 Display modes
Fullscreen, Splitscreen, Fusion or PIP
- 2 video source PIP
integrate your X-Ray, Ultrasound
- Recording of 4K Videos and pictures
internal Flash drive or USB Port



Optimized filters for image processing

- Comprehensive set of image parameters
multiple adjustable parameters including brightness, contrast, sharpness and color settings
- Enhanced image filters
improved differentiation of tissue and blood-related structures

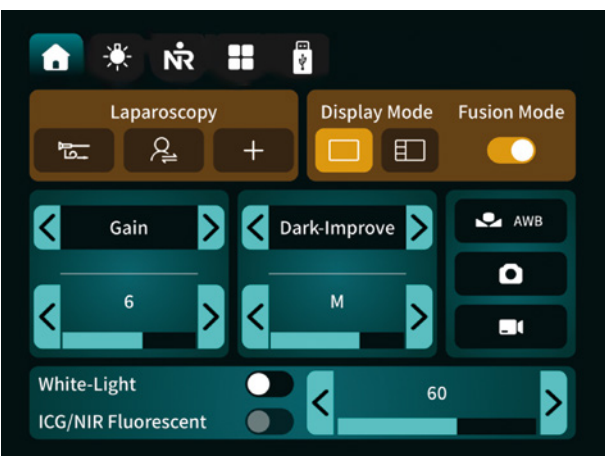


Color Contrast Enhancement

Intensifies color contrast without changing the natural color balance.

Color Shift

Reduces red tones in the image and intensifies the green-blue spectral components.



Efficient parameter navigation

- 8.4" capacitive LCD touchscreen
- Direct access to key parameters from the home screen
- One-Touch: White balance, Recording, Fusion
- Flat menu structure with minimal navigation depth
- Factory presets and customizable user profiles
- User-defined parameters can be saved and deleted

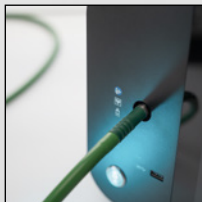
ICG/NIR FLUORESCENCE CAMERA SOLUTION

The combination of LED light and 4K camera in one device

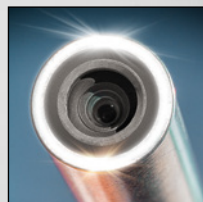
- Camera, illumination and recording combined in a single control unit
- One-click switching between white light, ICG/NIR and fusion visualization modes
- Integrated LED white light and NIR illumination laser-free technology
- Ergonomic camera head and centralized control designed for focused surgical handling
- Native 4K imaging provide ultra-high-definition visualization



Multifunctional camera head



High transmission light cable



Laser-free LED illumination



8.4" LCD capacitive touchscreen



4K

ICG/NIR FLUORESCENCE CAMERA SOLUTION



CONSENS ICG 4K Camera and light source
including camera head

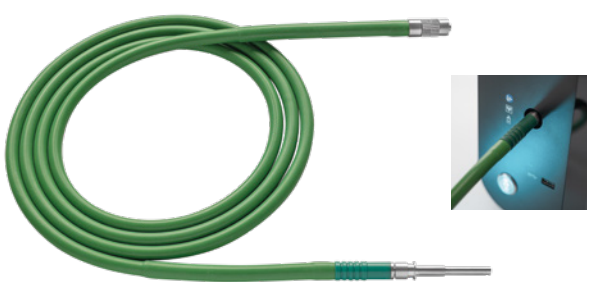
300-700-100



CONSENS ICG 4K Camera Head only
with fixed 2.8m cable

300-700-110

ACCESSORIES (for ICG/NIR use)



CONSENS ICG/NIR LED Light Cable
Ø 4.8mm, 2300mm, with adapter

250-148-230



CONSENS TV-Coupler (compatible ICG/NIR)
f14 - 32, C-mount

250-015-040

ICG/NIR 4K LAPAROSCOPES



Ø 10 mm	0° DIRECTION OF VIEW	
	330mm working length 407mm overall length	300-700-400

30° DIRECTION OF VIEW	
330mm working length 407mm overall length	300-700-430

Ø 5.5mm	0° DIRECTION OF VIEW	
	300mm working length 359mm overall length	300-755-400

30° DIRECTION OF VIEW	
300mm working length 359mm overall length	300-755-430

4K LAPAROSCOPES



0° DIRECTION OF VIEW

330mm working length	300-100-400
405mm overall length	
450mm working length	300-200-400
532mm overall length	

30° DIRECTION OF VIEW

330mm working length	300-100-430
405mm overall length	
450mm working length	300-200-430
532mm overall length	



0° DIRECTION OF VIEW

300mm working length	300-155-400
356mm overall length	
424mm working length	300-255-400
480mm overall length	

30° DIRECTION OF VIEW

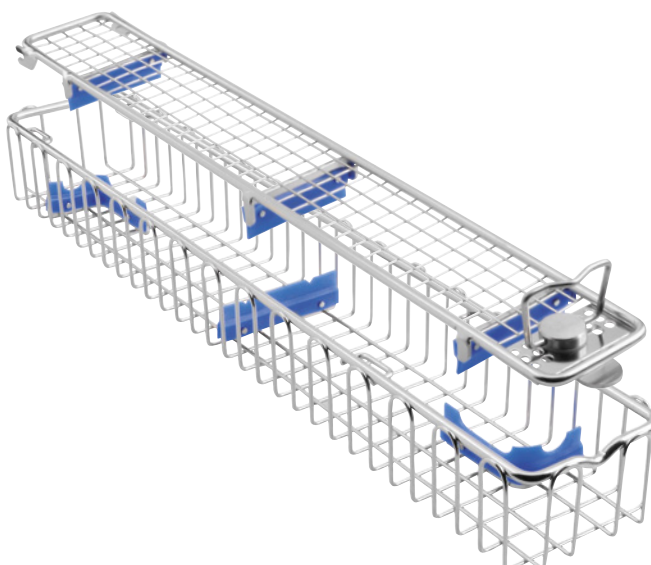
300mm working length	300-155-430
356mm overall length	
424mm working length	300-255-430
480mm overall length	

600-462-052

Endoscopes	max. 2
Endoscope length	max. 350mm
Dimensions	460 x 80 x 55mm

600-670-052

Endoscopes	max. 1
Endoscope length	max. 550mm
Dimensions	670 x 80 x 55mm



ICG/NIR FLUORESCENCE CAMERA SOLUTION

4K MONITOR



- 4K ultra HD picture quality
- Maximum brightness up to 1000cd/m²
- Multi-window display (PIP and POP)
- Front panel protective cover
- Conforms to the EMC test standards

32" 4K Monitor

300-001-031

CONSENS CART



CONSENS Cart Essential
with monitor holder, 3 shelf, 1 handle
1 drawer, ocular holder

300-002-920

ACCESSORIES (for CONSENS Cart)

Additional shelf
Keyboard holder
Gas cylinder holder
Cup camera holder
Rear handles
Cable winder
Light cable holder
Rear panel
Flexible endoscope holder
IV pole

Technical Data

Light	Integrated white light + near infrared (NIR/ICG) LED laserfree
Fluorescence	Fusion Mode (overlay)
	Split Screen
	Full Screen
	Positive/negative Fluorescence modes
	Gradient intensity & Grayscale Fluorescence modes
	Overlay color customizable
	Fluorescence wavelength 785nm
Image Algorithms	DeHighlight - homogenous brightness
	DNR - Dynamic Range
	Shadow
	RDE - Red Dynmaic Enhancement (Blood filter)
	Defog
	Detail
	Demoire
	Chroma
Dual Picture Mode	Spectral Filter
	Original image and filter image view on the same monitor via split screen
	Record both endoscopy sources with one camera
Zoom in/out	5 Display modes, E-POP/PIP, etc
	x 5.0 Zoom in
	x 0.5 Zoom out
Touch Display	8" LCD Display
Camera Buttons	4
Recording	programmable on the touch display
	USB, supports 8TB USB input
	4K recording and capture in real-time
Output interface	optional build-in SSD up to 4TB
	4K output x 4: HDMI, 12G-SDI, 3G-SDI, DP
	FHD output : DVI, 3G-SDI
Processor	SD output : S-Video, CVBS
	8-core



350 x 220mm



500mm



Weight: 21kg



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