

LEMKE.

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HD CAMERAS

CLASSIC LINE



autoclavable

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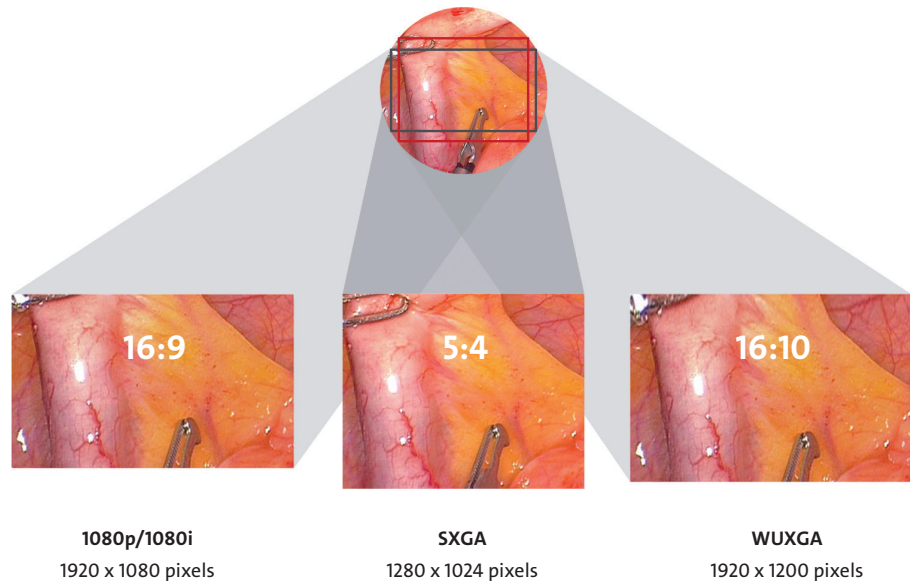
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enquiry@omsurgicals.com

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Choose your HD format

In terms of image resolution High Definition video technology has been established in the field of Minimally Invasive Surgery. The switch from the classic 5:4 monitor format to the latest 16:9 or 16:10 widescreen monitors is ongoing. Thus customers find different HD video formats on the market, each with individual benefits and pitfalls for endoscopic imaging. The LEMKE Cameras offer all formats, so users are free to select their personally preferred format.



16:9 – format with the highest impact on the video market HD video standards 1080p and 1080i

5:4 – the ideal video format for Minimally Invasive Surgery

**16:10 – optimum format for latest medical grade monitors
HD video standard WUXGA (1920 x 1200 pixels)**

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Video modes

The HDC907*optimum* supports 1080i and 1080p.

Progressive scan (p) is a method transmitting moving images in which all the lines of each frame are drawn in sequence. Benefits of this technology are higher vertical resolution video images.

It is the ideal mode for LCD monitors, but unfortunately not supported by current HD capture systems, which are limited to 1080i.

With the **interlace (i)** technology only every second horizontal line per frame is transmitted.

Two serial complementary images in sequence deliver the necessary visual information needed for a complete video image. Pitfalls of this technology are several “interlaced” effects, e. g. motion artifacts, interline twitter and blurring.



Interlace

Progressive scan

Intuitive user guidance via optimized on screen display

- Appropriate for all MIS applications guaranteeing excellent image quality
- Seven selectable application-optimized camera settings
- Ten individually adjustable user settings

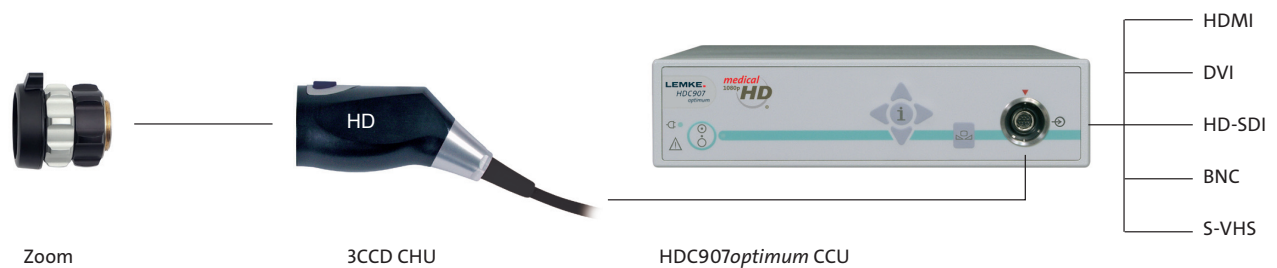
Latest output options

- Digital output of image data for modern capture systems and clinical networks
- 2x HDMI/1x HDMI*, 1x DVI, 1x HD-SDI



*depends on model variation

From input to output: the HD chain



Videocoupler Zoom

- Focal length: 16-34 mm
- Parfocal*
- Brilliant optic
- Quick coupler
- Waterproof
- Autoclavable
- C-mount
- Ergonomic Design



Videocoupler Zoom

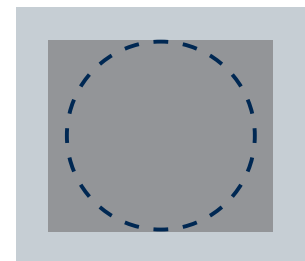
One coupler for optimum indication settings



LAP



ENT



ARTHRO, HYS, URO

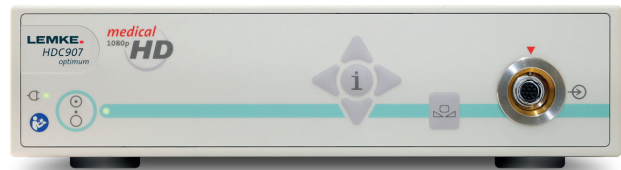
*A parfocal lens is a lens that stays in focus when magnification/focal length is changed

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HDC907*optimum*

3CCD Medical-HD® Camera

- Fully digital 3CCD Camera Head
- Optional: autoclavable Camera Head
- Moderate operating temperature
- Exchangeable camera cable
- C-mount thread for easy coupler exchange and free choice of couplers



Devices

Item No.	Description
HDC907-L01	HDC907 <i>optimum</i> Control Unit
HDC907-L02	HDC907 <i>optimum</i> Camera Head PAL or NTSC (non-autoclavable)
HDC907-L03	HDC907 <i>optimum</i> Camera Head PAL or NTSC (autoclavable)

Accessories

Part No.	Description
ZOOM-L01	Videocoupler Zoom, Focal length = 16-34 mm, (LAP, ARTHRO, HYS, URO, ENT), autoclavable
URO-L01	URO-Videocoupler, 18 mm, 90°
CCB-L02	Camera cable, black

Power supply cord and further accessories available upon request.

Technical Data		HDC907 <i>optimum</i>
Camera Head Unit (CHU)	Medical-HD® 1080p 3CCD Camera Head	
Video standards	SXGA	1280 (H) x 1024 (V), horizontal resolution 1024 lines
	WUXGA	1920 (H) x 1200 (V), horizontal resolution 1200 lines
	1080p	1920 (H) x 1080 (V), horizontal resolution 1080 lines
Sensitivity	1.5 lux	
Minimum illumination	3 x 0.9 lux	
AGC-Max	+18 dB	
Operation	2 programmable remote head keys (user defined settings with 10 variable key functions)	
Safety	Waterproofed according to IEC529, classification IPX7, completely soakable with attached EFO and camera cable (with screwed on sealing cap), Classification CF (Degree of protection against electric shock: applied part of type CF), Isolation resistance test max 500 V DC between applied part and CCU housing, autoclavable	
Dimension	Ø 40 mm, L = 120 mm/Ø 1.57 in, L = 4.72 in (length incl. zoom and quick coupling)	
Weight	210 g/7.4 oz (incl. zoom and quick coupling)	
URO-Videocoupler	f = 18 mm, easy focusing – focus ring can be operated from left or right	
Zoom objective	f = 16-34 mm	
Digital zoom	2 x	
Quick coupling	Fits rigid endoscopes (ocular), ISO eye piece compatible (ISO 8600-1)	
Camera cable	3 m/9.8 ft highly flexible special cable, waterproof, replaceable w/o special tools short circuit proof	
Camera Control Unit (CCU)	Digital signal process, +6 dB with interference suppression, continuous shutter: 1/50 to 1/16000 s, automatic signal amplification up to 400 %, automatic system check routine, setup menu for all settings, automatic white balance with digital long time memory. COLORAMA color adjustments, measuring areas SPOT and INTEGRAL, adjustable video	
Signal/Noise ratio	> 62 dB	
Horizontal resolution	1024 lines (SXGA), 1080 (1080i/1080p), 1200 (WUXGA)	
Operation	Easy operation with membrane key: ON/OFF, WHITE BALANCE, 3 measuring areas selectable (SPOT large/small, INTEGRAL), test pattern, video level, manual COLORAMA color fine balance	
Outputs	1x HD-DVI, 2x HDMI/1x HDMI*, 1x HD-SDI, 2x BNC (FBAS), 2x Y/C (S-VHS)	
Interfaces	PC Interface RS 232 C, Remote (3.5 mm/1/8 in stereo jack)	
Mains	Medical global power adapter 100-240 V AC +/-10 %, 50-60 Hz	
Current consumption	Max. 400 mA	
Classifications	Protection Class I, Type CF, IP20	
Fuses	2 x 250 V, T 0.8 A	
Dimensions (w x h x d)	267 x 69 x 360 mm/10.5 x 2.7 x 14.2 in	
Weight	3.9 kg/8.6 lb	

*depends on model variation