



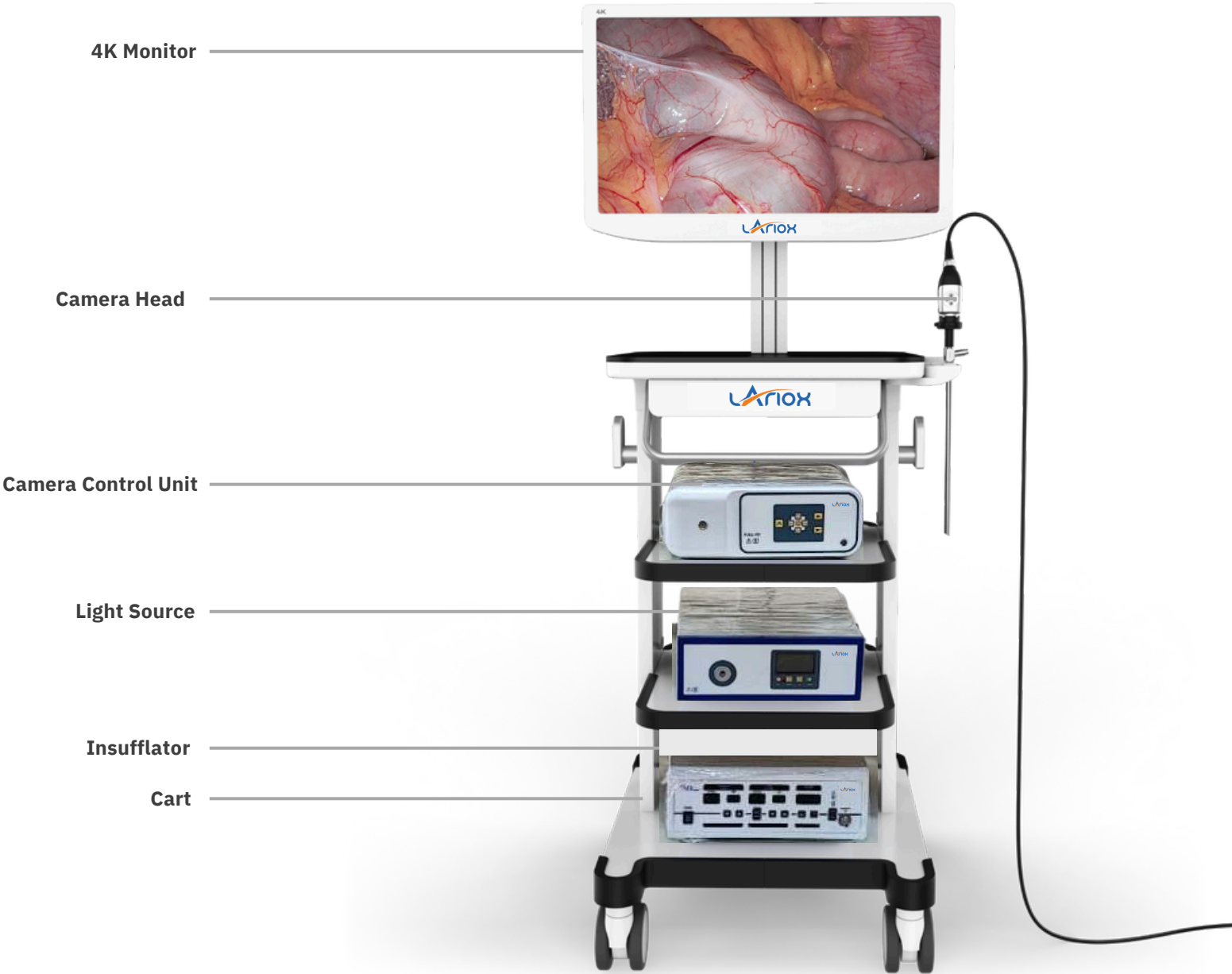
# 4K ENDOSCOPE SYSTEM

UNMATCHED VISUALIZATION TO ADVANCE YOUR SURGERY DELICACY



# 4K ENDOSCOPE SYSTEM

Our 4K Endoscope System offers enhanced image quality, improved surgical visibility and a user friendly experience. Leveraging our unique 4K technologies and advanced algorithms, including autofocus and fog-free functions, this system delivers ultra-high-definition visuals, a wide color spectrum and expanded field of view for Minimally Invasive Surgery. It empowers surgeons to precisely identify lymphatic fat , nerve, membrane structures and crucial blood vessels, thereby enhancing surgical safety, precision and reducing postoperative complications.



# 4K ULTRA HIGH DEFINITION CAMERA



## PM-CAM-4K

### HIGHLIGHTS:

- Extended color space BT2020
- Ultra-High Definition of 3840 x 2160
- Optional Built-in video & still image recording
- 10 USER Presets for surgical application
- 4 programmable head keys
- Smoke reduction, Digital zoom, Freeze function



# 4K Ultra High Definition PM-CAM-4K

Our 4K Ultra High Definition Camera is an advanced endoscopy device of the latest generation with excellent and outstanding image quality suitable for most challenging requirements of modern day Endoscopy applications. This unique system comprises of smoke reduction, Optional built-in recording system and 4 programmable head keys. This system shall proudly assist you to bring the benefits of ultra-modern endoscopy imaging to your patients.

FEATURES:	SPECIFICATIONS:		
<ul style="list-style-type: none"> <li>• Optional In-built video and still recording.</li> <li>• 4 Programmable camera head keys.</li> <li>• 10 pre-set modes for multiple users &amp; various surgical specialties.</li> <li>• Digital Zoom.</li> <li>• Freeze mode for teaching purpose.</li> <li>• Smoke reduction.</li> <li>• Suitable for all commonly used rigid and flexible endoscopes.</li> <li>• Full HD and HD-SDI for transmission.</li> </ul>	<table border="1"> <tr> <td>Camera Head</td> <td>3 x 1/3" CMOS immersible sensor</td> </tr> </table>	Camera Head	3 x 1/3" CMOS immersible sensor
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## Ordering Data

**PM-CAM-4K:** Digital 3-CMOS UHD Camera Console, Camera Cable with head, HDMI-HDMI Cable, Power Cord, User Manual.

**PM-CAM-4K-USB:** Digital 3-CMOS UHD Camera Console With inbuilt USB recording system, Camera table with head, HDMI-HDMI-Cable, Power Cord, User Manual.





# FULL HIGH DEFINITION CAMERA WITH RECORDING



## PM-ECS-FHD-111-EXR

### **FULL** HD Resolution with Progressive scan

- Natural color reproduction for strain free working
- Perfect sharpness for distinguishing between tissues
- Built in 10x Digital Zoom without motion artifact
- Adaptable to all kind of Medical Endoscopes
- Recording facility and image capturing
- Programmable Camera head keys
- Preset fibre scope setting for anti-moire effect
- Multiple users settings



# Full High Definition Camera with Recording

## PM-ECS-FHD-111-EXR

PM-ECS-FHD-111-EXR is a CMOS based Full High Definition video camera of the latest generation with excellent image quality and outstanding natural color reproduction for professional requirements. It can be used for every endoscopic application with high demands.

FEATURES:	SPECIFICATIONS:																								
<p><b>Progressive Scan</b> - Creates a picture signal with double the scan lines of a conventional interlaced picture to create a noticeably sharper image. It offers higher picture quality and eliminate virtually all motion artifacts.</p> <p><b>Freeze Function</b> - The image on the screen can be frozen via push button on the camera head. ON-Screen-Menu Camera settings like color, brightness, gain, gamma etc. can be made in the On-Screen-Menu. Settings are stored in memory. E-flip &amp; Mirror Image</p> <p><b>Facility to change</b> the direction of the image from left to right horizontally and from upward to downward vertically to get the view of anatomy. This has been made possible by our unique E-flip and mirror image functions.</p> <p><b>E-flip &amp; Mirror Image</b> - Facility to change the direction of the image from left to right horizontally and from upward to downward vertically to get the view of anatomy. This has been made possible by our unique E-flip and mirror image functions.</p>	<table border="1"> <tr> <td>Video System</td> <td>: Progressive scan</td> </tr> <tr> <td>Resolution</td> <td>: Full HD 1920 x 1080 P</td> </tr> <tr> <td>Aspect Ratio</td> <td>: 16:9</td> </tr> <tr> <td>S/N</td> <td>: 54 dB</td> </tr> <tr> <td>Minimal subjective Sensitivity</td> <td>: 0.5 Lx</td> </tr> <tr> <td>Outputs</td> <td>: 1 x DVI 1 x HDMI 1 x HD-SDI 1 x Video Composite</td> </tr> <tr> <td>Settings</td> <td>: On-Screen-Menu 1 User Setting Storable</td> </tr> <tr> <td>Pre-Settings</td> <td>: For various endoscopy specialties</td> </tr> <tr> <td>Power Supply</td> <td>: 100-240 VAC</td> </tr> <tr> <td>Head</td> <td>: C-Mount thread, immersable, four push-buttons for remote functions, flexible cable : 3 meter</td> </tr> <tr> <td>Class Type</td> <td>: 1/BF</td> </tr> <tr> <td>Manufactured &amp; Tested Acc.</td> <td>: IEC 601-1 EN 60601-1 93/42 ECC</td> </tr> </table>	Video System	: Progressive scan	Resolution	: Full HD 1920 x 1080 P	Aspect Ratio	: 16:9	S/N	: 54 dB	Minimal subjective Sensitivity	: 0.5 Lx	Outputs	: 1 x DVI 1 x HDMI 1 x HD-SDI 1 x Video Composite	Settings	: On-Screen-Menu 1 User Setting Storable	Pre-Settings	: For various endoscopy specialties	Power Supply	: 100-240 VAC	Head	: C-Mount thread, immersable, four push-buttons for remote functions, flexible cable : 3 meter	Class Type	: 1/BF	Manufactured & Tested Acc.	: IEC 601-1 EN 60601-1 93/42 ECC
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<div style="display: flex; justify-content: space-around;"> <div data-bbox="148 1529 288 1740"> <p><b>E-FLIP</b></p> </div> <div data-bbox="474 1554 687 1704"> <p><b>MIRROR IMAGE</b></p> </div> </div> <p><b>Optional</b> - Focusable Couplers of various focal lengths, Optical Zoom Lens, Medical Grade Monitors, Light Sources etc.</p>																									

# Full High Definition 3 Chip Endo Cameras

## ECS-777



Optional:  
USB based recording  
Keyboard (waterproof)  
Foot Switch

**PM-ECS-777-FULL-HD is a HD-Camera of the latest generation:**

### Full resolution of 1920 x 1080

True HD Format of 16:9 compatible to 16:9 (16:10) HD TV/ LCD Monitors

### Progressive Scan

Creates a picture signal with double the scan lines of a conventional interlaced picture, to create a noticeably sharper image. It offers higher picture quality and eliminates virtually all motion artifacts.

### Multilingual Menu

Camera settings (like color, brightness, area) can be made in the On-screen-menu. Settings are stored in memory. This menu is available in different languages: English, Deutsch, French, Spanish, Italian, Portuguese

### Character Generator

Creates- on-screen-information on all video outputs by using standard PS2 keyboards

### 2.5 Digital Zoom

Up to 2.5x digital zoom via push buttons

### Freeze Function

The image on the screen can be frozen via push-buttons on the camera head or an optional footswitch

### Push Buttons

Via multifunctional push- buttons on the camera head it is possible to remote more than 2 camera functions.

### Technical Data

<b>Video System</b>	progressive scan with 50 or 60 Hz
<b>CCD Sensor</b>	3 x 1/3 CCD
<b>Video Resolution</b>	> 1000 TV-lines horizontal
<b>Aspect Ratio</b>	16:9
<b>S / N</b>	55 db
<b>Resolution</b>	Full HD 1920 x 1080 pixel
<b>Minimal Subjective Sensitivity</b>	< 3lx
<b>Outputs Digital Out</b>	2 x HD SDI 1 x HDMI / DVI
<b>Analog Out</b>	1 x Y-Pb-Pr/ RGB 1 x Y/C (Pal/ NTSC) 1 x CVBS (PAL/ NTSC)
<b>Settings</b>	On-Screen-Menu 3 user setting storable
<b>Power Supply</b>	100-240 VAC 353x103x253
<b>Dimensions ( W X H X D ) CCU</b>	Head 168 g 1/BF
<b>Class / Type</b>	

### Order Details

<b>PM-ECS-777-Full-HD</b>	Digital 3-CCD/CMOS HD Camera
<b>Including</b>	Mains Cable, HDMI-DVI-Cable, RGB Cable, Y/C, BNC Cable User Manual

### Order Details

<b>PM-ECS-777-Full HD-VR (with recording)</b>	Digital 3-CCD/CMOS HD Camera
<b>Including</b>	Mains Cable, HDMI-DVI-Cable, RGB Cable, Y/C, BNC Cable User Manual

### Optional Accessories

<b>PM-TV-28-HD</b>	HD-TV-Coupler f= 28 mm
<b>PM-TV-14-HD</b>	HD-TV-Coupler f= 14mm

# LED LIGHT SOURCE

## PM – LL – 1000

The newest LED light source is a response for needs of demanding medical market. Its unquestionable advantage over traditional Halogen and Xenon Light Sources are much lower power consumption, longer lifetime, reduced IR radiation and lower price while keeping the light intensity at the level of 300 W Xenon Light Source. The lifetime of a LED is guaranteed up to 50000 hours. Its additional virtue is silent work.

### Features and Advantages

- ✓ Digital Display for Intensity
- ✓ Digital Hour Meter for LED Life
- ✓ Intensity Control from 0-100
- ✓ Standby Mode for More Life of LED



Technical Features	
Type of LED	Ultra-high power Module optically focused
LED Geometry	focusing reflector with Lenses
Color Temperature	6000°K +/-5%
Standard Connection Plug For Light Guide Cables	Optional and upon Request
Life Time Of Lamp / LED	up to 50.000 hours
Line Voltage	90-263V AC
Frequency	50/60 Hz
Dimensions (W X D x H)	330x306/96 (mm)
Weight	5.6 Kg
Ambient temperature	+10°C- +40°C during Storage
Max. relative air humidity	90% during storage
Classification	Class 1 / BF
Casing Safety Standard	IP XO- not protected Against ingress of Water (Falls)
CE Standard	Comply with the European directive 93/42/EEC

# LED LIGHT SOURCE

## PM – LL – 2000

The newest Ultra Bright LED light source is a response for demand of high light intensity for optimum Image resolution of Ultra High Definition 4K Camera systems. Ultra-bright intensity module of LED has unquestionable advantage over traditional LED Light Sources. It has low power consumption, long lifetime, reduced IR radiation while keeping the light intensity at the level of 300 W Xenon Light Source. The lifetime of a LED is guaranteed up to 50000 hours. Its additional virtue is silent work.

### Features and Advantages

- ✓ Digital Display for Intensity
- ✓ Digital Hour Meter for LED Life
- ✓ Intensity Control from 0-100
- ✓ Standby Mode for More Life of LED



**New 4K UHD Compatible**

Technical Features	
<b>Type of LED</b>	Ultra-bright LED Hybrid Module optically Focused
<b>LED Geometry</b>	focusing reflector with Lenses
<b>Color Temperature</b>	6000°K +/-5%
<b>Standard Connection</b>	Optional and upon Request
<b>Plug For Light Guide Cables</b>	
<b>Life Time Of Lamp / LED</b>	up to 50.000 hours
<b>Line Voltage</b>	90-263V AC
<b>Frequency</b>	50/60 Hz
<b>Dimensions (W X D x H)</b>	330x306/96 (mm)
<b>Weight</b>	5.6 Kg
<b>Ambient temperature</b>	+10°C- +40°C during Storage
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