LABOMED INC.

LB-1915

Surgical Microscope for ENT

The LB-1915 surgical surgical microscopes for ENT are adopting the combinative structure which is in fashion internationally, are suitable for the examination and surgery in the ENT and ophthalmology.

The main microscope can be equipped with straight, inclined or tiltable binoculars on the basis of different usages. It is also with manual focusing system or motorized focusing system. The retinal protection device and red reflex module are very useful in the ophthalmic operation. In order to demonstrate or store the document, the beam splitter, observer's monocular and adaptor for CCD camera or still camera are for option.

Features

- With full range of spare parts, and flexible combination, it is suitable for examination and surgeries in several kinds of fields.
- High-contrast image, great depth of field and excellent stereo effect.
- 5-step drum magnification changer, different working distance for options.
- The main microscope can be inclined back & forth and right & left, and move up & down.
- The counter-balanced spring arm, easy for adjustment.
- Co-axial cold light illumination, high intensity, no heating in the operation surface.

SPECIFICATION

MICROSCOPE
Binoculars Straight: f'=160mm
Objective: f'=300mm
Eyepiece: 12.5x, high-eyepoint, wide angular, pupil exit distance 21mm
Diopter adjustment: -5D to + 5D
Magnification changer: 5 steps: 0.4x, 0.6x, 1x, 1.6x, 2.5x
Total magnifications: 2.8x, 4x, 7x, 11.5x, 17x
Visual field: 80mm to 12.5mm
Interpupillary distance: 55mm to 75mm
Focusing: Micro-focusing manual 40mm or motorized pedal operated
Working distance, 295mm

Accessories, Camera and LCD are optional

ILLUMINATION
Type: Coaxial illumination by optical light-guide system
Cold light source: Halogen lamp, 15V/150W, twin bulbs
Illumination control: 3 steps
Field of illumination: 80mm
Power supply: AC 110V/220V - 220W
Light Intensity: 80,000 LUX
Filter: Blue, Green

ARM STAND

Type: Pantographic arm, floorstand
Range: 1210mm(1st arm 320mm, 2nd arm 605mm, 3rd arm 170mm)
Rotation angle: 270 degree
Elevation stroke: 350mm
Base size: 600mm x 560mm
Weight: 80 KGS

ACCESSORIES

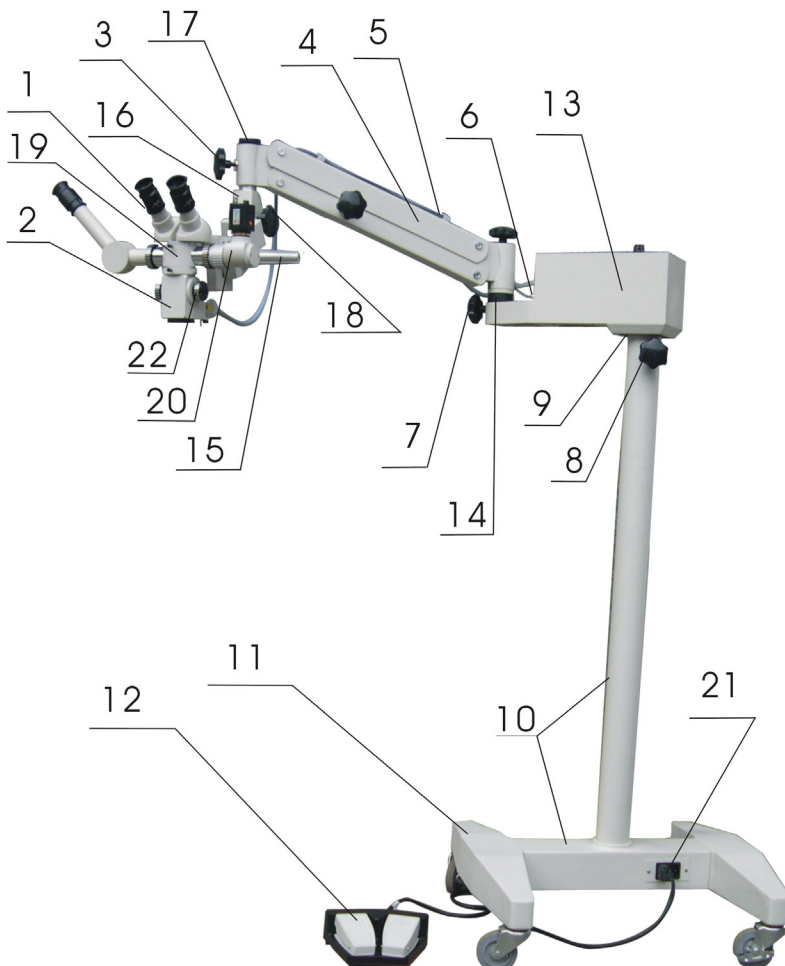Binoculars: 0-60 degree inclinable binoculars f'=160mm
Objective: f'=250mm, 350mm, 400mm
Beamsplitter: dismountable
Adaptor for CCD Camera: f'=65mm

Parts

1. binoculars
2. main microscope
3. lock hand-wheel
4. counter-balanced arm
5. optic fiber cable
6. electric cable and it's connector

7. fixing hand-wheel
8. lock hand-wheel
9. connecting part
10. column and bar
11. flank base
12. pedal control switch
13. cold light source arm
14. connecting screw and washer
15. inclination handle
16. connecting block
17. connecting hand-wheel
18. hand-wheel
19. beam splitter
20. adaptor for CCD camera
21. connectors for power supply and pedal control switch
22. magnification changer wheel

LC-8 Sony IMX185(C) 1/1.9"(7.2x4.5) C-mount WIFI+HDMI CMOS Camera

LC-8 Sony IMX185(C) 1/1.9"(7.2x4.5) C-mount WIFI+HDMI CMOS Camera has multiple interfaces (HDMI+WIFI+SD card) CMOS cameras and it adopts ultra-high performance Sony CMOS sensor as the image capture device. HDMI+WIFI are used as the data transfer interface to HDMI display or computer.

For HDMI out, The XCamView software will be loaded and a camera control panel and toolbar are displayed on the HDMI screen, in this case, the USB mouse can be used to control the camera, browse and compare the captured image, play back the video.
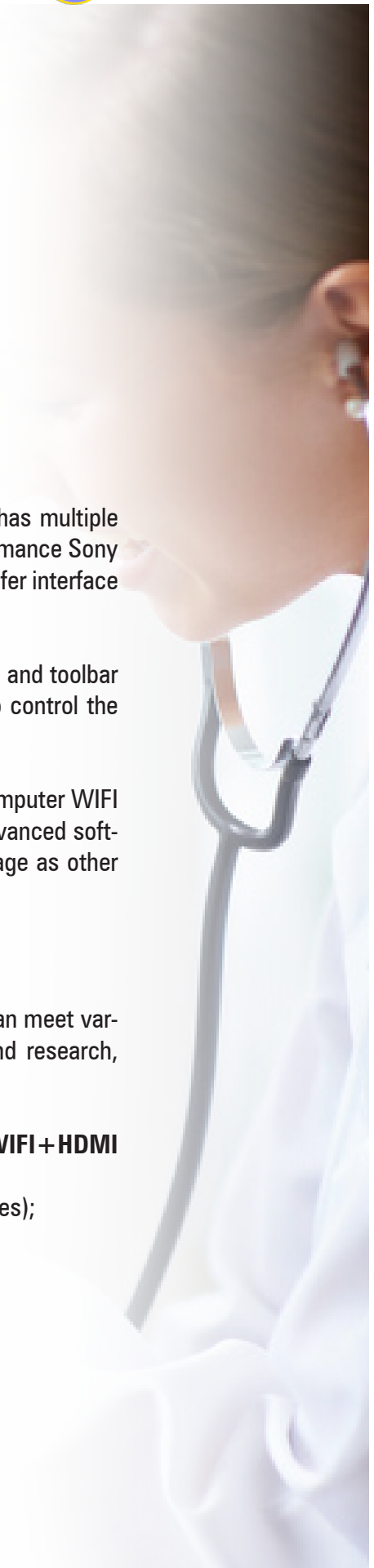
For WIFI out, unplug the mouse and plug in the USB WIFI adapter, connect the computer WIFI to the camera, then the video stream can be transferred to computer with the advanced software ImageView. With ImageView, you can control the camera, process the image as other USB series camera.

APPLICATION

LC-8 Sony IMX185(C) 1/1.9"(7.2x4.5) C-mount WIFI+HDMI CMOS Camera can meet various applications and can be widely used in industrial inspection, education and research, materials analysis, precision measurement, medical analyses etc.

The possible application of **LC-8 Sony IMX185(C) 1/1.9"(7.2x4.5) C-mount WIFI+HDMI CMOS Camera** is as follows:
1. Scientific research, education (teaching, demonstration and academic exchanges);
2. Digital laboratory, medical research;
3. Industrial visual (PCB examination, IC quality control);
4. Medical treatment (pathological observation);
5. Food (microbial colony observation and counting);
6. Aerospace, military (high sophisticated weapons).

FEATURES

The **LC-8 Sony IMX185(C) 1/1.9"(7.2x4.5) C-mount WIFI+HDMI CMOS Cameras**' basic characteristic is as follows:

1. All in 1(HDMI+WIFI) C-mount camera with Sony high sensitivity CMOS sensor;

2. For HDMI application, with built-in multiple-language XCamView software. The camera characteristic can be controlled by XCamView through the USB mouse. The other basic processing and choosing can also be realized by the XCamView.;

3. 1920 × 1080 (1080P) resolutions to match the current high-definition displayer on the market; Support plug and play application;

4. For HDMI application, 2.0M resolution image(1920*1080) can be captured and saved for browsing; For video, 1080P video stream(asf format) can be captured and saved;

5. With the USB WIFI adapter, the **LC-8 Sony IMX185(C) 1/1.9"(7.2x4.5) C-mount WIFI+HDMI CMOS Camera** can be used as WIFI camera, the ImageView/ImageLite advanced image processing software is used to view the video and capture image, support plug and play application;

6. Ultra-Fine color engine with perfect color reproduction capability(WIFI);

7. With advanced video & image processing application ImageView, which including professional image processing such as 2D measurement, HDR, image stitching, EDF(Extended Depth of Focus), image segmentation & count, image stacking, color composite and denoising(USB).

CAMERA SPECIFICATION

Model	LC-8
Sensor & Size(mm)	Sony IMX185(Color) 1/1.9"(7.2x4.5)
Pixel(μm)	3.75*3.75
G Sensitivity	1120mv with 1/30s
Dark Signal	0.15mv with 1/30s
FPS/Resolution	60/1920*1080(HDMI) 25/1920x1028(WIFI)
Binning	1x1
Exposure	0.06ms～918ms

Interface & Button Functions

USB	USB Mouse/USB WIFI Adapter
HDMI	HDMI Out
DC12V	12V Power in
SD	SD Card Slot
ON/OFF	Power On/off Switch
LED	Power Indicator

Other Specification for HDMI Out

UI Operation	With USB Mouse to Operate on the embedded XCamView
Image Capture	JPEG Format with 2M Resolution in SD Card(8G)
Video Record	ASF Format 1080P 30fps in SD Card(8G)
Camera Control Panel	Including Exposure, Gain, White Balance, Color Adjustment, Sharpness and Denoising Control
Toolbar	Including Zoom, Mirror, Comparison, Freeze, Cross, Browser Function, Muti-language and XCamView Version Information

Other Specification for WIFI Out

UI Operation	ImageView or ImageLite on Windows/Linux/OSX/ Android Platform
WIFI Performance	802.11n 150Mbps; RF Power 20dBm(Maximum)
Maximum Connected Devices Distance)	3～6(According to the Environment and Connection
White Balance	Auto White Balance
Color Technique	Ultra-FineTM Color Engine (WIFI)
Capture/Control API	Standard SDK for Windows/Linux/Mac(WIFI)
Recording System	Still Picture or Movie (WIFI)

Software Environment (for USB2.0 Connection)

Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 8.1/10(32 & 64 bit)
	OSx(Mac OS X)
	Linux

PC Requirements

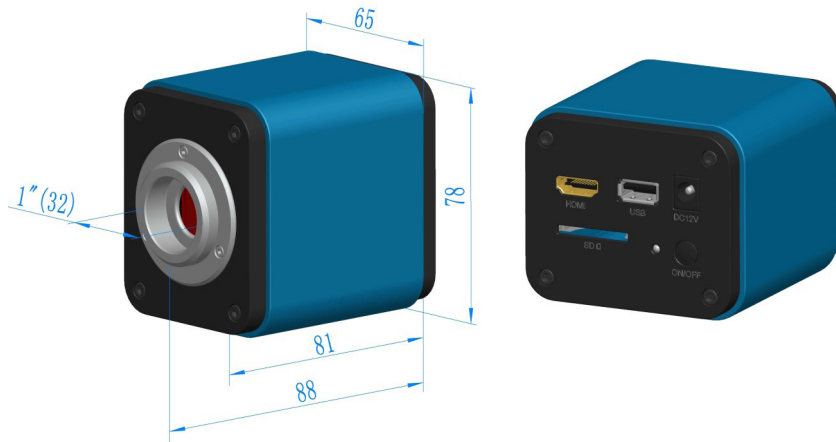|	
CPU:	Equal to Intel Core2 2.8GHz or Higher
Memory:	4GB or More
USB Port:	USB2.0 High-speed Port(As Power Only, not as the USB Data Transfer)
Display:	19" or Larger
	CD-ROM

Operating Environment

Operating Temperature	-10～ 50 (in Centidegree)
Storage Temperature	-20～ 60 (in Centidegree)
Operating Humidity	30～80%RH
Storage Humidity	10～60%RH
Power Supply	DC 12V/1A Adapter

XCamView UI for Mouse Control

DIMENSION

PACKING INFORMATION

Standard Packing List

A   Gift box : L:25.5cm W:17.0cm H:9.0cm (1pcs, 1.43Kg/ box)

B   LC-8 Camera

C   Power Adapter: Input: AC 100~240V 50Hz/60Hz, Out: DC 12V 1A

American standard: Model: GS12U12-P1I 12W/12V/1A: UL/CUL/BSMI/CB/FCC

EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338

EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard

European standard:Model:GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHS

EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338

EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard

D   HDMI Cable

E   USB Mouse

F   High-speed USB2.0 A male to A male gold-plated connectors cable /2.0m

G   CD (Driver & utilities software, Ø12cm)

Optional Accessory

H   Adjustable lens adapter

               C-Mount to Dia.23.2mm Eyepiece Tube

               (Please choose 1 of them for your microscope)

I   Fixed lens Adapter

               C-Mount to Dia.23.2mm Eyepiece Tube

               (Please choose 1 of them for your microscope)

Note: For H and I optional items, please specify your camera type(C-mount, microscope camera), engineer will help you to determine the right microscope adapter for your application.

J   108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube

K   108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube

L   Calibration kit

               106011/TS-M1(X=0.01mm/100Div.);

               106012/TS-M2(X,Y=0.01mm/100Div.);

               106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)

M   SD Card(4G or 8G)