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I Brief introduction

Visible cold light source, is composed of a new high definition camera system, high magnification of the optical system, high-quality LED cold light source. It is new cold light source, It can be used for the hospital ENT, anorectal examination and treatment of gynecological and other departments to provide high-definition, security and real observation of the effect.

II Performance summary

The products are mainly composed of HD camera system, high magnification of the optical system of the , 12 images collection system and high quality LED cold light source.

1. Its HD chip is adopted by developed countries, its resolution is up to 700 lines, easy to operate, automatic balance.

2. High magnification optical system has adjustable focusing, Wherever in long or short distance, it can be seen by clear and realistic imaging.

3. Hard lens's fastener is operated easily to widely.

4. LED cold light source has stable light, low energy consumption, low-temperature and a long lifetime.

5. Surveillance imaging system is used by 10 inch TFT-LCD module, LED back light mode, resolution 800 * 600 and strong anti-interference..

6. Image capture: single image is played in one image, four collected images are played through four images, 12 continuous collecting high-definition images can be collected at same time.

7. This product is designed and made according to standard in the first part of the " Medical electrical equipment safety requirements: General requirements " GB9706.1-2007. So our product assures your security.

III Main technical parameters

- 1 Power Supply: AC 110V/220V 50Hz \pm 10HZ
- 2 Input Power: \leq 90W
- 3 LED Bulb Power: 80W
- 4Color Temperature: 6000K
- 5:Illumination: 4000000LX
- 6:Fuse Protector: 3A/250V \times 2
- 7:CCD:700 line
- 8:Image Resolution :800 * 600
- 9: Image Quantity:12
- 10:Image Available:one or four play

IV Security tips and symbols

1 To avoid the risk of fire, electric shock or personal injury during the operation, you should always comply with the basic safety and preventive measures.

- ① Please read the manual carefully, and operate in accordance with the requirements of the specification;
- ② Fuse protector's replacement should be same with indicating requirements;
- ③ Cold light source can not be directly used for eye lighting.

2 The introduction of the following symbols



Attention! Check the documents with machine



Protect the grounding



Disconnect the power



Connect the power

V Working environment

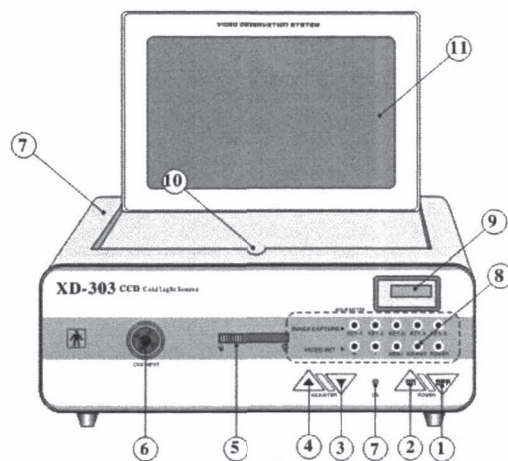
- a. Surrounding Temperature: $5^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- b. Relative Humidity: $\leq 75\%$
- c. Atmospheric Pressure: 86.0 kPa to 106.0kPa

VI Products list

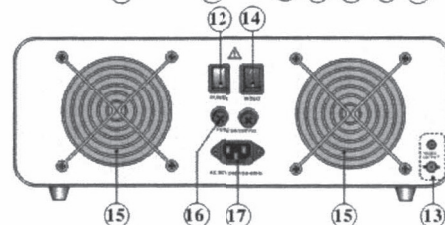
- Cold light source main unit: one piece
- Power wire: one piece
- Built-in cameras: one set
- Signals guiding beam: one piece

VII Control interface

Picture 1

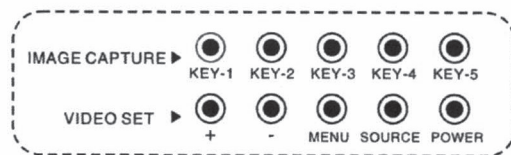


Picture 2



1.The main case

- (1) Power Off: Cold light source stops working
- (2) Power on: Cold light source starts to work
- (3) The illumination decreases while the light source the brightness reduces
- (4) The illumination increases while the light source brightness increases
- (5) Brightness indicator: the bulb's brightness t indicating
- (6) Fiber interface: guiding beam connector
- (7) Power indicator:power indicating
- (8) Video processing: camera image processing (see picture 3)
- (9) Timer: light source life timer
- (10) Monitor opening: monitor open
- (11) Monitor size: 10-inch colorful display
- (12) Power switch: cold source light's power switch control
- (13) video output: video signal output interface
- (14) Colorful screen switch: monitor power switch
- (15) Fans: electrical cooling fan
- (16) Fuse box: fuse inside
- (17) Electric output : AC power input interface



Picture 3

a.Image capture:

KEY-1: capture and release of a single image

KEY-2: single image playback

KEY-3: four images capture

KEY-4: four images playing

KEY-5: image capture setting menu

b.Video Settings (Video set):

"+"Increase

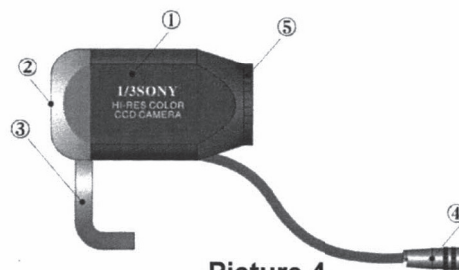
"-" reduce

"MENU" menu set

"Source" setting system

"Power" monitor power switch

2.CCD camera(picture 4)



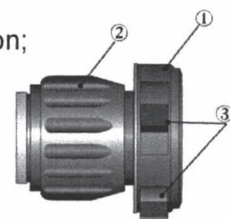
Picture 4

(1) camera case: CCD camera inside;;

(2) Image capture button: fixture video image button;

(3) handle: hand position

(4) connector: connecting fiber



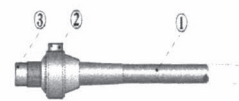
Picture 5

3.Endoscope fixture(picture 5)

(1) Endoscope fixture: connect endoscope's device;

(2) Focus knob: Adjust object focus

(3) Clip: install and unload endoscope



Picture 6

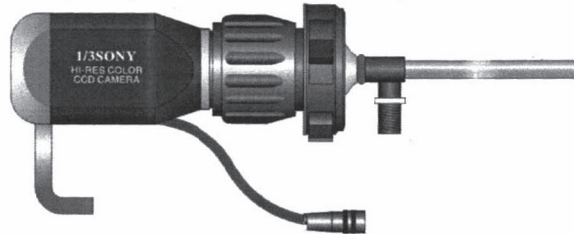
4.Fiber(picture 6)

(1) Fiber: optical fiber

- (2) Connector: Camera and fiber connector
- (3) Fiber output: connecting with endoscope
- (4) light source connector: connecting with light source

VIII Operation instruction

1. Open the package, check the goods with detailed list.
2. Confirm if the power is consist with the power label on light source.
- 3.connected camera,endoscope clip and endoscope like picture 7.



Picture 7

4. Connect fiber (3) to endoscope,and fiber(4) to light source
- 5.Connect Handle camera (4) and fiber (2)
6. Open the master power switch(2), the cold light source begins to work.
- 7.Brightness adjustment button(3) or (4) the illumination can be adjust weaken or strong.
8. Open the color monitor power switch(12), the monitor begins to work.
9. Adjust the camera focal length knob(2) ,you can take the pictures clearly
- 10.There are two rows of 10 black key stokes in video processing (8) , the first row "image capture" is the signal processing, and the second row "video set" is the adjustment of screen picture. Press

"KEY-1" or Image capture button(photo4) ,you can get a still high definition picture. You can get 12 still pictures under continuous collection. If exceed, the first will be replaced by the thirteen one.

11. Press "KEY-2", the pictures will play opposite sequence.

12. Press "KEY-3", you can get 4 pictures, and one is the real-time picture, press "KEY-1" or Image capture button(photo4), the real-time picture will be collected.

13. Press "KEY-3", the screen displays a group of four pictures,scroll Play

14.Press KEY-5 keys appears on capture images display screen to fine-tune the menu, the screen can be color, brightness and contrast adjustment

15. "power" is the monitor's power switch, press the "source" button to select the video format, press "MENU" button to display the menu, through the "+" "-" button to adjust the display's color purity, brightness size and contrast level.

16.The light source has standard setting for the signal processing menu and video settings menu when leave the factory. if the user mess the settings in use,the two mixed up,.the picture color is not correct,you can restore with the following number.

①Press the button "KEY-5",adjust the " brightness" " contrast ratio" and "color" to 86/148/94 respectively.

②Press the button "menu" adjust the " brightness" " contrast ratio" and "color" to 50/60/50 respectively.

IX Notice and description

1. This light source should be placed on a stationary area with aeration during operation. The distance between the fans and the back shelter should keep 15cm.

2.Patients are not allowed to touch the cold light source during

operation.

3. Forbid looking at the optical cable end or light outlet direct in the eye to avoid damage after the cold light source is switched on.

4. Do not put other articles on the machine during operation.

5. The equipment shouldn't be violently vibrated. Move it gently.

6. The equipment should be placed on a dry area with aeration and covered with a shield when disusing.

7. The equipment should be sterilized with an UV sterilizing lamp regularly.

8. Only service person is allowed to open the housing.

X Bulb replacement

The bulb of the cold source is LED, Extended bulb life up to 5,000h. Generally, it has no use for replacement. If it break down, please contact the factory to handle.

XI Transport and storage requirement

Environment temperature: $-40^{\circ}\text{C}\sim 55^{\circ}\text{C}$

Relative humidity: $\leq 95\%$

pressure range: $50\text{kPa}\sim 106\text{kPa}$

XII After-sales service warranty

The period for protecting to our products is 18 months, and we provide maintenance services for life.

◆ In warranty, under normal use conditions, every quality failure can enjoy free maintenance services by the warranty and purchase invoice.

◆ Any remodel or add other features without manufacturers' allow that cause failure, is not in the scope of warranty.

- ◆ Indication on the product, such as model, serial number, production date have been changed, deleted, moved or cannot recognize, will not enjoy free warranty service.
- ◆ Damaged due to falling, extrusion, soak, damp, or logistics are not in the scope of warranty.
- ◆ When receive the goods, please open the package and examine the instrument, after confirm it has no injury, no scratch, no special sound inside, and then sign in; If the goods is damaged, but sign in without open-package examine, accept the consequences by customers.
- ◆ Instrument needs maintenance which return to factory, in order to avoid more serious damage in the way and cause unnecessary loss please use the original packaging to send it back.
- ◆ After sales service line: 86-25-52777091 Fax: 86-25-52777092

Warranty card

| | | | |
|---|--|------------------|--|
| Company name: | | | |
| Address | | Phone No. | |
| Product name | | Model | |
| Serial Number | | Manufacture date | |
| Sale date | | | |
| Fault description: | | | |
| Remark: The warranty of our products is 18 months since the release date. | | | |

(Please truthfully fill in this form, cut it according to the dotted line and send it back to our company, thank you for your cooperation)

Maintenance card

| | | | |
|--|--|------------------|--|
| Company name: | | | |
| Address | | Phone No. | |
| Product name | | Model | |
| Serial Number | | Manufacture date | |
| Sale date | | | |
| Fault description: | | | |
| Remark: You can enjoy seventy percent discount for the maintenance services even if you use this card over the quality assurance period. | | | |