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If the product specifications have changed,  
it will not be notified separately.



ISO 13485



ISO 9001



**Surgical Shadowless Lamp**

Technology fused with Art





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# Apollon 970/930 Series

LED surgical shadowless light

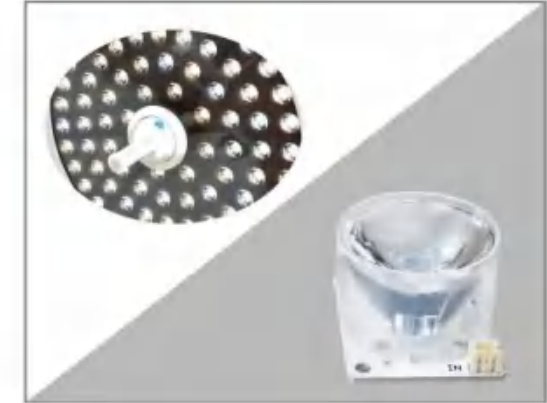


- LED light source, 160000lux maximum center illumination, 1200mm excellent deep cavity lighting effect;
- Provides high color fidelity with a color rendering index of 96;
- The spot size is adjustable from 180mm to 300mm. The spot size changes while the light intensity remains unchanged;
- The color temperature is adjustable in 10 levels from 3000K to 5000K, and can be switched to 4350K, which is close to natural light, with one click;
- Lightweight and slim elliptical design that meets the requirements of modern laminar flow purification operating rooms;
- Optional central/external camera system ensures timely output of high-definition images during surgery;
- Video recording solutions available.

## Meet clinical professional lighting needs

### Efficient, low-consumption LED lighting

- High luminous efficiency, low temperature rising effect, and a service life of up to 60,000 hours
- Each LED light source component can be disassembled and replaced individually to reduce maintenance costs.



### Uniform light spot control

- The spot size is adjustable from 180mm to 300mm, and the central light intensity remains unchanged.



### Multiple levels of color temperature adjustment

- A 4350K color temperature closer to natural light and a high color rendering index Ra 96. During surgery, it allows doctors to find bleeding points in tissues faster and improves surgical efficiency;
- The color temperature is adjustable in 10 levels from 3000K to 5000K to meet the professional lighting needs of multiple departments.





## Excellent shadowless effect

- For a normal operation, assume that there are 3-4 doctors standing in the operating area. Taking dual lamp heads as an example, part of the light source of each lamp head will be blocked by the heads and shoulders of the two doctors. Then, the light that is not blocked by the doctors will be the real useful light in the surgical area;
- The "shadowless" effect of the surgical light is achieved by optimizing the light path design to achieve/compensate the light from different angles. It provides doctors with layered illumination brightness and depth for operations without producing umbra.



Shadow-free rate of single shading plate is 80%



Single light-shielding plate deep cavity shadow-free rate is 70%



Double shading plate shadow-free rate 60%



Double light-shielding plate deep cavity shadow-free rate 50%

## Safer, considerate and humanized design



### Shape design that meets laminar flow purification requirements

The lamp head is spray-coated to inhibit bacterial growth, and the elliptical design allows laminar flow through the lamp body in the operating room without obstruction, ensuring the cleanliness of the operating environment;

The laminar flow test is certified according to DIN 1946-4 standard.

## Full touch control interface (optional)



- On/Off;
- Illumination adjustment;
- Color temperature adjustment
- Ambient light lighting mode switching;
- Camera system control.

## Various camera system control methods

- Equipped with remote control mode, it is convenient for medical staff to control the camera system outside the sterile area.



### Camera system parameters

Central/External HD camera	
Picture Element	2MP
Camera Lens	f=3.8-38mm, F=1.8-3.4
Optical Zoom	20X (12X digital 10X optical)
SINR	> 50dB
Shutter Speed	1/1-1/10000s
Output signal	component signal

### External/Center camera system

- Equipped with both external and central camera systems to meet the needs of remote consultation/teaching, academic sharing, and medical certificate retention;
- The center-mounted high-definition camera can be flexibly rotated (330°) according to surgical needs.

### Various combinations



Apollon970/930



Apollon970/970



Apollon970



Apollon930



Apollon970M



Apollon930M



# Hestia A500/300 Series

## LED surgical shadowless light

- LED light source, maximum central illumination of 160000lux, providing excellent lighting effects;
- Provides high color fidelity with a color rendering index of 96;
- The spot size is adjustable from 180mm to 280mm. The spot size changes while the light intensity remains unchanged;
- The color temperature is adjustable in 10 levels from 3000K to 5000K, and can be switched to 4350K, which is close to natural light, with one click;
- The petal shape meets the requirements of modern laminar flow purification operating rooms, and is easy to use when assembled together;
- Equipped with central/external camera systems to ensure timely output of high-definition images during surgery;
- Video recording solutions available.





# Provide a high-performance work environment for clinical departments

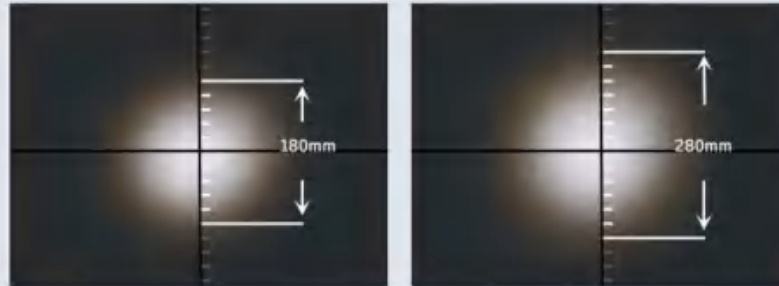
## Efficient, low-consumption LED lighting

- High luminous efficiency, low temperature rising effect, and a service life of up to 60,000 hours
- Each LED light source component can be disassembled and replaced individually to reduce maintenance costs.



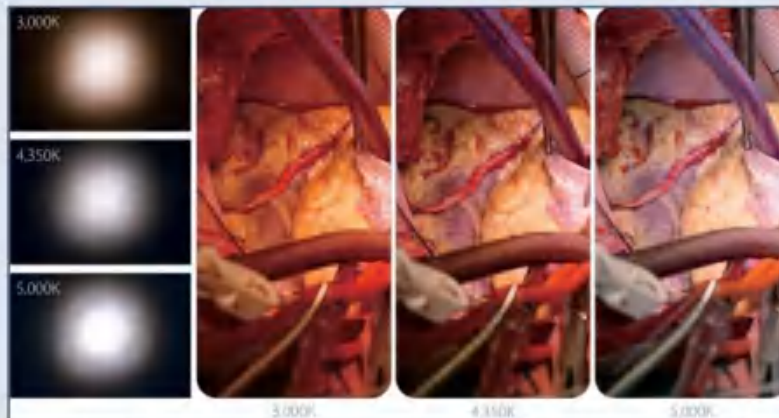
## Uniform light spot control

- The spot size is adjustable from 180mm to 280mm, and the central light intensity remains unchanged.



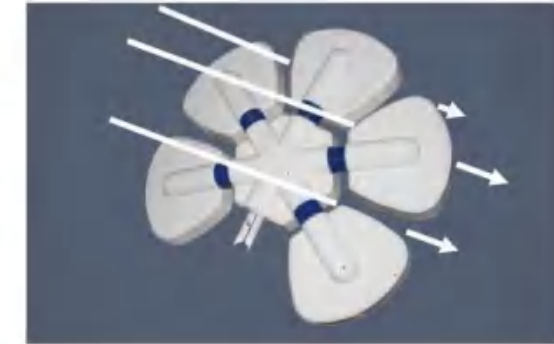
## Multiple levels of color temperature adjustment

- A 4350K color temperature closer to natural light and a high color rendering index Ra 96. During surgery, it allows doctors to find bleeding points in tissues faster and improves surgical efficiency;
- The color temperature is adjustable in 10 levels from 3000K to 5000K to meet the professional lighting needs of multiple departments.



## Design that meets the requirements of laminar flow purification

- Complying with aerodynamic principles, it effectively reduces air turbulence and achieves excellent laminar flow performance;
- The surface design of the lamp head without exposed screws is easy to clean and ensures cleanliness;
- Laminar flow test certified according to DIN 1946.



## Intelligent control, convenient operation

- switches;
- Normal mode and bright mode, brightness adjustable in 10 levels;
- Color temperature is adjustable in 10 levels;
- One-click ambient light switching



## Humanized design, convenient operation

- Removable disinfection handle, easy to disinfect and maintain. The ergonomic handle curvature makes it easy for doctors and nurses to hold and adjust the position of the lamp head.







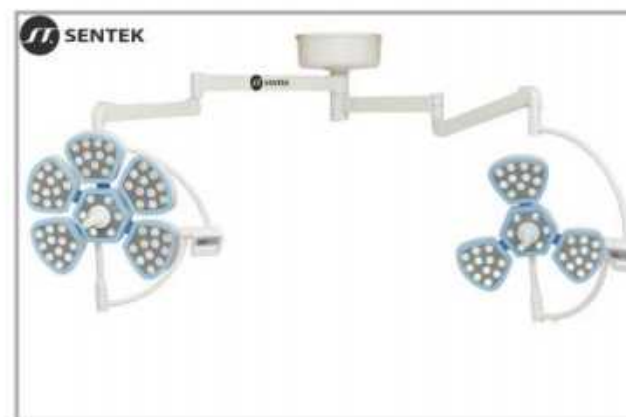
### Camera system parameters

Central/External HD camera	
Picture Element	2MP
Camera Lens	f=3.8-38mm, F=1.8-3.4
Optical Zoom	20X (12X digital 10X optical)
SINR	> 50dB
Shutter Speed	1/1-1/10000s
Output signal	component signal

### External/Center camera system

- Equipped with both external and central camera systems to meet the needs of remote consultation/teaching, academic sharing, and medical certificate retention;
- The center-mounted high-definition camera can be flexibly rotated (330°) according to surgical needs.

### Various combinations



Hestia A500/300



Hestia A500/500



Hestia A500



Hestia A300



Hestia A500M



Hestia A300M





## Eros A700/500 Series Surgical Shadowless Light

- Up to 150,000 lux ensures that surgeons can work under a light source with sufficient illumination.
- The spot size can be adjusted freely, with an adjustment range of 150mm-280mm.
- Provides a color temperature closer to natural light 4350k, providing high color fidelity with a color rendering index of 95.
- The longest lighting depth can reach 1200mm.
- Once the working bulb fails, the backup bulb will switch to the working bulb position through the motor within 0.2 seconds, and the position of the surgical field spot remains unchanged, instantly ensuring the safe and normal operation of the surgical process.
- Filters most of the infrared thermal radiation to achieve excellent cold light effect. The temperature rise in the surgical field shall not exceed 9°C;

### Layer flow effect

Excellent layer flow effect. Use two design methods to avoid turbulence production:

1. Streamlined appearance design.
2. Low power consumption to ensure low surface thermal effect.



### Illuminance

As high as 15,000 Lux, make sure the surgeon can work under a sufficiently illuminated light source.



### Smart switching

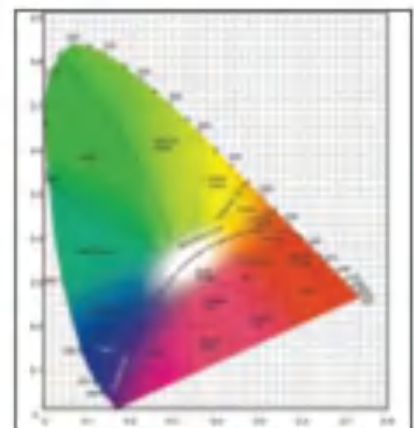
The Eros A surgical lamp has two independent light bulbs, one is a working light bulb and the other is a spare light bulb. When the bulb is damaged, the lamp head will automatically switch to light up the ballast bulb to ensure that the operation process is safe and normal.



### Color temperature and color rendering index

Excellent natural light effect and extremely high color fidelity.

The unique filter component of the Eros A surgical light can accurately adjust the passing light beam, provide a color temperature closer to natural light of 4350k, and provide high color fidelity with a color rendering index of 95, ensuring that surgeons can easily distinguish diseased tissue from healthy tissue.





Depth

Excellent deep cavity lighting capabilities. The Eros A surgical light uses an integral reflector to produce a perfect beam of light with a maximum illumination depth of up to 1200mm, eliminating the need for secondary focusing to interrupt the surgical process.



Diameter

The size of the light spots is freely adjusted. The central handle of Eros A surgery lamp can regulate 130mm, which can easily meet the lighting needs of large -scale wound surgery such as cardiac surgery and organ transplant surgery.



Camera system parameters



Central/External HD camera	
Picture Element	2MP
Camera Lens	f=3.8-38mm, F=1.8-3.4
Optical Zoom	20X (12X digital 10X optical)
SINR	> 50dB
Shutter Speed	1/1-1/10000s
Output signal	component signal

External/Center camera system

- Equipped with both external and central camera systems to meet the needs of remote consultation/teaching, academic sharing, and medical certificate retention;
- The center-mounted high-definition camera can be flexibly rotated (330°) according to surgical needs.

Various combinations



Eros A700/500



Eros A700/700



Eros A500



Eros A700



Eros A500M



Eros A700M



# Metis A480/240 Series

## LED Surgical Shadowless Light

### Ultra-thin lamp head design

Ultra-thin streamlined design meets laminar flow purification requirements. 360° surrounding handle design makes operation more convenient.



- Adopt PMMA optical lens, with unique light condensing technology, high light efficiency, low power consumption and long light source life.
- The light source uses OSRAM LED lamp beads, with an average lifespan of more than 60,000 hours.
- Flexible design with PWM stepless dimming and adjustable color temperature.
- The shell is made of engineering plastic and is inlaid with an aviation aluminum top cover, which is unique.
- Snap-on removable disinfection handle for easy cleaning and disinfection.
- Constant current drive design keeps the working current in a stable state and greatly extends the service life.
- Ultra-thin structural design, the thickness of the lamp head is only 95mm.
- The controller adopts 4.3-inch high-definition IPS LCD and high-sensitivity touch screen, which is comfortable and clear and operates smoothly.
- Simple and clear system operation interface, users only need to touch and click to complete various functions.
- The spot diameter and center camera screen direction are adjustable.
- The high-end version has new functions such as shading compensation, electric dimming spot, and lamp head mutual control, making it more complete.
- Optional function, full HD central control/independent camera system (light panel central camera or independent external camera optional).
- Optional functions, including adding gesture sensing, handheld wireless control and other functions, make operation more convenient.



## Color temperature is adjustable

### Facilitate organizational identification

The color temperature can be adjusted in 9 levels to achieve excellent tissue color rendering effects;

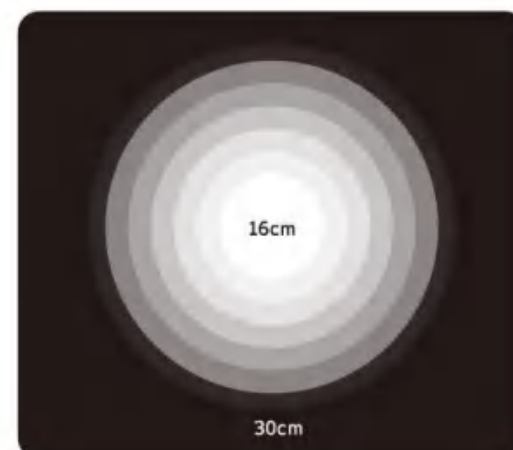
High color temperature can improve tissue visual resolution;  
Low color temperature can relieve visual fatigue caused by long-term surgery.



## Large range light spot design

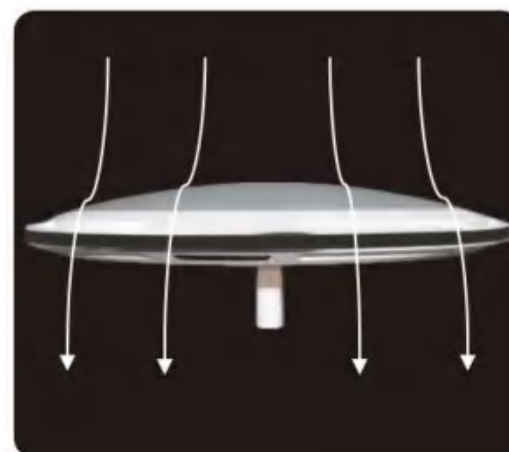
### Better focus and less ineffective glare.

The size of the surgical field spot can range from 16cm to 30cm to meet different types of clinical needs. For small incision surgeries such as spine surgery, mitral valve replacement surgery, etc., the 14cm small spot design makes the light more focused and reduces peripheral glare.



## Safe and durable

- There is no screw design on the surface of the lamp head;
- The shape design conforms to aerodynamic principles, effectively reducing air turbulence and achieving optimal laminar flow performance;
- The lamp head is waterproof and dustproof IP 54;
- The lamp head can withstand more than 30 disinfectants.



## Safe and long-lasting

- High luminous efficiency, low temperature rising effect, and a service life of up to 60,000 hours
- Each LED light source component can be disassembled and replaced individually to reduce maintenance costs.



## Security

- Curved surface design prevents ineffective glare on the periphery;
- Anti-stroboscopic design to avoid eye fatigue caused by stroboscopic flicker;
- Anti-collision design reduces the risk of damage caused by collision of the lamp head.



## Clear and smooth

The controller adopts 4.3-inch high-definition IPS LCD and high-sensitivity touch screen

- switches;
- Normal mode and bright mode, brightness adjustable in 9 levels;
- Color temperature is adjustable in 9 levels;
- One-click ambient light switching







### Camera system parameters

Central/External HD camera	
Picture Element	2MP
Camera Lens	f=3.8-38mm, F=1.8-3.4
Optical Zoom	20X (12X digital 10X optical)
SINR	> 50dB
Shutter Speed	1/1-1/10000s
Output signal	component signal

### External/Center camera system

- Equipped with both external and central camera systems to meet the needs of remote consultation/teaching, academic sharing, and medical certificate retention;
- The center-mounted high-definition camera can be flexibly rotated (330°) according to surgical needs.

### Various combinations



Metis A480/240



Metis A480/480



Metis A240



Metis A480



Metis A240M



Metis A480M



# Eros C850/800 Series

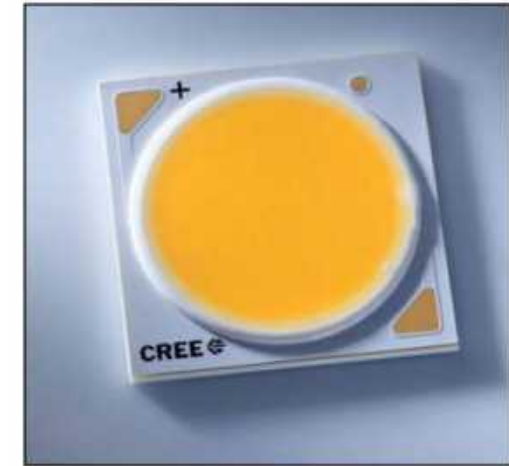
## LED Surgical Shadowless Light



### Extra long service life

60,000 hours ultra-long lamp life (equivalent to 5 years of continuous lighting)

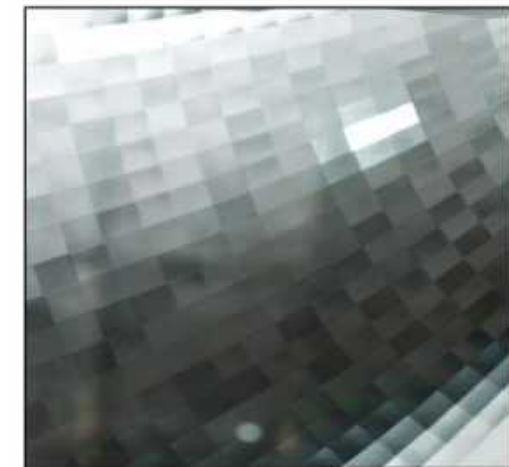
Real cold light source



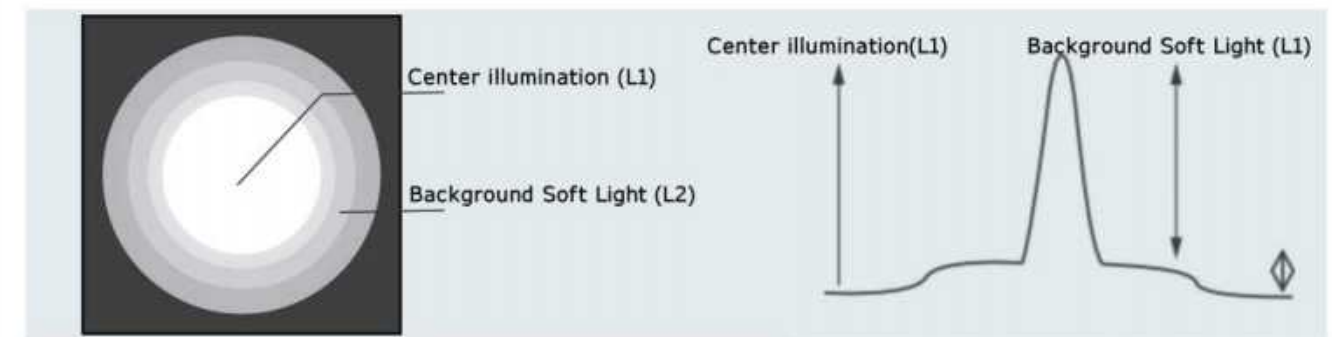
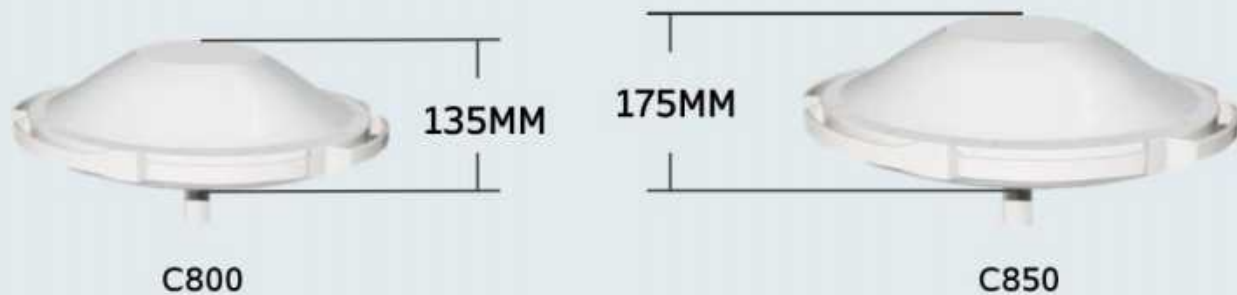
### High quality shadowless effect

Create a perfect surgical environment

It adopts a multi-prismatic reflector with unique light-gathering technology, high light efficiency, low power consumption, and better shadowless effect.



The lamp head is only 65% of the thickness of the halogen lamp

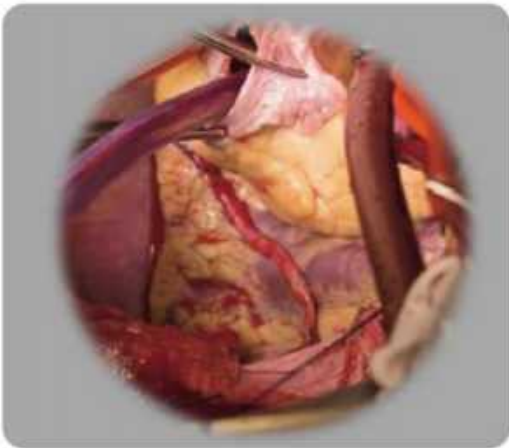


Optical design complies with authoritative guidelines from the Illuminating Engineering Society of North America (IESNA)



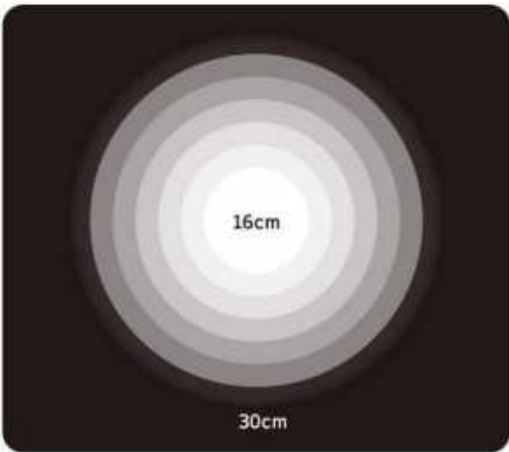
Color temperature is adjustable

Excellent natural light effects and extremely high color fidelity.  
The unique filter component can precisely adjust the passing light beam, the color temperature can be adjusted from 3800-5000, and provides high color fidelity with a color rendering index of 96, ensuring that surgeons can easily distinguish diseased tissues.



Large range light spot design

The spot size is adjustable from 120mm to 280mm, and the central light intensity remains unchanged.



External/Center camera system

Central/External HD camera	
Picture Element	2MP
Camera Lens	f=3.8-38mm, F=1.8-3.4
Optical Zoom	20X (12X digital 10X optical)
SINR	> 50dB
Shutter Speed	1/1-1/10000s
Output signal	component signal



Various combinations



Eros C850/800



Eros C850/850



Eros C800



Eros C850



Eros C800M



Eros C850M



# Zeus A150/120 Series

## LED Surgical Shadowless Light



### long lasting bright

Each LED light source lamp bead uses nano-layer heat dissipation and uses Pulse Width Modulation constant current technology, making the lamp bead life  $\geq 60,000$  hours.



### Comfortable and eye-friendly

The medical optical lens is made of PMMA material, which provides high-quality optical focusing, allowing the illumination to reach 160,000LUX and the color temperature to 5500K



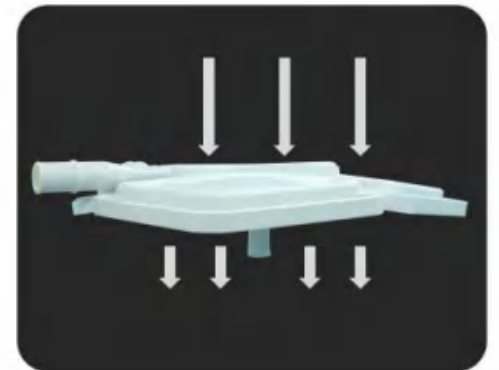
### Make vision clearer

The original RGB color compensation makes it easier to distinguish fine tissues and organs with the naked eye in deep cavity mode.



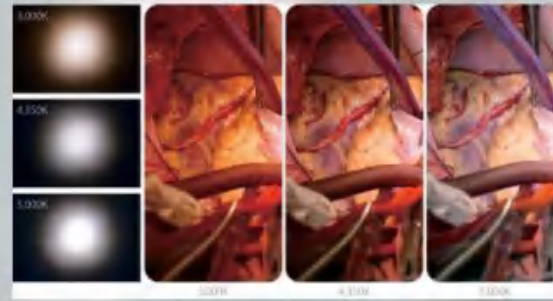
### Safe and durable

The hollow design of the petals, with a thickness of no more than 10cm, meets the purification requirements of the operating room and has passed the DIN1946-4 standard test.

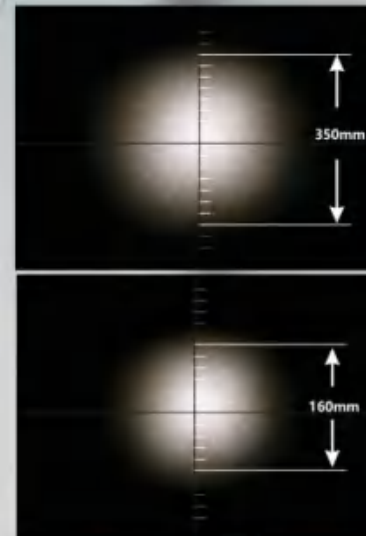




A light column with a fixed daylight-like color temperature - 4,350K or a variable color temperature of 3,000 - 5,000K. This helps distinguish differences between various tissue types and the perception of true tissue color, especially for use in cardiac surgery



A unique electrical control mode is used to adjust the light field diameter: increase or decrease the number of luminous bulbs, but the central illumination remains unchanged. The light field diameter can be adjusted within the range of 160-350mm, suitable for surgical areas of various sizes. This large diameter, combined with the dual light head, ensures you have options and helps meet a variety of surgical needs.



Using ACROBAT®2000, safe load 21kg  
Both the balance arm and the central axis of the shadowless lamp adopt the ondal balance system. The lamp head can rotate 360°, and the balance arm can rotate 360°, without the risk of drifting.



## Focus on safety

It adopts a single output closed power supply, providing 12V, 15V, 24V, 36V and 48V output. In addition to the efficiency up to 90%, the design of the metal mesh shell enhances the heat dissipation capacity and allows it to work at -30°C to +70°C without a fan. +70°C temperature range.



Strong light mode



Shallow mode



Endoscopic mode



Optional shading compensation



deep cavity mode



Mutual control synchronization

The dual-light mutual control system can operate the two lamp heads synchronously without moving the place.

Color temperature and illumination touch button adjustment, 10 levels to meet different surgical needs.







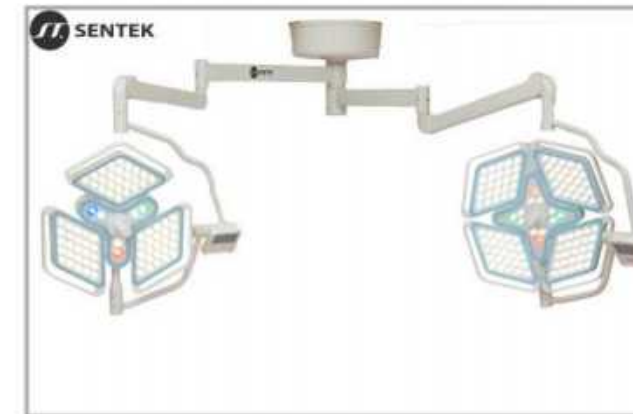
### Camera system parameters

Central/External HD camera	
Picture Element	2MP
Camera Lens	f=3.8-38mm, F=1.8-3.4
Optical Zoom	20X (12X digital 10X optical)
SINR	> 50dB
Shutter Speed	1/1-1/10000s
Output signal	component signal

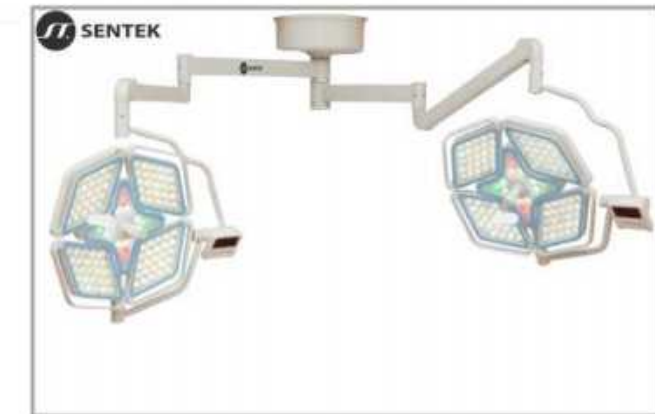
### External/Center camera system

- Equipped with both external and central camera systems to meet the needs of remote consultation/teaching, academic sharing, and medical certificate retention;
- The center-mounted high-definition camera can be flexibly rotated (330°) according to surgical needs.

### Various combinations



Zeus A150/120



Zeus A150/150



Zeus A120



Zeus A150



Zeus A120M



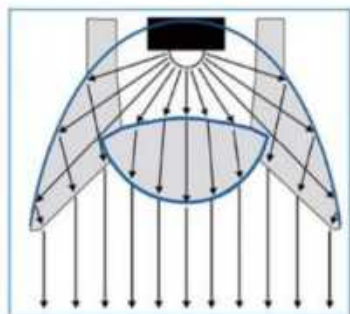
Zeus A150M





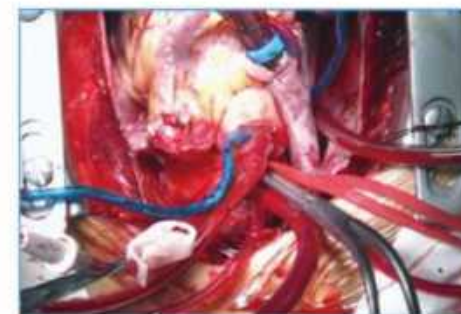
## Zeus B230/210 Series

### LED Surgical Shadowless Light



#### Advanced optical system

Each LED is equipped with a lens reflection system that combines the LED beam geometric arrangement with a built-in parabolic reflection lens to provide doctors with a continuous and uniform illumination beam.



#### Excellent color rendering index

Zeus B230/210 has the ability to be closest to natural lighting and restore true colors, allowing doctors to easily and accurately distinguish fine tissues and organs.



## Excellent color temperature adjustable technology

Provides a color temperature adjustment range of 3000K-5000K suitable for various surgeries to provide the best lighting environment for different surgeries.

For example, when performing liver and gallbladder tissue surgery, warm white light of 3000K-4000K is more suitable to better distinguish various tissue fluids from blood and skin tissue; and for large wound surgeries such as cardiothoracic surgery, positive white light of 4000K-5000K can provide a brighter lighting effect, which will prevent doctors from visual fatigue even during long-term operations.



## Electronic focusing technology

The ultra-thin blade-type lamp head design makes full use of electronic focusing technology. During use, the light spot of the LED surgical sky shadow light changes smoothly, naturally and uniformly, ensuring the visibility of the surgical field of view to the greatest extent.



## Convenient one-button operation mode

Through advanced PLA control, it is equipped with one-touch normal, deep cavity, superficial, background and other operating modes. By controlling the brightness of each LED, different lighting effects can be achieved to meet doctors' convenient control needs for different surgical lighting.



## Design that meets laminar flow requirements

The fully enclosed blade lamp head design is derived from aerodynamic design principles and complies with the technical standards for medical air conditioning. It minimizes the impact of the lampshade on laminar air supply and fully meets the high standard laminar flow requirements of clean operating rooms.



## Clear lighting area

Each LED position of the Zeus B230/210 petal lamp head has been carefully optically designed and fully verified. The illumination is uniform and soft, creating the most realistic and clear surgical area for doctors.







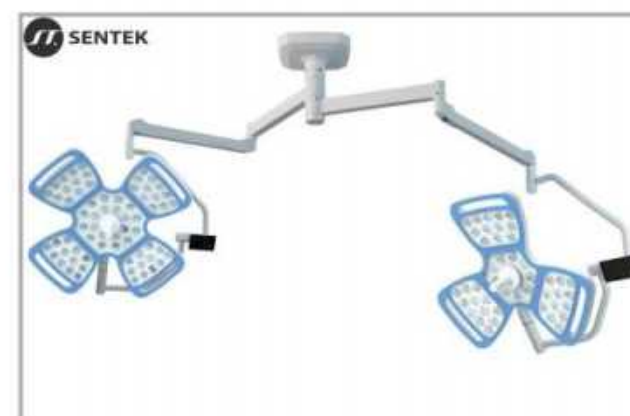
### Camera system parameters

Central/External HD camera	
Picture Element	2MP
Camera Lens	f=3.8-38mm, F=1.8-3.4
Optical Zoom	20X (12X digital 10X optical)
SINR	> 50dB
Shutter Speed	1/1-1/10000s
Output signal	component signal

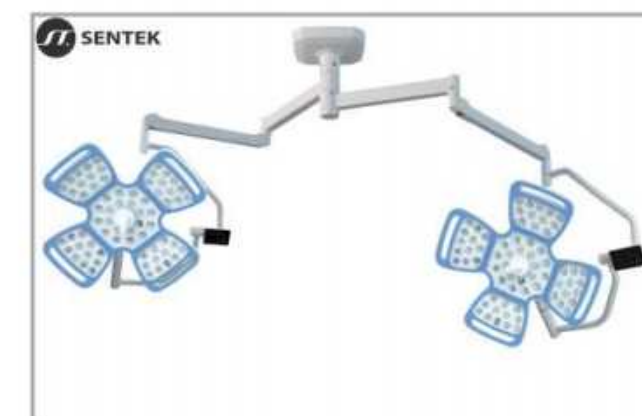
### External/Center camera system

- Equipped with both external and central camera systems to meet the needs of remote consultation/teaching, academic sharing, and medical certificate retention;
- The center-mounted high-definition camera can be flexibly rotated (330°) according to surgical needs.

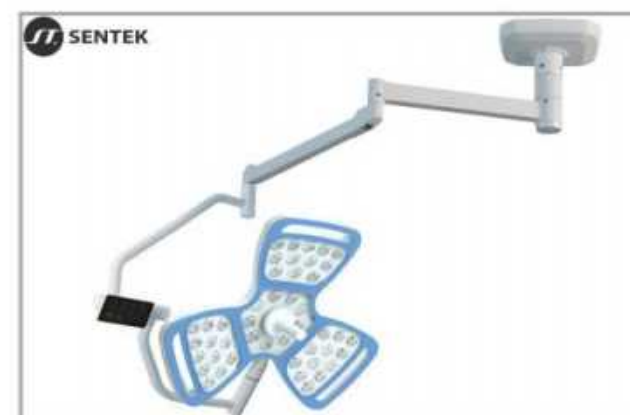
### Various combinations



Zeus B230/210



Zeus B230/230



Zeus B210



Zeus B230