

Shadowless operating lamp



Technical Parameters		
Illumination (Lux)	40,000-160,000Lux	30,000-160,000Lux
Bulb Average Life	$\geq 1500\text{h}$	$\geq 1500\text{h}$
Color Temp (K)	$4500\text{K} \pm 250\text{K}$	$4500\text{K} \pm 250\text{K}$
Color Rendering Index (CRI)	$\geq 97\%$	$\geq 97\%$
Illumination Depth(mm)	50-180cm	50-180cm
Facular Diameter(mm)	120-300mm	120-300mm
Brightness adjustment	1-20digital adjustment	1-20digital adjustment
Bulb Power (W)	150	150
Temp Rise (doctor head)	$< 2^{\circ}\text{C}$	$< 2^{\circ}\text{C}$
Automatic switching of main and auxiliary lights	$< 0.2\text{s}$	$< 0.2\text{s}$
Input Power	AC100-240V 50/60HZ	AC100-240V 50/60HZ

Product Features:

★The ZF series reflective surgical shadowless lamps are widely used for lighting needs in various surgical situations and are the ideal lighting equipment for modern operating rooms.

★The overall reflective optical system created using CAD/CAM technology has been specially designed by experts and treated with oxidation and electrolysis technology. Its annual lifespan has been increased by 5 times,

without fading or falling off the oxide film. Exposure depth $\geq 1200\text{mm}$; The use of color temperature compensation technology enhances color reproduction and is more suitable for lighting in large and complex surgeries such as neurosurgery and thoracic surgery.

★Microcomputer digital control, brightness selection from 1 to 20 levels, with illumination memory function and wide voltage operating characteristics. Stable operation within the voltage range of AC160V-250V, strong anti-interference ability.

★ The fully enclosed streamlined lamp body design fully meets the disinfection and high standard laminar flow requirements of today's operating rooms.

★The lamp panel is made of German PC (bulletproof glass) injection molding, making the light softer and the safety more reliable.

★The focusing system has a delicate structure, making it quick and convenient to replace light bulbs. The detachable handle jacket can be used for high-temperature ($\leq 134\text{ }^{\circ}\text{C}$) sterilization treatment.

★ Equipped with automatic switching function for backup light bulbs, when the main light is damaged, the auxiliary light will automatically turn on within 0.2 seconds. The handle panel has a failure indicator for the main and auxiliary lights, reminding to replace them in a timely manner after surgery.

★ Set up a soft start device to effectively extend the service life of the light bulb. Use imported long-life halogen tungsten light bulbs, with a bulb service life of ≥ 1500 hours.

★Key components are all made of international famous brand products, which operate smoothly and reliably. Flame retardant materials are temperature resistant and safe, and comply with IEC standards.

★Equipped with a lightweight balance arm suspension system, six sets of joint linkage, flexible movement, stable positioning, and a 360° all-round design, it can meet the needs of different heights and angles during surgery.

New Standard Lens Design System

★Lamp housing: Made of imported aluminum plate material from Germany, it has high strength, high heat dissipation, wear resistance, and corrosion resistance.

★ Reflector: The surface adopts optical expert technology, and the mirror surface adopts special processes+oxidation+electrolysis new technology, which extends the lifespan of the coating reflection system by more than 5 times. It does not fade or shed the oxide film, and provides excellent deep lighting, fully meeting your requirements.

★ Multi mirror reflection system, with lenses reaching over 5280, making the surgical area truly shadowless. Advanced color temperature compensation technology provides a color temperature closer to natural sunlight and evenly covers the entire surgical area.

Good laminar flow purification, disinfection, mirror design,

and replacement of backup light bulbs

★The fully enclosed streamlined lampshade is carefully designed based on aerodynamic principles, which is conducive to the application of laminar flow purification and disinfection in the operating room and reduces the risk of surgical infection. The transparent glass at the bottom of the lamp head is made of anti vibration and anti disinfectant materials, which are sturdy and durable, easy to clean, and will not be affected by radiation, wiping, and long-term use. The lamp holder handle can be pushed and pulled up and down, and the lamp holder can be rotated to adjust the focal length; After surgery, it can be easily removed for solution immersion or high-temperature pressure disinfection.

★When replacing a light bulb, gently press the locking system to make the replacement process simple.

Digital Integrated Circuit Control System

★The practical integration of power switch, brightness adjustment, and auxiliary light detection operation, as well as the selection of brightness adjustment and brightness memory function for 1-20 gears, can automatically indicate the brightness of the LED.

★ Equipped with wide voltage operating characteristics, stable operation within the voltage range of AC160V-250V, and strong anti-interference ability.

Signal indication system

★The panel has a main light fault indicator light to remind you to replace the light bulb in a timely manner after surgery.

★The lamp holder has two halogen bulbs, one of which is a backup bulb. Assuming a light source failure occurs during the surgery, the signal light immediately displays the surgical light switch device to use the bulb mode, and the faulty bulb can be easily replaced after the surgery.

★ Eliminating risks: An automatic switching system for backup light bulbs. One of the more dangerous aspects during surgery is the possibility of malfunction of the light bulbs during surgery. The backup light bulb automatic switching system will automatically switch and light up within 0.2 seconds, without any impact on the light intensity and surgical area.

Efficient filtering system

★Experts recommend thermal energy filtering technology, which filters out 99.5% of infrared radiation and increases the temperature of the patient's injury area by 11 °C (international standard 12 °C), thus avoiding any risk of water evaporation in the surgical area.

Universal joint system

★The spring arm suspension system is designed with six sets of universal joints and 360 ° joint linkage in all directions, ensuring accurate positioning

and completely solving drift problems.

Natural surgical color temperature

★The color temperature correction system designed by experts provides a color temperature close to 4500K of natural sunlight, ensuring that surgeons can clearly and accurately identify the colors of blood vessels, nerve bundles, and other tissues in the surgical area.

Configuration list

1、 700 lamp cap、 Dimming System	1 suite
2、 500 lamp cap、 Dimming System	1 suite
3、 Rotating Arm	2 suite
4、 Balance arm	2 suite
5、 Transformer assembly	2 suite
6、 Handle Sleeve	4 count
7、 Hexagon Allen key	1 suite
8、 Fixed plate	1 piece
9、 Install fixing bolts, washers, and nuts	1 suite
10、 Bracket, support cover	1 suite
11、 lamp bulb	8 pieces
12、 Fixed seat	1 part
13、 Product Qualification Certificate	1 part
14、 Instructions	1 part