

Release Note

Release Date: 2025/04/27

Products Involved : VeLED S5/S3/E5/E3

VeLED S5/S3/E5/E3 Launch



VeLED E3



VeLED E5



VeLED S3



VeLED S5

Steel may hold the scalpel, but light holds the soul

**Better
Illumination**

- Eye Comfort
- Gentle Light up

**Easier
Control**

- One-hand Rotate & Stop
- One-Hand Control

**Elegance
Design**

- Sleek Appearance
- Compact Body

**Superior
Quality**

- Long lasting Lifetime
- Interference free

Shenzhen Mindray Animal Medical Technology Co., LTD.

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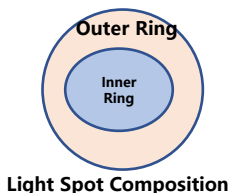
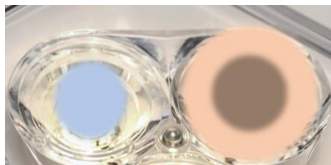


**Better
Illumination**

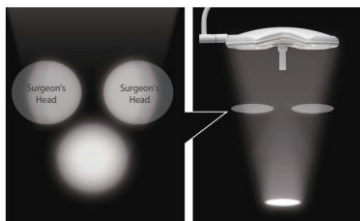
Eye Comfort

Multi-Patch Superposition Technology (MPST)

- ✓ **Eye Comfort, No Fatigue During Prolonged Surgeries**
- ✓ **Clearly illuminates the surgical site, revealing layered tissue structures and enhancing surgical efficiency**

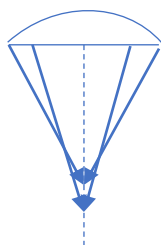


Light Spot Composition



Constant Focus spot

- ✓ **Electronic Focus Adjustment: The inner and outer rings of the light head focus at different distances, ensuring the light spot remains sharp without scattering between 0.8–1.3 meters.**



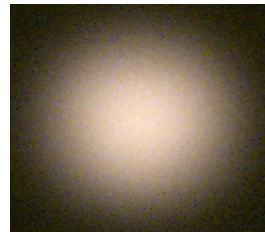
0.8m



1m



1.3m

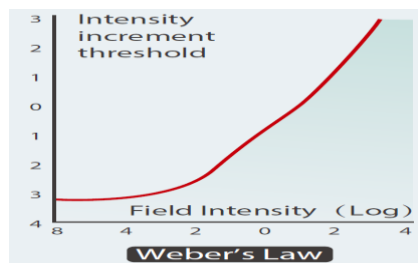


**Better
Illumination**

Gentle Light up

During Power On/Off: The illuminance of the surgical light changes gradually.

- ✓ **Minimizes user eye strain caused by sudden changes in brightness**
- ✓ **Decreases stimulation to animals during examinations. (Examination Light)**



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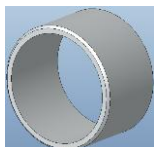
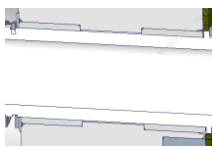
mindray
animal care

**Easier
Control**

**One-hand Rotate
& Stop**

No Drifting

- ✓ The light head can be one hand control and stopped any anywhere & any angle **without drifting**.
- ✓ Maintains Joint Stability After 40,000 Rotation Tests



Easy moving

- ✓ Lightweight Cart Design, Easy to Move with One Hand
- ✓ Hair-Proof Casters, No Jamming Issues



**Easier
Control**

One-Handed Control

Handle Functions

- ✓ Brightness Adjustment via Handle which allows doctors to easily adjust brightness.



Touch Controls

- ✓ Touch Controls Across All Models: Adjust parameters without moving the light head.
- ✓ One-Touch Ambient Light: Activates ambient lighting without disrupting doctors during endoscopic surgeries.



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Elegance Design

Sleek Appearance

- ✓ No screw hole on the light head, easy-to-clean, no bacteria remain
- ✓ Antibacterial design to prevent cross-contamination

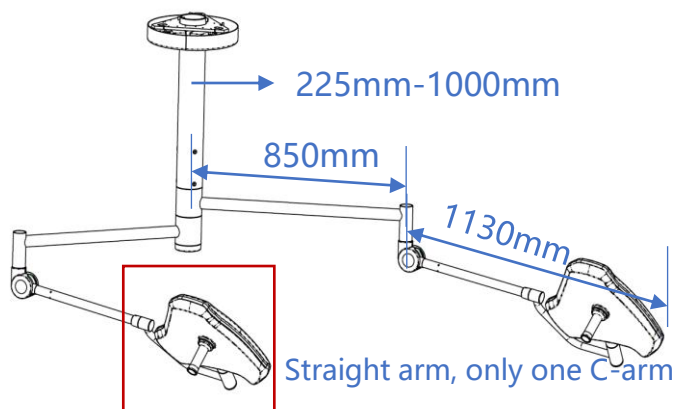
Tested Microorganisms	Escherichia coli ATCC 8739	Staphylococcus aureus ATCC 6538P
Concentration of Inoculated Bacterial Solution (CFU/ml)	5.8×10^5	3.3×10^5
Volume of Inoculated Bacterial Solution (ml)	0.4	0.4
U_0	4.11	3.88
U_t	5.88	5.25
A_t	-0.20	-0.20
B (CFU/cm ²)	7.6×10^5	1.8×10^5
C (CFU/cm ²)	<0.63	<0.63
R	6.1	5.5
Antibacterial Rate (%)	>99.9	>99.9
Evaluation	Compliance	Compliance



Elegance Design

Compact body

- ✓ Suspension system tailored for veterinary OR space characteristics: supports a minimum of 225mm barrel length, straight arm lamp
- ✓ Short cross arm customized for compact spaces, with a maximum rotation radius of 1.7 meters



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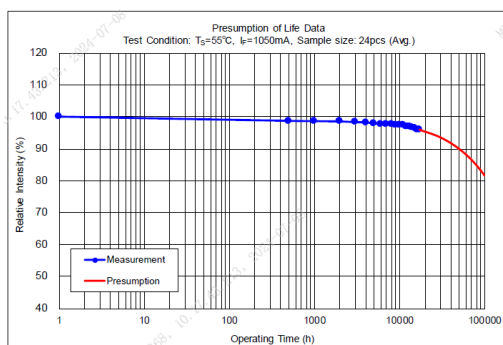


Superior
Quality

Long lasting Lifetime

LED lifetime

- ✓ The LED lifetime can reach up to 100,000 hours



Aging test

- ✓ Over 10,000 hours aging tests ensure the product's longevity for extended use (10 years)



Superior
Quality

Interference free

- ✓ Interference-free design make sure no impact of the power to disturb the other medical devices

7. MTBF

$\geq 100,000$ hours 25°C , 额定电压, 220Vac.

The power supply shall have a minimum predicted MTBF (MIL-STD-217F) of 100000 hours at normal operation condition and normal use.

8. EMC 特性/ELECTROMAGNETIC COMPATIBILITY

序号/Number	项目/Item	标准 (或测试条件) /Specifications	判定标准/Class	备注/Standards
1	传导干扰 (CE)	Class B	/	IEC/EN60601-1-2; YY706.102; GB4824.1 (SPL 1); EN55011; FCC Part 18.
2	辐射干扰 (RE)	Class B	/	IEC/EN60601-1-2; YY706.102; GB4824.1 (SPL 1); EN55011; FCC Part 18.
3	浪涌 (SURGE)	线线 $\pm 1\text{kV}$ /Line to line $\pm 1\text{kV}$	A	IEC/EN60601-1-2; YY706.102;
		线地 $\pm 2\text{kV}$ /Line to Earth $\pm 2\text{kV}$	/	IEC/EN61000-4-5; GB/T 17626.5.
4	静电抗扰 (ESD)	空气放电 $\pm 15\text{kV}$ Air discharge $\pm 15\text{kV}$	A	IEC/EN60601-1-2; YY706.102;
		接触放电 $\pm 8\text{kV}$ /Contact discharge $\pm 8\text{kV}$	A	IEC/EN61000-4-2; GB/T 17626.2.
5	快速瞬变脉冲群 (EFT/雷)	$\pm 2\text{kV}$ (Burst frequency = 1000Hz)	A	IEC/EN60601-1-2; YY706.102; IEC/EN61000-4-4; GB/T 17626.4.

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Comparison

	Surgical Lights		Examination Lights	
MODEL	VeLED S5	VeLED S3	VeLED E5	VeLED E3
Image				
Central illumination (lux)	160000	100000	70000	60000
Field diameter (mm)	170-250	170-250	170	170
20% Depth of illumination (cm)	120	120	150	150
Colour temperature (K)	4500	4500	4500	4500
Colour rendering index (CRI) (Ra)	99	99	99	99
Deep Saturated Red Color Index R9	97	97	97	97
Irradiance* (mW/m2*lux)	3.5	3.5	3.5	3.5
Dimension of light head (mm)	500	500	290	290
Number Of LED bulbs	24	18	6	6
Service life (h)	100000	100000	100000	100000
Power consumption of light head (W)	45	45	35	35
Dimming Range	5 ~ 100%	5 ~ 100%	5 ~ 100%	5 ~ 100%
Weight of Light Head (kg)	7	7	3	3
Control Brightness by Handle	✓	✓	✓	✓
ENDO MODE	✓	✓	×	×
Camera	×	×	×	×
Stopless	×	×	×	×
MPST	✓	✓	✓	✓

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Appendix I

All material has upload to IT Platform.

Item	Format	Status
VeLED S5/S3/E5/E3 Series LED Light RoHS DOC	PDF	Ready
VeLED S5/S3/E5/E3 Series LED Light RED DOC	PDF	Ready
H-046-031062-00-1.0 VeLED S5 S3 S5W S3W S5M S3M user manual(EN)	PDF	Ready
VeLED S5/S3/E5/E3 _Brochure_ENG	PDF	5.14
VeLED S5/S3/E5/E3 Price list	Excel	Ready