



Galaxy Series

Mastry Of Surgical Lighting

Illuminating and Documenting
Medical progress

Pioneers
in medical technology



Brilliant light

means clear vision

KEEPING THINGS COOL

Although the sun is an excellent source of light, for medical purposes it does have some disadvantages. For one, it's hot. Excess heat can make operating team uncomfortable and also dry out sensitive tissues with thermal radiation. MICARE illumination systems are designed to keep both patients and caregivers as cool as possible.

REALISTIC COLORS

In order for physicians and surgeons to get a realistic impression of what they are looking at, the color temperature of the light source must be carefully selected. Otherwise, the color will appear unnatural. MICARE illumination system provide the appropriate color temperature to give you a very real picture –without misleading false colors.

SO MANY USES

MICARE illumination systems are designed for exam rooms, emergency wards, minor surgery rooms, intensive care units, and operating rooms. You can choose from a variety of models, sizes, configurations, and illumination sources to create a lighting solution that will provide the flexibility and power you need. Some of our models can even be equipped with a video camera for documentation or training purposes. The choice is yours.

MICARE MEDICAL

Since 2005

"Light" is one of the most important elements in the operating theater. It has a great influence on the course of an operation and is essential for every successful procedure.

But every situation, every tissue and every user is different

Light that is versatile enough to illuminate every situation and everything you use is essential.



LAMINAR AIR FLOW COMPLIANCY 18.5 % "MICARE Galaxy Surgical Light"

According to DIN standard 1946-4, Laminar air flow ceilings are essential in operating theatres to limit the levels of contaminants in the air and thus the risks of post-operative infections for patients. The vertical outflows are generated by ceiling outlets recovering the zone to be protected, and it is crucial that surgical lights do not disturb the air flow. MICARE Galaxy surgical lights were sent to a centre of expertise in air filtration systems, in order to determine its impact on laminar flows in actual operating theatre conditions.

Furthermore, the turbulence degree is exceptionally far below the 37.5% limit of the DIN standard. Its unique design, smooth surface and low heat dissipation ensure an optimum operating environment for both patients and surgeons.

Simplicity redefined

Most advanced LED technology Active Shadow Management light rightly

where you need it Warm white/cool white LED and unique high-tech lenses provide bright, even illumination. Automatically Illumination Management decreases the need to adjust the luminaire.

MICARE GALAXY-LED offers user-friendly simplicity and robust reliability for a wide range of surgical applications and clinical settings such as ambulatory surgery centers. It is designed to align with evolving standards for risk management.

With GALAXY-LED you are prepared for any situation in the OR, regardless of the light intensity, light field size or color temperature required for perfect illumination. Its 72 LEDs can be controlled individually.

Effective and constant illumination No matter where you stand underneath the lighthead, the rounded, symmetrical shape of the lighthead and the large number of light sources ensure that you always have the same quality and quantity of illumination.



Smart Sensor

Smart sensor will detect the obstacle and increase the intensity automatically. So GALAXY-LED can deliver more stabilized illumination with shadowless management.



High Intensity
Focal Size
140MM



Normal Intensity
Focal Size
180-280MM



Wide Focus
Focal Size
350MM

MICARE TOUCH PRO

Allows for more advanced customization. Settings can be saved for both users and specific specialties for Specs each surgery setting interface. If necessary, they can be activated immediately. As a result, you will save time and further increase safety. The advanced function allows you to modify important features.

Specialty and user-specific settings already has the essential surgical specialties preset. For more individual settings, the surgeon concerned can save the specific values. These can be changed and supplemented at any time.

Allows you to select between several operating languages customized. Another advantage: in the hospital, surgeons are sometimes from different backgrounds, and can navigate more easily through the menu in their native language.



Adjust
the lighting
properties
exactly
to
your
preferences

Fundamental Lighting Technology for Medical Field

Exceptionally safe color reproduction – Ra 98

Color Rendering Index

(Ra: 98, R9: 98, R13: 98)

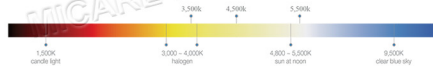
A measuring value, the color rendering index Ra, is used in order to describe the color rendering properties of light sources. This index indicates how the colors will be reflected under the respective light source in comparison with the color reproduction in natural daylight. The highest Ra value is identified with the number 100. Ra 100 means that all the colors so far objects are perceived as in natural daylight. Those then appear to the viewer as "natural". The more the color reproduction index Ra deviates from 100, the worse color on the illuminated objects are rendered. Especially R9 (Red Test color) plays an especially important role in medicine, since the differentiation of various shades of red in tissues and blood is extremely difficult.



Color Temperature

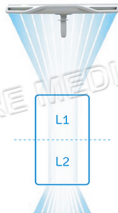
(3,500K - 5,500K)

The color of a lamp is characterized by its color temperature. The object of comparison is the "black body" (made of platinum), which, when it is heated, takes very precise colors at determined temperatures. At the beginning it is dark red, then red, after that orange, then yellow, finally white, and at very hot temperatures light blue. A specific color is then defined with an indication of the temperature in K (Kelvin) of the "black body". The Kelvin temperature scale begins at the absolute zero point (-273.15°C).



Depth of Illumination

The distance between the point of maximum intensity of illumination at the center of the illuminated field (L1 meter from the surface emission of light) and the detection of the value of 20% of the maximum intensity of illumination, measured in the direction of the emitting surface (L2) that in the opposite direction (L2). These values, added together (L1 + L2), gives the depth of illumination without the need to reduce. A higher level of illumination depth is very important especially in cases of narrow and deep wound channels.



MICARE GALAXY-LED delivers excellent depth of illumination
 E2 x 60% : 35cm
 E2 x 20% : 160cm

Focus Adjustment

Adjust the focus size to suit your working area to eliminate peripheral distraction.

- 1) Max. 35cm/Min. 14cm
- 2) 10 Steps adjustment



Smart Sensor

Smart sensor will detect the obstacle and track the intensity automatically. So, Galaxy-LED can deliver more stabilized illumination.



Synchronized Intuitive Control

GALAXY-LED adopt touch sensor control panel which surgeon can control the light intensity, focus size and color temperature with only finger touch. The control panel is synchronized with sub-handle for the user to approach the control panel easily during the surgery. Also quick controller on central grip will help surgeons to concentrate on surgery.





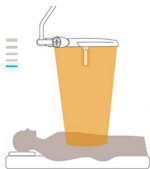
Enhance visibility and diagnostic capabilities by selecting your preferred lighting option.

MICARE Galaxy Surgical Light

Risk management

Enhance visibility and diagnostic capabilities by selecting your preferred lighting option. You have the flexibility to choose between fixed and adjustable color temperatures, offering two distinct choices of warm and cool white light to suit your preferences.

MICARE Galaxy-LED is outfitted with a sterilizable handle capable of enduring up to 350 cleanings, creating a consistently hygienic and secure surgical environment. MICARE Galaxy's sleek and smoothly contoured surfaces, devoid of visible screws, facilitate effortless cleaning and disinfection.



Warm color temperature



Cold color temperature



The future of OR lighting is here.

Medical professionals know it's vital to create the optimal environment for today's complex procedures — and the foundation of that environment is brilliant lighting and the tools that help OR and critical care teams see more.

TECHNICAL DATA SHEET



Model Number	E700/700	E700	E700L
Working Voltage	95V - 245V, 50/60HZ	95V - 245V, 50/60HZ	95V - 245V, 50/60HZ
Light Intensity At EC (1M)	40,000 - 160,000 / 40,000 - 160,000 Lux	40,000 - 160,000	40,000 - 160,000
Light Intensity Control	0 - 100%	0 - 100%	0 - 100%
Color Temperature (Steps)	3,500 / 4,000 / 4,500 / 5,000 / 5,500K	3,500 / 4,000 / 4,500 / 5,000 / 5,500K	3,500 / 4,000 / 4,500 / 5,000 / 5,500K
Color Rendering Index RA / R9 / R13	98 / 98 / 98	98 / 98 / 98	98 / 98 / 98
Lamp Head Diameter	702 / 740/5M	740MM	740/5M
LED Quantity	72 / 72PCS	72PCS	72PCS
Adjustable light field size	160 - 310 / 160 - 310MM	160 - 310MM	160 - 310MM
LED Life Span	80,000Hrs	80,000Hrs	80,000Hrs
Total Radiant Flux Density	364 - 500W / m ²	364 - 500W / m ²	364 - 500W / m ²
Endoscopic Ambient LEDs	White + Yellow Remis (Spec) / White + Yellow Remis (Spec)	White + Yellow Remis (Spec)	White + Yellow Remis (Spec)
Light Intensity For Endo Mode	10% / 10%	10%	10%
Temperature At Surgeon's Head	≤1°C	≤1°C	≤1°C
Illumination Depth For L1+L2 at 20%	1600MM	1600MM	1600MM
Illumination Depth For L1+L2 at 60%	850MM	850MM	850MM
Protection Rating	IP5-EX	IP5-EX	IP5-EX
Operating Element	9" LCD Touch Screen	9" LCD Touch Screen	9" LCD Touch Screen
Rotating Angle / Height Adjustment	360° / 445°-50° / 1100MM	360° / 445°-50° / 1100MM	360° / 445°-50° / 1100MM
User-specific settings	3 Surgeons For Each Surgery	3 Surgeons For Each Surgery	3 Surgeons For Each Surgery
ADM (Automatically Illumination and shadowless management system)	Optional	Optional	Optional
Synchronizer Control	Optional	Optional	Optional
Battery Back Up-Optional	4-6 HRS	4-6 HRS	4-6 HRS
UPS Uninterruptible Power Supply Optional	4 HRS	4HRS	4 HRS
Sony Internal Camera 20X	Optional	Optional	Optional
22" / 27" / 32" Medical Monitor with record system	Optional	Optional	Optional

INTELLIGENT LIGHTING+CAMERA

Communication and information nowadays play a vital role in many surgical, endoscopic and other imaging interventions and procedures. Specifically, digital image documentation of surgical procedures and live operations are increasingly gaining importance.

SONY Cam from MICARE gets you directly in touch with what's happening in the OR - live. In conjunction with our MICARE operating light generation, the digital camera system offers you everything you need for visualization and image transmission of entire surgical procedures. You have the choice.

Why the MICARE Surgical Light is the right choice:

- Zoom 20X Optical X 10X Digital
- Image rotation ("light head" version only)
- Manual focus and auto-focus
- Manual and automatic shutter
- Servomotorized image selection function, remote-controllable (only in the light head)
- White balance
- On separate arm or integrated into light head



Image sensor

Number of pixels

Effective pixel number approx.

Signal system Standard

Aspect (height-to-width) ratio

Signal-to-noise ratio (SNR)

Zoom

Focal length (zoom lens)

Shutter

White balance automatic

Power requirements: control unit / camera

Wall socket connector standard 3 x BNC socket for video signal

1 x multiple DIN socket for control signals

Resolution

Contrast

1/3" CMOS

1920 x 1080 / 3840 x 2160

2,000,000 / 8,300,000

1080P / 2160P / 50 Hz

16 : 9

> 50 dB

20x optical / 12x digital

f = 5.1 mm to 51 mm

1/2 bis 1/10,000 s

100-240 V, 50/60 Hz / 6-12 V DC

1920 x 1080 pixels excellent

16:9

Technical data TFT monitors (3840 x 2160P 4K Solution Optional)

Product	Features	Signals/Interfaces Outputs	Signals/Interfaces Inputs
Radiance 22" (w/ fiber-optic input)	Resolution 1920 x 1080, response time 5-12 ms Types of voltage 24 VDC	1x DVI-D loop (DVI socket) 1x S-video loop (mini DIN) 1x HD-SDI loop (BNC)	1x DVI-I (DVI socket) 1x DVI-D (DVI socket) 1x VGA (D-sub, 15-pin) 1x S-video (mini DIN) 1x S-video (2x BNC) 1x composite color video signal (BNC) 1x YPbPr (3x BNC) 1x RGBS (3x BNC) 2x HD-SDI (BNC) 1x RS232 (D-sub, 9-pin)
	High-quality endoscopy display with HD-SDI interface PIP (picture-in-picture) mode and other features		

Product	Features	Signals/Interfaces Outputs	Signals/Interfaces Inputs
Radiance 24" (with fiber-optic input)	Resolution 1920 x 1080, response time 5-12 ms Types of voltage 24 VDC	1x DVI-D loop (DVI socket) 1x S-video loop (mini DIN) 1x HD-SDI loop (BNC)	1x DVI-I (DVI socket) 1x DVI-D (DVI socket) 1x DVI via fiber optic 1x VGA (D-sub, 15-pin) 1x S-video (mini DIN) 1x S-video (2x BNC) 1x composite color video signal (BNC) 1x YPbPr (3x BNC) 1x RGBS (3x BNC) 2x HD-SDI (BNC) 1x RS232 (D-sub, 9-pin)
	High-quality endoscopy display with HD-SDI interface PIP (picture-in-picture) mode and other features with LWI interface		



Good lighting is a critical part of clear assessment and safe treatment.
With the MICARE GALAXY-LED Surgical Light
We're helping surgeons do
What they do best

GALAXY-LED Performance that doesn't cost the earth



GALAXY-LED embodies MICARE's environmental policy, which aims to minimise the environmental impact of its products by using sustainable resources for product development and manufacturing processes.

MICARE is actively committed to a sustainable development policy that will respect and preserve our environment. Our aim is to implement processes and use technologies that have a low impact on the environment and ecosystems. A number of tangible actions in the design, development and manufacturing of GALAXY-LED reflect this approach. Ninety percent of GALAXY-LED is made from aluminium, a material that can be recycled indefinitely, reducing the usage of raw materials. The compact packaging reduces the amount of materials and waste, and optimised transport keeps CO2 emissions to a minimum. The use of LED light sources cuts energy consumption considerably, and makes further savings through their long service life and minimal maintenance costs.

QUALITY CERTIFICATES & STANDARD

IEC 60601-1:2005 + A1:2012 + A2:2020 & EN 60601-1:2006 + A1:2013 + A2:2021
IEC 60601-1 Clause 14 PEMS + Software Evaluation
IEC 60601-2-41:2021 EN IEC 60601-2-41:2021+CSA C22.2 NO. 60601-2-41:23
IEC 62471:2006 EN 62471:2008
IEC 60601-1-6:2010 + A1:2013 + A2:2020
IEC 62366-1:2015 + A1:2020
EN 60601-1-6:2010 + A1:2015 + A2:2021
EN 62366-1:2015 + A1:2020 + CAN/CSA C22.2No. 60601-1-6
ISO13485:2016 / ISO9001:2015
CE MDR 2017/745(EU) the requirements of the European Directive



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THE
BRILLIANT SIDE
OF MEDICAL LIGHTING