

XLED[®]

Surgical Lighting Systems



4-dimensional surgical lighting

STERIS[®]





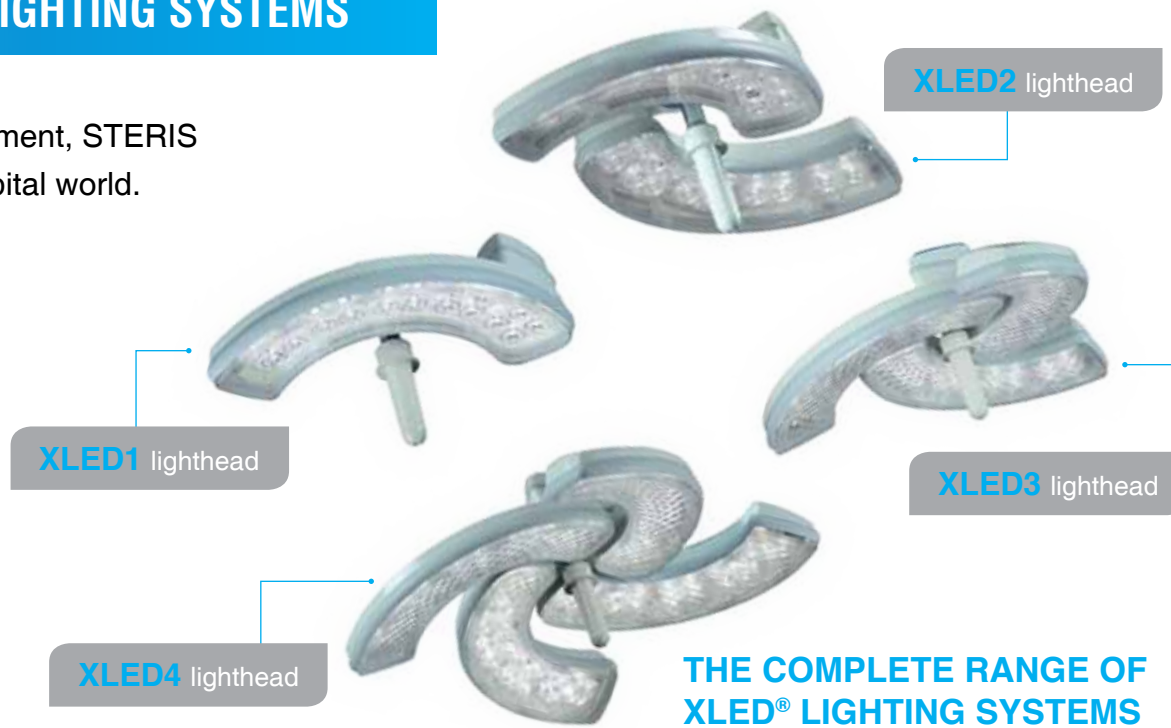
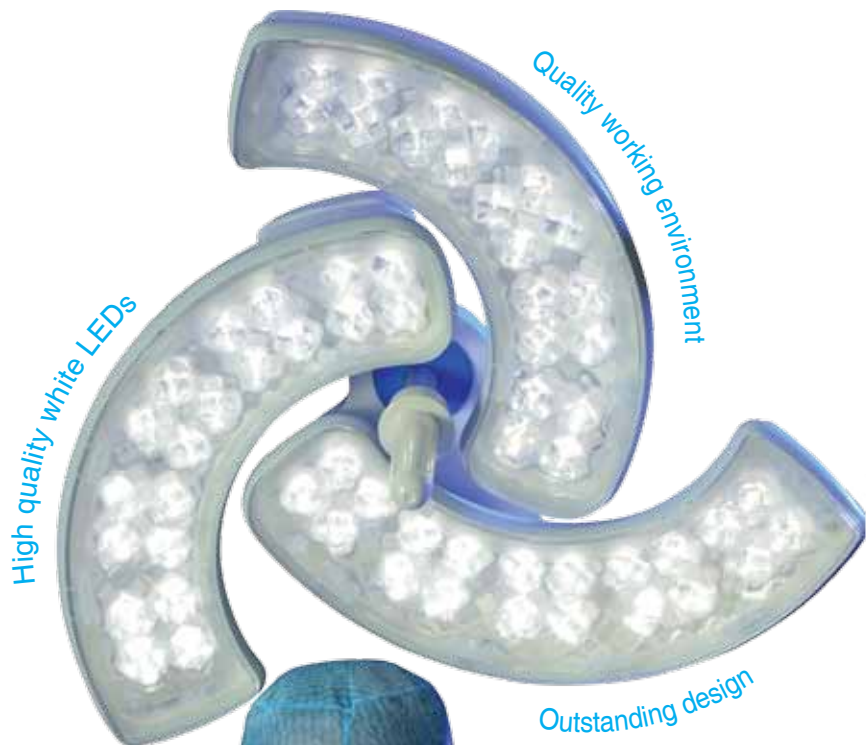
“At STERIS, we haven’t tried to produce one lighting system to suit everybody but lighting systems adapted to each of your specialities”

Jean-Marie L’Hégarat - R&D Director

XLED® A NEW GENERATION OF SURGICAL LIGHTING SYSTEMS

With over a century of experience in the field of medical equipment, STERIS continues to offer innovating solutions to personnel in the hospital world.

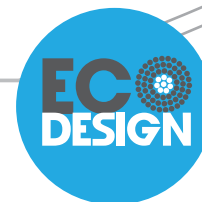
Our mission: useful innovation !



A new outlook on lighting

Our engineers have totally rethought the surgical lighting concept. **A revolutionary concept: the spot.** This makes the XLED® range the most comprehensive surgical light offering on the market, from the single fixed spot to task-adjustable multi-spot systems covering the requirements of all surgical specialities. Whatever the configuration, XLED® offers the ideal intensity and amount of light for each application.

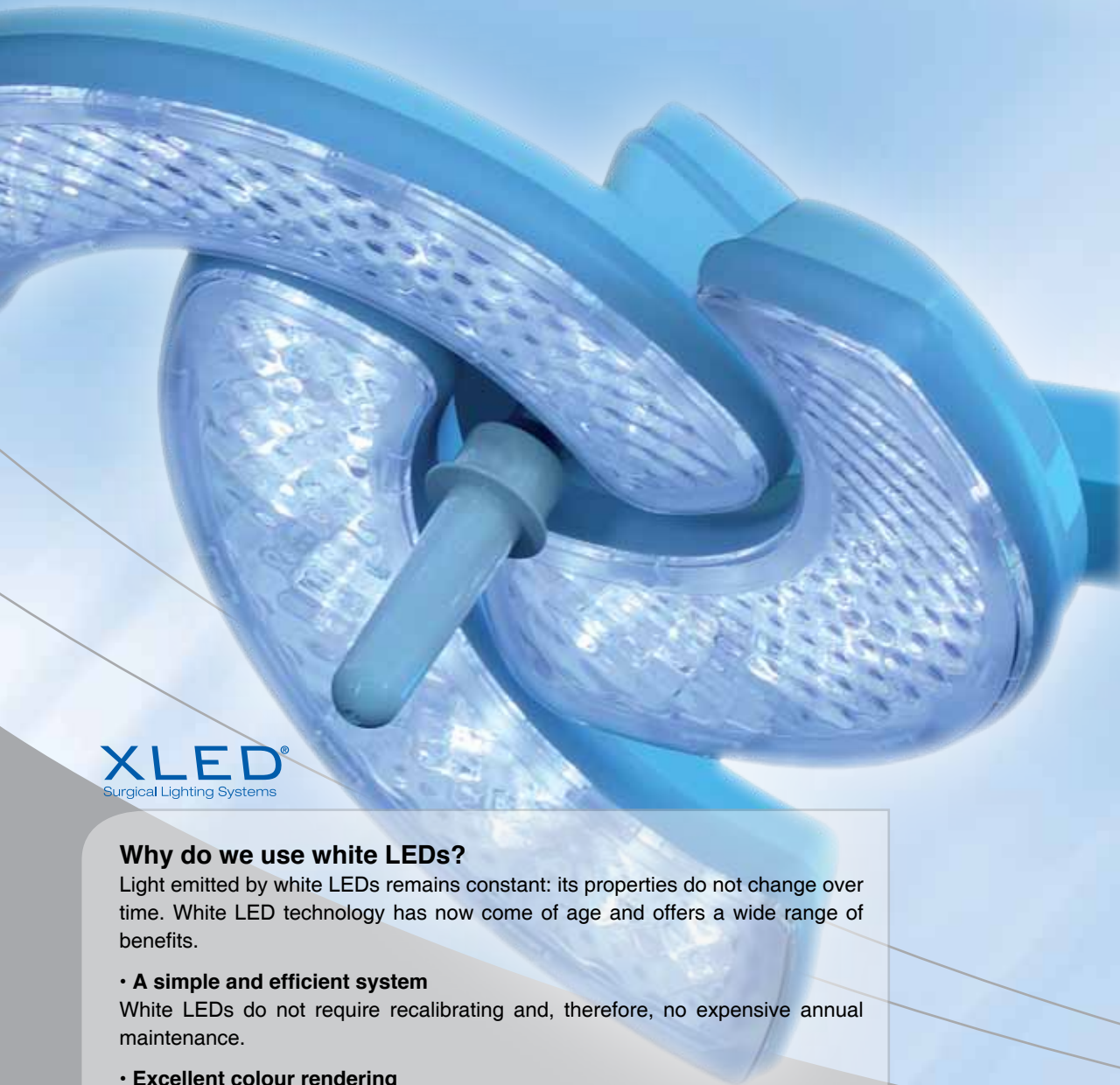
AN EXCLUSIVE DESIGN



Optimised laminar flow

The fluid and open shape of the XLED® allows it to optimise the laminar flow output... and thus contribute to patient safety.

XLED® EXCEPTIONAL SURGICAL LIGHTING QUALITY



XLED®
Surgical Lighting Systems

Why do we use white LEDs?

Light emitted by white LEDs remains constant: its properties do not change over time. White LED technology has now come of age and offers a wide range of benefits.

• A simple and efficient system

White LEDs do not require recalibrating and, therefore, no expensive annual maintenance.

• Excellent colour rendering

XLED® white LEDs guarantee precise colour rendering, a feature that is especially important as far as reds are concerned, in order to be able to identify tissue, vessels and bones etc.

The different shades of red are very accurately rendered.

XLED® OFFERS ALL THE BENEFITS OF LED TECHNOLOGY

Prime choice LEDs

Not all LEDs are the same! STERIS has selected the best LEDs in order to guarantee excellent lighting quality:

- Rated life \geq 40,000 hours
- Excellent Colour Rendering Index (RA = 95) and particularly for the deep saturated red index (R9 = 97)
- Pattern homogeneity (no rainbow effects) for enhanced visual comfort
- Delivering up to 160,000 Lux

Shadow reduction

The 20 LED array in each spot produces 20 patterns that are perfectly superimposed: if the operating field is partially obstructed, the area remains evenly lit.

The exclusive Wavelens system

Available as standard on XLED3 and XLED4, this patented system is used to instantly adjust the pattern diameter through beam divergence. Adjustment is simple and intuitive: the lighthouse does not need to be refocused or repositioned. Lighting quality is maintained.



XLED® A UNIQUE AND USEFUL INNOVATION



1 MANOEUVRABILITY

The XLED® spot design provides a lightweight and balanced system, making its positioning an easy task. There is a single cardanic version for operating theatres with low ceilings.



6 PERFORMANCE

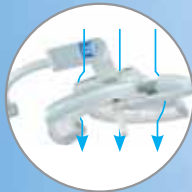
The spot that makes up the XLED® range also provides better energy dissipation and thus helps to enhance LED longevity and maintain performance.

An on/off switch is used to fully switch off lighting and thus reduce energy consumption by avoiding a systematic standby mode.



2 EASILY ADJUSTED

Dual control: directly accessible from the lighting suspension or from the wall-mounted unit (touch screen).



3 EXCELLENT LAMINAR FLOW DELIVERY



4 AMBIENT LIGHTING

Endoscopic procedures now form part of every specialisation. The XLED® range meets this requirement with its standard ambient lighting. Its intensity is also adjustable.



5 MAINTENANCE

XLED® is compatible with all existing procedures. The choice of materials and the quality of finishes are determining factors: smooth surfaces, silicon joints etc.



EACH SURGICAL PROCEDURE HAS ITS XLED® SOLUTION



An intensive care unit does not need the same type of lighting as an operating theatre or even a delivery room: the quantity and volume of light will vary considerably. Because it is modular, the XLED® surgical lights range provides a precise solution to each need.

The XLED®

DUO XLED4 Lighting - 1



Surgery

- Cardiac
- Thoracic
- Vascular

The XLED®

XLED2 / XLED3 Lighting Systems



Surgery

- General
- Gynaecology/
Urology
- Orthopaedics
- Hybrid operating
theatres



- Up to 2 x 160,000 Lux of light available for the XLED3 and the XLED4
- 25 to 30 cm pattern diameter (Wavelens technology for the XLED3 and the XLED4)
- Shadow reduction

- Cold light: tissue-respectful
- Laminar flow compatible
- Ambient lighting as standard

The XLED®

XLED1 / XLED3 Lighting Systems, 1 screen

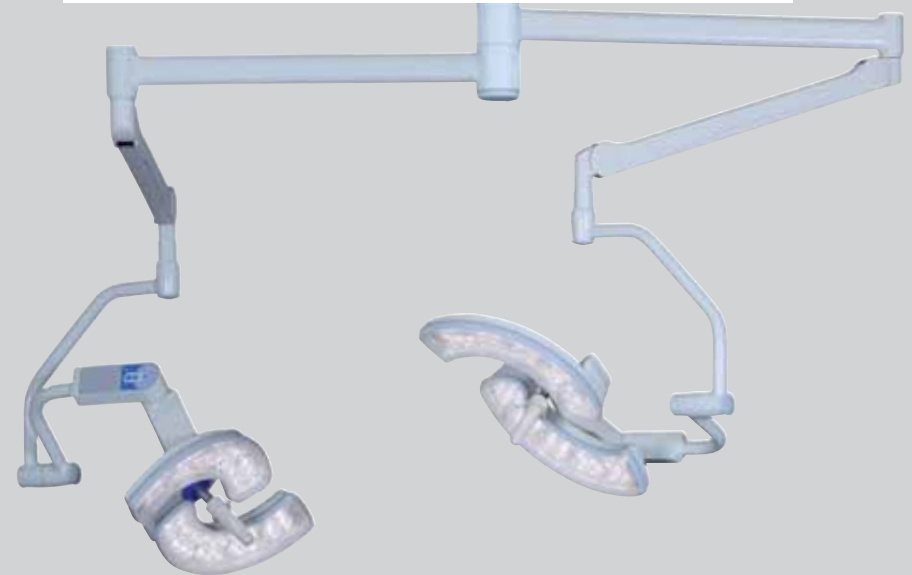


Surgery

- ENT
- Neurosurgery
- Orthopaedics

The XLED®

XLED2 Duo Lighting System



Surgery

- General
- Gynaecology
- Ophthalmology
- Neurosurgery
- ENT



- 1 spot lighting ideal for deep cavities
- Lightweight and manoeuvrable
- Ambient lighting as standard

- Laminar flow compatible
- Option of adapting a monitor holder and/or camera holder
- HD Camera

The XLED®

XLED1 Lighting System

- Surgery
- Intensive care unit
- Emergency room
- Induction room
- Examination room



- The lighting intensity is appropriate to all applications, from 45,000 to 90,000 Lux
- The spot is designed for a positioning avoiding any obstruction: the surgical area receives 100% of the light
- A 16 cm pattern diameter is ideal for examination room applications

The XLED®

XLED2 Lighting System



- Delivery rooms
- Emergency treatment rooms
- ENT - stomatology



- 55,000 to 110,000 Lux intensity (from examination to procedure)
- 25 cm diameter pattern
- Available as a single cardanic version

XLED® TECHNICAL CHARACTERISTICS

	XLED1	XLED2	XLED3	XLED4
Number of LEDs	20	40	60	80
Maximum intensity at 1 m (Ec)**	90 000 lux	110 000 lux	160 000 lux	160 000 lux
Lighthouse size	490 mm / 19"	665 mm / 26"	695 mm / 27"	785 mm / 31"
Pattern characteristics	Small pattern	Fixed pattern	Wavelens as standard	Wavelens as standard
Pattern diameter (d ₁₀)*	160 mm / 6"	250 mm / 10"	250-300 mm 10" - 12"	250-300 mm 10" - 12"
Colour temperature (Tk)*	4 400	4 400	4 400	4 400
CRI (Colour Rendering Index) – RA*	95	95	95	95
R9 (deep saturated red colour index)*	97	97	97	97
Depth of field (L1 + L2 at 20% Ec) 2000 version*	1480 / 58"	1230 mm / 48"	1140 mm / 44"	1050 mm / 41"
Depth of field (L1 + L2 at 60% Ec) 2009 version*	620 mm / 24"	660 mm / 26"	690 mm / 27"	510 mm / 20"
Estimated LED service life	40 000 h	40 000 h	40 000 h	40 000 h

* Performances ± 6% according to IEC60601-2-41
 ** : Performances ± 10% according to IEC60601-2-41



A RANGE OF HANDLES AND ADAPTORS



1



2

- 1 The sterile handle has been designed to withstand at least 1,000 sterilisation cycles.
- 2 STERIS single-use sterile handle holder and adaptor

INSTALLATION

Electricity supply

The XLED® is easily installed in all premises, whether new or existing:

- Wall-mounted box for quick and easy installation in operating theatres
- Wall control relay and remote wall-mounted box for a discrete installation

STERIS: A SUSTAINABLE COMMITMENT

The STERIS Centre of Excellence brings together Sales, Administration, Marketing, Engineering, Research & Development and Manufacturing teams covering Europe / the Middle East and Africa.

This structure controls the entire value chain for all products whether used in the operating theatre block or for infection prevention.

XLED®: AN ENERGY-EFFICIENT LIGHTING SYSTEM

Consuming a mere 85 Watts in its most powerful configuration and delivering 160,000 Lux, XLED® has a particularly lower power consumption.

The production site in France, in partnership with proximity suppliers, has led to a noticeable reduction in the product's carbon footprint.

MANUFACTURING IN EUROPE: STERIS' CHOICE

For STERIS, opting for manufacture in Europe was not a haphazard choice. It is part of our insistence on quality:

- Wholly controlling the quality of our output
- Capitalising on the knowledge and expertise of French engineers and technicians
- Integrating the best European suppliers
- Monitoring and reacting to the demands of our users clients
- Reducing our ecological footprint



STERIS: A COMPLETE RANGE FOR THE HOSPITAL TECHNICAL ENVIRONMENT

With 5,500 employees worldwide, STERIS is a major player in the field of health. A partner to more than 25,000 clients in more than 80 countries, STERIS is present throughout the surgical unit with STERIS Surgical. In addition to XLED® surgical lighting systems, STERIS also offers a comprehensive range: operating tables, arms and integration systems. STERIS is also active in the field of infection prevention technologies through STERIS IPT (Infection Prevention Technology): washing, disinfection and sterilising equipment and consumables.

A WIDE RANGE OF OPERATING TABLES



SURGICAL LIGHTING SYSTEMS



AIRport ARMS



HARMONY INTEGRATION SYSTEMS



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STERIS

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