4-dimensional surgical lighting
"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

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 surgical lighting with 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® 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 ≥ 50,000 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 at a pattern diameter of 25 cm

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 light head does not need to be refocused or repositioned. Lighting quality is maintained.

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

XLED® exceptional surgical lighting quality

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 tissues, vessels and bones etc. The different shades of red are very accurately rendered.

- **Energy efficiency**
  XLED® white LEDs are designed to provide excellent energy dissipation and thus help to enhance LED longevity and maintain performance.

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

- **Easily adjusted**
  Dual control: directly accessible from the light head or from the wall-mounted unit (touch screen).

- **Maintenance**
  XLED® is compatible with all existing procedures. The choice of materials and the quality of the finishes (smooth surfaces, silicon joints etc.) ensure ease of cleaning and maintenance.

- **With XTND® make way for a future-ready operating room!**
  XTND® suspensions, designed and developed by STERIS, offer a wide range of flexible solutions.

  - **XTND®: An architectural solution for your operating rooms**
    Just one anchoring point is enough to mount a wide range of equipment (surgical lights, monitors, in-light or auxiliary arm cameras, etc.) in a compact space. The compactness of the suspension enables installation of the system even in low-ceiling rooms. The XTND® range also includes optional longer extension arms, for complete compatibility with hybrid operating rooms or rooms with laminar flow.

  - **XTND®: Flexibility**
    May times after installation, add one or more additional spindles to fit your needs.

  - **XTND®: Integrity of HD signals**
    STERIS XTND® introduces the latest technological innovations to preserve the integrity of HD signals. A new generation of rotating contacts, with long electron contacts for optimized transmission of signals from your HD equipment.

  - **XTND®: Simple to install**
    XTND® is not only compatible with many existing installations (anchors and tubes), but the system of installation and maintenance will also simplify the organization of your operating room, with minimal downtime.

Simplify the planning of your operating theatre
STERIS has decades of experience in operating theatre equipment, and has developed solid expertise in the field of operating theatre design and configuration. Our new S3D configurating tool, supplemented by our team of planners, will help you design and optimize the organization of your equipment in your operating theatres.

Thanks to the STERIS S3D software, visualizing the configuration of your future operating theatres is fast and user-friendly.

Light emitted by white LEDs remains constant: its properties do not change over time.
FOCUS ON IMAGING

An intensive care unit does not require 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 lighting range provides a precise solution to each need.

Operating room integration links medical imaging to audio and video routing, two of the fastest-developing technologies in the world. Harmony IQ® integration systems incorporate the latest advances in high-definition image management, bandwidth, and signal routing.

The XLED® HD in-light camera allows the medical team to watch the surgical procedure on surgical-grade monitors, specifically designed for the surgical environment. The videos can also be broadcast by videoconferencing for teaching purposes, for example.

The new XTND® suspension system combined with the XLED® HD in-light camera and the surgical-grade monitors provide impressive image quality with excellent vivid color rendering.

The VuCapture™ digital recording system is a simple and integrated solution for HD surgical video and still image capture and printing up to 1080p.

EACH SURGICAL PROCEDURE HAS ITS XLED® SOLUTION

Each surgical procedure has its XLED® solution.

Operating room integration links medical imaging to audio and video routing, two of the fastest-developing technologies in the world. Harmony IQ® integration systems incorporate the latest advances in high-definition image management, bandwidth, and signal routing.

The XLED® HD in-light camera allows the medical team to watch the surgical procedure on surgical-grade monitors, specifically designed for the surgical environment. The videos can also be broadcast by videoconferencing for teaching purposes, for example.

The new XTND® suspension system combined with the XLED® HD in-light camera and the surgical-grade monitors provide impressive image quality with excellent vivid color rendering.

The VuCapture™ digital recording system is a simple and integrated solution for HD surgical video and still image capture and printing up to 1080p.

An intensive care unit does not require 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 lighting range provides a precise solution to each need.
**Les benefits**

- The lighting intensity is appropriate to all applications, up 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
- Optimal lighting for deep cavities

**XLED1 lighting system**

- Satellite light head
- Intensive care unit
- Emergency room
- Induction room

**XLED2 lighting system**

- ENT surgery
- Neurosurgery
- Orthopaedic surgery
- ENT / stomatology

**XLED3 / XLED2 HD camera-ready lighting systems - 1 monitor**

- Cardiac surgery
- Thoracic surgery
- Vascular surgery

**XLED3 / XLED3 HD camera-ready lighting systems - 2 monitors**

- Up to 110,000 Lux intensity (from examination to procedure)
- 25 cm pattern size
- Available in single cardanic version
- Laminar flow compatible
- Option of adapting a monitor holder and/or camera holder
- Optional HD camera

**XLED4 / XLED2 HD camera-ready lighting systems - 2 monitors**

- Up to 2 x 160,000 Lux of available light
- 25 to 30 cm pattern diameter (wavelength technology)
- Shadow reduction
- Cold light: tissue-respectful
- Ambient lighting as standard

**AMBIENT LIGHTING**

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

**Configuration**

- General surgery
- Gynaecological surgery
- Ophthalmic surgery
- Neurosurgery
- ENT surgery

**XLED benefits**

- Lightweight and manoeuvrable
- Ambient lighting as standard
- Laminar flow compatible
- Option of adapting a monitor holder and/or camera holder
- Optional HD camera

**Configuration**

- Cardiac surgery
- Thoracic surgery
- Vascular surgery

**XLED benefits**

- Delivery rooms
- ENT surgery
- Orthopaedic surgery

**Configuration**

- ENT surgery
- Neurosurgery
- Orthopaedic surgery

**XLED benefits**

- Laminar flow compatible
- Ambient lighting as standard
- Cold light: tissue-respectful
- Laminar flow compatible
- Option of adapting a monitor holder and/or camera holder
- Optional HD camera
The STERIS Centre of Excellence brings together Sales, Administration, Marketing, Engineering, Research & Development and Manufacturing teams covering Europe, Middle East and Africa. This structure controls the entire value chain for all products whether used in the operating theatre 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 low 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 European engineers and technicians
- Integrating the best European suppliers
- Monitoring and reacting to the requests of our customers
- Reducing our ecological footprint

**XLED® TECHNICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>XLED1</th>
<th>XLED2</th>
<th>XLED3</th>
<th>XLED4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of LEDs</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Maximum intensity 1 m (Ec)**</td>
<td>90,000 Lux at a pattern diameter of 14 cm</td>
<td>110,000 Lux at a pattern diameter of 22 cm</td>
<td>150,000 Lux at a pattern diameter of 25 cm</td>
</tr>
<tr>
<td>Colour temperature (Tc°)</td>
<td>3200 K°/40°</td>
<td>3500 K°/40°</td>
<td>3500 K°/40°</td>
</tr>
<tr>
<td>Light head size</td>
<td>490 mm / 19”</td>
<td>665 mm / 26”</td>
<td>695 mm / 27”</td>
</tr>
<tr>
<td>Pattern characteristics</td>
<td>Small pattern</td>
<td>Fixed pattern</td>
<td>Numbers on standard</td>
</tr>
<tr>
<td>Colour Rendering Index (Ra°)</td>
<td>93</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>CRI (Colour Rendering Index; Ra°)</td>
<td>97</td>
<td>97</td>
<td>97</td>
</tr>
<tr>
<td>Depth of field (L1 + L2) (*)</td>
<td>2000 version at 20% Ec</td>
<td>1480 mm / 58”</td>
<td>580 mm / 23”</td>
</tr>
<tr>
<td>Camera-ready option</td>
<td>HD</td>
<td>HD</td>
<td>HD</td>
</tr>
<tr>
<td>Estimated LED service life</td>
<td>50,000 h</td>
<td>50,000 h</td>
<td>50,000 h</td>
</tr>
<tr>
<td>INSTALLATION</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

The XLED® surgical lighting systems are easily installed in all premises, whether new or existing:

- Wall-mounted power module for quick and easy installation in operating theatres
- Wall control panel and remote power module for a more discrete installation

**STERIS: A SUSTAINABLE COMMITMENT**

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 European engineers and technicians
- Integrating the best European suppliers
- Monitoring and reacting to the requests of our customers
- Reducing our ecological footprint

To use the equipment safely, carefully read the instructions in the user manual and on the labelling.

And even more accessories on www.steris-lesindispensables.com
STERIS, WORKING IN PARTNERSHIP WITH OPERATING THEATRES FOR 70 YEARS

With 14,000 employees worldwide, STERIS is a major player in the healthcare sector. As a partner of more than 25,000 customers in over 80 countries, STERIS is involved in every aspect of the operating theatre, offering a wide-ranging product line: operating tables, surgical lighting, distribution arms, and integration systems.

STERIS also supplies technologies that contribute to preventing infections via STERIS IPT (Infection Prevention Technology): washers, disinfection units, sterilisers, and consumables.