

# High Performance, Premium Optics

Harmony® LED Surgical Lighting and Visualization System



# Harmony<sup>®</sup> LED

## Superior Visualization



### Idea.

What if you could redesign your surgical lighting system from the top down? What would it look like? How would it perform? How would it make your life easier and enable you to provide better outcomes for your patients?

### Solution.

STERIS surgical lighting engineers poured 70+ years of experience and innovation into creating an LED lighting system with everything you need:

- high intensity, pure white light
- high performance suspension
- high definition video images

We developed a system that will change your expectations of a surgical lighting system.



### Cutting Edge Technology.

Our engineers evaluated different LED technologies from around the world to determine the most appropriate technology for the demanding requirements of surgical lighting. The result: single-color, phosphor-coated LEDs. They allow the Harmony LED to create a **pure white, natural light** that provides a crisp, consistent spot that will never cause any of the color fringing or rainbow effects of multi-colored bulbs.



# High Performance Optics

## More Power.

Harmony LED delivers 160,000 lux of cool, white light to the surgical field. We pack all of that power into a surprisingly compact LED array, making the lighthead sleek and easy to move. Our patented Surgeon Control puts you in command; adjust the light intensity, spot size, and position, all from the sterile field.

Not only does the Harmony LED deliver a powerful, natural white light, each LED is specifically engineered to provide a superior color rendering index (CRI) of 97. But more importantly, we focused on maximizing the R9 value, a specific color rendering index for deep, saturated shades of red. With an R9 value of 96, Harmony LED achieves an impressive 37% improvement over previous halogen technology. Your eyes will see every detail in exposed tissue, in every subtle shade of red, with clarity, comfort and focus.

Clarity remains constant with **unparalleled shadow reduction** characteristics. Our engineers, using diamond-turned tooling (accurate to one millionth of an inch) created a custom profile LED lens that gathers and focuses light. All of the lenses that make up the Harmony LED lighthead are meticulously fitted, precisely aimed and overlapped to achieve a tight, round pattern. Block one LED lens – or forty – no matter. The surgical spot remains clear and unobstructed. No distracting shadows. No questions.

- High intensity
- Exceptional deep-cavity illumination
- Excellent color rendition (CRI)
- Outstanding R9 value for true red color rendition
- Crisp, adjustable spot size
- Excellent shadow control



120 LEDs in Harmony LED785



84 LEDs in Harmony LED585



Our LEDs deliver light from many different angles, reducing shadows and maintaining a bright, consistent spot regardless of obstructions.



Each LED lens creates the entire pattern – block one or forty and the surgical spot remains **clear and unobstructed**.



**STERIS** STERILIZATION & SURGICAL SOLUTIONS

Surgeon has one-touch control of intensity and spot size over the sterile field.



# High Performance Suspension

In today's OR, providing exceptional, pure white lighting isn't enough. More complex procedures require you to process more information: endoscopic images, PACS images, vital signs. STERIS seamlessly delivers all of this information to the surgical field with our patent-pending modular suspension. STERIS ensures **stunning image clarity** with vivid color accuracy by transmitting high-definition signals from any HD image device, including our HD in-light camera, through low loss HD fiber optic cables. This information is then displayed on our fast response, surgical-grade HD monitors, providing **image quality without compromise**.

Moving with quiet precision, Harmony LED lights and monitors practically float above the surgical field, easily moving at your touch. High-speed ultraglide bearings are designed for **strength and durability**, preventing bounce or drift as lightheads and monitors are moved to their positions.

Our high performance suspension incorporates a state-of-the-art **helix coil/energy chain system** to protect internal wiring. We further encase our fiber optic cables in a double-wall Kevlar jacket to prevent them from kinking and breaking. STERIS tested this system under extremely abusive conditions to **over 20 years of life**, experiencing no degradation in signal quality. So as you position and reposition monitors, the fiber optic video cables inside will not snag, pinch, or abrade, ensuring reliable, high-quality video images over the entire life of your system.

- Streamlined suspension provides crisp, clear HD images while virtually eliminating image lag.
- Ultraglide bearings prevent drift and bounce.
- Specially engineered pre-wired extension arms prevent cable damage.
- Pre-wired system brings high-definition signals to life.

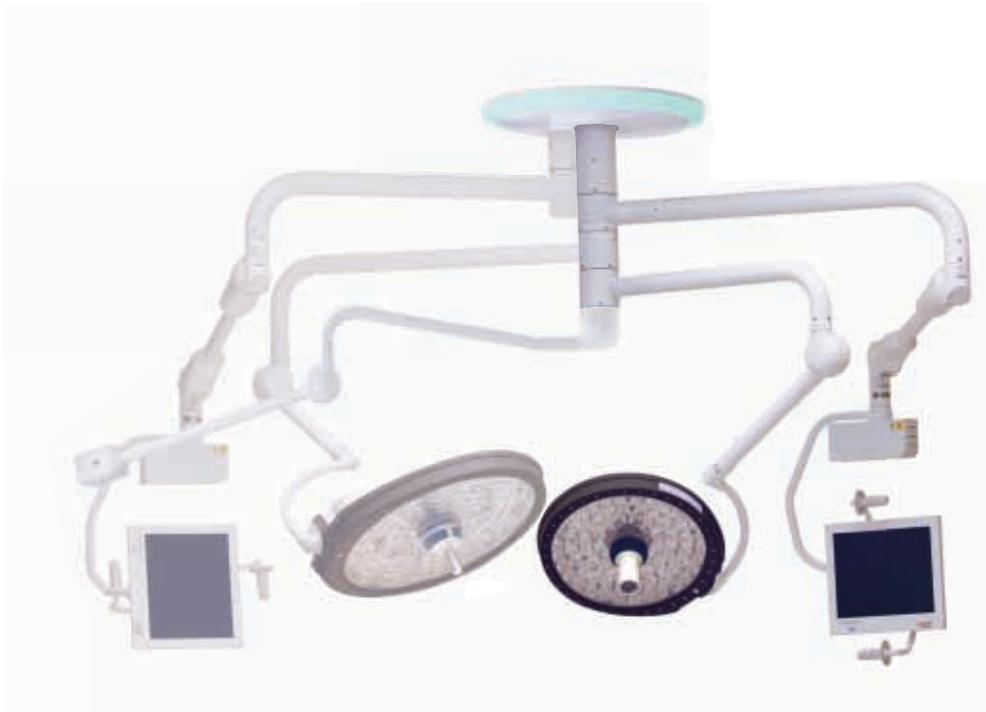


Clean monitor design hides wires and cables.



Harmony ConnectPoint attaches to the bottom of any Harmony LED lighting system to provide DVI, HD-SDI, RGBHV, S-video and composite signals right to the surgical site. The six-foot ConnectPoint arm rotates a full 320°.

Finally, you can have more freedom to position your mobile video equipment where you need it, not where video and power outlets happen to be.



## Future-Ready

- Future-ready design protects your investment.
- Modular, flexible design easily adapts as your needs change.
- All lightheads are camera-ready.
- Harmony LED system accommodates **all** current video signals including:
  - DVI
  - HD-SDI
  - RGBHV
  - RGSB
  - Component
  - S-Video
  - Composite

## Surgical technologies advance in a flash

The Harmony LED system is engineered in every way possible to accommodate your current and future needs.

An **open infrastructure**, camera-ready lightheads, and a sleek, modular design provide for surgical suite flexibility. Monitor extension arms come pre-wired with our new Superbundle and include 12 fiber optic cables, 9 coaxial cables, both AC and DC power and communication cables. This extra video capacity **supports any current video signal** type, from any video vendor, so changing from one video source to another is effortless.

Add a light, a monitor, a camera, an ambient light, even a Harmony ConnectPoint video connectivity system – Harmony LED is upgradable to meet your needs. Harmony LED is designed to adapt and grow, so as technology evolves, **your investment remains protected!**



Add a monitor.



Add a lighthead.



Add a ConnectPoint



Add an HD camera.



Add an ambient light.



Harmony LED lasts  
30 times longer  
than traditional  
surgical lighting,  
while using  
30 percent  
less energy.

## Improve Your Environment

- Greater comfort for the surgical staff.
- Improved safety for the patient.
- Saves energy.
- 30,000-hour life.

Let's face it. If you aren't comfortable, you can't concentrate on the critical task at hand. Harmony LED emits **34% less beam heat** than traditional lighting technologies, keeping you and your staff **cool and comfortable**, even during long, complex procedures. Not only is there less heat on you, but less on the patient as well, reducing the risk of drying out exposed tissue.

Here's the kicker. This technology is better, not only for you and your patient, but for the environment as well. With many hospitals devoted to "green" practices, Harmony LED can be part of your solution. Not only does it use **one-third less energy** than traditional lights, but it is rated for **30,000 hours of life**. That is 10-15 years! Less energy, less waste, better performance.

Now that is a brighter idea.



Harmony LED generates 34% less heat than traditional surgical lighting.



# Exactly What You Need

Every surgeon is a unique individual with specific goals for each type of procedure performed. Your lighting needs for a quadruple bypass procedure in the morning are vastly different from those for a MIS stent procedure in the afternoon. You expect a lighting system to be able to adapt to your needs.

Harmony LED is available in a multitude of configurations so you have exactly what you need, where you need it. And as your needs evolve, Harmony LED is engineered to grow with you.

**Ask your STERIS Sales Professional about the broad offering of flat panel monitors and accessories available for the Harmony LED Surgical Lighting and Visualization System.**

LED585 Single Lighthead System



LED785/585 Dual Lighthead System



LED785/585/585 Triple Lighthead System



LED785/585 with two Dual Flat Panel Monitors



LED585 with Single Flat Panel Monitor



LED585/585 with two Single Flat Panel Monitors



LED585/585 with Single Flat Panel Monitor



## Harmony LED system specifications

Harmony LED delivers high performance optics, modular suspension, future-ready open infrastructure, numerous configurations and reliable high performance to meet all of your optical needs.

Feature	Harmony LED585	Harmony LED785
Max Central Illuminance	160,000 Lux (14,870 fc)	160,000 Lux (14,870 fc)
Average pattern size	7-11" (18-28 cm)	8.5-12"(22-30 cm)
Color temperature	4400 K	4400K
CRI (Color rendering index)	96	97
R9 (deep saturated red color index)	96	96
Heat-to-light ratio (mW/m <sup>2</sup> -lx)	3.4	3.4
Life	30,000 hours	30,000 hrs

Harmony LED is the flagship of our LED lighting family.



Harmony LED System

## More in-light camera options

Part of the flexibility of the Harmony LED system is that every lighthead is camera-ready. Regardless of whether you choose the standard definition (SD) or the high definition (HD) camera, you can easily unscrew the regular handle and insert the camera. Our high-performing system automatically recognizes the camera and allows you to control it from the wall-mounted control panel or from your Harmony iQ integration system touchpanel.



Harmony vLED System

Feature	HD Camera (LHD0002)	SD Camera (LB0010/LB0020)
Image Device	1/3-type CMOS	1/4-type Exview HAD CCD
Effective Pixels	Approx. 2,000,000 pixels	Approx. 380,000
Digital Zoom	12x (120x with optical zoom)	4x (40x with optical zoom)
Video Output	Y/Pb/Pr	S-video or composite
Signal System	50 or 60 Hz	50 Hz (PAL), 60 Hz (NTSC)
Horizontal Resolution Value	High Definition (720p or 1080i)	460 TV lines (PAL), 470 TV lines (NTSC)



Harmony LED385  
Exam light

**For more information, please call your STERIS Account Manager or visit [www.steris.com](http://www.steris.com).**

### Mixed Sources

Product group from well-managed forests, controlled sources and recycled wood or fiber



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