

# Visionary, versatile surgical lighting

Harmony® vLED Surgical Lighting System



 **STERIS**

# Problem

Your surgeons don't like their current incandescent lights: they are too hot, too yellow and too dim. They are demanding the latest LED technology for their procedures. You know you need to upgrade. You can't even remember when your current lights were installed. You have looked at the current LED technology on the market and are a little overwhelmed by the complexity.

Is there an easy way to meet your surgeons' lighting requirements?





## Solution

Our engineers spent 14 months talking to surgeons and nurses at major hospitals and surgery centers to discover their most critical needs for surgical lighting. These clinicians asked us for the same things: uncompromising light performance, cool, high intensity, and pure white light.

In response, we created a new class of surgical lighting. The Harmony® vLED Surgical Lighting System combines the high performance optics of our industry-leading Harmony LED system with a streamlined suspension and control.

Technology - delivered.



## Visualization for all applications

From open heart to endoscopy to orthopedics, the Harmony vLED system gives surgeons and clinicians exactly what they need:

- high intensity
- cool, bright white light
- accurate color rendition
- superior deep cavity illumination
- excellent shadow reduction
- energy efficiency



## Very bright white light at a cool temperature

The advances in LED technology are perfectly matched to the surgical arena. Because LED lights do not emit heat-carrying infra-red rays, there is virtually no heat directed towards the surgical field. Less heat minimizes tissue desiccation and increases surgeon comfort. A true win-win.



# Virtually eliminates shadows

Regardless of the obstructions beneath the surgical light, you need the light at the surgical incision to be perfect. Harmony vLED lights' star-shaped LED arrangement provides the optimum balance of shadow reduction and deep cavity penetration.

Ray-tracing software is used to precisely overlap the pattern of each of the 60 LEDs, so no matter the size or number of the obstructions, the light at the surgical site remains clear and consistent.



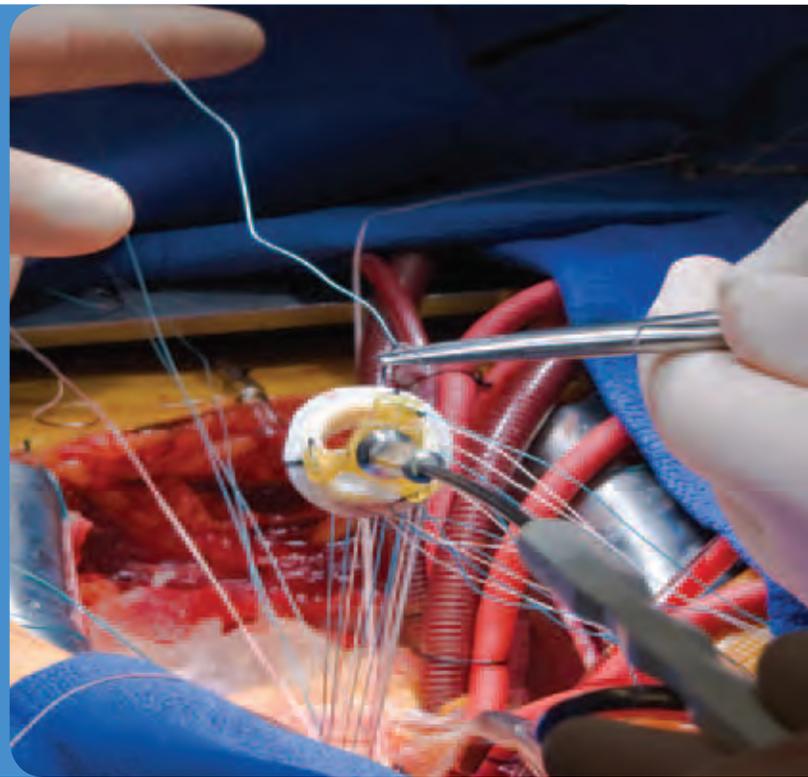
Each LED lens creates the entire pattern - block one or forty and the surgical spot remains clear and unobstructed.

## Vivid color rendition

Not only is the Harmony vLED light cool, it is bright. Our engineers chose a single color, phosphor-coated LED chip for crisp white light, without the color-fringing or color-shifting effects of multi-color LEDs.

Harmony vLED lights provide natural color rendition, allowing surgeons to accurately and consistently assess and interpret tissue and vessel appearance, helping provide the best possible patient outcomes.

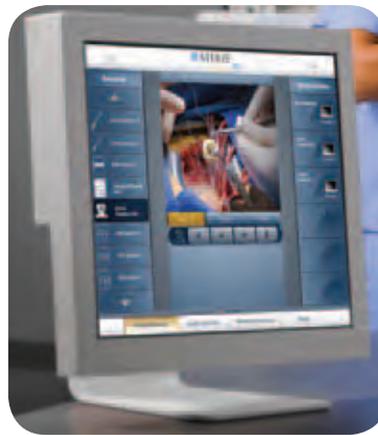
More specifically, we focused on maximizing the R9 value, a specific color rendering index for deep, saturated shades of red, critical to the surgical environment.



# Visionary controls

The Harmony vLED system has three convenient sources of control. The easy-to-use flush-mounted control panel provides light intensity and in-light camera adjustment. An optional Automation Control Technology (ACT) interface allows control of your lighthouse from your integration touch panel.

The integrated lighthandle controls (shown below, far right) allow the surgeon to control light intensity (7 different levels), and provide for quick changes to pattern size or light placement. Clinical versatility, right at your fingertips.



# Value beyond lights

Today's surgical lighting needs go beyond great optics and suspension systems. They require a system that can integrate lighthandle cameras and flat panel monitors and the need to accommodate future technologies. Our empty flat panel monitor arms have a removable panel to address most cabling needs. This means that you have the freedom to choose any endoscopy camera vendor and you are not locked into one video provider.



# Versatility to meet your needs

Not every OR is alike. We created the Harmony vLED system with a variety of configurations and choices to match your OR needs.

Time-tested suspension offers:

- maneuverability for the full range of positioning needs
  - excellent low lateral positioning
  - high "parked" position between cases
- single cardanic arms available to accommodate low ceiling heights
- dual cardanic arms allow flexibility in light positioning for standard ceiling heights

Different lighthead for different needs:

- fixed spot size lightheads, ideal for surgery centers, acute care or cath labs
- adjustable spot size lightheads illuminate any surgical site, from general surgery to large orthopedic cases
- adjustable spot size lightheads that are camera-ready for recording cases



vLED single light system



vLED single light, single flat panel monitor



vLED dual light, with single cardanic option



vLED triple light system



vLED dual light, two single flat panel monitors

# Harmony vLED system specifications

Offering premium optics, excellent configurability and great ease-of-use, the Harmony vLED Surgical Lighting System is another outstanding solution from STERIS Corporation!

Feature	Harmony vLED (typical)
Max Central Illuminance	• 160,000 Lux (14,870 fc)
Average pattern size	• Fixed (7" / 18 cm) or Adjustable 7-11" (18-28 cm)
Color temperature	• 4400 K
CRI (Color rendering index)	• 96
Heat-to-light ratio (mW/m <sup>2</sup> -lx)	• 3.4
Life	• 30,000 hours

The Harmony vLED is a great addition to the Harmony LED Lighting Family.



Harmony HD LED System



Harmony vLED System



Harmony LED385

Exam light



## Environmentally friendly

The Harmony vLED Surgical Lighting System is gentle on the planet. How?

Harmony vLED lights do not contain mercury, lead, cadmium, CFCs, POPs, VOCs or other potentially hazardous materials.

Each long-lasting LED performs for 30,000 hours, which means no lightbulbs to throw away, reducing landfill contributions. Plus, they require less energy to run and don't generate heat that would require excessive HVAC cooling, saving utility costs. Smart and sustainable.

**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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