LUMITEX™

9 Reasons

Why Surgical Equipment with Illumination is Critical

Would you say quality lighting is essential for operating rooms?

The history of OR equipment is extensive and varies on the piece of equipment being utilized. In the early 1800s, operating rooms were known as operating theaters.

Just imagine:

Surgeries were being performed on sunny days between 11:00 am and 2:00 pm since there was no electricity at the time. And candles were often used to help illuminate the room.

Operating rooms require specific pieces of equipment. Many of which are high-tech used for advanced surgeries and would be inadequate without integrated lighting. As a custom medical device lighting company, our passion is bringing lighting solutions that enhance these products and impact lives.

High quality surgical lighting is critical to perform sophisticated procedures in the OR.

And here's why...

1

User Control Lighting

Flexible lighting ensures a surgical suite can meet all its needs.

"As with most state-of-the-art surgical suites, data collection includes voice recordings, radiology scans, patient data, and images from endoscopic and overhead cameras and from cameras mounted on booms. The lighting for data collection as well as display (and viewing) is critical, yet complicated.

In minimally invasive surgery, the lighting requirement is different because the surgeon is directing a probe inside the patient's body while looking at a screen, which is difficult to read in bright light. This problem is eliminated with user-controlled lighting." Anne L. Fischer, BioPhotonics.

2

Heat and Shadow Control

Surgeons depend on their equipment to minimize shadows as much as possible.

Operating room lights are over the OR table to provide light--without shadow and with the least amount of excessive heat.

The problem arises that no matter how low the intensity, a shadow can still be produced. By combining proven reflector technology, the shadow control can be disciplined.

3

Improved Visualization

for better patient outcomes -

Surgical lights provides lighting in the OR and are specifically designed to "illuminate the surgical site for optimal visualization of small, low-contrast objects at varying depths in incisions and body cavities."

4

Enhancement of Deep Colors

the hue should provide the ability to distinguish between different shades of red. (tissues, veins, wounds).

5

Deep Cavity Illumination

No matter how deep or narrow a surgical site is, illumination or superior lighting will guide a surgeon.

Amico created the iCE LED surgical lighting system that "allows surgeons to effortlessly direct a precise light pattern into the surgical field while providing the ideal balance of shadow reduction and deep cavity illumination."

Watch the Video - LED Lights and Surgical Booms : Innovating From Above

6

Better Tissue Discrimination

Surgical lights that are both comfortable for the OR team and offer superior color rendition is a win for all.

Exceptional surgical lighting systems can offer better tissue discrimation with CRI of 95+. A color rendering index (CRI) is a "quantitative measure of the ability of a light source to reveal the

colors of various objects faithfully in comparison with an ideal or natural light source."

Simply stated, it is the measurement of light in relation to how it affects the appearance of color.

Light sources with a high CRI are desirable in color-critical applications such as neonatal care or operating rooms.

7

Reduce Eyestrain

Susan Cantrell, ELS said it best in: Shedding Light on What Surgeons Need...

"The best surgical light provides two things - the correct amount of illumination for the procedure and the right patch size. Brighter does not mean better. Too much [intensity] can fatigue the surgeon's eyes and cause glare."

We concentrate on the quality of light versus the quantity of light.

8

Reduce Reflections, Glare and Poor Contrast

All types of ORs are incorporating various displays and monitors which can benefit from low levels of ambient illumination.

Clifford J. Yanke, Ph.D., Director, Healthcare Product Marketing at Kenall wrote: The Science Behind Properly Lighting an Operating Room. He further details, What is the “right amount of light for the OR and Why Green hue-- green-yellow or blue-green?”

9

Create an Operating Advantage for the OR Team

The ambient illumination should provide contrast with the displays and monitors to allow the OR team to view the monitors, perform tasks, and move about the room as needed.

Operating rooms are integrating a variety of technological advances which require proper lighting to be fully utilized.

Conclusion

The operating room is a demanding environment that requires precision, efficiency, communication, skilled surgeons and healthcare professionals and quality lighting.

Advances will continue as lighting choices and illumination becomes smarter in the ORs and medical field. Each step forward will make for a safe environment for both the patient and surgical team.

Do You Need to Light Your Surgical Equipment?

Let us know by clicking the button below

Light Your Equipment Today

Lighting shouldn't be a luxury. Surgical trends toward less invasive approaches are not well-served by traditional headlamps and overhead lighting, which cast shadows in minimally-open cavities.

Bringing cool, adaptable, low-profile, shadowless light into the cavity can enhance retractor systems and help enable visualization. Integrating light into a retractor system brings multiple benefits:

- Improved visualization and navigation of sensitive areas
- Minimized blood loss through better identification of bleeders
- Ability to transilluminate tissue