

## Case Study: Zero-Flare Surgical Imaging — Powered by VIX™ Intelligent Vision Platform

### Problem Statement

In most OT light-mounted surgical camera systems, autofocus and auto-exposure run independently. When the surgeon's hand, head, or an instrument passes across the field, the camera repeatedly refocuses and simultaneously recalculates exposure. This dual adjustment creates momentary blur and brightness flare-ups, lasting one to two seconds — an annoyance that breaks visual continuity and distracts the surgeon during critical moments. Even some premium international OT light brands cannot fully eliminate this issue, as they rely on standalone camera logic and lack synchronized light-camera control.



### Our Solution

EPMD addressed this challenge through its proprietary VIX™ Intelligent Vision Platform — a smart integration of autofocus and auto-exposure systems under a single control architecture within the Celesta OT Light platform. The VIX™ platform employs a synchronized Smart Sensing System, enabling autofocus and auto-exposure to work in perfect harmony — adapting seamlessly when the camera operates freely, but instantly locking when the user activates Smart Mode.

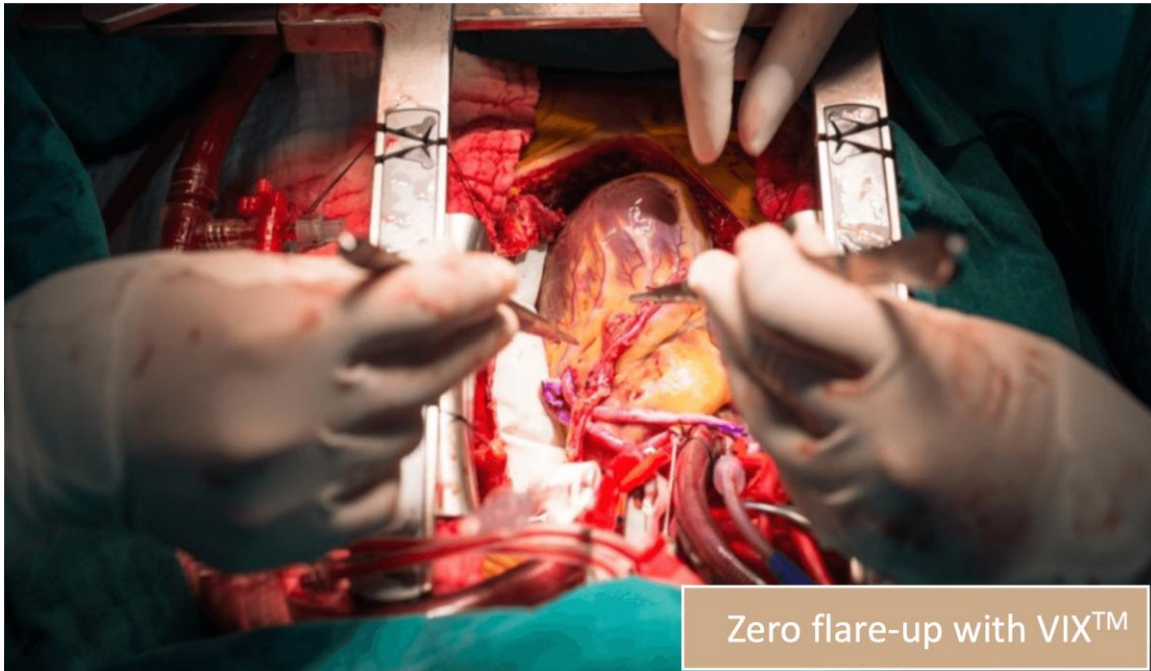
In Smart Mode, the VIX™ system:

- Maintains a constant focal plane on the operating field for continuous sharpness.
- Sets and holds a fixed exposure level at the surgical site, preventing any brightness

fluctuation.

- Keeps focus and exposure tuned together so that even if instruments or personnel temporarily obstruct the scene, the system resumes operation with zero flare-ups or delays.
- Provides manual override through an intuitive touch-based UI, allowing surgeons to toggle modes instantly.

The VIX™ Intelligent Vision Platform ensures both optical stability and operating-room comfort — something no off-the-shelf OT light camera achieves today.



### Impact

Surgeons using EPMD OT lights powered by VIX™ across major corporate hospitals have praised this innovation for its clarity and reliability. The VIX™ platform delivers a steady, crystal-clear image without transient glare, flicker, or focus drift — even in highly dynamic surgical conditions. It enhances surgeon concentration, improves teaching recordings, and elevates the overall operating experience.

“There are absolutely no flare-ups anymore,” shared one senior surgeon. “The field remains perfectly clear — no delay, no adjustment time. It’s the smoothest imaging experience I’ve had in an OT light.”

### Beyond the Product

The VIX™ Intelligent Vision Platform exemplifies EPMD’s core philosophy — designing not just devices, but intelligent medtech ecosystems. By deeply understanding real-world surgical workflows and coupling optical physics with smart firmware, EPMD continues to redefine what precision lighting and imaging mean in the operating room.