



Case Study

SURGICAL FIBER OPTIC CABLE SYSTEM: RE-DESIGN INCREASED LUX OUTPUT BY 40%.

A tier one medical company needed to improve the performance of a fiber-optic surgical light system and move production to an ISO 13485 certified low cost location. Sanmina's fiber optic design and manufacturing expertise delivered 40% increase in LUX output and 25% cost reduction.

RE-LOCATING MANUFACTURING DELIVERED 25% COST REDUCTION & ISO 13485 COMPLIANCE.

THE CHALLENGE

A tier one medical technology company needed to move production of a surgical fiber optic light system to a low cost location. They also needed to improve product performance by increasing brightness, reducing energy consumption and operating temperature. The existing design required a significant amount of manual processing and assembly which resulted in inconsistent product performance and cosmetic issues. The customer required an ISO 13485 certified manufacturing partner who could help select a new fiber-optic material and develop a robust manufacturing process.

WHY SANMINA

Sanmina had been this OEM's trusted electronics manufacturing partner for many years. The customer recognized Sanmina's fiber-optic cable technology expertise. They wanted the benefits of both the fiber-optic and manufacturing knowledge of Sanmina's engineers to develop a robust manufacturing process and improve product performance. Sanmina's ISO 13485 certification was essential.

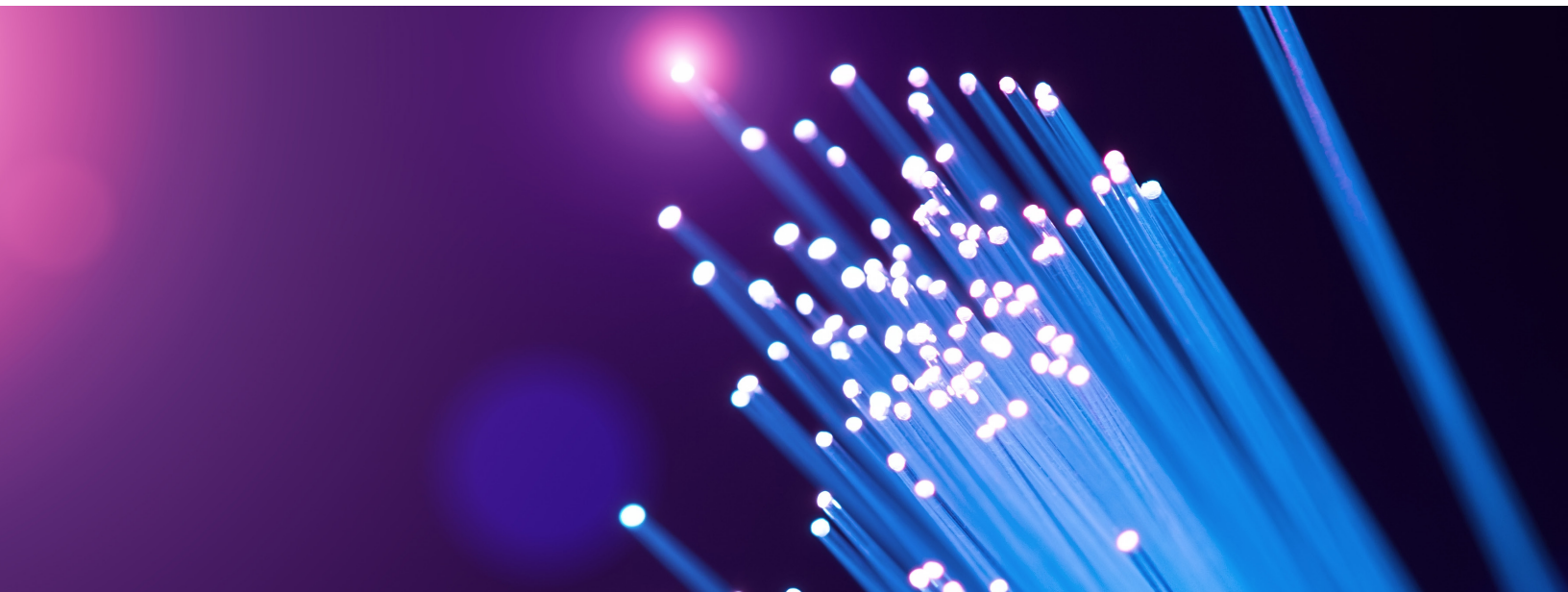


SANMINA'S APPROACH

- One of Sanmina's ISO 13485 certified facilities located in a low cost region was selected for design & manufacturing.
- A Sanmina fiber optics & cable systems engineer investigated the properties of numerous fiber optic materials.
- Several tests were conducted to analyze the light, connectivity and reliability properties of the materials.
- A recommendation for material choice was made based on the test results.
- The customer accepted the Sanmina engineer's recommendation for new fiber optic material and design changes.
- An innovative manufacturing process was developed to consistently cut and separate 5,000 fibers into bundles of 2,500 and assemble them into a fiber-optic cable assembly with metal tubing and ACMI connectors.
- The fiber material was fixed in an epoxy to enable the introduction of additional fibers.
- A semi-automatic system for polishing the epoxy and fiber was developed to increase the light output and eliminate any scratch blemishes.
- A custom fixture was designed to hold the fiber-optic assembly during functional light testing.
- A measurement system and cross reference table was developed to predict the light performance of the system at the surgical site following six months of operational use.

RESULTS

- The fiber-optic cable system was successfully re-designed using different material, improving light output performance by 40%.
- 25% cost reduction was achieved.
- The cable system is now in production at Sanmina.



ABOUT SANMINA

Sanmina makes some of the most complex and innovative optical, electronic and mechanical products in the world. Recognized as a technology leader, Sanmina provides end-to-end design, manufacturing and logistics solutions, delivering superior quality and support to Original Equipment Manufacturers (OEMs) primarily in the communications networks, computing and storage, medical, defense and aerospace, industrial and semiconductor, multimedia, automotive and clean technology sectors.

More information regarding the company is available at www.sanmina.com