



# Medical Application Uses LEDs to Light the Way!

#### Overview

In recent years, the healthcare sector has seen an increased demand for testing and treatment devices for operating room use. Medical device gurus have collaborated to fill this need by focusing on lean manufacturing processes to increase throughput, quality, and accuracy of healthcare products. Clinicians need appropriate lighting equipment to perform medical procedures. Proper lighting allows medical professionals to clearly see the area of interest on the patient.

## Challenge

The medical device manufacturer had three important considerations for the requested product. They needed –

- A LED with high lumen output at low power
- A small case size
- Consistent light output

Over the span of a few months, a cross functional Bivar project team worked on this project. We used the SM0402 LED series for its versatile usage, small size, and low power consumption.

Bivar was keenly aware of the documentation requirements for medical devices. Throughout the project, we regularly communicated with the medical device manufacturer via email and Microsoft Teams, along with weekly team alignment meetings to review our progress. Our consistent communication with the medical device manufacturer allowed us to swiftly generate the product and necessary documentation. Bivar subsequently provided timely material specifications for the medical device manufacturer's regulatory review.

When the medical device manufacturer requested reliability and qualification testing data, Bivar developed and conducted thermal shock tests, constant temperature and humidity cycle tests, soldering tests, continuous lighting tests, and long-term life tests. We provided a full testing plan and report, complete with specific tolerances, sample sizes, and justifications for any outlying data.







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### Solution

Bivar worked closely with the medical device manufacturer's design engineers to maximize light output while reducing power consumption and patient risk. Our engineers arrived at each meeting with new information to produce the best product for the medical device manufacturer.

Our team adapted to design specification changes and manufacturing requests provided by the medical device manufacturer. When asked if Bivar could collaborate with offshore contract manufacturers, third-party sourcing firms and provide the option to service procurement through our authorized global distribution channel, we established the connections as that was no challenge to us.

After completing the project, Bivar became the medical device manufacturer's preferred supplier due to our commitment to serving their needs throughout the entire cycle, from design to product delivery.

Bivar is committed to serving our customers and keeping patients safe in the operating room. Our product reliability allows medical device manufacturers to deliver stellar products to professionals, which allows medical professionals to use our LEDs with confidence. Bivar's LED design on this project has led to continued collaboration in the areas of status indication and illumination in the healthcare industry.



## We're Here to Help

Our engineering team is here to help answer any questions you may have.

#### Contact Us