

## CASE STUDY

# Illuminating the Heart of the Matter



# BIVAR

[www.bivar.com](http://www.bivar.com)

# Illuminating the Heart of the Matter

When manufacturers seek FDA approval for vital healthcare devices, time is of the essence. Narrow windows for prototype and approval require industry know-how to get LED-illuminated medical products to market quickly and safely.

You can find our products illuminating nearly all industries. Leaders in communications, aerospace, medical, and more come to Bivar when they need to move LED light to a specific point, in, on, or around a product case, panel, or enclosure. LED lights are one of the primary interfaces between a user and an electronics product, communicating valuable system statuses like power, battery life, signal strength, warnings, and more.

“

We give the same attention to customers, regardless of size. You're a startup; you're a huge corporation. It doesn't matter. We're here to serve everybody the same.

—Shirley Mercado, Bivar Business Development Manager

We know that a poor reading can negatively affect your user experience. So we take immense pride in helping you design top-notch products that expertly serve your customers. No matter how complex or straightforward, we have the experience and creativity to ensure light goes from point A to point B while addressing bends, curves, tight spaces, and technology demands.



# The challenge

Take the healthcare industry, for example. One of the world's leading patient monitoring companies approached us for an illumination solution that would fit into the compact footprint of a wearable heart monitor. The LED indicator tells the user if the device is powered 'on' or needs charging. When the small patch-like device is activated, doctors can remotely assess a patient's heart rate and other vitals.

As a wearable, the light pipe needs to be small. The lens profile must be flush—it can't snag on clothing or bulge too noticeably through a shirt. Plus, it needs to be simple, a tool-less design that a patient can easily clean without damage.



# How we solved it

In addition to the small package, things needed to happen fast. The client needed parts right away to clear the all-important hurdle of FDA approval. Enter our medical-grade PLPC Series, available in a variety of body lengths and lens sizes.

The 2.5mm body length of the [PLPC2-100](#) made it small enough to accommodate the narrow thickness of the panel. Its flush lens has a countersink thread which allows it to lay flat on the panel, meaning there aren't any protruding features—only a flat, seamless surface that makes the device comfortable for the wearer. Using a press-fit installation design, the PLPC snaps right into the panel without the need for tools or clips.

Through tight, rapid-response communication with the client's team, we could supply enough samples to meet the prototype build timeline. By working closely together, we were able to ready this wearable heart monitor for FDA approval so it could start helping patients in need.

## We hit the ground running and utilize every minute

At Bivar, we meet our customers where they are. We problem-solve to help you avoid changes to your enclosure, board, or panel; instead, let us find a solution that meets your needs.

“

What sets us apart? Our first hand variety of engineering experience. We don't just have one background but many different engineers, including mechanical, electrical, quality, and more. We invest in different types of people and equipment to help with our research and design, such as our 3D printer, laser cutting machine, five-axis CNC, and more.

—Kurt Baron, Bivar Design Engineer

We back everything we do with care, creativity, and attention to detail. With over 50+ years of experience in the design and development of LED illumination and Circuit Board/Component Hardware, we are a trusted engineering-solutions provider.

## We're all in this together

We become a natural extension of your in-house engineering team, bringing the same pride and commitment to your project that you'd expect from your internal staff. Our all-hands-on-deck mentality is rooted in a unique structure that not many other companies can mimic—Bivar is fully ESOP employee-owned. “We're all in this together,” explains Bivar Business Development

Manager Shirley Mercado. “The work we put out benefits customers, sales channel partners, and employees in the long run.”

## Long-standing relationships with major players across the globe

Quick engagement and responsive turnaround are two things we strive to bring to every project. We don't just find a solution and leave you to it, but we go the extra mile to coordinate purchasing and distribution.

“

We have different options we can give a customer, such as priority expedite or air logistics to cut down lead times and meet delivery deadlines.

–Shirley Mercado, Bivar Business Development Manager

Suppliers, contract manufacturers, and distribution partners worldwide know us for our diligence, expertise, and commitment to service. This reputation grants us access to resources and supply chain arrangements that help us meet tight production deadlines.

## Let's work together to illuminate your next innovation

When you're faced with the unexpected, you need an illumination partner willing to explore the details. At Bivar, we illuminate the way for innovative engineering teams so they can get sophisticated, quality products to market with confidence.