



Illumination that Brightens EV Charging Stations



Illuminated indicators on user interfaces do more than transmit information. Every touchpoint forges a connection with customers. How a product works — and looks — is a powerful marketing campaign for earning long-term, loyal business. This EV manufacturer came to us with a unique charging wall box shaped, designed, and packed with a unique charging system, designed and packed with features that suited their brand.

Human Machine Interfaces go beyond mere communication — they're how customers touch your brand. The design of a product serves as much of a function as it does a brand signature. In an industry where charging availability and performance are [top decision factors¹](#), we illuminate EV charging equipment with reliable, user-friendly functionality that delights.

See how our illumination expertise does more than make a product easy to use, but strengthens brand connections.

¹**McKinsey**, “Exploring consumer sentiment on electric-vehicle charging”: <https://www.mckinsey.com/features/mckinsey-center-for-future-mobility/our-insights/exploring-consumer-sentiment-on-electric-vehicle-charging>

The Challenge

This leading-edge creator of EV technologies approached Bivar for help designing LED indicator lights for a specialty charger designed for their fleet of commercial delivery vans. The project involved an LED indicator with a unique lens shape that integrated multiple different LED colors and could be viewed at an angle and up to 100 ft away in daylight. The device communicates valuable information to the user: if it's ready for charge, experiencing issues, requiring maintenance, and more. LED indicators need to do more than display local information, but also integrate with RS-485 standard to communicate control of illumination.

How We Solved It

Illumination Through Your Brand's Unique Lens

We got to work engineering an illumination solution that fit seamlessly into the specialty shape of the fleet-charging unit. Customized lens shapes boosted LED viewing distance, while reflective panels within the lens housing further extended visibility.

Ruggedized for Outdoor Installation

Outdoor EV charging boxes are used all around the world. They need to be tough enough to survive subtropical deluges and sweltering summers. Rain, wind, hail, or sleet shouldn't grind fleet charging to a halt. To seal the lens and hardware, Bivar designed a customized polyurethane foam gasket — a highly durable foam that holds its shape over the long haul — to meet IP67 specifications.



How We Illuminate the Path to Your Project's Success

- **Finding more than the 'right part,' we find the solution that's right for you:** At Bivar, we're manufacturer and component agnostic, meaning we look high and low for the best ideas no matter where they await us.
- **Sourcing flexibility and creativity:** A solution is only as strong as its availability. We can draft multiple iterations of a solution, utilizing various LEDs and electronics to proactively lessen blowback from unexpected market conditions or supply chain disruptions.
- **Transparent communication:** You won't have to come to us for a project status — we keep you fully in the loop on development so you have fair time to adjust internal plans accordingly.

Simple to Install Without Compromising Environmental Sealing

Even the most well-sealed designs are useless if they're too intricate or challenging to install. Bivar came to the table with a foolproof assembly plan to maintain the IP67 rating in every unit that came off the line.

Right from the beginning, we consider potential solutions by asking questions like, "is it easy to assemble?" We don't just present you with an answer that works; we find one that seamlessly integrates with all the ways you do business.

Experts in AEC-Q200 Standards

Throughout this project, we maintained tight component selection parameters and rigorous testing to meet AEC-Q200 qualification. Bivar worked with their own test programs and the client's preferred software (CoolTerm, MPLAB X) to analyze LED performance, as well as RS-485 messaging interfaces.

Better Together

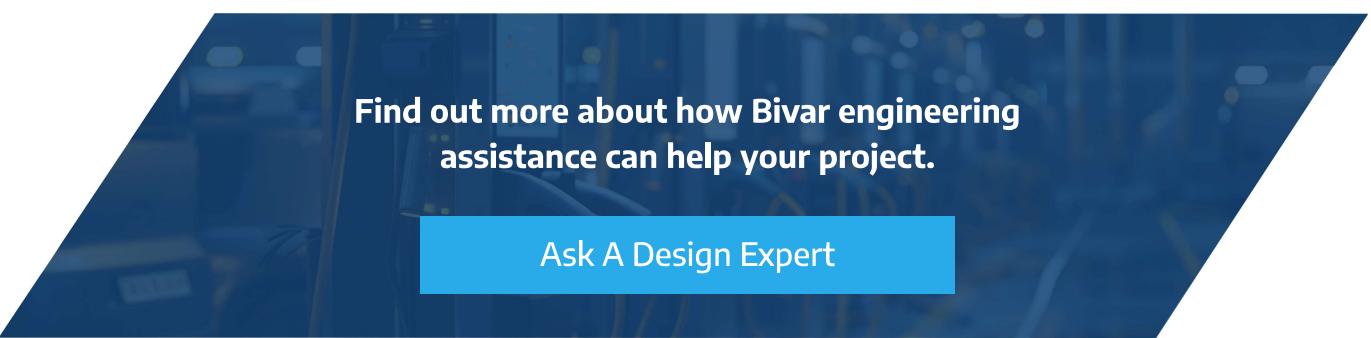
Working together, we blend effortlessly with your in-house engineering team, demonstrating the same commitment and pride you expect from your own staff. Our “all in this together” approach is fueled by a unique structure that distinguishes us: Bivar is fully ESOP employee-owned. “We’re all in this together,” explains Bivar Customer Experience Manager Shirley Mercado. “The work we put forth reflects our commitment and dedication to an exceptional customer experience.”

50+ Years of Strong Global Partnerships

With more than 50 years in the illumination industry, we’ve built a name for ourselves synonymous with dedication, skill, and attentive service among suppliers, manufacturers, and distributors. Our strong reputation opens doors to exclusive resources, creative ideas, and supply chain arrangements, ensuring we meet your tightest timelines.

Let's Work Together to Illuminate Your Next Charging System

When faced with a complex illumination challenge, you need a partner that understands all the details. At Bivar, we illuminate the path forward for creative engineering groups, empowering them to bring refined, high-quality products to the market with confidence.



Find out more about how Bivar engineering assistance can help your project.

[Ask A Design Expert](#)