



CASE STUDY

AMERICAN BRIGHT DRIVES TOWARD SOLUTIONS FOR ELECTRIC VEHICLES



CUSTOM DESIGNED FLEXIBLE LED LIGHT STRIPS WILL PUT THE CLIENT'S ELECTRIC VEHICLE CHARGING STATION IN THE SPOTLIGHT.

INTRODUCTION

The road transportation sector accounts for 16% of global emissions, according to a 2022 report from the International Energy Association. To bring that number down, today's automobile industry has electrification of cars as its primary focus. The client, a global corporation that specializes in and handles motor application products based on "everything that spins and moves," is revving up its efforts to develop and manufacture products that contribute to vehicle electrification. These products include EV charging stations that need to be both functional and visually attractive. That's where American Bright comes in.

To meet their goal of being viewed as the go-to source for LED lighting in EV charging stations, the client sought help from American Bright. American Bright solved the client's design problems by providing a custom solution with flexible light strips composed of RGB+IC individually addressable LEDs. The light strips provide the visual component for charging stations of any shape and size. The light strips are a UL Listed product that was customized based on the client's needs.





THE GOALS

As sectors across the economy act on the urgent need to find alternatives to fossil fuels, the automobile industry plays a leading role. When a consulting firm estimating that approximately 30% of all new vehicles sold worldwide will be electric by 2025, the client realized the importance of the electric vehicle market and expanded its designs to include charging stations.

The client needed a way to provide colorful lighting that outlined the charging station terminals and screens to be used as indicators of progress throughout the charging process. For example, red would mean the car was in the early stages of charging and green would indicate that the car was fully charged. Uniform colors would add visual appeal and bright hues would help drivers monitor the charging process.

American Bright stepped in to offer value-added services and solutions. The engineers' dedication to consistent innovation and improvement, along with high quality and reliable product offerings with unlimited variety options, made American Bright perfect for the job. In particular, the client appreciated the communication and great technical support that went into the final product.

CHALLENGES AND SOLUTIONS

The client knew they wanted to implement American Bright LED products in their unique charging station plans. But they were indecisive about whether they wanted to use an RGBW rigid board solution, or something else entirely. Then they became aware of the option for individually addressable flexible lighting solutions.

American Bright's flexible light strips make it easy to add light to any outdoor location. The light strips come in 5V, 12V, 24V options, with different IP ratings (IP20, IP65, and IP68), and in variable lengths and color combinations that are standard products or can be customized to specific requirements. Standard products include white color variations (CCT) and single-color options, along with the RGB addressable LED strips with lights that can be controlled individually. After an internal meeting with the client, American Bright designed and presented a complete solution that precisely fit the client's needs.

In one challenge, because the charging station was still in its design stage, the client was not sure of the exact length of the light strips that would be required. American Bright provided multiple samples with different lengths to allow the client time to compare and decide. In another challenge, the client was unsure about how to manipulate the IC control chip wiring connection. American Bright engineers explained the wiring process by sharing a detailed schematic circuit diagram. The client understood and verified the diagram and proceeded to place an order with American Bright.



BUSINESS SUCCESS

The client looks forward to incorporating American Bright's custom light strip solution into their electric vehicle charging stations next year. The design is still in the prototype phase and will be produced at the end of 2023 for delivery in Q1 of 2024. Then, it will be ready to hit the road for electric vehicle drivers across the country.

The client loved working with American Bright to develop the perfect solution. In particular, the client felt reassured about the reliability and stability of the final product; moreover, they felt that American Bright engineers listened carefully and responded thoughtfully to their requests and concerns.

American Bright always goes out of the way to ensure the provision of quality products and services. American Bright has over 25 years of extensive experience and knowledge and expertise in the lighting industry. The charging station project involved paying close attention to the client's needs and understanding how to help them achieve their goal.

American Bright is not only an LED manufacturer but is also a complete solution provider with brilliant customer service. The world needs the automotive industry to pour effort into shifting gears toward electric vehicles for climate friendly and clean transportation. American Bright's LEDs are lighting the road toward a sustainable future.

