LEC Technology Captures the Checkered Flag

Held at the Daytona International Speedway, Daytona Beach, FL, the Pepsi 400 is one of the more important races on the NASCAR circuit. But it's not just the drivers and pit-crews that are focused on finishing first, it's the advertisers too.

In 2004, Coca-Cola wanted to pay tribute to NASCAR racing legend Dale Earnhardt while introducing its C2 product at the Daytona International Speedway. Optika Scenicworks, Greenville, SC, was hired to conceptualize the sign design. Since the Pepsi 400 is traditionally overloaded with advertising messages, Optika needed a unique advertising solution to capture the fans' attention during both the day and night. The decision was made to illuminate three-dimensional billboard ads on a moving, 18-wheel tractor-trailer. "Once we had our idea and concept in place, we had only 30 days to execute the design and complete and deliver the truck," said Jason Kraning, president of Optika Scenicworks. "Literally, this should have taken six months to complete, but we worked 24/7 to reach our deadline."

The Project: Illuminate an 18-wheel tractor trailer at the Pepsi 400, Daytona Beach, FL

The Challenge: Create a lighting solution that would stand out and safely illuminate a moving trailer

The Solution: LEC-based panel lighting system

For the 40-ft trailer, Kraning incorporated flat, flexible illuminated panels from CeeLite, Lansdale, PA, which use light emitting capacitor (LEC) technology. A total of 84 two by three ft panels were wrapped around both sides of the truck along with an equal number of lenticular flip panels that were produced by Big3D Worldwide, Fresno, CA. LEC technology consists of three components: phosphors by OSRAM SYLVANIA, flatline inverters and advanced packaging materials. The LEC-based panels are flat and much larger than conventional lighting, stretching as far as four ft wide by six ft tall. The panels typically consume very small quantities of electricity relative to incandescent, neon and fluorescent lighting and are essentially a LEC structure with phosphor sandwiched between the electrodes.

Kraning also said a key step in the construction process was the confidence in the safety of the metal framework that mounted the lenticular graphics and CeeLite panels. "The truck was driven from Sarasota to Daytona, at speeds of 85-90 miles per hour and the last thing we wanted was the metal framework giving way and panels flying through the freeway like Chinese throwing stars," said Kraning.

—John-Michael Kobes