

TRAILER BODY BUILDERS®

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August 2018

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before innovation
was cool

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NACFE analysis

LED lighting: Brighter, more long-lasting

Advancements in LED lighting help make work trucks safer, smarter and more efficient by meeting use-specific requirements

AS LED lighting has continued to become more affordable, it has also become brighter and more long-lasting, with lifespans of 50 to 100 times those of incandescent lamps. The technology is not only changing the landscape of commercial vehicle lighting, but is also delivering superior lighting characteristics that also enable trailer and bodybuilders far greater application flexibility.

"We're seeing the dawn of a 'golden age' of vehicle lighting," Brett Johnson, president and CEO of Optronics International, said. "Design engineers at OEMs and up-fitters can put greater lighting capacity in smaller lamps that go almost anywhere to perform new functions."

LED scene lighting heads in a new direction

Optronics introduced its new UCL41 Series Scene Light in spring 2018. The first of a new family of directional scene lighting, the lamp cast a more focused beam of LED light precisely in a direction that could be dictated simply by its placement. Brought to market at a price of only about half the cost of traditional nine-diode scene lights, the UCL41 Series Scene Light featured 12 diodes as well as advanced optics that focused its beam pattern to deliver an optimal lighting scenario.

Before the introduction of the UCL41, scene lights basically just flooded an area with light no matter how wide or deep the scene they were illuminating might be. The more primitive scene lamps provided users with less usable light—particularly in those critical areas directly adjacent to a vehicle.

Optronics' new UCL41 directional scene light casts a bright white LED beam pattern at a 45-degree angle to its mounting position. The lamp's unique optical design allows OEMs, bodybuilders and end users to dictate the size, shape and brightness of the scene environment that best meets the vehicle's use. A lamp that is mounted higher creates a larger scene, a lamp mounted lower creates a smaller scene and rotated lamps create light that is oriented to a vehicle's front, rear and sides.

"We engineered our UCL41 Series Scene Light to be the first to address a vehicle's unique scene lighting profile needs," Johnson said. "Now engineers and those using a vehicle can configure a custom lighting scenario that meets their specific requirements."

The low-profile surface-mount lamp requires only two mounting fasteners and is easy to install. The UCL41 also features a black- or chrome-coated plastic bezel that snaps into position after installation, to provide a clean finished look.

The lamp measures 8.7 inches in width and 2.95 inches in height. Including its mounting plate and bezel, the UCL41 is only 1.59 inches thick when installed. To maintain the lamp's low profile, the UCL41's lens has a 15-degree angle that uses advanced optics to focus its 45-degree beam pattern.

Optronics also plans to introduce its new MCL79RCB Sealed ID Bar with Integrated Utility Lamps soon. The MCL79RCB will combine two directional LED scene lights with a standard sealed ID bar. The new lamp will allow a vehicle to meet its FMVSS 108 legal requirement of a three-light central ID configuration, with the added benefit of two 12-diode directional scene lights.



The ILL38CMB Corner-Mount Interior Lamp comes with a passive infrared (PIR) sensor and can be spaced as individual lamps within a vehicle or configured as one continuous bar.

The MCL79RCB delivers two LED beams of white LED light at 45-degree angles. Taking advantage of the fact that vehicle ID lights are located at the uppermost point and at the center of the rear of a vehicle, the MCL79RCB's scene lights can illuminate the very active area work area just behind the vehicle.

The MCL79RCB is also designed to be a low-profile surface-mount lamp and is only 1.54-inches thick, 22.45 inches in width and 2 inches in height. Similar to the UCL41 Series Scene Light, the MCL79RCB is designed for vehicles using both 12- and 24-volt electrical systems. The UCL41 and MCL79RCB are IP67 rated, and both lamps come complete with a 6-inch hard-wired lead and ground wires, requiring just a three-quarter-inch hole for the wire feed.

"Our UCL41 Series Scene Light and our MCL79RCB Sealed ID Bar with Integrated Utility Lamps will inevitably alter the way design engineers and end users think of scene lighting," Johnson said. "The design and optics of these lamps make them a viable low-cost, high-value alternative scene light for work trucks, emergency, fire and rescue applications, as well as recreational vehicles."

LED lighting ready to corner the market

No matter how durable an LED light is, it can still be damaged by contact with tools, cargo or equipment. One of the challenges of interior vehicle lighting is to illuminate the largest area most evenly; to achieve this, a central lamp location is often adopted. Unfortunately, the placement of even a low profile lamp on the ceiling of a vehicle's cargo or work area can make it vulnerable to being struck by foreign objects.

The new ILL38CMB Corner-Mount Interior Lamp from Optronics relocates a vehicle's critical interior lighting sources away from the high-traffic central core of a vehicle, where they are vulnerable to potential harm, and reorients them to the corners of a vehicle's ceiling. A corner location keep the lights away from potential threats and provides opposing beam directions that reduce shadows and dark areas, while enhancing overall interior illumination quality. (Continued on next page)

LED lighting . . .

The ILL38CMB has a modular design that enables multiple lamps to be spaced within a vehicle or configured as two continuous bars of light on both sides, throughout the entire length of a vehicle. The lamps have a corner-mount design that attaches securely to both the ceiling and the wall. The lamps also come with a passive infrared (PIR) sensor that can trigger either individual light segments, or a vehicle-wide interior lighting array.

The ILL38CMB Corner-Mount Interior Lamp is compatible with 12- and 24-volt electrical systems, operates in both refrigerated and non-climate-controlled environments and has an operational range of between -4 and 140 degrees Fahrenheit.

"The ILL38CMB Corner-Mount Interior Lamp is a smart design that takes interior lighting out of harm's way," Johnson said. "This lamp combines practicality with safety and automation to create a unique new lighting solution."

LED lighting that works harder on and off

Today, increasing numbers of delivery and service vehicles are on the road at all hours of the day and night. Whether in dense urban zones, neighborhoods or rural areas, vehicle operators rely on visibility for their safety and for the safety of those on the road around them.

With safety in mind, Optronics has introduced several new LED lamps with high-visibility reflective mounting flanges. Just like other vehicle conspicuity devices, the new flanges help others on the road detect the presence, size and shape of a vehicle whether its lamps are operating or not.

"Our economy is quite literally booming and that means more vehicles are on our roads around the clock," Johnson said. "Visibility has never been a more critical component for

the safety of vehicle operators and the driving public."

The new STL201XRFHXB Fusion four-inch round surface-mount combination stop, tail, turn and backup lamp is already two lights in one. The Fusion also features Optronics' unique reflective safety flange, providing an even higher level of conspicuity.

Optronics' new STL13RFHXB seven-diode surface-mount four-inch round LED stop, tail and turn lamp and its STL413RFHXB four-diode surface-mount four-inch round LED stop, tail and turn lamp both feature the new reflective conspicuity mounting flange.

Optronics introduced its first line of multi-function surface-mount lamps in 2014 and has since become the most prolific producer of these versatile, low-profile LED lamps that require only a half-inch wiring hole. Before the introduction of the surface-mount lamp, manufacturers had to design vehicles with four-inch round or six-inch oval mounting holes in body panels, frame posts, docking plates or gussets to accommodate each separate lamp. The holes reduced structural integrity and allowed moisture, road debris and other contaminants to enter into body cavities, promoting corrosion.

"Why put 4- or 6-inch holes in a vehicle when half-inch holes are all you need?" Johnson said. "OEMs and body-builders have always understood the structural advantages of minimizing potential sources of corrosion, while maximizing body strength, but with our reflective conspicuity mounting flange, now they also get a safety dividend."

Keeping LED lamps compartmentalized

Work and service trucks are often on duty 24 hours a day. Depending upon the work they do, or the service they perform, vehicles are often fitted with multiple compartments to hold tools and other equipment, and while functional during daylight hours, these compartments can present a safety challenge, particularly in dark and low-light environments.

The new UCL07CB Heavy-Duty LED Silicone Rope Light from Optronics is delivering reliable bright white LED light to erstwhile dark and dangerous compartments. Those early iterations of linear strip lights that entered the market from offshore sources in early part of the new century had a deserved reputation for being weak and unreliable. Optronics recognized that the convenience and flexibility of rope lights made them popular, but knew that a new generation needed to be engineered to withstand the tough and challenging environment of the commercial vehicle.

Optronics' new low-profile UCL07CB Heavy-Duty LED Silicone Rope Light is engineered to be far more robust and like all Optronics LED products, comes with a no-hassles lifetime warranty that will replace the lamp if even one LED fails. The UCL07CB delivers not only a brighter and a higher quality light than was previously possible, but the lamp also features some of the most advanced LED technology available.

Optronics' rugged new silicone rope light comes with a tried, tested and trusted 3M adhesive backing and can be mounted in almost any location, allowing the tools, equipment and other materials stowed on shelves and in recessed areas to be clearly illuminated. Adequate lighting of work trucks and service vehicles not only promotes safety and reduces the risk of injuries to hands and arms; it also promotes worker speed and efficiency.

Optronics is currently in the developmental phase of a new "cleansing" LED light source. The hygienic lamps are being engineered to destroy and nullify contaminants like bacteria, mold and fine particulate matter using only light.

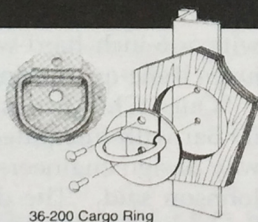
cargotrol TIE-DOWNS

OFFER:

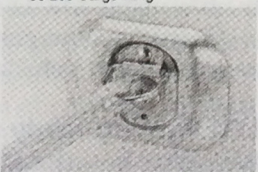
- maximum strength for safe cargo delivery
- the installer low-cost installation
- wide choice in sizes, styles and rated duty.

Cargotrol units are designed to keep your initial cost down, and to reduce claims for damaged goods.

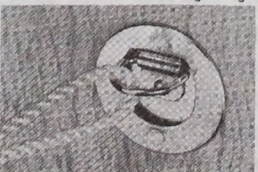
36-200—Unit is designed to mount flush in $\frac{3}{16}$ " to $\frac{3}{8}$ " plywood-lined vans. The low profile reduces freight damage, and two-point mounting lowers installation cost. Maximum wall strength is utilized by fastening directly to body posts.



36-200 Cargo Ring



36-800 FRP Low Profile Cargo Ring



36-123 Flush Cargo Ring



36-300 EP Cargo Ring

36-800—This ring and housing of high-strength steel is designed for FRP trailers and trucks. Unit comes preassembled for easy installation, using Camcar FRP or Huck fasteners.

36-123—This patented flush ring is designed to provide a strong "D" ring tie point in $\frac{1}{4}$ " plywood lined vans. Housing protects plywood around cutout. Installs directly to post for greater strength.

The **36-300 EP Cargo Ring** is a flush tie ring, securely riveted to the formed plate for external post trailers. Mounting holes in assembly positioned to match your post hole spacing.

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