



 OPTRONICS' WARNING LAMPS FEATURE 70 TO 140 POSSIBLE FLASH PATTERNS, AND ITS BEACON LAMPS FEATURE 30 SELECTABLE FLASH PATTERN MODES.

Improving Worksite Lighting with Optronics

ILLUMINATING AN ISSUE

The Infrastructure Investment and Jobs Act was signed into law in November of 2021. Regardless of how the government bureaucrats ultimately decide to spend the \$1 trillion in funding, one thing is certain: There will be a lot of construction on the nation's roads, bridges, and transit systems in the foreseeable future.

In construction areas, traffic barricades and barriers can often extend for miles, leading drivers to

become complacent if they don't see construction activity. Vehicle-mounted safety lighting lets drivers know that they are approaching an active area and should pay attention.

"When workers are in close physical proximity to moving traffic, vehicle safety lighting provides 'positive guidance' to drivers, alerting them to apply extra caution," says Marcus Hester, chief marketing officer for Optronics International, USA Harness.

"It's hard to imagine what a highway worksite would be like without safety lighting."

UNSEEN IS UNSAFE

Helping manage traffic speed on roads and highways is only part of what vehicle-mounted safety lighting does. A jobsite itself presents hazards for those who work there. Even the most organized worksite will have areas of

relative chaos while the construction plan is realized.

Vehicle-mounted work lights and scene lights promote a safer environment because they help workers see and avoid the myriad hazards that may be lurking around—and sometimes on—their vehicles.

“Vehicle-mounted LED work lights and scene lights have been a game-changing technology for the entire construction industry,” Hester says. “From large companies with a fleet of vehicles to those with a single work truck, the relatively low cost and high functionality of white LED lighting allows virtually everyone to benefit.”

FOR TOUGH CONDITIONS

One company, Optronics, offers a family of LED warning and beacon lamps. Designed for quick, easy installation, the lamps are engineered to operate reliably in demanding environments. The family of lamps meet Class 1 and CA Title 13 requirements. They also meet their respective Society of Automotive Engineers (SAE) standards: SAE J595 governs directional flashing optical warning devices, and SAE J845 governs omnidirectional optical warning devices.

As Class 1 optical warning devices, these lamps are for use on a variety of authorized vehicles. They are designed to alert pedestrians, motorists, and on-site workers of potential hazards relating to the presence of utility trucks, wreckers, and many other types of work trucks.

The lamps employ a solid-state, surface-mount device (SMD) design that protects their electronics against the conditions of moisture, shock, and vibration. An industry first, the entire family of lamps are offered with Optronics’ exclusive no-hassle, one-diode lifetime warranty protection, replacing any lamp if even one diode fails.

“Our aim was to produce an ultra-durable family of LED lamps with a lifetime warranty, engineered to last

as long as the vehicles they will serve,” says Dustin Smith, vice president of sales for Optronics International.

LIGHT FEATURES

The entire family of LED warning and beacon lamps is designed for multi-

volt applications and supports both 12- and 24-volt vehicle electrical systems. The lamps operate in a temperature range from -22 and 122 Fahrenheit. The LED warning lamps have an IP67 rating, and the LED beacon lamps have an IP65 rating for dust and water resistance.



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 The UCL41 is engineered to deliver an intense white LED beam pattern at a 45-degree angle to its mounting position. Mounting the lamp higher creates a larger scene, while mounting it lower creates a smaller scene.

The warning lamps come in three sizes and are available in single-color, dual-color, and tri-color models, offering 70 to 140 possible flash patterns. Easy-to-follow instructions are designed to eliminate guesswork and enable easy pattern selection and synchronization of up to eight LED lamps. The warning lamps have a thin, low-profile design of just .5 to .75 inches in thickness. The lamps feature a durable aluminum housing and a tough polycarbonate lens.

The rugged beacon lamps are available in 5.5- and 7-inch heights and feature 30 selectable flash pattern modes. They come complete with 9-ft cords and a 12-volt power plug and switches.

“With the introduction of this family of LED warning and beacon lamps, Optronics has given fleets and vehicle operators a new and more reliable lighting source designed to keep equipment more visible and crews safer,” Smith says.

A NEW DIRECTION

With the recent introduction of its UCL41 Series Scene Light, Optronics changed the course of scene lighting. The new lamp is the first of a new style of directional scene lighting that casts a more focused beam of LED light in a direction that can be accurately defined simply by its placement.

Until now, scene lights have generally just flooded an area with illumination without regard for how wide or deep the scene may be. The result of ultra-wide beam pattern scene lighting has been less focused and less usable light in the areas that may be most critical—those directly adjacent to the vehicle.

Designed to compete with traditional nine-diode scene lights, the UCL41 Series Scene Light uses 12 diodes and advanced optical engineering to focus its optimal beam pattern more precisely. The lamp is engineered to deliver an intense white LED beam pattern at a 45-degree angle to its mounting position.

The UCL41 enables OEMs, bodybuilders, and end users to determine the size and shape of the scene they prefer to



 Optronics recently expanded its total utility and work light offering by 40%, including utility and work lights, scene lights, and even include a freestanding, rechargeable, cordless, multifunctional LED lamp.



▲ With such a wide variety of shapes, sizes, prices, and raw lumen outputs ranging from 1,000 to 20,000, Optronics' entire family of LED utility and work lights was designed to fit a wide variety of environments and applications.

illuminate. Mounting the lamp higher creates a larger scene, while mounting it lower creates a smaller scene. The lamps can be rotated before mounting to deliver light that is oriented to a vehicle's front, rear, and sides.

SETTING THE SCENE

"Our UCL41 Series Scene Light is the first to be engineered with the scene in mind," Smith says. "Our design enables the engineers and those using a vehicle to configure a custom lighting scenario that best fits the specific need."

The low-profile surface-mount lamp is easy to install and requires only two mounting fasteners. Once the UCL41 is secured, a black- or chrome-coated plastic bezel snaps into position, giving the lamp a clean finished appearance. The UCL41 Series Scene Light accommodates both 12- and 24-volt electrical systems and is IP67 rated. The lamp comes complete with a 6-inch hard-wired lead and ground wires and requires only a three-quarter-inch hole for the wire feed. The powerful lamp measures just 8.7 inches in width and 2.95 inches in height. The lamp is only 1.59-inches thick when installed, including its mounting plate and bezel. To maintain the lamp's low profile, Optronics designed the UCL41's lens with a 15-degree angle, relying on its advanced optical design to enable the lamp to cast its 45-degree beam pattern.

ALL WORK

Optronics' offering of LED utility and work lights is expansive. The lamps range from utility and work lights to scene lights and even include a freestanding, rechargeable, cordless, multifunctional LED lamp. With such a wide variety of shapes, sizes, prices, and raw lumen outputs ranging from 1,000 to 20,000, versatility is part of the equation.

"Utility and work lights are vital for those working in low light or suboptimal ambient lighting conditions," Smith says. "With so many LED utility and work lights available, Optronics has something for everyone in the marketplace."

BETTER SAFE THAN SORRY

As the nation embarks on its ambitious infrastructure program, there will be more worksites than ever before. The work will occur at all hours of the day and night and in a variety of weather conditions.

"Better vehicle-mounted safety lighting means a safer and more productive work environment and a public more alert to that work," Hester concludes. ●

FOR MORE INFORMATION

Find out more, visit
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