

Bringing the X Factor to Warning Lights

REDEFINING SAFETY WITH NOVEL AND INTEGRATED LIGHTING SOLUTIONS.

LED warning lights have become indispensable tools for alerting drivers and pedestrians to potential hazards as the construction boom continues across the United States.

One example is Optronics International who has a new version of its safety lighting series FusionX.

“We’ve taken directional lights and warning lights and incorporated them into our popular FusionX series of stop, turn, tail, back-up lights,” says Dustin Smith, vice president of sales, Optronics International. “This consolidation of multiple functions into a single unit represents a paradigm shift in vehicle lighting design.”

The lights combine stop, turn, tail and back-up light functions with warning light capabilities. This integration streamlines the lighting system and offers benefits in terms of safety and compliance. An advantage is the intelligent priority system built into every unit.

“When you do throw that switch for our FusionX warning lights, ours are DOT compliant, which allows the stop, turn, taillight functions to override the warning light function,” says Smith. “This means that even when the warning light is activated, it automatically deactivates when the brake light function is needed, always ensuring full DOT compliance. This is a crucial advantage over competitors’ products, where the warning light may continue to flash, potentially compromising the visibility of critical brake signals.”

The importance of this feature cannot be overstated. In high-stress situations where both warning and braking functions are crucial, the system ensures that critical safety information – the vehicle’s intention to stop or turn – is always clearly communicated to other drivers on the road.

GETTING WITH THE PROGRAM

Like other LED warning lights in Optronics’ portfolio, users can program the lights to function independently or as a unit, with simultaneous or alternating flash patterns.

“You can set those up to have simultaneous flash or alternating flash,

or you can select from a number of flash patterns, so the sky’s the limit on these,” says Smith.

This programmability allows for tailored lighting solutions that meet specific safety needs and preferences. Whether it’s a utility truck needing to alert nearby traffic of its stationary position, a construction vehicle requiring different warning patterns for various scenarios, or a roadside assistance vehicle needing to be visible in varying conditions.

The lights can be integrated into existing vehicle systems, good for both new vehicle builds and retrofits. A recent addition to the lineup is an all-smoke lens version.



BEYOND GEN X

“Over the past five years, these lights have undergone substantial transformations, becoming much smaller, thinner and easier to install,” says Smith. “Our newest family of LED warning lights, beacons and light bars is our most impressive yet.”

One notable change has been the simplification of flash patterns. Current models feature a range of nine to 20 patterns, down from the 168 in earlier versions. This reduction, driven by customer feedback, has made the lights more user-friendly and cost-effective. This streamlining not only improves usability but also allows for more focused and effective warning signals.

The color spectrum has also expanded beyond the traditional amber and clear, now including blue, red, and green options. This diversification responds to evolving regulatory requirements at state and municipal levels and helps maintain driver



Optronics' newest family of LED warning, beacons, and light bars.

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FusionX tail lights are DOT compliant, which allows the stop, turn, tail light functions to override the warning light function.

attention in an increasingly complex visual environment.

“The novel colors and patterns help capture people’s attention, offering positive guidance, and assuring that people who encounter them pay attention,” says Smith.

This expansion of color options is particularly crucial given the current increase in infrastructure projects and the persistent issue of drivers speeding through construction zones. The ability to use different colors can help differentiate various types of work vehicles or indicate different levels of caution required, enhancing overall safety in busy work environments.

READY TO WORK

All Optronics’ new warning lights now boast an IP67 rating for dust and water resistance. This standard of protection ensures that all new LED warning, beacons, and light bars, whether part of the FusionX series or traditional warning lights, can withstand the harsh conditions often encountered in work truck environments.

The lights are designed to operate in extreme conditions, functioning reliably in temperatures ranging from

-22°F to 122°F (-30°C to 50°C). This wide operating range ensures that both FusionX and traditional warning lights remain effective in diverse climates and jobsite conditions, from frigid winter construction settings to scorching summer road work.

Recognizing the need for versatile installation options, the adhesive-backed WLL242 Series lights can be attached to vehicles without the need for screws.

BY THE BOOK

The new warning lights meet Class 2 requirements and adhere to SAE J595 standards for directional flashing lights and SAE J845 for omnidirectional optical warning devices. Some products in the company’s lineup continue to meet California Title 13 requirements.


All products offer dual power options, compatible with both 12 and 24-volt systems. This flexibility ensures that the lights can be used across a wide range of vehicles and applications, from small utility trucks to large construction vehicles.

“Unlike any other combination stop, tail, turn, back-up and warning light around, Optronics’ FusionX gives fleets

all of the benefits of a multifunction combination lamp in addition to being DOT compliant in all modes of operation,” says Smith.

LIGHTING THE WAY

Optronics is exploring applications in emerging fields, including projects involving warning light functionality for autonomous vehicles.

“With our continued focus on innovation and responsiveness to market needs, Optronics International is ensuring that the future of work truck safety is not just bright, but intelligently illuminated,” says Smith. “As we move forward, we can expect to see further innovations in this space, with integrated, smart lighting solutions playing an increasingly crucial role in enhancing safety for work trucks and all those who encounter them.” 

FOR MORE INFORMATION

To learn more about Optronics’ Fusion Series LED lighting, visit www.optronicsinc.com.