

MEDIA ADVISORY

Optronics' Purilite Light-Shield LED Lamps Will Reduce Exposure to Allergens and Pathogens in Commercial Vehicles

Optronics' new Purilite Light-Shield LED lighting technology sanitizes vehicle air, while removing hazardous particulate matter, and may help with FDA compliance.

TULSA, Okla., USA (Feb. 26, 2019) — [Optronics International](#), a leading manufacturer and supplier of heavy-duty LED vehicle lighting, announced that it will unveil its new LED-based Purilite Light-Shield decontaminating light for the first time in booth 2534 at the 2019 NTEA Work Truck Show in Indianapolis, Indiana. The unique LED technology promises to bring a revolutionary level of hygiene to vehicles everywhere, while improving air quality and enhancing worker safety in the process.

Many who work in, on and around vehicles are exposed to microscopic airborne pollutants so small that they evade the body's natural defense mechanisms, penetrating deep into respiratory and circulatory systems, and causing damage to lungs, hearts and brains. The United States Environmental Protection Agency (EPA), has developed ambient air quality trends for particle pollution, also called Particulate Matter (PM).

PM 2.5 describes fine inhalable solid particles and liquid droplets, with diameters that are generally 2.5 micrometers and smaller. These particles include many types of mold and bacteria found in vehicles transporting food. PM2.5 also includes soot emitted by diesel engines and APUs.

“Airborne and surface-based mold and bacteria are also a concern for those workers on vehicles that are exposed to biological residue and other contaminants,” Brett Johnson, president and CEO of Optronics International, said. “Sleeper cabs, vehicles with multiple users, and dry bulk and refrigerated food transportation haulers may be at greater risk of exposure. The climate a vehicle operates in may also be a factor in allergen and pathogen proliferation.”

Purilite Light-Shield LED lamps generate a constant stream of negative ions, created by a proprietary coating applied to their LEDs. The lamp provides decontamination and sanitization functions, while producing optimal light quality for human vision, approaching the color temperature of natural sunlight.

The ionic sanitization occurs through both physical and biological mechanisms. The negative ions bind to lightweight airborne PM2.5 particles, adding mass and enabling natural gravitational forces to remove them from the air by causing them to float safely to the ground.

The negative ions also combine with positive molecules in mold spores and bacterial proteins, destroying them and causing them to decompose. Once terminated, what's left of the pathogens also fall inertly to the ground. With viability removed, the biological remnants are rendered essentially sterile, reducing exposure risks even if they are disturbed and become airborne again.

“When the lights are on, they are doing their job, it’s deceptively simple,” Johnson said, “A sleeper cab driver can flip on these lights, go grab a bite and when they return, the cab environment will be significantly cleaner. If they prefer, drivers can remain in the cab while the lights are working, it’s perfectly safe just to leave them on.”

Preliminary tests in a controlled environment show a 77 percent reduction in PM2.5 and a 65 percent reduction in Escherichia coli (E. coli) in just one hour. Testing also compared Purilite Light-Shield with standard LEDs as well as no light source.

The new lamp will also help food supply chain and cold chain shipping companies comply with the most recent Food and Drug Administration (FDA), Food Safety Modernization Act (FSMA) rule on Sanitary Transportation of Human and Animal Food. With some exceptions, the final rule applies to shippers, receivers, loaders and carriers that transport food in the United States by motor or rail vehicle, whether or not the food is offered for or enters interstate commerce.

“Until today, surface cleaning procedures and bacteria-resistant surface treatments were the only methods available to fleets required to adhere to FSMA guidelines,” Johnson said. “Optronics’ Purilite Light-Shield is the first technology to transcend simple surface-oriented decontamination methods and move toward cleansing the entire interior environment of a vehicle, including the air.”

Optronics products are available in the U.S. and Canada through the company’s extensive [distribution network](#) of more than 15,000 convenient distribution locations. Users can access individual Optronics distributor websites by simply clicking on their logo icons. For information on international sales and distribution of Optronics products, please contact Dorian Drake at +1 (914) 697-9800, or visit <http://doriandrake.com>.

To access high-resolution images of the LED-based Purilite Light-Shield decontaminating light, please visit: <http://www.optronicsinc.com/RESOURCES/ImageGalleries/Purilite.aspx>

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About Optronics

As the fastest-growing vehicle lighting manufacturer in the U.S., Optronics International attributes its success to delivering better value, better options and better lighting to its customers. Founded in 1972, Optronics International is a premier worldwide manufacturer and supplier of branded industrial and commercial vehicular safety lighting products. The company specializes in interior and exterior LED and incandescent lighting for the HD, trailer, transit vehicle, RV and marine markets. The Optronics product catalog is among the most extensive in the industry. Optronics is headquartered in Tulsa, Oklahoma and has an IATF 16949 certified manufacturing facility in Annan District, Tainan, Taiwan. The company also has ISO 9001:2015 certified manufacturing and distribution facilities in Muskogee, Oklahoma and Goshen, Indiana. Learn more at <http://www.optronicsinc.com>.

Purilite Light-Shield is a trademark of Optronics International, LLC.