

## Amerlux Lights the Way into Building Automation with Delta Electronics at the Helm

Within the building world, a quiet revolution is unfolding. The premise that lighting should be lighting and independent from other building systems is changing.

Amerlux, located in Oakland, N.J., was acquired in 2019 by Delta Electronics, a \$9 billion international electronics manufacturer with its roots as a global leader in power electronics and thermal management solutions. The Amerlux acquisition added to Delta's Building Automation Business Group's list of recently acquired businesses. Delta's brand promise of "Smarter. Greener. Together." underscores the company's commitment to developing energy-efficient solutions to reduce the world's carbon footprint. Company executives believe lighting is an integral part of the future of building automation, an industry traditionally focused on HVAC.

A year after the acquisition, EdisonReport sat down with leaders from both Delta and Amerlux to exchange views on the emergence of lighting as a key element in the building automation field. Joe Oberle, who wears two hats as Delta's Vice President of Corporate Development and Chairman of Amerlux, reflected on the large number of synergies as the teams have come together to develop a complete total solution with building owners and occupants in mind.

"If you think about where the world is going today, everything is going to be connected," said Oberle, who also leads Delta's Building Automation Business Group in the Americas region. "We are excited to foster the next generation of smarter buildings and smarter city solutions."

In a very short time, Delta's building automation subsidiaries Amerlux, Delta Controls, LOYTEC and VIVOTEK, have covered a tremendous amount of ground. Amerlux President Chuck Campagna recalled the initial meeting with Delta, calling it an "eye-opener" when discussing the deep engineering and technical capabilities of Delta Electronics.

"Amerlux will serve as the vehicle for the future of building automation, given lighting's indispensable role," Campagna said. "Since lighting already has power and is embedded in ceilings, an IoT-enabled lighting system could in the future provide more services, such as asset tracking or a real-time locating system."

This year, at AHR Expo – known as the world's largest HVAC event – Delta's vision came together with the deployment of their building-related automation which was integrated across the various Delta businesses and made completely operational around the theme of "Smarter Buildings, Smarter Cities."

"We're thinking outside the envelope," Oberle said. "All of these disparate systems are coming together to form automation both inside and outside the building."

Delta's AHR booth depicted a modern cityscape, complete with a carpeted mock-asphalt road down the middle with opportunities to "get off" the highway and learn about each of the Delta solutions. Although an HVAC show, Amerlux exhibited their indoor and outdoor architectural fixtures which were controlled by different Delta automation control systems from various parts of the booth. Amerlux demonstrated human circadian lighting with tunable white control, color range select, on/off, daylight harvesting and dimming. Amerlux's LED lighting fixtures were controlled by software and systems from both Delta Controls and LOYTEC, which also controlled the HVAC system, window blinds for energy efficiency and the overall comfort and health of the buildings occupants. Amerlux's historical LED outdoor fixtures and poles were integrated with Delta's EV chargers and VIVOTEK surveillance cameras – all controlled by Delta's building automation software solutions.

With lighting leading a fully functional and integrated building automation system in the future, architects and designers will be more receptive to such technology, allowing them to "clean up the ceiling" especially as various systems and devices in recent years have begun taking up more space, according to Bill Plageman, Vice President of Marketing and Product Management at Amerlux.

"This opens a new chapter for building intelligence and smart cities," he said.

## National Energy Market Observer:

1. **New York MTA Buys UV-Light Devices to Kill Coronavirus** - New York's Metropolitan Transportation Authority will use ultraviolet light to help remove Covid-19 from its subways, buses and commuter trains as the technology has shown to eradicate the virus from surfaces. The MTA will spend about \$1 million for 150 double-headed lamps and begin next week zapping the interior of subway cars in the yard. While such technology has been used to clean hospitals and urgent-care facilities, agency officials say it's the first time ultra-violet light is being used to kill the coronavirus on public transit infrastructure. The MTA's ridership has fallen dramatically as people work from home and avoid using public transportation. To bring riders back, the agency plans to use innovative disinfecting regimes to help sanitize its fleets and restore ridership confidence. <https://www.bloomberg.com/>

2. **Kenall Licenses Disinfection Lighting Patents to Pinnacle** - Kenall Manufacturing recently announced it has licensed visible light disinfection patents to Pinnacle Architectural Lighting of Denver, Colorado. Both lighting companies are part of Legrand North and Central America. The patent licenses will allow Pinnacle to provide Indigo-Clean® visible light disinfection across a broad range of their product line, using the core disinfection patents from the University of Strathclyde in Glasgow, Scotland. Indigo-Clean employs visible light to disinfect and is safe for continuous human exposure, according to Kenall. <http://www.lightnowblog.com/>

3. **ALA: Can Germicidal Lighting Combat COVID-19?** - American Lighting Association (ALA), explains that it is imperative to be cognizant of the safety and efficacy issues of using germicidal lighting, and to be educated about the capabilities of the different types of UV light. UV-A and UV-B are not virus killers. It is only the UV-C part of the spectrum that can decimate viruses, including COVID-19, when used appropriately. When considering UV for germicidal purposes, carefully read all application, safety and caution notices, and ensure the product is emitting UV-C. The information should include exposure requirements, including maximum distance between the source and materials to be exposed, plus exposure time required for disinfection. <https://alalighting.com/>

4. **UV Light Tech Rising as Way to Disinfect Coronavirus by Eric Mack of NewsMax** - As the summer months approach, the effectiveness of ultraviolet provided by the sun and man-made tech is being considered a disinfectant tool to combat the global coronavirus pandemic. UV-A and UV-B are the rays from the sun that reach the earth's surface and cause skin sunburns, while UV-C is filtered out through the atmosphere and is in the "germicidal disinfectant range," per the report. Columbia University's Center for Radiological Research Director David Brenner told CNBC that UV-C benefits have been "known for more than 100 years now to be really, really good at killing microbes, bacteria and viruses both." The DHS study suggesting sunlight kills the coronavirus in mere seconds references UV-A and UV-B which are even less potent than UV-C, according to Brenner. "The issue with UV-C is it's a health hazard, so you can really only use it when people are not around," Brenner said. Drones and scanner technology, though, could be used to disinfect hotel rooms and restaurants at night when they are unoccupied, cleaning them from viruses for the next day. <https://www.newsmax.com/us/uv-light-disinfectant-sunrays/2020/05/10/id/966831/>

5. **LightFair 2020 Innovation Awards** - Our exhibitors take lighting innovation to the next level. The prestigious awards event is an annual LightFair highlight celebrating the lighting industry's most innovative products and designs introduced in the past 12 months. Complete listing at: <https://www.lightfair.com/lightfair-innovation-awards/#/>

6. **DLC SSL V5 Technical Requirements Update Due to COVID-19** - The DesignLights Consortium has responded to the disruption caused by the COVID-19 pandemic by adjusting portions of its Technical Requirements v5.0, effective immediately. <https://www.designlights.org/>

- The deadline to update V4.4 products to V5.0 and V5.1 has been extended by 1 month.
- The deadline to submit V5.0 new product applications has been extended by 3 months.
- Dimming requirements for V5.0 Standard products have been postponed to V5.1.

**7. DLC Publishes Report on Networked Lighting Controls and Interoperability** - The DesignLights Consortium (DLC) has published a report titled “Interoperability for Networked Lighting Controls” that explores the benefits of interoperability between LED-centric solid-state lighting (SSL) systems, other building systems, and utility systems. Natural Resources Canada funded the report that identifies actual use cases that benefit from interoperability and fully explores the way interoperability at the device, building system, and utility system levels delivers specific benefits in three of the use cases. The new report will accomplish several things for the DLC. It makes a clear case for the use of networked lighting controls (NLCs). It defines interoperability and how to measure benefits. And it lays the groundwork for the DLC’s coming Version 5 (V5) of its NLC specification called NLC5. <https://www.ledsmagazine.com/>

**8. DLC Releases Draft Update to its Horticultural Lighting Testing and Reporting Requirements** - The DesignLights Consortium (DLC) today released for comment draft Technical Requirements for LED-based Horticultural Lighting: Version 2.0, an update designed to increase the efficacy threshold for the DLC’s Horticultural Qualified Products List (QPL), while continuing the transition to specific data and metrics that best represent horticultural lighting performance. The DLC is also seeking comment on proposed changes meant to reduce manufacturers’ testing burden, as well as application complexity and cost, by introducing “family grouping” and “private labeling” to the DLC’s horticultural lighting program. Following consideration of stakeholder comments, the draft policy is scheduled to take effect in January. To submit comments on the draft updates please email [comments@designlights.org](mailto:comments@designlights.org), using the Horticultural Lighting Form by June 16, 2020.

**9. Requests for Information: DC Lighting & DC Building Microgrid Control Solutions** - The Pacific Northwest National Laboratory (PNNL) is gathering market data from DC lighting and DC microgrid controller manufacturers and solution providers to characterize the current states of these two technologies and their interoperability. The responses will help inform future research needs to advance DC lighting technology and DC building microgrids, with the ultimate goal of increasing energy efficiency and resilience while enabling Zero Energy Buildings. For each technology, PNNL is requesting information on (a) the current availability, types, and characteristics of technology solutions and (b) perspectives on technology benefits and adoption. Each technology has an associated RFI. Respondents may submit to either or both RFIs. Each RFI should take less than 1 hour to complete. Responses will be accepted through May 21. <https://www.pnnl.gov/requests-information-dc-lighting-dc-building-microgrid-control-solutions>

**10. NECA 2020 Safety Professionals Conference Postponed Until October** - Due to the COVID-19 outbreak, NECA has postponed the 2020 NECA Safety Professionals Conference (NSPC), presented by WESTEX by Milliken, which was to take place in Scottsdale, Ariz., May 18-20. The NSPC will now be held Oct. 5-7, in conjunction with the NECA Convention and Trade Show in Chicago. <https://necanet.org/about-us/calendar/national-events>

**11. NEMA Updates Roadway Standard for Enclosed Luminaires** - The American National Standard for Roadway and Area Lighting Equipment—Enclosed Setback Luminaires and Directional Floodlights for High-Intensity Discharge (HID) Lamps (ANSI C136.32-2020) covers dimensional, maintenance, and electrical features that permit the interchange of enclosed luminaires that have the same light distribution classification or type for HID lamps used in roadway and area lighting equipment. This Standard has been updated to include new technologies, and is designed for use by roadway and area lighting component manufacturers, municipal and regional governments specifying outdoor lighting solutions, and streetlighting offices/bureaus. [https://www.techstreet.com/nema/standards/ansi-c136-32-2020?product\\_id=2106293](https://www.techstreet.com/nema/standards/ansi-c136-32-2020?product_id=2106293)



**12. Savant Systems, Inc. to Acquire GE Lighting** - GE Lighting will remain headquartered in Cleveland, Ohio, and its more than 700 employees will transfer to Savant upon completion of the transaction. The proposed transaction will bring together this legacy and expertise with Savant’s best-in-class smart home solutions and renowned culture of innovation, creating a union of trusted and recognizable premium brands in the lighting and connected home technology markets. The proposed transaction includes a long-term licensing agreement for use of the GE brand. The transaction is subject to customary closing conditions and is expected to close mid-2020. Furthering Savant’s mission to become the premier company in intelligent lighting solutions. <https://www.savant.com/>

13. **Upper Midwest Electrical Expo Rescheduled for Dec. 9-10** - The Upper Midwest Electrical Expo, generally considered to be the largest regional trade show in the United States, will be held Dec. 9-10 at the Minneapolis Convention Center. The EXPO is the largest regional gathering of electrical professionals, products and services in North America. Over 9,000 participants gather biennially to learn and experience the newest and best electrical products in the marketplace -- all while creating and enhancing electrical supply chain relationships and solutions that enable our Upper Midwest Electrical Industry to succeed and thrive! <https://www.ncel.org/expo.html>

14. **Long-term Performance Evaluation of LED Lighting Products** - CLTC recently completed a four-year EPIC-sponsored research program that included a long-term performance evaluation of commercially available LED light sources. The study aimed to determine if today's existing products meet their stated performance when installed in worst-case thermal conditions typical of applications designed to comply with California's Title 24 requirements. Evaluation results showed that the tested LED replacement lamps met most of the performance criteria claimed by their manufacturers. However, 36% of the tested lamps failed prematurely. To learn more, read CLTC's article published in the May 2020 LD+A article Long-term Performance Evaluation of LED Lighting Products. <https://cltc.ucdavis.edu/>

15. **LCA's Spring 2020 Product Guide** - The Lighting Controls Association (LCA) announces the latest offerings in lighting controls from industry-leading manufacturers. Check out the featured manufacturers: Acuity Brands; Douglas Lighting Controls; Eaton Corporation; Leviton; Lutron Electronics; McWong International; RAB Lighting; Universal Lighting Technologies. <http://lightingcontrolsassociation.org/>

16. **UV Lighting to Prevent, Contain and Remove Pathogens by Matt DeLoge, Johnson Controls** - We continue to see a steady flow of press materials about the ultraviolet (UV) lighting sector, especially with regard to the coronavirus. Johnson Controls posted a short video breaking down the way UV can be used in disinfection. The video features vice president of intelligent lighting solutions. DeLoge covers a brief history of UV and also the research that has shown that both UV and short-wavelength visible light can kill microorganisms. The presentations clearly defines how UV can be deployed in a safe manner, and in a way that will not harm humans. DeLoge also briefly discusses the near-UV technology down in the 200–220-nm range that may ultimately prove save for human exposure and also capable of destroying a virus. Watch the video at: <https://www.youtube.com/watch?v=StE1NRZdP1M&feature=youtu.be>

17. **CIE Position Statement on the Use of Ultraviolet (UV) Radiation to Manage the Risk of Covid-19 Transmission** - The use of germicidal UV radiation (GUV) is an important environmental intervention which can reduce both contact spread and airborne transmission of infectious agents (like bacteria and viruses). GUV within the UV-C range (200 nm–280 nm), primarily 254 nm, has been used successfully and safely for over 70 years. However, GUV must be knowledgeably applied with appropriate attention to dose and safety. Inappropriate GUV application can present human health and safety issues and produce insufficient deactivation of infectious agents. Application in the home is not advisable and GUV should never be used to disinfect the skin, except when clinically justified. <http://cie.co.at/publications/cie-position-statement-use-ultraviolet-uv-radiation-manage-risk-covid-19-transmission>

18. **DOE's Building Technologies Office Funds 20 Small Business R&D Building Efficiency Projects** - As part of today's \$53 million announcement by U.S. Secretary of Energy Dan Brouillette for Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) research and development projects, the Office of Energy Efficiency and Renewable Energy (EERE) announced selection of 106 new projects across 26 states, totaling nearly \$21.3 million in funding. These 106 projects, spread across 12 states, will seek advancements in:

- Novel building energy rating delivery models;
- Solid-state lighting improvements;
- Efficient resilient building technologies;
- Advanced thermal energy storage.

Learn more about the recipients of BTO's SBIR/STTR Phase I Release 2 grants.

<https://www.energy.gov/eere/buildings/articles/building-technologies-office-funds-20-small-business-rd-building-efficiency>

19. **Bridgelux Introduces Metric to Tell How Nature the Light Is** - People are getting more aware of how natural lighting affects the body as well as the psychological feelings. Lighting design and LED technology also address how the artificial light source can mimic the light in nature. But how do we measure the “naturalness” of light? Bridgelux introduced a new metric to quantify the naturalness. Bridgelux announced that it has developed a new metric to enable objective comparison of light sources to natural light, since standard lighting quality metrics such as CRI and TM-30 do not fully address the naturalness. The LED company introduced the Average Spectral Difference (ASD) metric to address this shortcoming in available light quality metrics. ASD provides an objective measurement of how closely a light source matches natural light over the visible spectrum, averaging the differences of the spectral peaks and valleys between a light source and a standardized natural light source of the same CCT.

[https://www.ledinside.com/press/2020/5/bridgelux\\_naturallight\\_metric](https://www.ledinside.com/press/2020/5/bridgelux_naturallight_metric)

20. **Senators Ask to Extend PTC and ITC to Five Years** - Renewable energy producers are likely to get an extension to complete new projects and potentially receive federal tax credits in return since many have been delayed due to the COVID-19 pandemic. Six U.S. senators on both sides of the aisle late last month sent a letter to U.S. Treasury Secretary Steven Mnuchin asking the department to extend the “continuity safe harbor” for both the production tax credit (PTC) and energy investment tax credit (ITC), from four years to five years for projects that started construction in 2016 or 2017.

<https://www.ecmag.com/section/your-business/senators-ask-extend-ptc-and-itc-five-years>

21. **Fluence Partners with Medicinal Cannabis Grower on Horticultural LED Lighting Research** - Fluence by Osram has announced a research collaboration with Texas Original Compassionate Cultivation (Compassionate Cultivation) — a cultivator of medicinal cannabis. The two Austin, TX-based organizations will seek to discover optimal lighting strategies to maximize energy efficiency and solid-state lighting (SSL) efficacy measured by yield in growing operations. The research partners will work with Fluence LED luminaires to better understand sustainable production, quality of plants, and yield. They intend to study light intensity, SSL spectra, light distribution patterns, and chronology of light application.

<https://www.ledsmagazine.com/>

22. **Sea Turtles Thrive with Amber LED Lighting and Dark Sky Advocates Rejoice** - Gulf Shores, AL has installed new solid-state lighting (SSL) based on amber LEDs along coastline areas where sea turtles nest. The monochromatic amber wavelengths don't confuse hatchling turtles that rely on an instinctual attraction of cool-white moonlight reflecting off the ocean as a guide to the safety of the sea. The luminaires further feature a design that protects the dark sky. Meanwhile, turtles and other wildlife have thrived around the globe this spring with coronavirus-driven restrictions keeping people off beaches.

<https://www.ledsmagazine.com/>

23. **A Guiding Light by Craig DiLouie** - The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) publishes free design guides for buildings that achieve major energy reductions without compromising quality. The latest guides go even further, targeting net-zero buildings. The guides' actionable recommendations, which rely on practical design and technology, provide deep energy savings without compromising light levels and comfort. The first publications in the series cover K-12 school buildings (January 2018) and small to medium office buildings (June 2019) that are new and approached as a retrofit. The K-12 school buildings include all sizes and types. The office buildings include spaces ranging from roughly 10,000 to 100,000 square feet with a height of less than 75 feet. Strategies for achieving net zero include plug-load control, sizing and designing HVAC systems, reducing and eliminating thermal bridging, and optimizing lighting, among other techniques. The lighting heavily relies on daylighting, LED sources and controls.

<https://www.ecmag.com/section/lighting/guiding-light-0>

24. **Lightfair: Step Up Your Professional Game Without Stepping Out of Your Home** - Virtual Conference: July 21-23, 2020. Registration opens June 24. Choose from 51 sessions across six tracks, earn up to 61.5 CEUs. Adapting to the unexpected turn of events this year, Lightfair is moving their conference online. LightFair Connect 2020 is designed to support your professional growth and learning objectives. Enrich your knowledge, earn professional credentials and expand your industry connections from the comfort of your home.

<https://www.lightfair.com/lightfair-connect>

## Global LED Market Observer:

**25. COVID-19 Spurs Market Opportunities for UV/IR LED and Horticulture Lighting** - COVID-19 pandemic has led to lockdowns across the world with pause in business operation and production, resulting enormous impact globally. The technology industry, as one of the most affected field, not only needs to tackle the challenges brought by the coronavirus but also has to reconsider its strategies and operating plans for the post-pandemic world. As for the LED industry, since the supply chain mostly locates in Asia with the majority of production coming from China, plus high inventory due to oversupply in the past few years, the coronavirus epidemic has relatively slighter impact on the industry. Only the packaging companies suffered a little from lack of manpower during the China lockdowns. Therefore, it is not likely to see much changes in the ecosystem and supply chain structure of the LED industry. Nevertheless, the COVID-19 pandemic does drive more application opportunities for the LED industry including germicidal UVC LEDs, social distance controlling infrared sensors, and horticulture lighting to back food supply.

[https://www.ledinside.com/news/2020/5/covid19\\_impact\\_ledindustry](https://www.ledinside.com/news/2020/5/covid19_impact_ledindustry)

**26. LiDAR to be Adopted in Next-gen Volvo Cars in 2022 for Self-driving** - Volvo unveiled its plan to launch its next generation self-driving car in 2022 by integrating LiDAR technology supported by Luminar. Volvo Cars, the Sweden-based company now owned by Geely Holding of China, said that its next generation SPA2 modular vehicle architecture will be available as hardware-ready for autonomous drive from production start in 2022, with the Luminar LiDAR seamlessly integrated into the roof.

[https://www.ledinside.com/news/2020/5/volvo\\_luminar\\_lidar](https://www.ledinside.com/news/2020/5/volvo_luminar_lidar)

**27. Taiwan LED Supply Chain Backs Apple's Mini LED and Micro LED Developments** - Recently it is reported that Apple is planning to invest around US\$ 334 million for its new facility in Taiwan to push development in Micro LED and Mini LED display technology with its local partners Epistar and AUO. Many believe that the iPhone maker will intensify its display technologies including Mini LED and Micro LED with the mature LED supply chain in Taiwan covering wafer manufacture, chip production, chip testing and display fabrication. LEDinside covered in November 2019 that Apple has almost finished the construction of the new facility in Taoyuan, Taiwan, which locates nearby AUO and TSMC, Apple's reported Micro LED partners.

[https://www.ledinside.com/news/2020/5/apple\\_microled\\_taiwan\\_supplychain](https://www.ledinside.com/news/2020/5/apple_microled_taiwan_supplychain)

**28. Cost Competitiveness of Mini LED Backlight Display May Surpass OLED Options by 2022** - Apple has sparked considerable discussions in the market after rumors surfaced that the company's new 12.9-inch iPad Pro, to be released in 2021, may be equipped with Mini LED backlight technology. According to TrendForce, the manufacturing cost of Mini LED backlight displays is currently higher than that of traditional LCD and OLED displays. However, as manufacturers continue to make improvements in process technology and yield rate, the cost of Mini LED backlight displays is expected to undergo 15-20% YoY decreases and to potentially be lower than the cost of OLED displays by 2022, making Mini LED a cost-competitive option in the market. Not only will Apple integrate Mini LED backlight technology into its product lineups other than the iPad Pro, but other leading brands will also adopt Mini LED for their own products.

[https://www.ledinside.com/intelligence/2020/5/miniled\\_cost\\_reduction](https://www.ledinside.com/intelligence/2020/5/miniled_cost_reduction)

**29. Coronavirus Update by BSIE & LIA** - As many businesses re-open their operations, attention has turned towards an employer's responsibility in ensuring their workplace is safe for their employees, clients and visitors. It is assumed that the Lighting Industry Association (LIA) members are well versed in the PPE requirements for specific manufacturing tasks that take place in their day to day business, but this communication refers to procurement of additional measures taken to avoid the transmission of the COVID 19 virus. The advice given here is supplied in good faith by the British Safety Industry Federation, however, neither the BSIF or the LIA can be held responsible for the effectiveness of the measures or their application.

<https://www.thelia.org.uk/news/coronavirus-update>

**30. Light + Building 2020 Show is Cancelled** - The huge biennial event, postponed from April this year to September because of the coronavirus outbreak, will next take place in 2022. It's believed that organizers took the decision due to two majors factors, the withdrawal of major bellwether brands including Signify and Zumtobel, and the difficulty of holding the popular event while observing social distancing guidelines.

<https://light-building.messefrankfurt.com/frankfurt/en.html>

**31. Mini LED Shipments to Fall Short of Expectation in 2H20** - Demand for RGB fine-pitch mini LED displays and mini LED backlight units was originally expected to take off in second-quarter 2020 following CES 2020, but corresponding shipments will be significantly short of expectation in second-half 2020, according to industry sources. Major sports events originally scheduled for 2020 have been canceled due to the coronavirus pandemic and consequently, shipments for fine-pitch mini LED displays originally scheduled for first-half 2020 have been canceled or deferred, the sources said. So far, no shipments for mini LED backlight units have been scheduled for third-quarter 2020, the sources noted. <https://www.digitimes.com/news/a20200521PD210.html>

**32. Dementia Room Features Dynamic White LED Lights** - At the Fynsgade Nursing Home in Grindsted, Denmark, an automatic control system tunes the white LED lighting to vary the colour temperature of the light throughout the day. It varies the scenarios from warm (2700K) to cold light (6500K) following the rhythm of the day for both the temperature of the colour and the intensity of light. The concept is to provide 'calming and stimulating' light to help both the staff and residents to have a better everyday life. It's also reported that the dynamic lighting can calm very aggressive and agitated people with dementia, and possibly reduce the cost of medicine and allow the staff to spend more time with other patients. Anecdotal evidence suggests that at Fynsgade Nursing Home, sad or shy patients with dementia can become happier and more energetic. <https://www.luxreview.com/2020/05/14/dementia-room-features-dynamic-white-led-lights/>

**33. Become a Bluetooth® Mesh Expert with Lux Webinars** - Bluetooth® mesh is disrupting and revolutionising lighting control and pushing the boundaries of what the industry thought could be done with lighting – so to stay ahead it's crucial to keep pace with this exciting and game-changing technology. Lux is partnering up with the Bluetooth Special Interest Group to bring you a series of webinars this summer on key aspects of Bluetooth mesh. These exclusive online events will help upskill lighting professionals and deliver valuable insights into the features and unique opportunities presented by the tech. The first one takes place at 11am BST on Thursday 11 June. Edward Lees, global head of technical product development at Feilo Sylvania, will walk us through the key benefits for lighting of Bluetooth mesh. <https://www.luxreview.com/2020/05/20/become-a-bluetooth-mesh-expert-with-lux-webinars/>

**34. UVC LED Market Expands with More Home Appliances and Consumer Products Adopting the Technology** - The COVID-19 outbreak has spurred people's awareness in disinfection and roused demands for related products and applications. UVC LEDs with germicidal function thus become popular among consumers and brands of home appliance. LG Electronics launched a new refrigerator with ice and water purifier using UVC LED technology. Many other UVC LED embedded applications are entering the market this year as well. As a result, the market revenue of UVC LED package is expected to reach 60% CAGR from 2019 to 2024. [https://www.ledinside.com/news/2020/5/uvcoled\\_homeappliance](https://www.ledinside.com/news/2020/5/uvcoled_homeappliance)

**35. Chinese Companies Continue to Increase Investment in Mini and Micro LED Research and Production** - Micro LED and Mini LED technology bring new hopes for industry players in the field since they have been suffered from price competition with oversupply. Taiwanese LED companies were the first to begin Micro LED and Mini LED development and they have entered mass production phase for Mini LED in the past two years. In 2020, as Apple is rumored to release Mini LED-based products, it is expected that demands for Mini LED display technology will surge. Seeing the trend, LED and display companies in China are also pushing their technology development aiming to catch the coming business opportunities. Many of them are pouring large capital to expand production capacity and research center targeting advanced LED technology including Mini and Micro LED. [https://www.ledinside.com/news/2020/5/chinese\\_miniled](https://www.ledinside.com/news/2020/5/chinese_miniled)

**36. Epistar to Deliver over 680 Billion LED Units for Mini LED Display Applications in 2020** - LED chip supplier Epistar said that it is seeing surging demands for Mini LED display and fine-pitch display. With its mature miniaturized LED technology, the company is expecting to ship about 689.2 billion units of LED chip in 2020. Epistar is reportedly supplying Apple for the coming Mini LED-based iPad Pro and MacBook. The Taiwan-based chip maker has increased its investment for capacity expansion and turned 95% of its blue LED capacity in Taiwan into Mini LED production to meet the demands of Apple products. [https://www.ledinside.com/news/2020/5/epistar\\_miniled\\_shipment](https://www.ledinside.com/news/2020/5/epistar_miniled_shipment)

37. **Circadian Lights at Derbyshire Care Home Cut Number of Falls** - An installation of circadian lighting at a care home in Derbyshire, UK, has reduced the number of falls experienced by its elderly residents, it has been revealed. The spectrum-controlled lights at the 60-bed Heanor Park care home led to a 'significant reduction in the amount of falls a care home would usually experience' with only two residents experiencing falls within the first three months of opening. In addition, as the lighting helps to entrain residents' circadian rhythms, employees noted the residents are showing a greater level of engagement.

<https://www.luxreview.com//>

38. **BIOS Lighting Partners TrueLight to Develop Circadian Lighting for Creating Healthier Indoor Life** - BIOS Lighting and TrueLight announced their new strategic partnership to advance circadian lighting applications and bring the health benefits of natural sunlight indoors. The new dimmable TrueLight Circadia bulb uses patented BIOS SkyBlue Technology to pinpoint key photoreceptors that signal circadian responses. During the daytime, the TrueLight Circadia bulb infuses the critical sky-blue region (near 490nm), which helps improve alertness, mood and performance. Dimming the bulb after the sun goes down removes daytime photoreceptors and sends nighttime signals to help the body prepare for a good night's sleep. The TrueLight Circadia bulb's day-to-night functionality will provide individuals and their families with truly circadian lighting. [https://www.ledinside.com/press/2020/5/circadian\\_lighting\\_bios\\_truelight](https://www.ledinside.com/press/2020/5/circadian_lighting_bios_truelight)

## Monthly Feature:

### UV Light Tech Rising as Way to Disinfect Coronavirus by Eric Mack of Newsmax

As the summer months approach, the effectiveness of ultraviolet provided by the sun and man-made tech is being considered a disinfectant tool to combat the global coronavirus pandemic.

UV light has been used to disinfect hospitals and operating rooms for decades, and the equipment was valued at \$1.1 billion in 2018 with a projected value of \$3.4 by 2026, according to Allied Market Research, CNBC reported.

The UV light technology could expand its use in hotels, if not restaurants, and public spaces, per the report. President Donald Trump was widely derided in the media for talking about experimental medical use of UV light “inside the body” to save lives, but research was already underway because UV light has shown an ability to kill the coronavirus microbes quickly in a laboratory study by the Department of Homeland Security.

“Thought powerful UV light cannot be used on the human body, it can help prevent the spread of the virus,” CNBC reported. “Technological breakthroughs could see UV light become a key piece in returning to normal in a world with a looming COVID-19 threat.”

Columbia University’s Center for Radiological Research Director David Brenner told CNBC that UV-C benefits have been “known for more than 100 years now to be really, really good at killing microbes, bacteria and viruses both.”

UV-C is the third UV wavelength on the electromagnetic spectrum, which included X-rays, microwaves, and radio waves, among others.

UV-A and UV-B are the rays from the sun that reach the earth’s surface and cause skin sunburns, while UV-C is filtered out through the atmosphere and is in the “germicidal disinfectant range,” per the report.

The DHS study suggesting sunlight kills the coronavirus in mere seconds references UV-A and UV-B which are even less potent than UV-C, according to Brenner.

“The issue with UV-C is it’s a health hazard, so you can really only use it when people are not around,” Brenner said.

Drones and scanner technology, though, could be used to disinfect hotel rooms and restaurants at night when they are unoccupied, cleaning them from viruses for the next day.

Ostensibly UV light penetrates a microbe and “cracks it like an egg,” a doctor told CNBC.

WATCH THE VIDEO:

<https://www.newsmax.com/us/uv-light-disinfectant-sunrays/2020/05/10/id/966831/>