

Amerlux Innovation Center



Amerlux Unveils New State of the Art Showroom in Oakland, NJ! - Amerlux® has opened a state-of-the-art 7,000 square-foot showroom, lounge and conference area in its new corporate headquarters based in Oakland, NJ. Clients will learn firsthand how to realize the power of the latest technologies. The Amerlux Showroom will guide you through application, control, color tuning and warm dim real-life applications. Amerlux gives clients a space to build out their vision before the final design is inked. Deep dive into the new showroom, and research and test the latest fixtures, controls and technologies.

“Our new showroom is an elegant lighting application center that demonstrates how to use the latest LED technologies while doubling as a classroom for hands-on training of what goes into an Amerlux product that makes it so Special,” said Amerlux CEO/President Chuck Campagna. “The room can be used for actual interactive AIA/CEU courses, and to host meetings for the local chapters of the AIA, IES and other professional organizations. It also can be used for training sessions and educational seminars to distributors, contractors and the lighting community.”

Amerlux is installing a giant interactive wall unit that will be capable of bringing the showroom to customers’ offices, as well as transporting customers into the showroom via the web. The presenter will have a mobile camera and microphone to bring the Amerlux experience to those that can’t make the trip to the facility.

“Displays include urban apartments, offices, retail, hospitality, supermarkets, commercial and exterior spaces, as well as a black room lab,” said Mr. Campagna. “They are all designed to be re-lit quickly with any product that our customers may want to see.” The architecturally styled showroom was built with 24-foot ceilings and removable walls that provide the ability to change ceiling heights and space dimensions for various applications and environments. Optimal store displays and commercial settings can be built quickly to work out design issues before the final specifications of a project. The black room/test lab is available to view comparisons of color rendering and beam control, as well as light distribution at a height of up to 24 feet.

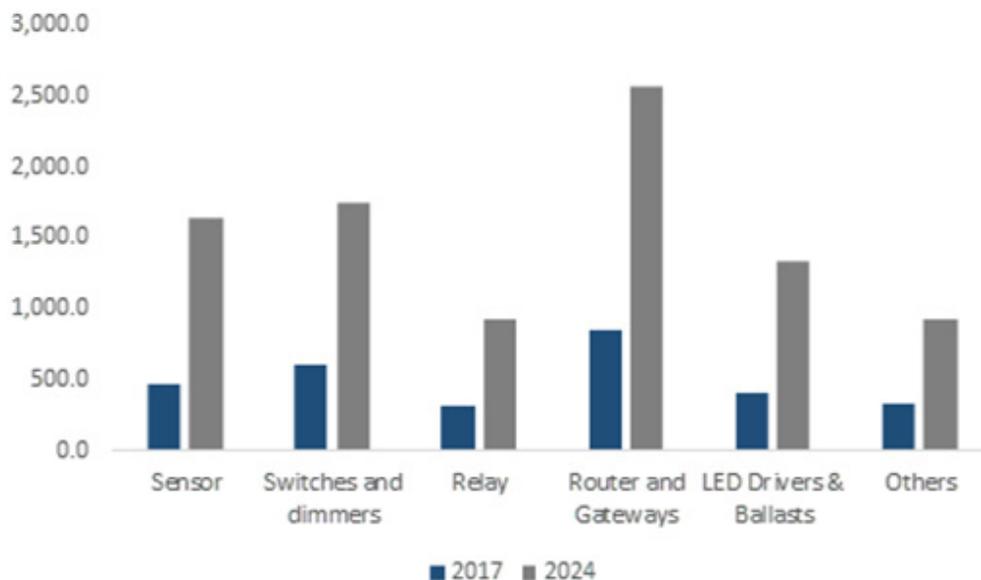
Advanced technologies demonstrate Warm Dimming, Color Tuning, IoT, and Superior Optics that deliver the most effective and efficient beams of light. Users and designers are invited to select from a myriad of the industry's latest controls that are most suited to meet their needs and include everything from IoT to Photocell and Motion, as well as Color Rendering and Dimming. Additionally, Data Collection sensors that reveal consumer purchasing analytics, and tools that grow plants and "produce" under illumination, will be available.

"Our new showroom is here to use and all are welcome to utilize it for their next lighting event," continued Mr. Campagna. "Customers and designers can come kick the tires 'Per se,' to make sure they are using the proper lighting fixtures in their layouts. Come and witness first-hand our passion for lighting and dedication to creating high-performance lighting custom tailored to your exact specifications."

Contact us at InnovationCenter@amerlux.com to schedule your visit!

LED Energy Market Observer:

1. **Smart Lighting Market to Grow at 20 Percent CAGR from 2018 to 2024** - According to a recently released research report by the market research and strategy consulting firm, Global Market Insights, Inc, the Smart Lighting Market will exceed US \$24 billion by 2024. The smart lighting market growth is attributed to worldwide initiatives for smart city development and the growing popularity of home and building automation systems in residential, commercial, and industrial sectors. As the modernized smart city infrastructure offers intelligent connectivity among different components of the administrative framework such as transport, healthcare, and law & order, further initiatives for developing smart cities are likely to be undertaken aggressively around the world over the next decade. <https://www.gminsights.com/industry-analysis/smart-lighting-market>



2. **2018 Light the Moment with ENERGY STAR Promotion Materials Available** - The U.S. Environmental Protection Agency is pleased to share plans and materials for our October 2018 Light the Moment with ENERGY STAR promotion featuring the benefits of choosing LED bulbs with the ENERGY STAR label. This year we are excited to enhance the inspiring and successful Light the Moment promotion with an added focus on hard-to-reach consumer segments, including low-income and Spanish speaking. For this new focus, we plan to supplement existing materials that leverage the altruistic call-to-action to light your moments with ENERGY STAR, with others that dial up the more practical dollar savings message. Plus, we will make more materials available in Spanish. Watch the Light the Moment video: https://www.youtube.com/watch?v=CVCVU_9RwUY

3. **NAILD Podcast #32 Illumigeddon Meets The Matrix by Chris Brown** - Sponsored by LumaNEXT <http://getagripnlighting.com/episode-32-illumigeddon-meets-the-matrix> Lighting industry veteran Chris Brown coined the term Illumigeddon several years ago and met up with Get A Grip to discuss where we are headed. Illumigeddon has turned into Illumitunity as long as you can work your way through The Matrix. Enough with the analogies, just give this a listen: https://www.youtube.com/watch?time_continue=2&v=1lpScOnHE7s

4. **Wichita Falls, TX to Finish Streetlight Upgrade** - The city of Wichita Falls, Texas plans to complete its switch to LED street lights that it started about 10 years ago, according to an article in the Times Record News. And the Wichita Falls city council approved the \$2.8 million project. While at least 2,490 roadway lighting fixtures have already been switched to LED systems, the city plans to upgrade the remaining 5,727 high-pressure sodium, metal halide, and mercury-vapor streetlights to LEDs. Ameresco, the company that the city has been working with, estimates that the new lights could save about 2.8 million kilowatt hours of electricity each year. Also with a 10-year warranty, about 20 years, from Cooper lighting, Eaton's lighting branch, the city also anticipates savings on maintenance. Ameresco and the city estimate that the project could be completed in four to five months. <http://www.solidstatelightingdesign.com/wichita-falls-tx-to-finish-streetlight-upgrade/>



5. **New NEMA Framework Predicts Energy Savings from Lighting Systems** - The National Electrical Manufacturers Association (NEMA) published NEMA LSD 79-2018 Predicted Energy Savings from Lighting Systems, a new white paper that includes a framework used to gauge the effectiveness of different lighting control methods. "While the potential to save energy short term is very clear, a method is necessary to determine the long-term average savings that can be captured based on the specific efficiency measures selected by a building owner," said Dr. Robert Nachtrieb, Lead Scientist, Lutron Electronics Company, and chair of the LSD 79 ad hoc committee. "This paper describes the complexity of this determination and suggests a potential path forward." NEMA LSD 79-2018 is available as an electronic download at no cost on the NEMA website: <https://www.nema.org/Standards/Pages/Predicted-Energy-Savings-from-Lighting-Systems.aspx>

6. **Solar in Professional Sports Growing Swiftly** - More than 46 megawatts of solar capacity — enough to power 8,000 homes — has been installed at professional sports facilities in the United States, according to the Solar Energy Industries Association. Nearly one-half of that total has been installed in just the last three years, another indication of solar energy's growth. The organization maintains a database of professional sports facilities across the NFL, NBA, MLB, NHL, MLS, NASCAR and IndyCar. To date, 32 percent of NFL stadiums have solar, the highest of any of the professional sports leagues. The NBA and MLB are tied for second at 30 percent of facilities with solar. The sports facility with the most solar is the Golden 1 Center, home of the NBA's Sacramento Kings, with an installed capacity of 11,000 kilowatts (kW). <https://www.facilitiesnet.com/>

7. **DOE Report Looks at High-Efficacy LED Luminaires** - The US Department of Energy (DOE) has released a short report covering testing of rectilinear LED luminaires intended for high-output applications such as low- and high-bay lighting in industrial or commercial settings. The testing was focused on seven solid-state lighting (SSL) luminaires that had been touted by manufacturers to deliver efficacy in the range of 200 lm/W. The mixed results include measured photometric performance and subjective analysis for visual comfort and acuity under the lighting. The testing took place at the DOE's Pacific Northwest National Laboratory (PNNL) where researchers sought to verify high-efficacy performance and discover any subjective or measured performance issues that resulted from manufacturers pushing the lumen output to high levels. <https://www.energy.gov/eere/ssl/articles/report-looks-high-efficacy-led-luminaires>

8. **Traditional Lighting Rebates Disappearing** - Traditional lighting technologies like pulse start metal halide, T5HO and induction used to receive hefty rebates. At the time, these solutions offered significant energy savings to customers and their rebates could range from \$30 to \$150 per fixture. Rebate programs have started to move away from these traditional technologies as LEDs prove more energy efficient. While the dollar amounts of the rebates for these products have stayed relatively consistent, the number of available rebate programs has dropped by 30% in the last year alone. <http://briteswitch.com/news/>

9. **Welcome to Their World by Scott Ziegenfus** - Insert the term “intelligent building” into a Google search and you’ll receive more than 746,000 results. There’s no shortage of opinions, reports and forecasts on the promise of using a single infrastructure between building systems to save on resources and promote data exchange. Lighting’s contribution to this promise is the “networked lighting control system.” Loosely defined, the networked lighting control system will have some level of distributed intelligence to control lights and provide feedback of various pieces of information for a multitude of business applications. This includes building applications such as energy management, asset management, space management, health and wellness, and more. Check out: eight simple rules for lighting specifiers when they sit down with the folks in IT at: <https://www.ies.org/lda/welcome-to-their-world/>

10. **Smart Lighting Yields Significant Benefits Beyond Energy Savings** - Bluetooth® device networks can enable the automatic, centralized control of a building’s essential systems, including HVAC, security, and lighting to harness energy savings, lower operating costs, and improve the life of a building’s core systems. Right now, smart lighting is gaining the most traction in large-scale use cases and is considered to be the next step on the path to optimizing building automation and maintenance. Expanding beyond the ability to intelligently control lighting, smart lighting can support whole-building automation and maintenance to optimize day-to-day facility operations and provide a significant return on smart building investment. A Bluetooth enabled wireless lighting solution can function as a platform that further supports point-of-interest solutions (PoI), indoor navigation, asset tracking, and space utilization in a smart building. <https://www.facilitiesnet.com/>

11. **A Fresh Look at Office Lighting by Craig Dilouie** - Open ceilings, collaborative workspaces, microleasing, and unique designs that inspire occupants and reinforce brand are just some of the trends reshaping the modern office and driving innovative lighting designs. The LED and subsequent intelligent control revolutions have supported these office trends. In the high end of the market, the desire to maximize the value of human value translates to a stronger focus on lighting solutions that support a personalized, productive space as well as foster collaboration. The key is control, both in the optical and electrical sense. <http://www.lightnowblog.com/2018/07/a-fresh-look-at-office-lighting/>

12. **Lightfair Continues Management Agreement with IMC as a Result of Merger with AMC** - LIGHTFAIR® International has announced that it will continue its management contract with International Market Centers (IMC) following the merger between IMC and AmericasMart Atlanta (AMC). LIGHTFAIR International is co-owned by the International Association of Lighting Designers (IALD, www.iald.org) and the Illuminating Engineering Society (IES, www.ies.org). The event has been co-owned, produced and managed by AMC (now part of IMC), which has managed LIGHTFAIR International since 1989. The LIGHTFAIR management team will remain in place and LIGHTFAIR International will continue under its current branding. <https://www.lightfair.com/>

Global LED Energy Market Observer:

13. **Siemens Re-Enters the Lighting Business, Via the IoT** - Five years after spinning off its Osram lighting subsidiary and thereby dumping its bulb baggage, Siemens AG is back in the lighting business. This time, however, there isn't a light bulb in sight, at least not as a revenue driver. Rather, the 171-year-old German engineering conglomerate is embracing the industry's modern zeitgeist, selling Internet-connected, chip-and-sensor imbued lighting controls, services, and systems aimed at profiting from data collection and analysis. This all became evident over the last month, when Siemens made no fewer than three acquisitions of smaller companies that specialize in Internet of Things (IoT) controls of lighting and building operations. This is exactly the business scheme that most lighting vendors are pushing today, as they try to turn the lighting infrastructure into an IoT information network that can do everything from improving traffic flow on city highways to helping facilities managers to better utilize floors, offices, conference rooms, and the like. At the same time, the smart systems improve the direct control of lighting. Lighting companies are doing this as they seek entirely new IT- and service-based business models to replace the century-old hardware model of selling bulbs and luminaires. <https://www.ledsmagazine.com/>

14. **Nichia Ready to Mass Produce Mini LED and Preparing Micro LED for 2022** - LED makers have been announcing their progress of Mini LED before reaching the final goal, Micro LED. Nichia, the Japanese LED giant, reported that it has completed the development process of Mini LED and is ready to mass produce related products that will be released by the end of the year. Currently Nichia is delivering samples with backlight application to its client and preparing to release the product in Q4. As for Micro LED, Nichia said the development is still an on-going process. According to the company, to produce a Micro LED sample is possible, but it will still take time for commercial manufacturing. With chips and transfer technology in progress, Nichia estimates that Micro LED production will be scheduled in 2022. <https://www.ledinside.com/>

15. **Samsung Smart Lighting: Inserting New-Age Efficiency into the World of Smart Luminaires** - Samsung smart lighting enables consumers, retailers and utility management teams to help create the desired ambiance in adapting to a user's mood – almost instantly, while maximizing energy efficiency. It includes automated controls to simplify the environmental settings for places such as highly efficient commercial facilities, based on minute-to-minute levels of occupancy, and desired amounts of sunlight. Smart lighting can be applied to any space that uses a lighting system, including homes, offices, retail outlets and even municipal infrastructure. Samsung provides three types of smart lighting platform components, categorized according to their functionality: Smart Component, Smart Device and Smart Service. <https://www.ledinside.com/>

16. **Iran and China Build Joint LED Lamps Plant** - With the cooperation of Chinese investors, Iran plans to build a LED lamps plant in Ardabil Province in Iran. The new plant will provide employment opportunities for local people and it is expected to produce nearly 12,500 LED lamps per day once it starts to run. The construction of the LED lamp plant aims to reduce LED lamps imported to Iran. In the last fiscal year (March 2017-2018), more than 2,000 tons of LED lamps worth US\$19 million were imported by Iran from China, Germany, the UAE, Turkey and South Korea. <https://www.ledinside.com/>

17. Top Ten in Chinese LED Package Market in 2017 - According to the latest report from LEDinside, a division of the market research firm TrendForce, 2018 Chinese LED Chip and Package Industry Market Report, Chinese LED package market scale is USD 10 billion in 2017, representing an increase of 12% YoY. Among top ten manufacturers, four are international firms, two are Taiwan companies and four are Chinese enterprises. Noticeably, it was the first time that Jufei appeared on the rank list. In addition, top ten manufacturers took up market share of 48%. MLS surpassed Nichia for the first time, ranking No.1 in Chinese market, and its market share reached 8.5%. Moreover, MLS possessed number-one market share in both light decoration market and lighting market.

Ranking	2016	2017	Change
1	Nichia	MLS	↑
2	MLS	Nichia	↓
3	Lumileds	Lumileds	→
4	Everlight	OSRAM OS	↑
5	OSRAM OS	Everlight	↓
6	Nationstar	Nationstar	→
7	LiteOn	LiteOn	→
8	Honglitronic	Seoul Semiconductors	↑
9	Cree	Honglitronic	↓
10	Seoul Semiconductors	Jufei	New

18. LEDvance Rolls Out Voice-Controlled Filament Bulbs in Europe - LEDvance, which is believed to be the only provider of voice-dimmable filament LED lamps that work with Apple gear, is now launching the concept in Europe, after having first rolled it out in North America early this year. Germany-based LEDvance is marketing the bulbs in Europe under the Osram name. It uses the Sylvania label in North America. Users can command Apple's Siri voice system to turn the filament lights on, off, brighten, and dim. While Siri can brighten and dim other brands of standard-style LED bulbs, LEDvance claims that no other vendor makes a Siri-dimmable filament LED lamp. Filament LEDs are generally considered more decorative. They mimic a retro incandescent look. Users can also use an app if they don't wish to speak to their bulbs. <https://www.ledsmagazine.com/>

19. Intelligent Automotive Lighting Market Gets Boost as Joint Venture Begins Operations - Osram reported, that the OSRAM Continental GmbH joint venture, set up by the two technology companies Continental AG and Osram, is up and running. This official start of the business as planned for the second half of 2018, follows the successful completion of all negotiations and the issuance of merger control approvals. For the joint venture, Continental and Osram are combining their strengths to develop state-of-the-art and intelligent solutions for headlamps, tail and interior lighting. OSRAM Continental is planning growth rates of up to double digits annually for the next five years. This is based on strong growth in the market for LED as well as laser-based lighting modules and solutions and associated electronics. <http://www.solidstatelighting.net/>

20. Global Human Centric Lighting Market - Analysis and Forecast, 2018-2024 - The evolution of smart technology has considerably changed the overall lighting industry in terms of energy and money saving and has improved the safety norms for the convenience of the users. Human Centric Lighting (HCL) is a lighting solution intended to improve a person's well-being, mood, and health by varying the Correlated Color Temperature (CCT). According to a new market intelligence report by BIS Research, titled, the Human Centric Lighting market was estimated \$445.9 million in 2017 and is anticipated to reach \$3.91 billion by 2024 growing at a CAGR of 35.2% during the forecast period. Some of the factors driving the growth of Human Centric Lighting (HCL) solutions in the global market are increasing benefits of human centric lighting, joint efforts from regulatory bodies, manufacturers and distributors, and increased adoption of solid state lighting. <https://bisresearch.com/industry-report/global-human-centric-lighting-market-2024.html>

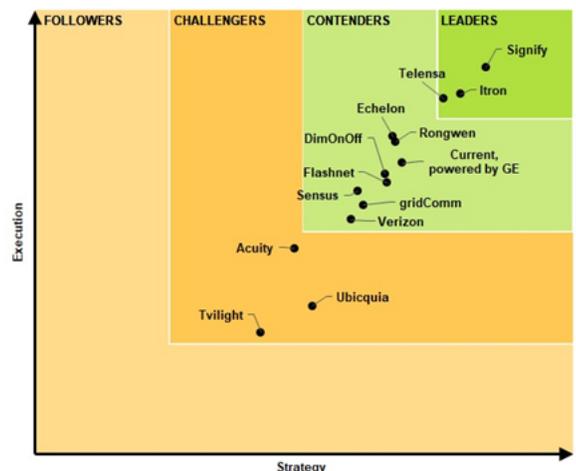
21. The Impacts of Trump's \$200 Billion China Tariff List on the LED Industry - On July 10th, the Trump administration announced plans to propose additional tariffs on US\$200 Billion worth of Chinese goods and released the tariff list. LEDinside analyzed the list right after the announcement and anticipated that the new tariff list might hit the LED industry in China. The previous tariff list addressed mainly intermediate goods and had limited impacts on LED companies in China as the exported goods of the categories from China to the U.S. were worth US\$175 million. The tariff majorly influenced U.S. based companies such as Cree, who has factories in the U.S. and has to buy the intermediate products from China for manufacturing. However, the second tariff list covers a wider range of LED products, including more than 10 items of LEDs and lighting categories with higher trading amount. In 2017, some of the Chinese exported lighting products were worth over \$5 billion. <https://www.ledinside.com/>

22. Siemens Partners with Alibaba to Power Industrial IoT in China - Siemens and Alibaba Cloud, the cloud computing arm of Alibaba Group, signed a Memorandum of Understanding (MoU) Monday to partner to foster the industrial Internet of Things (IoT) in China. The two companies will leverage each other's technology and industry resources to build a unique IoT solution to support Industrie 4.0, China's manufacturing upgrade and transformation and other industrial Internet initiatives. MindSphere is Siemens' cloud-based, open IoT operating system that delivers a wide range of device and enterprise connectivity options, robust applications, advanced analytics, and closed-loop innovation with complete digital twin solutions. The implementation of MindSphere on Alibaba Cloud will provide compelling services for companies in China Mainland to innovate with advanced industrial solutions. <https://tedmag.com/siemens-partners-with-alibaba-to-power-industrial-iiot-in-china/>

23. BMW Hopes for Smaller Li-Fi Gear on Factory Floor - It has become clearer why BMW used infrared light rather than visible: Infrared is faster, according to the group that led the project. Li-Fi can use the visible light emitted by LED luminaires, or, as at the Munich BMW plant, it can use infrared light, an invisible portion of the light spectrum. BMW had been testing Li-Fi to transmit information to and from a single factory floor robot used to inspect automobile bodies, in a small trial led by Berlin's Fraunhofer Heinrich Hertz Institute. <https://www.ledsmagazine.com/>

24. LED Lighting Market to Grow at a CAGR of 12.6% till 2023 - According to the market research report published by P&S Market Research, the global LED lighting market size is projected to cross \$70.2 billion by 2023, growing at a CAGR of 12.6% between 2017-2023. The growing adoption of energy efficient lighting solutions, across the globe is one of the primary factors attributing to the growth of worldwide LED lighting industry. The increased investment in infrastructure enhancement, along with continuous price erosion of LED lighting solutions is driving the growth of the market. Apart from this, increase in demand of LED for various applications of general lighting have also benefited the penetration of LEDs in recent years. <https://www.psmarket-research.com/market-analysis/led-lighting-market/report-sample>

25. Navigant Research Leaderboard: Smart Street Lighting - This Navigant Research Leaderboard examines the Strategy and Execution of 14 leading smart street lighting suppliers with the capacity to play a significant role in large-scale deployments. Three companies have been identified as Leaders in the smart street lighting market: Signify (formerly known as Philips Lighting), Itron (through its offerings from the recent acquisition of Silver Spring Networks), and Telensa. These vendors have deployed large-scale connected street lighting projects in multiple world regions and are recognizing the importance of smart street lighting to the broader smart cities market. A solid group of Contenders led by Echelon, Rongwen, and Current, powered by GE is also developing innovative technology solutions and leading significant city deployments. <https://www.navigantresearch.com/research/navigant-research-leaderboard-smart-street-lighting>



26. **Halliburton Opts to Rent Its Lighting** - The concept of 'lighting as a service' received another major vote of confidence today with the announcement that oil and gas services giant Halliburton is to use the model to upgrade six sites in the UK. In effect, the company will rent the lights at the locations, beginning with operations in Aberdeen and Great Yarmouth. The move by the firm – the world's largest oil field services companies with operations in more than 70 countries – follows an assessment of its lighting strategy with a view to reducing costs and cutting energy emissions. The luminaires and the lighting-as-a-service contract is being supplied by Zumtobel. <http://luxreview.com/article/2018/07/halliburton-opts-to-rent-its-lighting>
27. **Flinders Street Railway Station in Melbourne Gets Color Changing LED Lighting** - Flinders Street railway station is a railway station on the corner of Flinders and Swanston Streets in Melbourne, Victoria, Australia. The station has been a prominent landmark in Melbourne since the building was first completed in 1910. The station has received a new LED lighting installation as part of its \$100 million renovation project, according to an article on a website associated with the TripleM Newsroom of local radio station 103.5 FM. The new LED lighting will turn the building into a gigantic light show that can light up the entire station with a wide variety of colors for celebrations and events. According to the article, the default color of the LED lights will reflect the station's heritage will shine with amber LEDs, that reportedly match the color of the original building's floodlights. https://www.youtube.com/watch?time_continue=33&v=qEF8COBU_x4
28. **Current by GE Partners with Nokia to Unleash Smart City Technology Across Canada** - The two companies have announced a commercial partnership that will help Canadian cities improve operational infrastructure and expand new services to citizens. Under the terms of the agreement, Nokia will gain access to Current by GE's CityIQ* platform technology across Canada. The system will repurpose outdoor street lighting into digital infrastructure that collects data and distributes valuable insights to cities via Nokia's safe and secure communications networks. It builds on Nokia's steady expansion of its smart city capabilities, which includes a full portfolio of network solutions designed to provide Internet-of-Things (IoT) connectivity to municipal and utility infrastructure. The combined digital solution is expected to help cities gain new operational insights and will enable app development—using a 'horizontal' platform that can support a wide variety of apps simultaneously—that can address common challenges like parking and traffic management, public safety enhancements and weather and air quality monitoring. <https://www.currentbyge.com/ideas/>
29. **Current LiDAR Applications Trends in the Automotive Market** - LiDAR sensor (Light Detection And Ranging) detects surrounding objects and captures their distance to the sensor by emitting a very short light pulse and measuring the time that the light travels from the sensor to the object and back. LiDAR is a key technology for several applications including autonomous vehicles, intelligent transportation system, drone, measurement, sweeping robot and others. According to the 2018 Infrared Sensing Application Market Report by LEDinside, LiDAR laser market value is expected to reach USD 154 million in 2020. LiDAR sensor could be integrated into an advanced driver assistance system (ADAS) for providing real time condition of the surrounding environment of a vehicle, helping drivers to respond to different situations to avoid accidents. It has advantages in long-distance detection and depth resolution and has been adopted in autonomous cars for trials. https://www.ledinside.com/news/2018/7/current_lidar_applications_trends_in_the_automotive_market
30. **Nichia Announces to Expand LED Capacity** - The leading Japanese LED producer, Nichia Corporation released the news that the company decided to expand LED production capacity by building a new plant in response to the increasing demands of lighting and backlight LEDs as well as the applications for automotive use and others. The new plant is scheduled to start running in October 2020 and with the new capacity added, Nichia plans to double the production of Naruto factory in 2021. According to the report of Nikkei Asian Review, the major revenue of Nichia depends on white LED. However, Nichia has strategically intensified its momentum in high margin LED products including automotive lighting. <https://www.ledinside.com/>

31. **100,000 Luminaires to Be Refitted in Car Park Roll-Out** - A massive LED lighting roll-out across 200 European car parks will see over 100,000 luminaires installed. The project – in which fluorescent fittings will be replaced with LED ones, saving 40 per cent in energy load – will be conducted simultaneously across the United Kingdom, Ireland, the Netherlands, Germany, Belgium, France and Denmark and will complete in December next year. Q-Park, Europe's largest car park operator, agreed to the deal with Future Energy Solutions, a European Lighting Integrator who will manage the entire process including localized installation and maintenance. Additionally, wireless controls will be installed in many locations. <http://luxreview.com/>

32. **\$65M Boost Takes 'Lighting-as-a-Service' Mainstream** - The money will allow Irish LED lighting specialist UrbanVolt to bring its lighting-as-a-service model to the UK and the US. The firm – which already supplies major multinationals such as Pfizer – upgrades commercial buildings to LED lighting for no upfront capital cost. A proportion of the energy saving is then paid to UrbanVolt as a service charge for the first five years, during which time UrbanVolt also maintains the lights. The concept allows firms to finance lighting upgrades from operating expenditure budgets, rather than capital expenditure. Big lighting brands Philips and Zumtobel also offer similar services, but are not specialists in the field. <http://luxreview.com/article/2018/07/-44m-boost-takes-lights-as-service-mainstream>

33. **The On-going LED Horticulture Lighting Market Expansion** - According to the research of LEDinside, the market scale of LED plant lighting will reach US\$ 224 million in 2018 and is estimated to grow to US\$ 633 million by 2022, with a CAGR of 30% during 2018-2022. Many LED producers have entered the market of horticulture lighting to share the expanding opportunities when the demands in the general lighting market are relatively weak. LEDinside has collected the updates of horticultural applications from LED firms of the world. LED manufacturers worldwide have been developing technologies for innovative approaches of horticulture to overcome the limitations of geography and weather. It is expected that LED lighting applications can provide sustainable solutions to ease the environmental impacts of farming when facing the challenge of global warming. <https://www.ledinside.com/>

34. **Cloud-Based Light Control Cuts Energy at Volvo** - In the manufacturing area the legacy 480W metal halide lights were replaced with 520 200W HBX LED luminaires from CRT. Each luminaire has an integrated occupancy and ambient light sensor, plus an enModus Node to control the DALI driver. The Hub connects to the enModus Cloud Platform to collect data and control lighting. The Cloud-based platform allows configurable occupancy-based lighting schemes, daylight dimming and customisable lighting schedules. Volvo can now also automate regulatory compliant emergency light testing of the maintained emergency lights too. <http://luxreview.com/article/2018/07/cloud-based-light-control-cuts-energy-at-volvo>

Monthly Feature:

10 Reasons the Future of Lighting Is DC Grids - There are a host of factors driving local – and regional – electricity distribution towards direct current, and with lighting installations going all LED, it's time the lighting industry began supporting it. Here's 10 reasons why it makes sense:

- 1) Lighting has effectively gone DC thanks to LEDs. Why have the expense of local drivers for each luminaire when they can all be run off the same local DC network?
- 2) The power industry is moving to distributed power generation, thanks to a switch to renewables such as solar panels and the advent of energy storage.
- 3) It's much easier to integrate battery packs such as those produced by Siemens and Tesla into DC systems and grids. DC to DC converters are up to 20 times smaller than AC/DC equivalents.
- 4) There's a significant energy loss every time power is converted from AC to DC at each device. Removing a stage can improve system efficiency by 5 to 10 per cent.
- 5) System reliability will be improved. By removing AC/DC converters, especially those with electrolytic capacitors, we can dramatically improve the mean time between failures.
- 6) By using a relatively higher voltage such as 380V DC rather than 48V DC, we can solve the challenges of direct current such as voltage drop and increased cabling sizes, while maintaining safety.
- 7) There's less local heat at the luminaires when there is no power conversion electronics built into the housing, leading to cooler-running, more efficient and longer life LEDs and cooler ceiling voids and interiors.
- 8) A local DC grid opens up opportunities to connect other DC devices, such as sensors and cameras, to the lighting to create a network which can use data to deliver new services.
- 9) The technology is field proven and is used by blue-chip clients such as Carrefour and MaxMara.
- 10) Louis Vuitton, for instance, is using DC microgrids for its lighting at 40 of its newer stores in both Europe and China.

<http://luxreview.com/article/2018/06/10-reasons-the-future-of-lighting-is-dc-grids>

Based on a presentation by Fabien Teissier of Encom Energy at the recent Lighting Fixture Design conference.

