

Amerlux Corporate Video - Be seen in the best light:

<https://www.youtube.com/watch?v=8RMZpOOp3Qo&feature=youtu.be>

At Amerlux, we create bold lighting solutions that add warmth and brilliance to the world. As a design-and-manufacture company we build long-term relationships with architects, facility managers and lighting designers by taking every complex problem personally. Our award-winning portfolio includes innovative interior and exterior lighting products that deliver striking aesthetics and rich performance through advanced engineering. For more information, please visit Amerlux.com or call 201.416.2284.

LED Energy Market Observer:

- 1. High-Speed Breakthrough Brings Li-Fi Closer** - French manufacturer Oledcomm has demonstrated its latest model which gives 16 users simultaneous access to 100Mbps internet connectivity via visible light from LED luminaires, rather than traditional Wi-Fi. The LiFiMax platform requires the users to plug a transceiver dongle into their device, which allows for 100 Mbps download and 40Mbps upload. The download information is 'embedded' in the high-frequency visible light from the light fitting. LiFiMax - which will be available this September and costs £700 (€780, US\$900) - was launched at the CES Show in Las Vegas and is compliant with Windows, MacBook and Linux-based devices. The luminaires are connected to an internet access point via a network cable and feature a Li-Fi-compatible driver which converts data into modulated light. <https://luxreview.com/>
- 2. CES 2019: Hyundai Mobis Shows How Lighting Can Reduce Accidents in Self-Driving Cars** - According to the company, its lighting can be seen by pedestrians up to 450 feet away. When a pedestrian is detected, the lighting projects a red warning symbol, letting a person know it's not OK to enter the roadway. When the car comes to a stop, it can display a crosswalk on the ground, signaling it's OK to cross in front of the vehicle. Then, when it comes time to move again, the car's LED boards will show a countdown, while arrows highlight the direction of travel. Other companies have similar, yet different methods of conveying similar ideas. <https://www.cnet.com/roadshow/news/hyundai-mobis-self-driving-car-lighting-ces-2019/>
- 3. CES 2019: Advanced Smart Lighting Applications** - KOHLER Konnect features innovative kitchen and bath products that use voice commands, motion control, and personalized preset. The system includes Veil Lighted Bathroom collection which brings connected lighting into the entire bathroom space. Through the collaboration with Signify, Kohler has integrated Philips Hue's API in the system for users to control their lights via the KOHLER Konnect app. Security products and service provider Ring is presenting its newest home security product line, Ring Smart Lighting at CES 2019. By combining energy efficient LED lights with motion sensors and Ring's proprietary long-range network, Ring Smart Lighting can turn on other Ring Smart Lights as well as Ring Doorbells and Cams and alert customers of motion on their property. Taiwan-based Lite-On Technology is showcasing its AI-enabled smart street light solution and traffic management solution during the event. Lite-On noted that the AI-empowered solution for streetlight and traffic management has been implemented in Southeast Asia, where streets experience high traffic volumes throughout the day and drivers are prone to traffic violations. https://www.ledinside.com/showreport/2019/1/ces2019_advanced_smart_lighting_applications
- 4. December Jobs Report: 312,000 Jobs Added, Unemployment Slightly Rises** - The U.S. economy added 312,000 non-farm payroll jobs in the month of December and the unemployment rate trickled up slightly to 3.9 percent, the Department of Labor (DOL) reported. The number blew past economists' expectations who forecasted only 182,000 jobs would be added in the final month of 2018. Hiring remained strong, especially in manufacturing, and many who had struggled to find work came off the sidelines in 2018. Some 400,000 more people began looking for work last month, signaling that higher pay could be motivating Americans who were previously on the bench to start seeking better opportunities. The Department of Labor jobs report caps what has been a strong year for the American economy. <https://www.bls.gov/news.release/pdf/empst.pdf>

5. **Next-Gen Semi Materials Could Be a Boost for Photovoltaics, Lighting** - Next-generation semiconducting materials have the potential to transform lighting technology and photovoltaics, suggest researchers from the Georgia Institute of Technology (Georgia Tech), in a study of the unusual physics behind hybrid semiconductors. Semiconductors made with emerging materials can engage the material itself in quantum actions, according to the team. Such a material's ability to contain diverse quantum particle movements is related to its extreme flexibility on a molecular level. Semiconductors made with traditional materials, in contrast, have rigid molecular structures. The researchers studied the light-emission properties of a class of hybrid semiconductors called halide organic-inorganic perovskites (HOIPs). They found that the excitonic properties in HOIPs were diverse and that each excitonic resonance had a distinct degree of polaronic character.

https://www.photonics.com/Articles/Next-Gen_Semi_Materials_Could_Be_a_Boost_for/a64314

6. **High-Mast, Side-Mounted Roadway Lighting Standard Now Includes LED Technology** - NEMA published ANSI C136.18-2018 American National Standard for Roadway and Area Lighting Equipment—High-Mast Side-Mounted Luminaires. Developed by the ANSI Committee for Outdoor Lighting, this Standard covers physical, operational, maintenance, and light-distribution features that permit use of high-mast luminaires in roadway applications when specified. In this edition, references are updated and information covering LED technology has been added. ANSI C136.18-2018 is available in hard copy or as an electronic download for \$43 on the NEMA website. <https://www.nema.org/>

7. **Osram Sells Sylvania Lighting Solution to WESCO** - Osram continues its transformation and moves one more step ahead with sales of its North American services business, Sylvania Lighting Solutions (SLS). The transaction is expected to close in the first quarter of 2019. According to Osram, its Management Board has decided in May 2018 to initiate the divestiture of the SLS business. SLS offers a full spectrum of energy-efficient lighting upgrade, retrofit, and renovation solutions with annual sales of more than \$100 million and approximately 220 employees across the U.S. and Canada. It is headquartered in Wilmington, Massachusetts. <https://www.prnewswire.com>

8. **Lutron Acquires Limelight** - Limelight is a wireless lighting control solution for outdoor and industrial facilities that provides remote control and management, saves energy, and enhances facility safety. With the simplicity of its wireless fixture-level control architecture, it also helps ensure code compliance and streamlines the specification and design process. Limelight by Lutron integrates data seamlessly into Lutron's existing data and management platform, Enterprise Vue. That software, which offers a variety of metrics and alerts, enables a facility's interior and exterior lighting to be controlled from one dashboard and allows Lutron to provide a solution for multi-building projects and campuses looking to control lighting indoors and out.

<http://www.lutron.com/>

9. **LEducation 2019 Is Open for Registration** - The LEducation 2019 Trade Show and Conference is marking its 13th year and will be held March 12-13, 2019 in New York City at the NY Hilton Midtown Hotel. Industry experts will host 30 educational presentations and take part in six panel discussions. <https://leducation.org/registration/>



10. **LEDucation 2019 Announces Upcoming Presentations** - LEDucation 2019 has announced the lineup of presentations and panel discussions to be held during the Conference and Trade Show in New York City on March 12 and 13, 2019 at the New York Hilton Midtown. Industry experts from the lighting community and allied fields will host 30 educational presentations, which include six panel discussions. Topics slated to be discussed are lighting design trends, installation and performance control, building codes and compliances, how lighting can affect health, innovations and advancements in exterior lighting, the growing importance of lighting in horticulture, lighting and acoustics in the workplace, and much more. Abstracts are published on the LEDucation website at <http://leducation.org/presentations>

11. **LFI Returns in 2019 With the Synergy of Light in Life** - Light, technology, knowledge and design connect in a convergence of global introductions, innovations and thought leadership at LIGHTFAIR® International 2019, the world's largest annual architectural and commercial lighting trade show and conference. LIGHTFAIR was established in 1989 and will hold its 30th edition in Philadelphia May 19-23, 2019 at the Pennsylvania Convention Center. The five-day Conference program will feature 76 courses with 147 speakers presenting a leading-edge custom curriculum developed by lighting, technology and design experts serving on the select LFI Conference Advisory Committee. It offers practitioners across the lighting, design and technology spectrum relevant topics, accomplished speakers and industry intelligence as an integral component of the world's largest annual architectural and commercial lighting trade show and conference. <https://www.lightfair.com/whats-new>

12. **GE and SYLVANIA Release LED Light Bulbs Connecting Google Assistant to Accelerate IoT Lighting** - In the beginning of 2019, GE Lighting announced that it is deepening its C by GE portfolio which features hub-free IoT smart lighting with Google Assistant control. The Made-for-Google products are able to connect with Google's system and be controlled via app on smartphones or portable devices. The connected lights allow app and voice control for changing the color of lights and tuning brightness. Furthermore, they can also combine smart accessories including smart wall plug and motion sensor to manage lighting away from home and by movement. Earlier in December 2018, SYLVANIA general lighting expanded its portfolio of SYLVANIA SMART+ Bluetooth lighting. The new products work with the Google Assistant or Amazon Alexa via the new SYLVANIA Smart Home app on Google Play, providing hands-free lighting control without requiring any additional hardware. <https://www.ledinside.com/>

13. **NEMA Issues New Installation Guidelines for Outdoor Luminaires** - The National Electrical Manufacturers Association (NEMA) published NEMA LSD 80-2018 Installation Guidelines for Outdoor Luminaires—Grounding Considerations. This new white paper addresses the application of the National Electrical Safety Code® (NESC) as it pertains to the grounding of outdoor luminaires and recommends installation guidelines. New outdoor luminaries contain more electronics (e.g., LED lamps, electronic drivers, and electronic lighting controls) than previous outdoor lighting technologies. Electronics are more sensitive to grounding and wiring issues than earlier technologies. NEMA LSD 80-2018 is available as an electronic download at no cost at: <https://www.nema.org/>

14. **Walmart Slashes Smart Lighting Prices for Google Home and Amazon Echo** - Smart lighting is one of the first considerations when you set up a digital home controlled by Google Home or Amazon Echo devices. It's convenient and even fun to ask Alexa or Google Assistant to turn on one light or all the lights in your apartment or home with a simple voice command. The ability to manage smart lighting remotely also adds to your home security. The best deals are at Walmart for smart lighting that works with Google Home or Amazon Echo. Whether you're just starting to set up a smart home or want to add more smart lights to work with your existing configuration, with these deals you can save as much as \$20. Walmart has free 2-day shipping on orders over \$35. <https://www.digitaltrends.com/home/google-home-amazon-echo-smart-light-deals/>

15. **Bluetooth Promises Location-Tracking Lights** – Bluetooth has announced a direction-finding feature that means Bluetooth-enabled lights could be used for way finding, location tracking and proximity services. The feature allows devices to determine the direction of a Bluetooth signal, thereby enabling the development of so-called 'proximity applications' such as asset tracking. The launch of Bluetooth location-tracking will rival Philips' YellowDot program which allows certified LED luminaires containing YellowDot drivers to be interoperable with Philips' indoor positioning technology. With two major players with proximity technology, it could have the positive effect of driving the concept in the lighting sector. Bluetooth location services solutions generally fall into two categories; proximity solutions and positioning systems. <https://luxreview.com/>

16. **Osram Warns of a Weak First Quarter As It Cuts Jobs** - With no let-up in sight to the financial strains of transforming its business model, of relying on a soft automotive market, and of dealing with global trade wars, Osram warned that its 2019 first quarter will be weak when it reports results in two weeks. It also announced job cuts. In a short statement, the Munich-based company said that operating revenue would fall by 15% on a comparable basis, from \$107M in October through December quarter a year ago to \$945M in its new fiscal year. Osram also warned that its adjusted EBITDA margin will likely take about a 40% hit, coming in at 11.3% compared to 18.5% a year ago. <https://www.ledsmagazine.com/>

Global LED Energy Market Observer:

17. **Global Stadium Lighting Growth Trends, 2018 to 2026** - The stadium lighting market was valued at US\$ 465.7 Mn in 2017 and expected to grow at a compounded annual growth rate (CAGR) of 8.4% during the forecast period from 2018 to 2026. Replacement of traditional stadium lights with LED lights is one of the most common factors complimenting the growth of the market. Stadiums across the world in an urge to switch to energy efficient solution are increasingly adopting LED lights. Some of the major players operating in the stadium lighting market include Philips Lighting, Musco Sports Lighting, Eaton, Cree, Zumtobel Group, Acuity Brands, Hubbell, LG Electronics, General Electric and Panasonic among others. https://www.researchandmarkets.com/research/9qtnnm/global_stadium?w=12

18. **2019 Automotive LED Market Trend Analysis – Part One** - In the first half of 2018, car sales had slowly grown as the global economy was relatively stable. In 2018, China was still the country where the automotive market grew the most. Other growing markets include India and Brazil whose on year car sales growth rates were over 10 percent in 2018. In the U.S., car sales still increased in 1H18. But it may drop in the second half. LEDinside projects that high power and middle power LED will be growing faster than the low power ones. With increased diversity of factory-installed headlamp and the decreasing price of LED headlamps, the market value of high power LED could achieve a growth rate of 35 percent YoY. The growth rate for middle power LED is also projected to be around 20 percent with the increasing installation of lighting on side mirrors and daytime running lamps. https://www.ledinside.com/news/2019/1/2019_automotive_led_market_trend_analysis_part_one

19. **2019 Automotive LED Market Trend Analysis – Part Two** - The automotive LEDs are adopted in various places in cars including interior and exterior lighting, dashboards and rear view mirrors. Headlights as the most important part of automotive lighting have been moving toward to intelligent applications by combining LEDs and sensing technologies. Following the trends, automotive LED producers introduced matrix LED headlights which LEDs are placed in arrays and each LED can be individually controlled. In this way, the light source can be adjusted to fit different driving situations to enhance safety. Projection is another featured function of LED headlights which warnings, assisting path and other information can be projected on the roads. Osram, Nichia and Lumileds are the top three suppliers of automotive LED in the global market. https://www.ledinside.com/news/2019/1/2019_automotive_led_market_trend_analysis_part_two

20. French Cucumber Growers Tune LEDs for Year-Round Production - In another horticultural example of how LEDs can be finely tuned to suit different crops, Signify said that two French cucumber farms have installed greenhouse solid-state lighting (SSL) systems that optimize year-round growth of the popular salad vegetable. Jardins Réunis and Cheminant, both close to the city of Nantes near the northwest coast, have deployed Signify's Philips GreenPower LEDs set with a recipe that delivers brightness and frequency levels believed to be ideal for cucumbers. The passively cooled SSL also steers heat away from the crop, which likes temperatures from around 75° to 80°F. Both Jardins Réunis and Cheminant grow "high-wire" cucumbers, a technique in which the cucumber vine climbs vertically and then runs horizontally along a wire. Both are using top-lighting above the plants and inter-lighting within them. <https://www.ledsmagazine.com/>

21. Virtual Reality Edges Closer to Mainstream in Lighting - Signify, formerly Philips, unveiled two programs, one for clothes stores and one for exterior lighting schemes, which allow customers and specifiers to enter a virtual world and assess how specific lighting can impact their retail or urban environments. The Philips Fashion Lighting VR is available in both iOS or Android versions. Users simply place their smartphone in a VR headset and run the app. Accurate 3D renderings enable them to then immerse themselves in a virtual fashion store and see first-hand how lighting can make shop windows more dynamic to attract a shopper's attention and draw footfall into the store. The app lets them visualize the lighting in the space and its effect on the merchandise. <https://luxreview.com/article/2019/01/vr-edges-closer-to-mainstream-in-lighting>

22. Britain's Oldest Light Maker Goes Bust - Sugg Lighting, which had been in business for 182 years, is world famous for traditional street lights with both gas and electric light sources and has supplied palaces, government buildings and prestigious heritage projects around the world. Its gas lights have been illuminating the entrance to Buckingham Palace since 1911. The disappearance of its unique offer represents a major blow to those responsible for maintaining lanterns in period properties, parks and the public realm. The closure of Sugg – which was founded in 1837 – brings to an end an illustrious history of British manufacturing. <https://luxreview.com/article/2019/01/britain-s-oldest-light-maker-goes-bust>

23. Mini LED to be the Possible Turning Point for the Industry - 2019 may not be a prosperous year for LED manufacturers given the market uncertainties resulting from the changing global politics. Yet, industry players continue their technology developments and expect Mini LED to revive the stagnant market. Mini LED, as an improved version of conventional LED, provides refined dimming zones when serving as backlight and can be utilized in curved displays when coupled with flexible substrates. Since last year, several LED makers have begun shipping Mini LED backlight products for high end applications such as gaming monitors and gaming notebooks. LED producers in Taiwan believe that Mini LED could compete with OLED with its high display performance and the advantages of long life time and temperature resistance. <https://www.ledinside.com/>

24. Saint Peter's is Transformed with Osram LED Lighting - A BESPOKE lighting system has transformed Saint Peter's Basilica in Rome, allowing the art works to be seen in vivid detail for the first time. The showpiece all-LED installation – which delivers over 11 million lumens to the church's interior and cuts operational energy by 90 per cent – follows 18 months of planning by the lighting engineering team at Osram. More than 780 special luminaires equipped with 100,000 individual LEDs were used in the project. The 212W luminaires – which deliver 200,000 lumens from 120 LEDs – are based on special fittings originally developed for the relighting of the Sistine Chapel in 2014. Watch the video: https://www.youtube.com/watch?time_continue=17&v=ffQ8Jkh2KHY

Monthly Feature:

The 10 Big Lighting Trends for 2019 -

<https://luxreview.com/article/2019/01/the-10-big-lighting-trends-for-2019>

WHAT'S IN store for the lighting industry in 2019?

The big mega trends of recent years will continue of course, as digital disruption will challenge some business models and create opportunities for others, especially those who can make digital experiences a seamless and positive customer experience. Here's our take on 10 trends we expect to see in the coming 12 months.

The supply chain will breakdown

The client-specifier-manufacturer-wholesaler-contractor supply chain used to be understood by everybody. But with FMs buying from Amazon and margin-chasing contractors bullying manufacturers for rebates, the supply chain is getting more twisted out of shape than a Labour spokesperson explaining the party's policy on Brexit.

Power Line Communication will go mainstream

Power line communication – a sophisticated reprisal of the 'mains borne' signalling of the 1970s – has been the unexpected tech trend in lighting control in recent years. It beats wireless on many levels and is getting adopted by big players such as shopping mall giant Intu and automotive manufacturer Volvo.

Consolidation will accelerate

After the companies jump a few pesky regulatory hurdles this month, iGuzzini will join the Fagerhult Group as the jewel in the crown of its recent acquisitions. While it's certainly one of the most eye-catching takeovers in the industry it won't be the last. Driven by falling luminaire prices, consolidation will accelerate this year.

Bluetooth Mesh will gain traction

Bluetooth is the new big beast in the lighting controls world and its mesh technology brings simple wireless control to large installations. The familiarity of Bluetooth, the marketing muscle behind the brand and the open protocol nature of the technology will mean its entry into the mainstream lighting is a smooth one.

VR will arrive as a design tool

Virtual reality games may have enlivened your Christmas break but expect 2019 to be the year that they have a serious impact in lighting design. The big architectural practices are already using the tool to get clients excited and Signify - formerly Philips – is investing heavily in the technology as a design and marketing tool.

Visual comfort will move up the agenda

The right to experience artificial lighting without nasties such as glare and flicker has taken a back seat in recent years as we've embraced the stunning energy saving possibilities of LEDs. But expect visual comfort to make a comeback with increasing demand for warm colour temperatures and high CRIs.

Smart hubs will be cut out

The tangle of twinkling 'smart hubs' and 'intelligent bridges' you need to get your lamps connected to the internet will become a thing of the past. Led by GE's release of its O by GE light bulbs and C-Start switches this year, lighting will increasingly connect directly to Alexa, Google Assistant, Apple's HomeKit and even Siri.

Self-learning control will arrive

Led by the stunning success of Nest's digital thermostats which learn about a user's habits over time and anticipate changes, intuitive control will begin to arrive in the lighting world. Helvar is first out of the blocks with its Active+ system, but a flurry of patent applications in recent months show entrepreneurs are betting its the next big thing in lighting.

1970s design will return

The feminine palette of chalky pinks, brass and er, flamingos is so over, the interior fashionistas tell us. The big trend in interiors is a return to the 1970s but this time with better materiality and softer colours. Expect product designers to blow the dust off Concord and iGuzzini catalogues from the era in the search for inspiration

Modular design will spread

LED luminaire makers can't believe their luck. They've got away with integral products where extracting a failed driver or light source is harder than getting compensation from Ryanair. But European chiefs are on their tail. Expect Eco Design legislation to tighten and put pressure on manufacturers to have deconstruct-able luminaires.