



Amerlux Avista® AVI - Avista is an advanced LED light engine for retrofitting traditional and post top luminaires or for new construction. Unique with a completely sealed LED optical chamber, Avista offers cutting-edge optics and extraordinary output. Simple to install with adjustable height levels, Avista allows you to position the light where you want it for maximum performance. Height adjustable light engine can be field adjusted to optimal performance. A super-efficient, economical energy saver, Avista takes exterior LED lighting to the next level. <http://www.amerlux.com/products/AVI>

LED Energy Market Observer:

1. Retrolux Software LED Lighting Project and Sales Software to Include Amerlux LED Lights - The company says that the software's time-saving tools can bring order to the project delivery process including Leads, Surveys, Estimates, Proposals, Automatic Rebate Estimates and Instant Rebates, Ordering, Installation, Controls, and Commissioning. The company also says that its lighting retrofit software enables electrical contractors, energy service companies (ESCOs), and value-added resellers (VARs) to save time and money and close deals at a faster rate. The software also features audit, proposal, and e-commerce functions. <http://www.solidstatelightingdesign.com/>

2. LIGHTFAIR® International 2019 Will Take Place in Philadelphia for its 30th Annual Staging May 19-23 - The five-day Conference program features more than 70 courses presenting the latest information and leading-edge concepts to attendees representing a broad spectrum of industries. Under a curriculum developed by lighting, technology and design experts seated on a select Advisory Committee, the LFI Conference offers enlightening topics, dynamic speakers and industry intelligence as a featured component of the LIGHTFAIR event. For LIGHTFAIR International 2018, the Pre-Conference program will take place from Sunday, May 6 – Monday, May 7 and the LFI Trade Show and Conference will run from Tuesday, May 8 – Thursday, May 10 at McCormick Place, Chicago, IL For more information about LFI: <https://www.lightfair.com/>

3. LiFi - What It Is, How It Works, What It Provides, How to Apply, and Its Future Prospects by Luc Chassage - The acronym LiFi (Light Fidelity) was born at the beginning of the 2010s. Its name derives from the very well-known WiFi (Wireless Fidelity). LiFi relates to wireless communication technologies which rely on light as a power source. Owing to the incredible increase of LEDs (Light Emitting Diodes) over the last few years, which have become reliable and more affordable, LiFi technology can be integrated on a daily basis. The LEDs can be used like lasers in optical telecommunication in order to transfer data. LED light sources present in our surroundings can therefore be used for lighting but also used to transfer digital data. A transmitter, essentially an LED, sometimes a laser, emits light and information simultaneously. We then find the standard elements of a data chain transmission: data, coding and a network. These digital networks modulate the LED transmitter which then allows the transposition of the electrical signal into a light signal. Then the light signal is freely diffused into a room or outside. <https://www.led-professional.com/resources-1/articles/lifi-what-it-is-how-it-works-what-it-provides-how-to-apply-and-its-future-prospects>

4. **Wheat Grows Twice as Fast Under LEDs** - A team of scientists has cut the growing time of wheat by 50% by using LED lighting. Researchers from Australia and the UK grew wheat from seed to maturity in just eight weeks instead of the standard 16-week growing time for the cereal grown in spring. The development means that, for the first time, it is possible to grow as many as six generations of wheat every year, a threefold increase on the shuttle-breeding techniques currently used by breeders and researchers. The success of the project is being compared to the post-World War Two shuttle-breeding innovations in cereal production. The international team also says it has proof that the speed-breeding technique can be used for a range of important crops. <http://luxreview.com/>

5. **Relief on Title 24 Lighting Retrofit Compliance** - California regulators simplify Title 24 lighting codes to reduce energy project costs and speed ROI. In short, if the right type of high-efficiency lighting equipment is installed for an office lighting retrofit project, that project's requirements for advanced dimming controls can be eliminated. This is good news for many electrical contractors, plant facility personnel, and consulting engineers who could not previously justify a code-compliant lighting retrofit to some customers from a reasonably quick return on investment (ROI) standpoint. Code changes not only help reduce engineering and equipment costs, but also speed simple payback and can reduce ROI by 50% or more for a typical office building. Energy retrofit projects are now less expensive, faster, and easier. <http://www.ecmweb.com/lighting-control/relief-title-24-lighting-retrofit-compliance>

6. **Department of Energy to Host 2018 ARPA-E Summit** - The ninth annual Energy Innovation Summit is scheduled for March 13-15, 2018. The Summit draws thousands of participants from across the United States and internationally to convene a forum on the future of energy innovation. The Summit encourages leaders from industry, government, and academia to build partnerships that shape the direction of public-private cooperation in energy technology. The Summit will include the Technology Showcase which features more than 275 innovative technologies from across all energy sectors, including prototypes and commercial-ready products—many on public display for the first time. In addition, it will also feature panel discussions and mainstage addresses from leading experts on a range of technology issues affecting energy innovation. <http://www.arpae-summit.com/Showcase/About-the-Showcase>

7. **Smart Street Lighting Market Expected to Hit \$4.3 Billion** - A new report prepared by Persistence Market Research titled "Smart Street Lighting Market: Global Industry Analysis 2012-2016 and Forecast 2017-2026" studies the performance of the global smart street lighting market over a nine year assessment period starting from the years 2017 and ending in the year 2026. The report presents the forecast by value of the global smart street lighting market and provide important information regarding the market dynamics operating in this market, such as drivers, restraints, opportunities, and trends. The smart street lighting market in North America is the largest in terms of revenue and is likely to exhibit a CAGR of 15.5% during the period of assessment. The North America regional market is likely to reach a valuation of nearly \$1.25 billion by the end of the period of forecast in 2026. <https://www.persistencemarketresearch.com/mediarelease/smart-street-lighting-market.asp>

8. **Self-Driving Concept Car Is Full of LEDs, and Not Just for Lighting** - At Las Vegas consumer show, Osram and Swiss auto designer will show how shared, autonomous vehicles will use LEDs for everything including comfort, illumination, data connectivity, security, and more. the future of sustainable urban transportation will move towards cars that drive themselves, that users share rather outright own, and that connect individual passengers with data and services. The smart autonomous vehicle, called Snap, will include Osram LEDs and laser diodes that use infrared sensing and other LED technologies. For example, LED-based iris scanning technology will help secure entry into the vehicle, and will also help identify individuals and permit them to connect to information services. Snap, which is the shape and size of a minibus or a small train compartment, will also use LED-based infrared for facial recognition that would then trigger changes in lighting, heat settings, and seat positioning to suit the individual's known tastes. <http://www.ledsmagazine.com/>

10. **Now, Another Way to Talk to Your Lights: Apple's Homepod** - Apple's HomePod — the company's long-time-coming answer to Amazon's Echo — will indeed allow users to verbally command their LED lights to turn on, off, brighten, dim, and change colors and color temperature. HomePod is a smart speaker and voice receiver that Apple is positioning first and foremost as a music device. The company is lauding HomePod's superior sound quality, explaining that it has crafted "beam-forming tweeters, a high-excursion woofer and automatic spatial awareness," all into a stylish 7-in.-high box. While Apple is focusing attention on the audio side — it had to do something to stand out given that HomePod comes more than three years after Amazon's Echo personal assistant speaker, and over a year after Google's Home — HomePod will do plenty of other things. Like the smart lighting. <http://www.ledsmagazine.com/articles/2018/01/now-another-way-to-talk-to-your-lights-apple-s-homepod.html>

11. **Ground Planes for LED Drivers — Part 1 of 3** - In this article, we continue our discussion on the importance of grounding when installing LED lighting equipment. Part 1 of this three-part series focuses on the ground plane of the printed circuit board (PCB) used in the LED driver. We'll touch on the importance of the relationship between power quality in the facility electrical and grounding system and the LED driver's PCB ground plane in Part 2. Part 3 of this series will explain how strategic power quality monitoring can identify disturbances that can cause premature failure of digital-based LED drivers. <http://www.ecmweb.com/lighting-control/ground-planes-led-drivers-part-1-3>

12. **Why Facility Managers Can't Afford to be Complacent About Tech by Jonathan Cooper** - Now that the Industrial Internet of Things (IIoT) and mobile computing are becoming commonplace in facilities, managers must stay ahead of the learning curve, replacing outmoded technology to keep pace with innovative solutions that allow for efficient operations. All facilities, regardless of type, are susceptible to system disruptions. With IIoT, facility managers have new capabilities to deal with failing systems and can modify their O&M posture altogether. The average facility control system includes solutions for building automation, security, and lighting as well as equipment monitoring and HVAC. Many of these systems are so seamlessly embedded in buildings that we hardly notice their physical presence. But how do we stay in control of such systems when they invariably malfunction? How do we ensure that we are able to maintain command of not only the controls themselves, but the businesses and industries they are quite literally controlling? <http://www.ecmweb.com>

13. **What Smart Cities Will Mean for Electrical Contractors** - To name just a few, some of the skill sets electrical contractors are likely to need most will be an understanding of smart electrical grids, new lighting technologies and power backup installations. Additionally, the lighting technology used in the smart cities of the future wasn't even thought about when many electricians were receiving training for their occupations decades ago. That's why analysts believe staying competitive and receiving steady streams of work requires electrical contractors to upgrade their skills and learn about concepts related to the internet of things (IoT). <https://www.ecmag.com/section/your-business/what-smart-cities-will-mean-electrical-contractors>

14. **Automotive Adaptive Lighting Market to Grow at CAGR of 13% Till 2023** - According to the "Global Automotive Adaptive Lighting Market Research Report Insights, Opportunity Analysis, Market Shares and Forecast, 2017 – 2023" report by Research and Markets, the adaptive lighting market has increased the safety through providing automatic settings for downlight and headlight. <http://bizled.co.in/automotive-adaptive-lighting-market-to-grow-at-cagr-of-13-till-2023/>

15. **Sharp and Universal Display Update and Extend OLED Material Evaluation Agreement** - Universal Display Corporation headquartered in Ewing, New Jersey USA, reported that the company and display maker Sharp Corporation, have entered into an updated and extended evaluation agreement. Under the terms of the agreement, Universal Display will supply its proprietary UniversalPHOLED phosphorescent OLED materials and technology to Sharp Corporation for use in the Sharp's OLED displays. <http://www.solidstatelighting.net/sharp-universal-display-update-extend-oled-material-evaluation-agreement/>

Global LED Energy Market Observer:

16. **Gallium Nitride Is the Material to Watch Out in 2018 & Beyond** - Products based on it will be in great demand for Internet of Things (IoT), 5G communications and Internet of Energy (IoE), including wireless powering of devices over several metres, says Nobel laureate Hiroshi Amano. The white LED, which uses the gallium nitride technology, has revolutionised display and energy efficiencies. In future it can help in developing smart and sustainable technologies. The invention of the efficient blue LED is just 20 years old, but it has already contributed to the creation of white light, he said. White LED lamps are constantly improving and getting more efficient. <http://bizled.co.in/>

17. **Green Light for Surgeons Cuts Fatigue** - A Danish hospital is experimenting with saturated colour in its operating theatre in a bid to reduce the fatigue of surgeons and nurses and improve visual comfort during critical medical procedures. The keyhole surgery room at the University Hospital in Aarhus features LED panels with both colour-tuning and central downlight consisting of an LED array. Green light is used during keyhole surgery to cut fatigue while cool white light with high colour rendering is used for open surgery. When patients first enter the space, the 'check-in' lighting scene is a soothing, warm light which creates a feeling of safety and sets a pleasant mood during patient arrival and awakening. All scenarios – which are selected using a simple touch panel. <http://luxreview.com/article/2018/01/green-light-for-surgeons-cuts-fatigue->

18. **Metals Firm Pioneers 'Lighting as Service' Contract** - Aluminium Gmbh, which supplies metal extrusions, is paying for the replacement of the ageing lighting at its factory complex outside Dortmund with a fixed monthly rate payable over six years. In all, some eight production halls have been fitted with modern LED luminaires. The cost of design, removal of the existing luminaires, installation and annual maintenance are also built into the fee. While this type of financing model is not uncommon in applications such as street lighting, it only currently gaining traction in the commercial, industrial and educational sectors. The concept was initially developed when LEDs were more expensive than currently and the significant energy savings would offset the capital cost of the luminaires. The service contract – with Austrian luminaire maker Zumtobel – guarantees the company an illuminance of between 200 and 400 lux, depending on the requirements of each specific area of the production site. <http://luxreview.com/>

19. **Global Revenue for Lighting as a Service Expected to Reach \$2.6 Billion by 2026** - Energy efficient decision makers within the commercial building industry struggle with the plethora of lighting product and controls available on the market. As a result of this struggle, the market is seeing a shift in how lighting and other building technologies are obtained and managed. These shifts and uncertainties will lead to the rise of lighting as a service (LaaS). Navigant Research broadly defines LaaS as the third-party management of a lighting system, including additional maintenance, financial, technical, or operational services. This Navigant Research report examines the LaaS market for commercial buildings, with a focus on financing, maintenance, and turnkey services. The study addresses market issues, including key drivers and barriers, related to LaaS solutions. Global market forecasts for LaaS revenue, segmented by service type, building type, and region, extend through 2026. The report also examines the key services related to LaaS, as well as the competitive landscape. <https://www.navigantresearch.com/research/lighting-as-a-service>

20. **LED Lighting Drivers Market to Grow Owing to Green Initiatives** - The global LED lighting driver market <https://www.millioninsights.com/industry-reports/led-lighting-driver-market> on the basis of driving method, is segmented into constant volume and current volume. LED lighting driver market is estimated to grow at a double-digit CAGR during the assessment period. The key driving factors responsible for the growth of LED lighting drivers market includes growth in demand of LED in lighting applications such as retail outlets, street lights, residential complexes and rapidly growing usage within the commercial applications. Additionally, residential & commercial application of LED lighting propels the market demand for LED drivers. However, the market hindering factors is lack of understanding the gap between cost and benefit by the user. <http://bizled.co.in/led-lighting-drivers-market-to-grow-owing-to-green-initiatives/>

21. **Ring Acquires Innovative LED Lighting Technology Company Mr. Beams** - Ring, a specialist in home security, announced it acquired Mr. Beams, an innovative LED lighting technology company, in order to integrate smart, energy-efficient lights into more of its security devices and release new, standalone outdoor security lights, called Ring Beams. A company on a mission to reduce neighborhood crime, Ring offers affordable security products that include bright, motion-sensing lights to ward off potential intruders. Like all Ring products, Mr. Beams lights are affordable, incredibly easy to install anywhere around a home, and provide proactive security in the areas where it is needed most. <http://www.ledinside.com/>

22. **Gooee Adds Koopman Interlight to Top Partnership Tier for IoT Lighting** - Gooee has added a third luminaire maker to its top tier of partners, naming Holland's Koopman Interlight as the latest company in the "platinum innovation" program that provides early access to Gooee's Internet of Things (IoT) software and hardware. Interlight joins Aurora Lighting and Feilo Sylvania in the platinum group, which Gooee launched two months ago at the LuxLive 2017 exhibition and conference in London. Gooee makes chipsets that connect luminaires to the Internet and that include sensors to detect room activity. It also provides cloud software connections and data analytics that help users make sense of data collected by the luminaires. <http://www.ledsmagazine.com/>

23. **Li-Fi Has No Impact on Quality of LED Lighting, Says Study** - A team of researchers at the University of Edinburgh, UK, did a yearlong research to find out if Li-Fi could be detrimental to the energy-efficiency of LEDs used as lighting sources. The study shows that when digital data is transmitted through LEDs at the same time when it is being used to generate light, does not make the light change its colour, or become dimmer. nor does it make the LED consume more energy. Preserving the quality of lighting is a key consideration as it can have a major effect on the physical and mental wellbeing of people at homes and at workplaces. <http://bizled.co.in/li-fi-has-no-impact-on-quality-of-led-lighting-says-study/>

24. **Jacob Tarn Appointed CEO of LEDVANCE** - The Supervisory Board of LEDVANCE GmbH has appointed Jacob C. Tarn, Ph.D., a well-known LED Lighting industry veteran, as the new Chairman of the Management Board and new CEO of LEDVANCE. Assuming his position on February 1, 2018, Dr. Tarn will focus on accelerating the company's transformation from a traditional lamps manufacturer to an industry-leading, innovation-driven full LED lighting company. Dr. Tarn will manage the company out of its global headquarters in Garching, Germany. Tim Yun Chen is Chairman of the Supervisory Board at LEDVANCE. Since 2017, LEDVANCE has been owned by a consortium led by the strategic investor IDG Capital and including the leading Chinese lighting company MLS and financial investor Yiwu. <http://edisonreport.com/jacob-tarn-appointed-ceo-ledvance/>

National Energy Market Observer:

25. **T8 Rules to Take Effect Craig DiLouie** - In 2015, the U.S. Department of Energy (DOE) issued new energy standards for general-service fluorescent lamps. These standards identify categories of lamps and impose minimum efficacies, expressed in lumens/W. Primarily impacting 4-ft. 32W T8 lamps and some reduced-wattage T8 lamps, the new standards are now set to take effect January 26, 2018. <http://www.lightnowblog.com/2018/01/t8-rules-to-take-effect/>

26. **Ted Konnerth on Lighting Disintermediation** - A \$2 word for cutting out the middle man. We've talked a lot about the changing channels throughout the electrical industry. Changes are not particularly new to the industry. In those way back years, electrical distributors sold appliances, Grainger created the catalog model for industrial supplies, Anixter created a major disintermediation by specializing in wire as a stand-alone category, etc. In more recent days, 'structured wiring' moved from an electrical distributor product line to data/com distribution. IOU's moved away from distributor support decades ago and most buy directly from the manufacturers. <http://www.lightnowblog.com/2018/01/ted-konnerth-on-lighting-disintermediation/>

27. **GE Reignites Break-Up Talk After \$11 Billion Insurance, Tax Hit** - General Electric Co indicated it is looking closely at breaking itself up on Tuesday as the conglomerate announced more than \$11 billion in charges from its long-term care insurance portfolio and new U.S. tax laws. Chief Executive John Flannery has previously raised the idea of selling pieces of the largest U.S. industrial company, but went slightly further on Tuesday, saying GE is "looking aggressively" at a spin-off or other ways to maximize the value of GE's power, aviation and healthcare units. Flannery already is eliminating thousands of jobs and cutting \$3.5 billion in costs as he tries to solve problems he inherited when he became CEO on Aug. 1, including falling sales of power turbines, a build-up of inventory and declining profit margins in some businesses. His turnaround effort is still likely to take a year or more to play out. 1/16 Reuters

28. **Philips Taps Ex-Cisco IoT Exec as Americas Boss** - With the lighting industry's future ever more dependent on connecting smart luminaires, bulbs, and street poles to the Internet, Philips Lighting is replacing the head of its Americas division with an Internet industry veteran who has a long background at networking stalwart Cisco Systems. The company named Chris White to take over the Americas from Amy Huntington, who has been CEO of the division which includes North America and Latin America. US boss Roger Karner will report to White. It is not clear when the change takes place, and whether White's title will be CEO. Philips is scheduled to announce fourth-quarter and year-end financial results on Feb. 2, and is expected to provide more details then. The move could be a precursor to other smart lighting maneuvers by Philips, and comes as rival GE puts its smart lighting and energy unit Current, powered by GE on the block. <http://www.ledsmagazine.com>

29. **2018 Construction Outlook Overall** - Things are positive with no surprises. We're at full employment. Inflation is in check. The stock market is confident. Personal and disposable income is up, as is personal savings. Dodge Data & Analytics predicts total U.S. construction starts in 2018 will climb 3 percent to \$765 billion. That breaks down to a 4 percent gain in residential and 2 percent in nonresidential. Nonbuilding will gain 1 percent after a rough couple of years. <https://www.ecmag.com/section/your-business/2018-construction-outlook>

Monthly Feature:

10 Challenges Facing Exterior Lighting Engineers in 2018

<http://luxreview.com/article/2018/01/10-issues-facing-exterior-lighting-engineers-in-2018>

Street and exterior lighting was one of the first sectors to widely switch to LEDs. And while the subsequent energy savings have widely appreciated, that move has thrown up some fresh challenges that are set to keep engineers on their toes this year. Here we run through the top concerns facing the sector in 2018.

1. Glare - The issue that won't go away. It's becoming widely acknowledged that too many fixtures with poor optical control were installed in the first wave of LEDs. Cool colour temperatures – 5000K in some places – have also proved deeply unpopular with residents around the world.
2. The end of PFIs - The era of the huge Private Finance Initiative LED roll-outs is coming to an end. But as the dust settles, niggling doubts remain in some local authority areas about whether the projects represented value for money and whether light quality has been sacrificed on the altar of politics.
3. Electric vehicle charging - The average municipality think its street lighting network is the perfect solution to the provision of charging points for the coming wave of electrical cars. It isn't. Technical issues abound – not least the high-current draw – and street lighting engineers won't be popular for pointing them out.
4. Connectivity - City Halls are obsessed with free Wi-Fi connectivity and vie with rivals to boast of fast download speeds. Now brick-sized 5G cells are in the pipeline and here, the lighting columns really are the perfect hosts. Up to 500,000 of these mini masts are set to be installed in London alone.
5. The Great Switch Off - The deeply unpopular switching off of street lights by cash-strapped local authorities is still causing ripples and it continues to be blamed for accidents by the police and coroners. Dimming is the solution that lighting controls manufacturers propose, but getting funding is a headache.
6. Blue light hazard - The strong blue component of many LED street lights is raising fears that residents' wellbeing is being compromised. The influential American Medical Association weighed in last June, warning that the colour temperature of LEDs shouldn't exceed 3000K. Cue a heated debate that continues to rumble on.
7. Smart Cities - Mayors love the idea of their metropolis becoming a 'smart city' and while the phrase sounds cool, no-one knows quite what it means, least of all the people who are supposed to implement it. But everyone does agree that lighting is involved. At the very least, expect some sensors in your street lights.
8. Light pollution - Scary pictures from Nasa tell us what everyone has long suspected: that the arrival of low cost LED luminaires from China and elsewhere hasn't cut light pollution as was originally – and naively – hoped. Instead, it has made it worse. Expect legislation to begin to target this problem in 2018.
9. The lack of strategy - It's hard to plan for the next 30 years of urban illumination, which is why street and exterior lighting engineers like a strategy. You know, a clue where we might be heading. Famously, the London Plan mentioned lighting a mere six times in its 526 pages.
10. Future proofing - Everyone agrees we need to do it, especially when a new wave of luminaires will last generations. So how do you specify a fitting that, in the future, may have to provide a range of ancillary services such as CCTV, pollution sensors, traffic detectors and Wi-Fi without blowing the budget?