ENERGY OBSERVER
A MONTHLY NEWSLETTER FROM AMERLUX®

JAN 2022

https://www.youtube-nocookie.com/embed/Rtajxo8d7js?rel=0&controls=0&showinfo=0

UV-Free, White Antimicrobial Lighting for Offices and Commercial Buildings Bring a New Kind of Clean to the Architectural and Design World

What is ActiveClean™?

What if you could provide an extra layer of defense and reduce your staff's exposure to viruses, bacteria, fungi, yeast and other contaminations—all day, every day?

You can—with ActiveCLEAN™.

ActiveClean™ combines Amerlux's award-winning, commercial-grade LED engineering with the UV-free, market-leading antimicrobial technologies of Vyv to continuously light—and better protect—your business, staff and customers under the most beautiful, comfortable, white-light illumination.

- Continuously Kills1 Viruses
- Continuously Kills1 Bacteria
- Approved for Unlimited Use Around People & Pets
- UV-Free
- Crisp, Comfortable White Lighting

Amerlux - Antimicrobial Commercial Lighting | UV Commerical Lighting

National LED Energy Market Observer:

1. **On Average, How Much Does an Electrician Make?** - From state to state, electrician salary and hourly wages vary dramatically. Fortunately, there's readily available data that can help you pinpoint what electrician salaries you should offer as per your business location. In the United States, the current average salary of an electrician is $55,579 a year. Outside of the salary average, the average hourly pay amount for an electrician in the United States is $25.16 an hour. From Master Electrician positions to beginner apprenticeships, we've compiled a list of the most recent electrician salaries by state. CHECK IT OUT: Electrician Salaries By State | FieldPulse

2. **DOE Policy Expected to Remove General Service Lamp Exemptions** - The Natural Resources Defense Council has announced that the US Department of Energy's latest regulatory update proposes a 45-lm/W efficacy standard for all general service lamps, and closes a 'loophole' on inefficient incandescent products. In a blog post today, energy-efficiency advocate Joe Vukovich wrote that a newly proposed DOE rule "will require all so-called 'general service lamps' or GSLs — think general, everyday light bulbs — to meet an efficiency threshold of 45 lumens per watt (LPW)," following a rule proposed in November that would remove exemptions from the GSL definition "and [enlarge] the scope of coverage of the standard." You can read the full blog on the NRDC website, and view a copy of the proposed action from the DOE as a PDF from the agency's website. DOE policy expected to remove general service lamp exemptions (UPDATED) | LEDs Magazine.

3. **TRAINING: Lightfair Connect Set to Launch December 8** - LightFair Connect, the virtual, on-demand library of conference sessions from LightFair 2021, will launch December 8 offering 27 sessions – with 32 available CEU credits – to continue the return of industry-wide education across lighting categories leading up to LightFair 2022. The next LightFair event is June 19 – 23 at the Las Vegas Convention Center. The 27 LightFair Connect sessions recorded during the 2021 LightFair Conference are comprised of a variety of 60-minute and 90-minute courses across the six tracks – Application & Evidence-Based Design, Art + Inspiration, Design Tools + Techniques, Experiencing Light, Professional Development + Practice and Technology. ALightFair Connect registration and CEU accreditation information will be available on December 8 at www.LightFair.com/LightFair-Connect

4. **PNNL Releases Three New Connected Lighting Reports** - The Next Generation Lighting Systems (NGLS) program recently released three reports related to ongoing investigations in the Living Labs into the installation, configuration, and use of systems currently available on the market.
• **An Observational Understanding of Connected Lighting Systems** provides a look at the NGLS research method, its evaluations and data synthesis, and conclusions and recommendations to date.
• **The Impact of Wall Control Performance on Connected Lighting Systems** details the installation and configuration challenges of wall controls, their performance in day-to-day use, and conclusions about the state of the technology.
• **The Influence of Communication on the Complexity of Connected Lighting Systems** looks at manufacturer information available to installers, its effectiveness during system installation, and the further work required to get these systems up and running and configured for daily use in Parsons classrooms. Click here to download them. PNNL Releases Three New Connected Lighting Reports (lightingcontrolsassociation.org)

5. **2022 ArchLIGHT Summit Opens Exhibitor Registration, Call for Speakers** - ArchLIGHT Summit, the new lighting trade event and educational platform for the architectural, specification and design communities, has opened exhibitor registration and a call for speakers. The next event, taking place September 15-16, 2022, at the Dallas Market Center, will welcome lighting designers, architects, interior designers, specifiers and students to review new products, network, and attend a wide range of seminars. For exhibitors, the next edition of the show will present the unique opportunity to reach the architectural, specification and design communities seeking commercial lighting brands that represent the leading edge of innovation and technology. Complete information available at: https://archlightsummit.com/exhibit/ Speakers are also invited to submit proposals consistent with the show's mission to be boldly different and actively inclusive. The most sought-after sessions will be those that break the mold of traditional presentations and panels, in favor of more experiential learning and honest discussions. To learn more and to submit a proposal https://archlightsummit.com/speakers/. The deadline for applying to speak is January 15, 2022.

6. **Rethinking the Commercial Workspace: How Lighting Facilitates the Return to the Office by Matt Ochs, Lutron Electronics** - After months of remote work, employees are returning to the office. How can you, as a building owner or property manager make that return most appealing? Smart lighting control systems can contribute to a more comfortable and engaging environment that meets the changing needs of both tenants and their employees, today and over time:

- **Lighting Control to Enhance the Hybrid Work Model**
- **Install Resilient Lighting Systems that Support Today's Needs and Adapt to Tomorrow's**
- **Lighting for Wellbeing: Optimize the User Experience**
- **Lighting Can Elevate the Indoor Environment and Add Value to Your Space**

Rethinking the Commercial Workspace: How Lighting Facilitates the Return to the Office | Buildings

7. **Securing a Networked Lighting System by Jared Morello** - When planning a smart lighting system, here are tips to maximize the benefits and address potential cyber security threats. We live in a world of connected, intelligent devices referred to as the Internet of Things (IoT), and each year new products are brought online to solve modern-day challenges. Connected devices communicate to share information with other devices and systems within a network and are often implemented into the environments of companies in diverse sectors such as manufacturing, healthcare, education, and commercial offices. When equipped and installed correctly with a building's large-scale automation system, IoT devices and systems help to warrant safe and secure facilities for occupants while reducing operational expenses (OPEX) by optimizing and automating many services, including lighting and HVAC controls. Securing A Networked Lighting System (facilityexecutive.com)

8. **Managers Turn to UV Lighting to Combat COVID-19 by Maura Keller** - Ultraviolet light gets backing from CDC, ASHRAE as effective for reducing infections. Interest has peaked during the past year among maintenance and engineering managers about how ultraviolet light (UV) technology can be used more readily as part of an overall, more robust disinfection program in institutional and commercial facilities. As the COVID-19 pandemic continues, managers continue searching for more methods to keep common areas such as lobbies and waiting areas, offices, cafeterias, hallways, restrooms, and other high-traffic sections, safer for workers, patients, and visitors, says Jeannine Wang of Acuity Brands Lighting. Managers Turn to UV Lighting to Combat COVID-19 - Facilities Management Insights (facilitiesnet.com)

9. **BriteSwitch: All About EV Charger(EVSE) Rebates** - Electric vehicle (EV) sales are projected to grow dramatically, with millions more cars coming to the roads in the next few years. But where will these cars charge up? At this moment, the US has roughly 168,000 gas stations but only 44,417 publicly available EV charging stations. That means the infrastructure has a long way to go to catch up. **As contractors and distributors start to focus on opportunities in the EV charging market, rebates will likely be a key to their success.** Many organizations across the country are providing rebates, incentives, and tax credits for installing EV chargers. While many in the industry may be familiar with rebates for equipment like lighting or HVAC that have been around for years, EV charger rebates can work a little differently. Learn more about EV charger (EVSE) rebates and how they can help you increase your business. All About EV Charger (EVSE) Rebates (briteswitch.com)

10. **VIDEO: Bridgelux Research Study Reveals Top Lighting Specifiers' Preference for Thrive Nature Light** - Bridgelux (www.bridgelux.com) announces the results of a study the firm commissioned for its innovative full spectrum product family, Thrive. The goal of the study was to ascertain whether top designers would recognize a difference between Thrive and 90 CRI products and find out which light source looked more natural based on their expert opinion. The study utilized a complement of Thrive and 90+ CRI LEDs at three popular color temperatures: 2700K, 3000K and 4000K. Thrive was preferred 88% of the time compared to 8% for 90 CRI and 4% undecided. A one-minute video showing how designers embraced the natural spectrum of Thrive can be viewed here: https://www.youtube.com/watch?v=KLy6abXZMzc

11. **Can Smart Lights Help with Seasonal Affective Disorder? by Simon Sage** - Seasonal affective disorder is more than just being bummed that it's getting dark early and you can't go outside. This kind of depression significantly affects your ability to sleep, concentrate, maintain energy levels, and regulate appetite. These symptoms need to arise in at least two consecutive years to establish the trend. It's speculated that sunlight and vitamin D help us maintain regular serotonin and melatonin levels. When we lose that, our brain chemistry gets knocked out of whack. Color temperature plays a role in seasonal affective disorder light therapy, but this is the easiest challenge for smart bulbs to tackle. In order to mimic daylight temperature, light needs to be in the 5000K to 6000K range, and adjustable white smart bulbs are routinely able to go from 2200K to 6500K. Studies have shown that visible narrow-band blue light can confer benefits similar to traditional SAD lightboxes. That kind of light is well within the abilities of smart lights. Specialized lighting has long been held as an antidote for this seasonal affective disorder, but can everyday smart lights rise to the task? Yes.... Can Smart Lights Help Deal With Seasonal Affective Disorder? | Digital Trends

12. **NEMA: New Standard Describes Requirements for Network Lighting Control Devices for Outdoor Lighting** - This is a new Standard that describes methods and requirements for the measurement of energy consumption and the reporting of the consumption for a network lighting control (NLC) device in an outdoor lighting application. This Standard is written for use by roadway and area lighting component manufacturers, municipal and regional governments specifying outdoor lighting solutions, street lighting offices/bureaus, and utility companies. ANSI C136.50-2021 is available on the NEMA website for $74.

13. **Automotive LED Market Value Forecast to Reach US$3.51 Billion in 2021** - TrendForce's Market Analysis research indicates, the global penetration rate of LED headlights exceeds 60% in 2021 with penetration in new energy vehicles (NEV) exceeding 90%, according to TrendForce's latest investigations. Influenced by growth momentum from increasing automotive market shipments and the rising penetration rate of LED lighting, global automotive LED market value is estimated to be valued at US$3.51 billion in 2021, a 31.8% YoY growth rate. This demonstrates that LED headlights and automotive display LED products remain the main driving force for growth in the automotive LED market. In terms of automotive lighting, ams-OSRAM has leveraged stable product quality, excellent lighting efficiency, and cost performance to make it the supplier of choice for the world's high-end cars and new energy vehicles. https://www.ledinside.com/node/32464

Figure 1: Automotive LED Manufacturer Revenue Ranking, 2020-2021
(Unit: Million USD)

Ranking	Company	Revenue		Market Share	
		2020	2021 (E)	2020	2021 (E)
1	ams-OSRAM	926	1,304	34.8%	37.2%
2	Nichia	647	809	24.3%	23.1%
3	Lumileds	315	401	11.8%	11.4%
4	Stanley	212	231	8.0%	6.6%
5	Dominant	136	199	5.1%	5.7%
6	Seoul Semiconductor	130	155	4.9%	4.4%
7	Samsung LED	71	121	2.7%	3.4%
8	Everlight	67	69	2.5%	2.0%
9	CREE LED	38	40	1.4%	1.1%
10	Lextar	8	35	0.3%	1.0%
	Other	110	141	4.1%	4.0%
	Total	2,660	3,506	100%	100%

Source: TrendForce, Dec. 2021

14. **Special Interest Groups Call on State of Vermont to Ban Sales of Mercury-Containing Fluorescent Lamps** - Several environmental and consumer policy advocacy groups have collaborated to petition for new Vermont legislation that would effectively ban the sale of all mercury-containing fluorescent lighting products in the state. Advocates say cost and performance of LED lamps mandate a reboot of existing law on phasing out fluorescents, while NEMA asserts the criteria only apply to CFLs — not the pervasive linear lamp. NEMA parties concluded that "the only general purpose, mercury-added lighting product for which an 'alternative, non-mercury energy efficient lamp is available that provides the same or better overall performance at a cost equal to or better' than the mercury-added product is screw-based compact fluorescent lamps [CFLs]. Non-mercury alternatives for all other general purpose (as well as specialty) mercury-added lamps are either unavailable, cost substantially more per unit, or present performance challenges." Special interest groups call on State of Vermont to ban sales of mercury-containing fluorescent lamps | LEDs Magazine

15. **How Smart Lighting Technology Creates A Brighter Future For Smart Buildings** - Toggled's DANIEL HOLLENKAMP discusses how smart lighting controls represent a vital puzzle piece in designing and developing smart buildings and will become the IoT backbone of the built environment. Tomorrow's cities will be marked by countless smart buildings that seamlessly interact with the people, systems, and external elements that surround them. As construction executives, city planners, and building managers consider this future, there's one factor that'll ensure success — designing and implementing smart lighting controls. Recent technological advancements, paired with incentives that make lighting controls more affordable and more attractive, have made smart lighting the future of smart building and city development. Smart lighting control technology will revolutionize building design and infrastructure, and it'll create a brighter, greener, and more cost-effective path to intelligence-driven buildings and cities across the globe. How smart lighting technology creates a brighter future for smart buildings | LEDs Magazine

16. **Registration Opens for Virtual DOE-IES Solid-State Lighting Workshop** - Join the U.S. Department of Energy and the Illuminating Engineering Society at the 19th annual Solid-State Lighting Workshop, January 31–February 3, 2022, where top lighting scientists and industry thought leaders will gather to share progress, challenges, ideas, and solutions to shape the future of lighting. The DOE Workshop will once again be cosponsored by the IES, leveraging the long-term partnership between DOE and IES to advance the quality and efficiency of lighting through engineering, science, design, and partnerships. **The 2022 workshop will be virtual, and free to attend.** 2022 Solid-State Lighting Workshop | Department of Energy

17. **CASE STUDY: 30-Site Data Center Upgrades Lighting Using Espen Technology** - One of the largest data center operators in North America has begun a very large lighting retrofit of its 30-site data center, with locations across the Northeast United States. The data center selected retrofit products from Espen Technology, a leading manufacturer of indoor, linear, LED lighting solutions. Products utilized in the retrofit include:

- Over 6,000 units of VersaLinear LED linear module retrofit kits,
- 2,500 units of emergency inverters (a combination of 8W and 15W models), and
- Almost 4,000 units of VersaKit LED 2x2 troffer retrofit kits.

Espen Technology plans to support the future 2022 and 2023 nationwide retrofits with specification creation and technical consultation. Espen Technology Inc.

18. **RESEARCH: Global LED Panel Light Market at $18.6 Billion** - Research and Markets' latest LED Panel Light Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2021 report is available for purchase. The report asks key questions such as, "What has been the impact of COVID-19 on the global LED lighting industry?" and provides in-depth insights, broken up by applications and regions, to the global market until 2026. Highlights from the report include: the global LED panel light market reached a value of U.S.$ 18.6 billion in 2020; the market is expected to exhibit strong growth in the next five years; China exhibits dominance in the market; advanced features such as, dimmability, remote plug and play drivers, building control compatibility, color variants and more are contributing factors in market growth; as LEDs are considered green alternatives, governments of various nations are now encouraging the use of LEDs. The companies mentioned in the report are Nichia, Osram, Samsung Electronics, LG Inntotek and Everlight Electronics. To purchase the report: Research and Markets - Market Research Reports - Welcome

19. **CASE STUDY: Linear Light Creates a New Angle by PureEdge Lighting** - Lighting played a big part in communicating the client's vision. TruLine was brilliantly used to convey connectivity by creating lines of light on the ceiling and walls. This office renovation required many layers of design expertise. Architectural lighting was a big component to the finished space, one that designer Michael Pattinson, President and Principal of BSA Architects at the time, took a deeper approach to in visually communicating what Ripple was all about: connections Their new office in San Fransisco was a renovation project within an old historic building. The design direction from the client was to create a space that conveys their brand, the service they provide, and company growth. Lines and dots that connected together were used to graphically create the effect of interconnectivity between banks and financial institutions, portraying how financial transactions could be transmitted safely and directly between them. Lighting played a big part in communicating their vision. Ripple_Office_Case_Study_091721.pdf (pureedgelighting.com)

20. **RESEARCH: Smart Lighting & Control System Market to Reach $19.04B** - The Global Smart Lighting & Control System Market size was estimated at USD 13.95 billion in 2020, is expected to reach USD 14.64 billion in 2021, and is projected to grow at a CAGR of 5.31% reaching USD 19.04 billion by 2026. The report provides insights on the following pointers:

1. Market Penetration: Provides comprehensive information on the market offered by the key players
2. Market Development: Provides in-depth information about lucrative emerging markets and analyze penetration across mature segments of the markets
3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments
4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players
5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

Research and Markets - Market Research Reports - Welcome

21. **Lighting Solution Development Enters Agreement to Acquire LightNOW** - Lighting Solution Development is a consulting firm providing a broad range of business development, consulting, and recruiting services to help lighting businesses grow and become more profitable. It is headed by David Shiller, a lighting industry veteran, insider, and expert. Craig DeLouie will remain a contributor to LightNOW, supporting the new editorial team headed by Suelynn Shiller, COO at Lighting Solution Development. Starting in 2022, the editorial and advertising contact for LightNOW will be Suelynn Shiller at **suelynn@lightingosld.com**. http://www.lightnowblog.com

22. **Registration Opens for 2022 LEDucation Trade Show and Conference** - Registration for LEDucation 2022 Trade Show and Conference, being held March 15–16, 2022 at the New York Hilton Midtown, is now open. A premier trade show and conference for the New York lighting industry, LEDucation 2022 has more than 350 companies confirmed to exhibit and a slate of accredited educational programs. The 2022 Conference will open with six virtual sessions on Monday, March 14. In-person sessions will take place on-site Tuesday and Wednesday, March 15–16. In compliance with New York City COVID-19 ordinance, expect that both masks and proof of vaccination will be required. Registration – LEDucation

23. **Lighting The Way for Contractor Profits** - This is a concept that you may want to kick around at your next strategic planning session. There's a ton of chatter right now about how contractors can capitalize on lighting control from lighting manufacturers marketing products that are easy to commission, monitor and upgrade. LEDs still account for a comparatively small fraction of the installed lighting base in commercial and industrial facilities, and the retrofit opportunities for contractors who can install and program these controls will be huge. EW's Picks for 2022's Top Trends and Sales Opportunities | Electrical Wholesaling (ewweb.com)

24. **Consumer Prices Up 5.7% Over Past Year, Fastest in 39 Years** - The November increase, reported Thursday by the Commerce Department, followed a 5.1% rise for the 12 months ending in October, continuing a string of annual price gains that have run well above the 2% inflation target set by the Federal Reserve. Consumer Prices Up 5.7% Over Past Year, Fastest in 39 Years – tEDmag

25. **DLC Releases LUNA Technical Requirements Version 1** - The DesignLights Consortium (DLC) released LUNA Version 1.0 Technical Requirements for outdoor LED luminaires that not only save energy and meet the DLC's Solid-State Lighting (SSL) Technical Requirements, but also include attributes to limit sky glow and light trespass and ultimately mitigate light pollution. LUNA products will appear as a subset of luminaires listed on the SSL Qualified Products List (QPL) and will be eligible for efficiency rebates and incentives designed for SSL V5.1 products. LUNA Technical Requirements V1.0 - DesignLights

26. **Top LEDs Magazine Articles Continue to Shape Germicidal UV Awareness** - Having looked back at our year, we've collected the top four most-popular articles we published on GUV this year below. From industry commentary on transparency of manufacturers' UV-C LED data to a primer on UV sources and dosage capabilities, readers have still flocked to content that delivers guidance and perspective to set proper expectations both in the market and on the user end.
Top articles continue to shape germicidal UV awareness | LEDs Magazine

1. Disinfection demands a complete UV-C LED picture
2. Dose factors heavily into ultraviolet disinfection system design
3. Educational administrators grapple with unknowns in using UV to fight COVID-19
4. Portable UV-C canisters provide take-it-with-you coronavirus zapping

27. **CES 2022: Microsoft, Google, Intel are Latest to Drop Out Over COVID Surge** - The big consumer electronics show in Las Vegas, set for early January, will still take place though dozens of exhibitors have canceled in-person appearances. Microsoft joins a growing list of companies switching to virtual-only appearances that already includes T-Mobile, Google, Intel, Lenovo, TikTok and Meta. CES 2022 is scheduled to take place virtually and in person from Jan. 5 to 8, with press day on Jan. 4. The event can go on due to vaccination and masking requirements, the availability of COVID tests for attendees, social distancing measures and lower attendance. https://www.cnet.com/

28. **Intelligence Made Visible: The Art and Science of Lighting Design by Susan Bloom** - As the market increasingly embraces the fact that better light quality can deliver greater employee satisfaction and higher sales, electrical contractors have become more involved in the process of lighting design for their customers. In addition to creating well-lit spaces that look spectacular and are more productive and inviting for their clients, skills in the art and science of lighting design are also helping contractors differentiate themselves in a highly competitive market. Following, several lighting industry experts discuss electrical contractors' growing involvement in lighting design while sharing some of their top tips to help contractors achieve success in that arena. Intelligence Made Visible: The art and science of lighting design | Electrical Contractor Magazine (ecmag.com)

29. **DOE Proposes to Advance Light Bulb Energy Efficiency** - The Department of Energy has released a pre-publication version of a proposed rule that would greatly advance the energy efficiency of the nation's light bulbs. The rule, along with another rule proposed by DOE in August, would effectively complete the transition to LED lighting from older, inefficient incandescent technology, delivering huge savings to consumers and avoiding millions of metric tons of carbon emissions. This newly announced rule will require all so-called "general service lamps" or "GSLs"—think general, everyday light bulbs—to meet an efficiency threshold of 45 lumens per watt (LPW). Energy Conservation Program: Backstop Requirement for General Service Lamps

Global LED Energy Market Observer:

30. **Singapore Funds Signify for Online Horticultural Center** - As part of its initiative to reduce reliance on imported food, the government of Singapore is subsidizing Signify to run an online horticultural knowledge center intended to help growers build vertical farms and greenhouses. The Signify Centre of Excellence for Horticulture will offer insights not only on lighting, but also on other aspects of plant science as well as on climate control and engineering. It aims to help growers in Singapore and elsewhere in Asia to improve crop yields and quality, including taste and nutrition. Singapore, an island nation, imports the majority of its food. It has established a plan that it calls "30 by 30" in which it aims to produce 30% of its nutritional needs, in a sustainable manner, by 2030. Singapore funds Signify for online horticultural center | LEDs Magazine

31. **BOE Develops VR, AR and MR Technologies with Focus on the Metaverse** - The concept of metaverse signifies a revolution in market economies. As the term goes viral, TrendForce estimates that social media, gaming, content creation, virtual economy and industrial applications will be the focus of development in the coming years. In addition to enhanced semiconductor performance and expanded coverage of low-latency high-speed networks, AR/VR device penetration will be a key factor for metaverse development. BOE. the Chinese tech giant emphasized that smart VR, AR, and MR (mixed reality) end products are crucial to the creation of metaverse, while display technologies with constant advances serve as a foundation that connects such products in reality to the virtual world. Currently, BOE provides representative display solutions for smart VR/AR/MR devices, including high PPI monitors, Fast LCDs and Si-based OLED displays with ultra-high resolution and contrast. Meanwhile, BOE is developing Mini LED technologies. https://www.ledinside.com/node/32449

32. **Global LiFi Leader pureLiFi Has Secured Another Multi-Million-Dollar Deal to Supply the US Army Europe** - Technologies such as WiFi, 4G and 5G use radio frequencies to transmit data, which produce large areas of radio frequency emissions that are easy to detect, intercept, and can cause overcrowding resulting in slow speeds and unreliable communications due to increased RF congestion. LiFi uses light rather than radio frequencies resulting in wireless communications that is more reliable, significantly more secure, and simpler to deploy. The US Army Europe is expanding their use of this cutting-edge technology as LiFi has proven to be reliable for the most critical communications. LiFi not only enhances the US Army's wireless connectivity toolset, but has demonstrated in action, that LiFi solves real problems faced by defense and national security. First-ever large-scale deployment of LiFi - pureLiFi

33. **Signify to Acquire Fluence to Strengthen Agriculture Lighting Growth Platform** - Signify announced that it has entered into a definitive agreement with ams OSRAM to acquire Austin, Texas-based Fluence for USD 272 million (EUR 242 million) on a cash and debt-free basis. This acquisition will strengthen our global Agriculture lighting growth platform and extend our position in the attractive North American horticultural lighting market. The acquisition is fully in line with our strategy to expand in attractive growth segments and our commitment to improving food availability by providing growers with horticultural lighting that helps them to reduce resource consumption and increase yields. We expect the global market for agricultural lighting to grow by more than 20% per year to EUR 1.6 billion in 2024. The acquisition will add Fluence's complementary horticultural lighting technology to our existing knowledge and expertise. Signify to acquire Fluence to strengthen Agriculture lighting growth platform - LEDinside

34. **$3 Million Company Lands $45 Million Lighting Order** - Sunna Design, the parent company to Sol – one of the more recognizable brands in the North American solar lighting market – has announced that it has secured a $45 million contract to provide lighting for a West African country. The large contract involves supplying and installing 50,000 connected solar street lamps in several thousand non-electrified rural villages in the country of Togo over a 24 month period. Sunna Design will also provide maintenance and related services for 12 years, under a Public-Private Partnership. Togo has a population of approximately 8 million people and a land area similar to the size of West Virginia. Sunna Design acquired Sol in March 2020 and the Sol brand now lists Miami as its home. According to the private company's filings with the French government, Sunna Design's 2020 net sales (Chiffre d'affaires net) were approximately $3.1 million (2.75 million Euros) with about 90% of sales occurring outside of France. The company's net sales were reported as approximately $7 million in 2019. $3 Million Company Lands $45 Million Lighting Order (inside.lighting)

35. **Epileds Expanding Capacity for IR LED Chips** - LED epitaxial wafer and chip maker Epileds Technologies is investing US$10.8 million to expand production capacity for infrared (IR) LED chips used in sensing by 20%, with the additional capacity starting to come into operation by the end of 2021, according to the company. IR LED chips are expected to be the main source of business growth in 2022, IR LED-based sensing accounted for 43% of the January-September revenues, ultraviolet LED-based disinfection and curing 19%, automotive lighting 18%, backlighting 11%, and others 8%. Epileds expanding capacity for IR LED chips (digitimes.com)

Monthly Feature:

U.S. Distributors on Pace for Record $7-trillion Year in 2021 by Tom Gale, MDM - The U.S. wholesale trade sector is on pace to finish above $7 trillion in 2021 for the first time, based on MDM forecasts and data through the third quarter. That represents a 21% increase above 2020 revenues of $5.8 trillion, which were down 4.3% from the year before. The record boost represents actual revenues, not adjusted for price inflation, and attributable to a combination of the sharp-V recovery year-to-year from the 2020 pandemic recession and not unrelated price inflation that has strengthened in the fourth quarter.

Each of the 19 major sectors that define the U.S. wholesale distribution sector are on pace to experience positive 2021 revenue growth rates from the high single-digits to 74% for oil and gas products distributors, reflecting the pricing rebound from 2020 to 2021. MDM forecasts overall U.S. wholesale distribution revenues to grow more than 8% in 2022.

Select U.S. Wholesale Distribution Sector Revenue Expectations	2021 Forecast	2022 Forecast
Electrical and Electronics Wholesalers	8.0%	4.9%
Industrial Distributors	15.5%	14.8%
Hardware, Plumbing, and Heating Equipment/Supplies Wholesalers	12.4%	1.5%
Building Material and Construction Wholesale Distributors	31.4%	3.2%
Total	67.3%	24.4%

Across the 19 major sectors that define the wholesale distribution sector, oil and gas products distributors are forecast to record the highest year-to-year increase in 2021 as they come back 73% ahead of 2020 revenues, which were down 29% from the year before as the pandemic lockdown kept people at home. Consumer products and computer hardware/software distributors both are expected to have the lowest year-to-year increase in revenues of 7.6%.

Beer, wine and liquor distributors are also among the low-growth sectors in distribution in 2021, as MDM forecasts that sector to finish up 7.9% over 2020 revenues. But that reflects the fact that this sector was the highest growth sector in 2020, with 7.5% growth over 2019 as people increased their alcohol purchases.