

EnergyWatch



November 2017

<http://attardimarketing.com/>
<http://energywatchnews.com/>

We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction. Bill Gates

Something to Think About... The King is Dead, Long Live the King -

Also published in Electrical Wholesaling magazine:

<http://ewweb.com/commentary/speaking-out-12-tips-reinventing-your-lighting-business>

“Some distributors are already out of business, they just don't know it yet”, emphatically warned my good friend Chris Brown when he first penned Illumigeddon. <http://energywatchnews.com/some-distributors-are-already-out-of-business-they-just-dont-know-it-yet-by-chris-brown-ceo-wiedenbach-brown-illumigeddon/> May I go one step further and even more emphatically state, “every single traditional lighting business will go out of business.....it's just a matter of time and it will happen faster than most would like.” Do you really want to be the last man standing? Remember the movie “The Last of the Mohicans”? Well, that did not end well...

To my friends and cohorts that run successful businesses and are in the market everyday fighting the good fight. You are the doers. You compete in a very competitive marketplace and have my deepest respect. My goal is not to tell you how to run your businesses but rather to contribute to your strategic thinking going forward. I offer my thinking to provide you with some encouraging guidelines in order to disrupt your existing business model for success in disruptive times...

1. Milk your traditional lighting business as long as you can but know that the end is near. <http://energywatchnews.com/what-do-we-do-with-a-problem-child-by-bill-attardi/>
2. Create a new disruptive lighting business model or acquire one....a separate business. If lighting is not about illumination anymore, then it must be about something else, so call it something else..... (GE calls theirs Current, Powered by GE, headquartered in Boston..... maybe they know something else).
3. Consider a disruptive business model that can satisfy the basic turn-key needs of your customers..... they want smart buildings:
 - Project management from the audit to ongoing monitoring of the result
 - Supply of the most advanced electronic technologies, not just lighting
 - Installation & maintenance – as technologies change so does your value proposition



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4. Don't put traditional people in charge – hire those that are not hampered by the good ole days: *it ain't your grandfather's lighting business anymore*. You do not need those that want to justify what they did but rather, leaders that demand taking an uncharted and maybe alien direction.
5. Hire Millennials, those that understand the transition to Smart Lighting and more importantly to Intelligent Lighting...systems approach and they can work your social media activities as well. Millennials are disruptive tech adopters—they grew up with a phone in one hand and a tablet on their laps and are proficient in the use of disruptive innovations. Most are technologically enabled in unprecedented ways. Tap into the Millennial World...
6. Customer mining – dig deep into your existing customer files and determine what they buy and how they buy from you. Remember, every single one of your customers will upgrade to SSL systems. Either you will sell them or your competitors will.
7. Dominate small niche markets first. A big fish in small pond strategy that seems to work with high-tech companies. <http://energywatchnews.com/big-fish-in-small-pond-strategy-by-bill-attardi/> The old traditional strategies that worked well in the past will certainly not work going forward. Serve those niche markets you know best. You cannot be all things to all people when change at this magnitude happens.
8. Create a new business development department to continue to look at the disruptive innovations that will continue to evolve and change course when necessary.
9. Put someone in charge of Content Marketing – the core of effective communications these days. Even traditional marketing disciplines are changing.....remember the four (4) Ps, well now it's the four (4) Cs:
 - Product Customer wants
 - Place Convenience to buy
 - Promotion Communications
 - Price Cost to satisfy
10. Focus on social media and email marketing as a means to enhance CRM (Customer Relationship Management).....keep your business fresh in minds of your customers and entice them to reconnect with your new business model. Content is fire. Social media is gasoline.
11. Lighting as a Service (LaaS) – stay plugged in to your customer's lighting / data service needs on an ongoing basis and charge accordingly. Look for news way to service your customers and service the hell out of everything you sell.

LED EnergyWatch...

1. ***\$4 Billion LED Lighting Module Market to Grow More Than Triple by 2022*** - The LED lighting module industry is showing the emergence of innovative functions and the introduction of new market segments including automotive, smart lighting and horticultural markets. In this context, Yole Développement (Yole) estimates the market and presents its vision of the industry in its new technology and market report titled LED Lighting Module Technology Industry & Market. According to Yole's Solid State Lighting team, the LED lighting module market, including flexible LED strips, reached nearly US\$4 billion in 2016 and will grow to US\$13.8 billion by 2022. <http://bizled.co.in/4-bn-led-lighting-module-market-to-grow-more-than-triple-by-2022/>



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2. ***Meet The 10 Disruptors Transforming Lighting*** - Here they are...the key individuals driving the industry into a brave new world of digital, connected lighting. These visionary men and women are bringing rapid and radical change to a sector that's more used to long product cycles and traditional glass and sheet metal technologies. Selected by a panel of *Lux Review* senior editors, they are shaping our future: <http://luxreview.com/article/2017/09/meet-the-10-disruptors-transforming-lighting>



3. ***Everlight Introduces Infrared LED for Iris Recognition*** - Taiwan-based LED producer Everlight Electronics Co., LTD. launched the NIR-C19M series with a wavelength of 810nm. According to the company, the NIR-C19M produces the clearest contrast effect for reading the pattern of the iris. The company says that with the new IR LED, the recognition process is precise and quick, and its package design offers excellent heat dissipation. Everlight says that the IR LED is, therefore, ideally suited for iris recognition in security surveillance systems (access control) and portable handsets. Smart biometric identification enables devices to measure the users' unique patterns in their voice, fingerprint, iris, and face to quickly avoid the problem of remembering traditional long passwords. <http://www.solidstatelighting.net/everlight-introduces-infrared-led-iris-recognition/>
4. ***Circadian Stimulus Calculator*** - Biological rhythms that repeat approximately every 24 hours are called circadian rhythms. Light is the main stimulus that helps the circadian clock. The Lighting Research Center (LRC) has released a new version of its CS calculator with more robust and flexible functionality to help lighting professionals select light sources and light levels that will increase the potential for circadian-effective light exposure in architectural spaces. The new calculator provides additional functions not included in the original version, including the ability to calculate CS levels in rooms with multiple light sources, and combine pre-loaded SPDs from the calculator dropdown and user-supplied SPDs to provide one CS measurement and a single relative SPD. <http://www.lrc.rpi.edu/programs/lightHealth/index.asp>
5. ***IES Research Symposium 2018 Call for Posters*** –How does light during the day and night affect our circadian, biological, and behavioral responses? At the 2018 IES Research Symposium, Light + Human Health, we will hear the latest research and consider how this research might affect current and future design applications. The Symposium will bring together researchers and design professionals for an open exchange of ideas that will influence future priorities for developing and adopting metrics, standards, and recommended practices. At the Crowne Plaza, Atlanta Midtown | Georgia | April 8-10, 2018. Researchers and designers actively involved in the study and practice of light and lighting are invited to submit posters describing their work and how human health can be affected as a result. Deadline for abstract submission: December 15, 2017. Learn more at: <https://ies.us13.listmanage.com/track/click?u=c074ef46db58e257034ce69c6&id=5c1cbee7ec&e=a524b08e21>



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6. ***Cree CEO Lights Up Stock on Possible Turnaround Plans*** - CREE shares surged by double digits Wednesday 10/180 as its new chief executive fired up the LED lighting company's stock by indicating to analysts that a new strategic plan may be coming in a few months. Cree shares initially fell 6% after the company reported fiscal first-quarter earnings late Tuesday. But new CEO Gregg Lowe talked of preliminary turnaround plans on Cree's earnings call, sending shares soaring on Wednesday. It was unclear what plans Lowe might have. <http://www.investors.com/news/>
7. ***Bluetooth Mesh Shows Wireless Connectivity in a Whole New Light by Jason Marcel*** - Wired lighting infrastructures have a history of providing dependability that, until recently, wireless networks couldn't match. And while there are other benefits to installing a wired network, many of today's wireless platforms—especially those supported by a *Bluetooth*[®] mesh network—ensure greater flexibility and extensibility at a reduced cost. <https://www.bluetooth.com/> Advancements in wireless connectivity make it hard to justify choosing a wired infrastructure over a wireless platform. An argument could be made that wired networks still offer better reliability, but installation costs, for both materials and labor, are significantly higher. A wireless network provides significant cost savings with minimal disruption during deployment. Wireless platforms are easier to install and upgrade, offering the flexibility you need to respond quickly to changing business demands. <http://www.ledsmagazine.com/>
8. ***Harbour Group acquires Green Creative LLC*** - GREEN CREATIVE, a developer of advanced LED lighting solutions, is now part of the Harbour Group family of companies, extending Harbour Group's participation in the lighting market, Jeff Fox, Harbour Group's chairman and chief executive officer, announced today. Cole Zucker and Guillaume Vidal, the co-founders of GREEN CREATIVE, will continue their key leadership roles in the business. Terms of the transaction were not disclosed. The investment represents Harbour Group's second in the lighting industry this year. In April, Harbour Group announced that ILP Holdings Corporation (ILP), a Sanford, Fla.-based manufacturer of energy-efficient luminaires and retrofit solutions, had become a Harbour Group company. The Green Creative and ILP brands will remain independent. <https://harbourgroup.com/news/>
9. ***Gooee Gives Equity Share to Cloud Software Partner, Launches 'Lighting As A Host'*** - Gooee has enhanced its data analytics capabilities through a deal that gives its cloud computing partner Evrythng an equity share in the firm, a seat on the board, and that gives Gooee greater access to Evrythng's software. Gooee has been working with London-based Evrythng for two years, but has now agreed to pay Evrythng around \$7.5 million for permanent access to Evrythng's Internet of Things (IoT) technology. The closer ties between the two companies strengthens Gooee's ability to gather data from lights equipped with its chipsets, and send that data off to the cloud for analysis. Such analytics then helps facilities managers to decide how better to use and operate rooms and buildings. <http://www.ledsmagazine.com/>
10. ***DOE Announces FY 2018 SBIR/STTR Funding Opportunity*** - The U.S. Department of Energy (DOE) Office of Science published the Fiscal Year 2018 Phase I, Release 1 Funding Opportunity Announcement (FOA) on October 17, 2017, for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs. Under DE-FOA-0001770, whose complete listing of technical topics was released on July 17, DOE seeks applicants for grants directed toward FY18 Phase I, Release 1 projects. Topics for this funding opportunity can be found at <http://science.energy.gov/sbir/funding-opportunities> and include LED and OLED lighting (topic 14).



- 11. White Paper: Extending the Life-Time of LEDs** - LED applications are becoming increasingly more diverse; design requirements, location or the function of the product are all elements that prove the challenges that face LED designers are continually evolving. LEDs, like most electronic devices will perform well until external influences start to deteriorate performance. Such influences can include the electrostatic attraction of dust, humid or corrosive environments, chemical or gaseous contamination, as well as many other possibilities. It is therefore extremely important that the end use environment is considered in detail to ensure the correct products can be chosen.
<https://www.led-professional.com/resources-1/white-papers/white-paper-extening-the-life-time-of-leds>
- 12. Target Gives the Go-Ahead on IoT Lights at Half Its Stores** - The world's largest known deployment of lighting-based indoor positioning is finally going full speed ahead, as US retail giant Target plans to roll out a customer engagement system in nearly half of its 1800 stores by Christmas. Using Bluetooth chips embedded in LED ceiling lights from Acuity Brands, Target will send signals to shoppers' phones. Drawing on a Target app, the phones will display an interactive map that guides individuals around the aisles, helping them find specific items and providing information about discounts. In a decision that will disappoint VLC advocates and which some observers will find surprising, the retail chain said it has decided to use Bluetooth but not VLC.
<http://www.ledsmagazine.com/>
- 13. Li-Fi Firms Gather to Unveil First Lights at LuxLive** - Innovations from the top three firms PureLiFi, Linmore and Lucibel – including, for the first time, Li-Fi-enabled battens and downlights – will be unveiled at the event, marking LiFi's global commercial debut. PureLiFi and Lucibel will introduce their joint-venture Ores luminaire, which embeds all the necessary Li-Fi components in an LED downlight. It is able to support between eight to 16 users at once, and deliver data at rates of 45 megabits per second. Meanwhile US firm Linmore is launching the first-ever Li-Fi battens, designed as a retrofit for fluorescent luminaires. These light fittings deliver data speeds of up to 43 Megabits-per-second (Mbps) up and down. The luminaires will all be demonstrated in the Li-Fi Experience at LuxLive 2017, which takes place at London ExCeL on Wednesday 15 November and Thursday 16 November 2017. <http://luxlive.co.uk/>
- 14. GE Chief Will Sell, Spin Off \$20 Billion of Businesses in Two Years** - John Flannery looks to simplify the conglomerate after a review begun when he was appointed CEO in June. While the Boston-based firm didn't specify which businesses would go on the block: "Everything is on the table, and there have been no sacred cows," Flannery said. Among the possible divestitures at GE is Baker Hughes. Wall Street analysts have suggested GE may consider selling assets from industrial lighting, which was part of retiring vice chair Beth Comstock's portfolio, to power conversion and even the locomotive division previously headed by new CFO Jamie Miller. The new CEO, who is detailing his strategy for investors in a Nov. 13 meeting in New York, continued to emphasize that he's fully committed to digital manufacturing. <https://finance.yahoo.com/news/ge-chief-may-sell-spin-122100057.html>
- 15. DOE Announces FY 2018 SBIR/STTR Funding Opportunity** - The U.S. Department of Energy (DOE) Office of Science published the Fiscal Year 2018 Phase I, Release 1 Funding Opportunity Announcement (FOA) on October 17, 2017, for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs. Under DE-FOA-0001770, whose complete listing of technical topics was released on July 17, DOE seeks applicants for grants directed toward FY18 Phase I, Release 1 projects. Topics for this funding opportunity can be found at <http://science.energy.gov/sbir/funding-opportunities> and include LED and OLED lighting (topic 14).



16. Acuity Teams with Indoor Mapping Firm That Has Big Airport Presence - Another day, another matchup between a lighting company and an IT firm in an effort to turn lighting infrastructure into intelligent data networks. This time, LED lighting stalwart Acuity Brands has teamed with LocusLabs, an indoor mapping software specialist which has provided wayfinding programs to major airports such as Dallas/Fort Worth International. LocusLabs is enabling its “location as a service” technology to work with Acuity's Atrius, which is Acuity's catch-all brand of an ever-widening set of smart lighting and lighting-based Internet of Things (IoT) services.

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

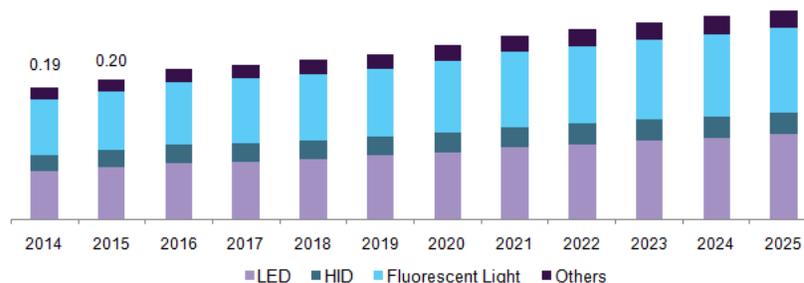
17. 30 Ways IoT Lighting Can Solve Everyday Problems by Ray Molony - The next revolution in lighting is luminaires connected to the ‘Internet of Things’. So what are the benefits? Click on the top 30 killer capabilities of IoT lights from the real world by application...

<http://luxreview.com/article/2017/10/30-ways-iot-lighting-can-solve-everyday-problems>

- Retail
- Healthcare
- Offices
- Transport
- Outdoor
- Hospitality & Leisure

Global LED EnergyWatch...

18. High-End Lighting Market Analysis by Light Source Type - The global high-end lighting market size was estimated at USD \$14.43 billion in 2016. Increasing demand for connected lighting and interior designing is anticipated to be a key factor driving the industry growth. Increasing penetration of smartphones and internet connectivity is growing the demand for connected lighting systems, thus impacting the market growth. The market can be segmented by light source into LED lamps, HID lamps, fluorescent lights and others. The LED lamps segment is anticipated to exhibit high growth in this particular market over forecast period. The segment accounted for USD 5.12 billion in 2016 and is projected to grow with a CAGR of 6.8% from 2017 to 2025. HID high-end lighting market is expected to witness steep fall in revenue by 2025. <http://www.grandviewresearch.com/industry-analysis/high-end-lighting-market>



19. Top Six Trend in LED Chip and Package Industry in China in 2017 - According to the latest report from LEDinside, a division of the market research firm TrendForce, 2017 Chinese LED Chip and Package Industry Market Report, Chinese LED package market scale in 2016 reached RMB 58.9 billion, went up by 6% YoY, higher than expected. LED price held steady in 2016, some products saw price growth, and the industry is still in an uptrend under the drive of fine-pitch, automotive and lighting markets. As for the market outlook in 2020, it is expected that the Chinese LED package market size will be up to RMB 73 billion. <http://www.ledinside.com/>

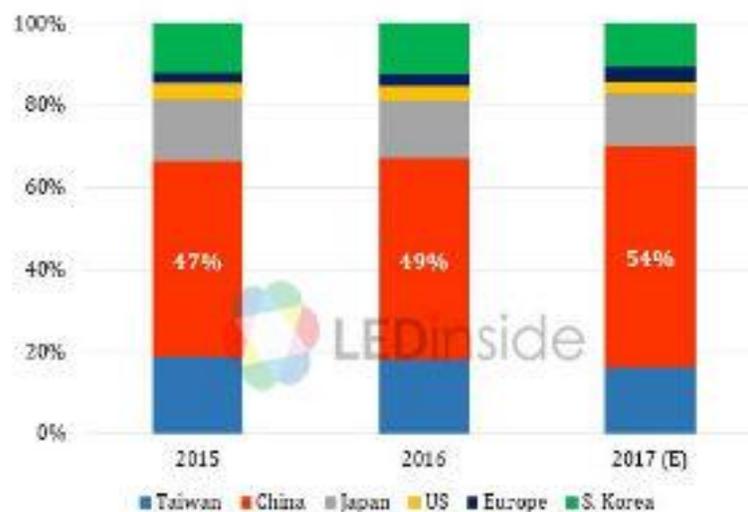


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- 20. Thorn Lighting to Provide 100,000 LED Fixtures for Mass Transit Project in Singapore** - Thorn Lighting has won a major lighting contract for Singapore's Thomson-East Coast Line, a 26-mile long mass transit project that will be completely underground, utilize driverless trains and give commuters at 31 stations access to Singapore's mass transit system. The US \$11.75 million project will utilize more than 100,000 Thorn LED luminaires in the TEL tunnels and maintenance areas. Thorn's AreaPak Pro, Chalice, CiviTEQ, Formula LED, GTLED, HiPak and PopPack brand LEDs will be used in the project. Thorn Lighting is part of the Zumtobel Group.
<http://www.electricalmarketing.com/>
- 21. White Paper - Serviceable Luminaires in a Circular Economy by LightingEurope** - Members have a long experience in dealing with aspects related to the circular economy. The industry has a solid track record in the areas of recycling, management of hazardous substances, improving efficiency and replacement of failing components for repair purposes. The transformation brought by the shift to LED technology demands a careful assessment of which areas could be further improved to bring benefits to customers and the environment and last not least to strengthen the competitiveness of the sector. This White Paper briefly introduces the concept of the circular economy and focuses on design for serviceability to assess its benefits; the last part discusses policy options which potentially could help transform the sector towards more "circular" products and services. The focus of this White Paper is luminaires. <http://www.lightingeurope.org/>
- 22. Chinese LED Chip Suppliers to Represent 54% of Global Production Capacity in 2017** - During 2017, global LED chip production capacity was on an expansion phase, according to LEDinside, a division of TrendForce. According to the report, this surge in capacity for LED chips is due to the rising demand from Chinese LED package suppliers who have already started increasing their production capacities since 2016. While Chinese LED chip suppliers are enhancing their capacity, LEDinside estimates that about 401 MOCVD chambers based on the standard K465i design will be installed worldwide by 2017 end. <http://bizled.co.in/chinese-led-chip-suppliers-to-represent-54-of-global-production-capacity-in-2017/>

Figure: Distribution of MOCVD Systems Installed by Country/Region, 2015-2017



Source: LEDinside, Oct. 2017



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23. Nichia Remained Revenue Leader in China's LED Package Market for 2016 - Steady growth in the LED lighting market supported the capacity expansion efforts of LED chip and package industries in 2016, says LEDinside, a division of TrendForce. Furthermore, the annual revenue of China's LED package market grew by 6% for 2016 to reach US\$8.9 billion.

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

Table: Revenue Ranking of Top 10 LED Package Suppliers in Chinese Market, 2015~2016

Ranking	Top 10 for 2015	Top 10 for 2016	Change in Ranking
1	Nichia	Nichia	→
2	Lumileds	MLS	↑
3	MLS	Lumileds	↓
4	Everlight	Everlight	→
5	OSRAM Opto	OSRAM Opto	→
6	Lite-on Technology	NationStar	↑
7	NationStar	Lite-on Technology	↓
8	CREE	Honglitronic	↑
9	Honglitronic	CREE	↓
10	Seoul Semi	Seoul Semi	→

Source: LEDinside, Jul., 2017

24. Philips Lighting and Vodafone IoT Partner to Improve the Way Cities Function - Philips Lighting has partnered with Vodafone IoT to provide customers with scalable M2M connectivity for connected lighting and beyond. Connected light points throughout the city can be monitored and controlled using Vodafone's IoT connectivity and existing cellular network infrastructure.

https://www.youtube.com/watch?time_continue=7&v=zEPVW5OQTtA

25. Philips Gearing Up to Tap LED Street Lighting Market in India - Philips is developing a range of LED street lighting products to suit the requirements of the Indian street lighting market. It is also planning to increase its presence in India in the lighting space and create more awareness about LED products and solutions in the country. Among the Asian countries, India and China contribute a major chunk of Philip's overall lighting division sales, and the company expects a huge growth from these countries. <http://bizled.co.in/philips-gearing-up-to-tap-led-street-lighting-market-in-india/>

26. Seoul Announces Horticultural LEDs - Seoul Semiconductor announcement became what was perhaps the broadest horticultural LED launch in the industry, even surpassing the Lumileds SunPlus announcement last year in breadth. Seoul is the only vendor offering horticultural-centric products spanning the UV range to the near infrared (NIR) bands. Moreover, the company is targeting some LEDs at horticulture that are based on its SunLike technology platform that debuted earlier this year with a uniform spectral power distribution said to mimic the sun. In the high-power sector, Seoul announced deep-blue (449–461 nm), deep-red (646–665 nm), far-red (730 nm peak), and broad-spectrum-white LEDs. In each case, the company is specifying a photosynthetic photon flux (PPF) measure of performance expressed in micromoles per second ($\mu\text{moles/sec}$). For example, the 650-mW deep-blue LEDs are rated at 2.6 $\mu\text{moles/sec}$. <http://www.ledsmagazine.com/>



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LED Technology Watch...



27. LSI LED Area Lights – Tellus (TEL16 and TEL22) - The Tellus Area Light provides one of the best solutions on the market today, with the highest return on investment when replacing existing HID area lighting fixtures advanced optics with multiple light distribution patterns produce better light output with more foot-candles and significant energy savings. Tellus’ “Universal Bracket System” makes one-person installation easy, whether retrofitting or new construction. <http://www.lsi-industries.com/products/tel.aspx> Watch the video: <https://www.youtube.com/watch?v=CyBnvGxhuc0>

28. Viribright’s® LED Downlights – Newest Generation - Viribright’s® line of LED downlights with an astounding 90+ CRI and excellent light output that reaches over 100+ lumens per watt. With our patented ViriTrue™ White technology, our team of lighting engineers has developed the highest color rendering available on the market and we are proud to offer it in all three major color temperatures. Our mission is to bring consumers high-efficiency LED bulbs at a fraction of the cost.



- 5/6" Disc Light Flush Mount only \$7
- 5/6" Recessed Lighting only \$7
- 4" also available for only \$6 each

<http://www.viribright.com/led-downlights/>

29. TCP Luxterior LED General Purpose Strip and Retrofit Kit - The integrated LED luminaires significantly reduce energy consumption compared to fluorescent systems, providing instant energy savings along with the ability to take advantage of potential utility rebates. A long 50,000 hour rated life significantly decreases maintenance labor and material costs over the life of the fixture. <https://www.tcpi.com/wp-content/uploads/2017/10/TCP-LED-General-Purpose-Strip-Luminaire-Spec-Sheet.pdf> TCP’s General Purpose Strip incorporates a ribbed, frosted white diffuser lens to protect the LEDs and minimize glare, while delivering bright, uniform light. TCP’s LED General Purpose Strip Retrofit Kits also incorporate a ribbed, frosted white diffuser lens to protect the LEDs and minimize glare, while delivering bright, uniform light. <https://www.tcpi.com/wp-content/uploads/2017/10/TCP-LED-General-Purpose-Strip-Retrofit-Kit-Spec-Sheet.pdf>



30. ConTech Lighting, a Leviton Company, Introduces the New Champion High Bay (CHB) Series - The CHB LED Pendants delivering up to 28,500 Lumens is ideal for high ceiling applications such as warehouses, large retail environments, storage facilities, and sports arenas, and is available in two wattage packages: 200W/22,000 Lumens and 240W/28,500 Lumens.



Utilizing custom optic lensing, the CHB is available in three beam distributions: 45°, 90° and 120°. The luminaire comes standard with 120’ of flexible cable and eye bolt for hook mounting. Other mounting options include twist lock receptacles for easy retrofit opportunities or a U-Bracket for conduit, ceiling or wall mounting. Motion sensor, dimming capabilities and battery back-up options are also available.

<http://contechlighting.com/product/chb>

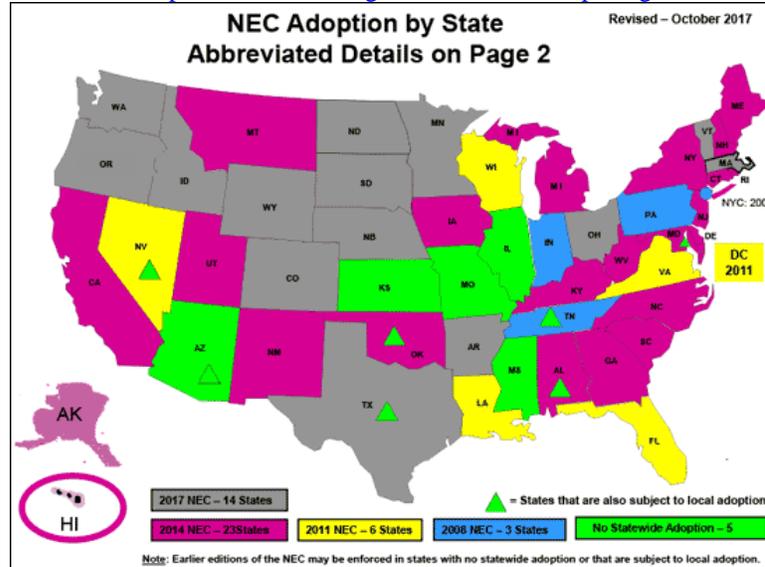


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National Energy Watch...

31. Adoption of the National Electrical Code®- The National Electrical Code® (NEC) is the preeminent electrical installation code in the U.S. However, the NEC takes on real significance when it is adopted into law by states and local jurisdictions. The timing for code adoption varies by locale and may be amended by state and local jurisdictions. The result is that different electrical codes are being enforced in different parts of the U.S. NEMA's Field Representatives track the adoption of the NEC in their respective territories and have developed a report that identifies which electrical codes are enforced where. Download at: <https://www.nema.org/Technical/FieldReps/Pages/National-Electrical-Code.aspx>



32. Get to Know Electricity Supply Rates in Your State - In recent years, many states have adopted a deregulated energy market that allows residents to shop for the supply portion of their energy rather than automatically getting it from their utility – a right known as energy choice. Deregulation changed the world of energy, which is reflected in price differences across regulated and deregulated energy markets. Here, we've compiled data to show you just how much energy costs can vary, including historical energy supply prices from the U.S. Energy Information Administration (EIA) in all 50 states. Information on recent rates and fluctuations may help you understand your bill or decide to change your energy supply plan. Enter your ZIP code to monitor your rate at: <https://www.chooseenergy.com/electricity-rates-by-state/>

33. Massachusetts Still Tops State Energy Efficiency Ranking - The 11th annual report from the American Council for an Energy-Efficient Economy (ACEEE) shows which states are doing the best on energy efficiency — a critical tool for withstanding and recovering from storms and economic shocks. Massachusetts broke its 2016 tie with California by holding on to the No. 1 ranking, while the Golden State slipped to No. 2. As national leaders, Rhode Island, Vermont, and Oregon round out the top five in the ACEEE Scorecard. Idaho posted the most gains by far in 2017, surging past a number of mid-ranked states in ACEEE's comparative index of efficiency policies, best practices, and other metrics. Idaho advanced seven spots, from 33rd to 26th place. The balance of the 10 most-improved states are Virginia, Oklahoma, Florida, Utah, Nevada, Louisiana, Oregon, Washington, D.C., and Kentucky. <https://facilityexecutive.com/2017/09/massachusetts-still-tops-state-energy-efficiency-ranking/>



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Monthly Special Feature... *LED Bulbs Have Turned into Multi-Functional Gadgets -*

With fast advancements in LED technology, a simple LED bulb is no longer just a source of lighting—it has become a multi-functional gadget that can connect with the web, influence human behavior, work with sensors and much more. At present, the lighting industry has shifted from the traditional filament lighting to electronic systems. This has opened up numerous opportunities to develop smart and connected lighting systems. Today's LED lighting systems can be embedded with smoke detectors, heat sensors, cameras, speakers, etc. However all such additional facilities come with a price.

New smart LED lighting systems

With the demand for smart LED lighting rising across the globe, companies are coming up with new offerings to fulfill the needs of the users. Enlighted Inc has come up with appealing developments in smart lighting systems, particularly for the retail sector. The company has incorporated sensors within lighting system, which helps to track movement of customers around a retail space. This will help the retailers to gain critical feedback of their consumers, points of sale (POS), consumer behavior, etc. For office applications, LED lighting vendors have brought about user-friendly and user-focused systems. For instance, the desks of an office can control individual lighting, as a result, and staff member can dim individual lights up or down through a desktop or his/her smartphones.

These desk clusters can change the lights to imitate the natural daylight. This eventually, influences the circadian rhythm of the staff members. In the evening, they can make the lights warmer, allowing the release of melatonin and preparing the body to rest. These functions are possible with the help of intelligent lighting controls and sensors, which also help to save energy.

LED technology such as cloud-based lighting opens up an array of opportunities for facility management. For instance, a hotel has numerous light points. A two-way control system can communicate with the maintenance team if a downlight in a guest room toilet has failed, without the need to perform regular inspections.

In addition, the system can collect information about a user's behavior. For instance, a corridor that dims down after 10 minutes of inactivity could ultimately be adjusted to five on the basis of the usage pattern. This means that at the end of the year, those five minutes will symbolize hours of energy saving.

Activity-based lighting

LED is about activity-based lighting, which refers to having light where it is absolutely necessary. For instance, daylight sensors help in measuring the actual daylight inside the room and then regulate the artificial light to ensure outstanding visibility.

Such sensors can accurately monitor any walking or driving motion with ceiling heights up to 20 metres, making it perfect for application-specific solutions in which high energy efficiency is of key importance.

Advanced fittings

Not only lighting systems are getting more efficient and smart, the fittings are equally smarter and efficient. Since LED is a controllable and manageable component, fittings can now adapt to severe weather conditions, and guarantees high performance. The smart lighting fittings react extremely well to diverse conditions and can withstand adjustments in intensity.

<http://bizled.co.in/led-bulbs-have-turned-into-multi-functional-gadgets/>



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