

EnergyWatch



February 2016

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

Peter Drucker:

The small may not be eaten by the big but the slow will always be run over by the swift

Change is the engine of growth

Systematic innovation requires a willingness to look on change as an opportunity

Do the right things rather than do things right

Something to Think About... Big Fish in Small Pond Strategy

Let me share what I am learning teaching graduate and undergraduate classes at Monmouth University. We talk a lot about content marketing, the whole product concept, social media, the smart information age, the high-tech life cycle. How a phone is not just a phone anymore; that a watch isn't just about telling time anymore; that lighting is not just about illumination anymore. Everything is moving so fast, how can one keep up and thrive in the new complex world of IoE?

One strategy that seems to work with high-tech companies is to dominate niche markets first. A *big fish in small pond strategy*. If you believe as I do, as Chris Brown does, lighting is now playing in the high-tech game. As he says, "this is not my grandfather's lighting business anymore." If you believe as I do that SSL is disruptive, that it will change everything, then the old traditional strategies that worked in the past will certainly not work going forward.

So what will work? I do not have all the answers, sorry folks. I have lots of questions though. You have to fill in the blanks:

1. Can you identify and market to a niche market segment you can dominate?
2. Can you dominate by 50% market share, at least in the short term?
3. Can you work with customers that will commit to only your innovations? Brand preference or even brand insistence?
4. Buzz Marketing – will your customers say: "don't do anything in lighting until you check with _____!"
5. Do you set the de facto standard in the selective market segment?
6. Can you set the critical business processes in lighting that others will follow?



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Market segmentation is a skill set that must be selective and on target:

1. Customer data mining – what are your existing customers buying from you and which market segment are they in?
2. Do you have a library of target new customers in the target market segment?
3. Do you have an internal selection committee to prioritize the customers you must sell?
4. How do you plan to communication to this target market segment?
5. Have you dedicated resources to dominate?

The Whole Product Concept:

1. “The Marketing Imagination” book by Ted Levitt
2. “Marketing High Technologies” book by Bill Davidow
3. What is the “whole product concept”?
 - The innovative product
 - Variety of services
 - Ancillary products
4. What are you selling?

Technology Adoption Life Cycle: (see my other blogs on this subject)

1. Can you effectively get to the early and late majority – the mainstream market?
2. Will the whole product planning lead to market segment dominance?
3. Do you have strong leadership in this market segment and recognized as such?
4. Does your positioning fit the target market going forward?

Tactical partners:

1. Are you receptive to partnering with other high-tech companies to sell the whole product?
2. Can you jointly accelerate the formation of the whole product working with others?
3. Can you dominate this market segment? By yourself? With others? Who?
4. Can you co-develop the target market jointly and expand to other market segments?
5. Can you partner with key customers?

Competition

1. Who are they?
2. What is their relationship with your customers? What is your relationship with theirs?
3. What is their positioning? Is it different than yours?
4. Can you define the battle? Are you taking it to them? Are they taking it to you?
5. Is your whole product better than theirs?



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LED EnergyWatch...

1. ***Why is Apple Starting to Patent Light Fittings?*** - Apple has been granted a patent for the ceiling lighting system it has developed for its new-look stores in a move that has again raised the issue of the company's intentions in the lighting market. The US Patent and Trademark Office has granted Apple US Patent No. 9,217,247 for its new illuminated ceilings, which will be the showpiece feature of its next-generation stores. One of the first in the world to sport the new look is the company's outlet in Brussels. The fully-illuminated LED ceiling is interspersed with narrow linear lighting troughs which include spotlights and other services, a design that is not wholly unfamiliar to lighting professionals working in the retail sector. The troughs can accommodate cameras, speakers, alarms, fire suppression systems and, it's speculated, the company's iBeacon Bluetooth transmitters, which would allow customer tracking, in-store location, payments and marketing push notifications.
<http://luxreview.com/article/2016/01/why-is-apple-starting-to-patent-light-fittings->
2. ***Apple and Samsung Display Close to Inking OLED Contract*** - A report from Korean media ET News pointed out that Samsung Display will be supplying flexible OLEDs for the next generation Apple iPhones. The Korean company is expected to invest US \$7.47 billion into the plant and equipment investment. The report went on pointing out Samsung Display has decided to invest US\$2.49 billion and \$3.32 billion for plant and equipment this year to expand current facilities, and will probably start receiving orders from Apple from end of first quarter at the earliest. Market rumors point that the investments will bring its OLED production capacity to 30,000 sheets to 45,000 sheets per month. Another plan of adding 45,000 sheets per month production capacity in 2017 that was also included in the contract, if combined with the 2016 expansion plan the company is estimated to invest in total \$6.64 billion to \$7.47 billion in production expansion.
http://www.ledinside.com/news/2016/1/apple_and_samsung_display_close_to_inking_oled_contract
3. ***Which Chinese LED Candidate Will Emerge as the Winning Bidder of Osram's Lighting Business?*** - Five Chinese LED manufacturers have been competing head-to-head in the bid for Osram's lighting business, after the German company announced it would be spinning-off its less profitable general lighting business in April 2015. The five listed Chinese companies in the race for Osram's lighting business include MLS (also known as Forest Lighting), ETI, Tsinghua Tongfang, Felio Acoustics and Foshan Lighting. <http://www.ledinside.com>
4. ***Six SBIR-STTR Proposals Selected for Award for SSL Technology*** - The U.S. Department of Energy Office of Science has selected for award six Small Business Innovation Research (SBIR)-Small Business Technology Transfer (STTR) proposals targeting advances in SSL technology:
<http://energy.gov/eere/ssl/six-sbir-sttr-grants-awarded-ssl-technology-fy16-phase-i-release-1>
 - PhosphorTech Corporation: Hybrid Down-Converting Structures for Solid State Lighting
 - Lumisyn, LLC: High Performance Colloidal Nanocrystals
 - Vadiant Optics LLC: Alternative Interconnect Manufacturing
 - OLEDWorks, LLC: Development of High Efficiency White OLEDs Using Thermally Activated Delayed Fluorescence Emitters
 - UbiQD, LLC: Nonradiative Recombination Pathways in Noncarcinogenic Quantum Dot Composites
 - SC Solutions Inc.: Real Time Learning Temperature Control for Increased Throughput in LED Manufacturing



5. ***Melrose Eyes £4bn Bid for Philips Lighting*** - If Melrose secures a deal to buy the Philips division, it would mark the British company's largest takeover to date, but would also represent a departure from the series of acquisitions it has made since it launched 13 years ago. Set up by a trio of former executives at Wassall, a mini-conglomerate, Melrose specializes in identifying struggling industrial assets and improving their performance through several years of intensive operational management. Other bidders for the Philips Lighting division include Apollo Management, Bain Capital and KKR, the buyout firms. <http://news.sky.com/story/1621309/melrose-eyes-4bn-bid-for-philips-lighting>
6. ***Plug and Play: Alliance of Alliances Paving Way for Interoperable IoT*** - The ZigBee Alliance and the EnOcean Alliance are joining forces to connect the benefits of EnOcean energy harvesting wireless solutions with ZigBee 3.0 for worldwide applications, creating an open, global specification that will extend energy harvesting wireless communication to a broader range of self-powered Internet of Things (IoT) sensor solutions. These solutions use the surrounding environment as their energy source, making battery-less connected devices a reality. <http://www.smartgridnews.com>
7. ***GE Moving Headquarters to Boston for Tech Talent, Tax Cut*** - GE said the move would have no material financial impact, with costs offset by state and city incentives and the sale of its current headquarters offices in Fairfield, CT, and its offices at 30 Rockefeller Plaza in New York City. Massachusetts will provide up to \$120 million in grants and other incentives and the city will provide property tax savings of up to \$25 million. With 800 employees, the Boston headquarters will be the same size as Fairfield, but its makeup will change, GE said. The new office will employ about 200 administrators and 600 "digital industrial product managers, designs and developers," GE said. Those workers, spread among the company's GE Digital, Current, robotics and life sciences divisions, will share technology developments across business units. The 124-year-old company is undergoing a major restructuring to emphasize digital and industrial capabilities. 1/13 Reuters
8. ***IoT – Savings and Operational Efficiencies for the Industrial / Warehouse Environment*** - Daintree Networks® recently surveyed hundreds of warehouse professionals to better understand how enterprises are embracing and adopting the Internet of Things (IoT). The results showed that while IoT adoption is clearly still in its early stages, over 10 percent have programs underway or in the planning stages, and 30 percent acknowledge that IoT is a reality today in the industry. These findings along with other results in the survey support that the IoT is now moving from concept to practical application in the industrial and warehouse environments. <http://www.daintree.net/resources/internet-of-things-savings-and-operational-efficiencies-for-the-industrialwarehouse-environment/>
9. ***ZigBee and EnOcean Alliances Collaborate*** - The ZigBee Alliance, a non-profit association of organizations creating open, global standards that define the Internet of Things (IoT) for use in consumer, commercial and industrial applications, recently announced with the EnOcean Alliance, a leading consortium for battery-less, wireless smart buildings and smart homes, that the two organizations will cooperate on combining the benefits of EnOcean energy harvesting wireless solutions with ZigBee 3.0 for worldwide applications. The cooperation connects the two alliances' advantages, synergies and track record of standards advancements to create an open, global specification that will extend energy harvesting wireless communication to a broader range of self-powered IoT sensor solutions. These solutions use the surrounding environment as their energy source, making battery-less connected devices a reality. <http://www.lightnowblog.com>



10. *The 49th Annual Consumer Electronics Show* - Officially kicked off in Las Vegas on Wednesday, January 6. The annual CES technology show is a time when we're given a glimpse into what the future could look like, new technology stars can be born and of course, many ideas are celebrated. CES is the tech world's big coming-out party for the New Year — a supersize circus of gadgetry that both follows major trends in tech and creates them. It's never the same year to year, but it's always a showcase of what's to come in consumer technology. Lighting is exhibited too:

- Pioneer Demonstrates Innovative Automotive Laser and OLED Displays
- Samsung Showcased New Smart LED Signage
- HP Unveils New Consumer Hybrid PCs with OLED Display
- LG Debuts OLED Rolled-up Display
- Kodak LED Lighting Showcased
- NXP Showed LED & LEP drivers and white lamps
- Ooma Displayed the Philips HUE
- Osram expands Lightify networked lighting portfolio <http://www.ledinside.com>

11. *Acuity, Microsoft to Jointly Show Lighting-Based IoT Services for Retail Trade at NY Confab* - In a move underscoring that the IT and lighting world are in full-swing convergence, Acuity announced that it will show its LED-based indoor positioning technology at Microsoft's Retail Industry Group booth at the National Retail Federation's annual convention and exhibition next week in New York. Acuity offers technology that uses LED ceiling lights to target shoppers' smartphones with in-store navigation and with promotions tailored to customers who opt in, typically via a loyalty app. The lights might recognize that a shopper who recently purchased pasta has just walked in the store, and then ping that person with an electronic discount coupon for sauces, along with a map showing the precise location in the store. Data about the products and purchases travel to and from Microsoft's Azure cloud computing system, helping the retailer analyze both individual and general trends. Retailers use that information to further set prices, establish sales campaigns, and engage individual shoppers. The system mimics the online shopping experience in the brick-and-mortar world, and helps make lighting a key node in the fledgling IoT. <http://www.ledsmagazine.com>

12. *Smart City Projects Have Increased Nearly 40 Percent Since the Third Quarter of 2013* - A new report from Navigant Research, *Smart City Tracker 4Q15*, examines the current state of global smart city development, covering the related aspects of the smart energy, smart water, smart transportation, smart buildings, and smart governments sectors, segmented by region. As the benefits of smart cities become clearer, the number of projects and partnerships supporting the cause is rapidly increasing. The total number of identified smart city projects has grown from 170 in the third quarter of 2013 to 235 today. Continued investment in technologies and policies such as smart grids, networked LED street lights, urban mobility, climate action plans, open data platforms, water management, and smart parking systems represent a growing market for smart cities, according to the report. In addition, an increase in innovations from suppliers in terms of the product and solution offerings, as well as the partnerships they are forming with cities and other stakeholders, is expected to further propel the industry's growth. <http://www.navigantresearch.com/research/smart-city-tracker-4q15>

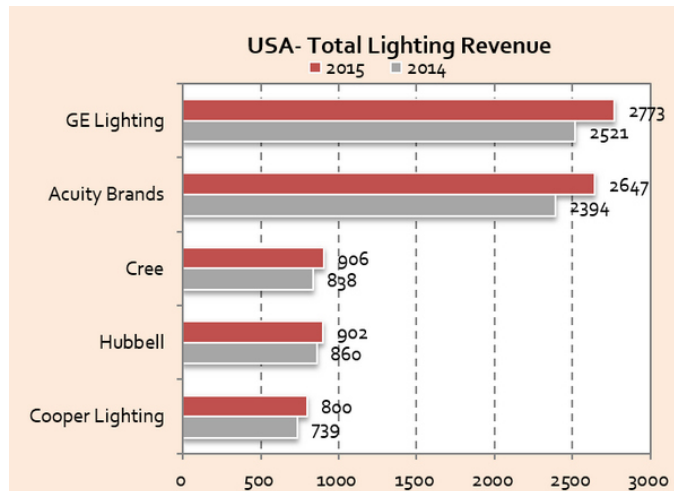


- 13. LIGHTFAIR® International Offers Its First-Ever IoT & Smart Lighting Forum** - A new one-day series of six 60-minute sessions designed to explore the impact of Internet of Things (IoT) and how it relates to smart lighting. Within the 2016 Conference, which includes 82 courses, the IoT & Smart Lighting Forum strives to address both the potential and challenges of IoT and whether smart lighting truly extends beyond using connectivity for energy efficiency and maintenance. The Forum takes place on Wednesday, April 27 during LFI 2016 at the San Diego Convention Center April 24 – 28 (Pre-Conference LIGHTFAIR Institute®: April 24 – 25; Trade Show & Conference: April 26 – 28). <http://www.lightfair.com/lightfair/V40/index.cvn?id=10447>
- 14. Philips Illuminates Clemson University Watt Family Innovation Center with LED PoE Lighting System** - A first-of-its-kind, large-scale lighting installation at a major university campus that leverages Power over Ethernet (PoE). LED lighting provides flexible work spaces that encourage collaboration between faculty and students, optimize space management in the facility, and improve energy efficiency. The intelligent PoE system delivers energy savings by gathering historical and real-time anonymous data from each lighting fixture to determine when a room is being used. These occupancy sensors also trigger lights to turn on and off, saving additional energy. The Philips EnvisionManager, an advanced lighting control system, enables all the lights to be controlled from a single, tailored software console. The system supports remote access and web based control letting occupants control their lights via any authorized computer, smartphone or tablet. This ensures the right amount of light is provided only when, where and how it is needed. <http://www.ledinside.com>
- 15. PoE: Power Over Ethernet or Philips Over Everyone Else? by Chris Brown** - Or should it be BoE... "Beginning of End" for some lighting distributors. Illumigeddon got real last month with the announcement of an alliance between Philips and Cisco to promote PoE and networked lighting. I asked the question in 2014: When technology and lighting get together, who drives the bus? No surprise that Cisco is now officially in our game... not after Cisco was a keynote speaker at Strategies in Light in 2015 and recently at a DoE lighting conference. The chilling question for distribution now is "Who will be selling the products of this and other expected lighting and technology alliances?" And if existing lighting distribution will be selling PoE, there may be a steep learning curve regarding smart, networked lighting and related connectivity and networking gear. As my friend Bill Warren is fond of saying, "This is a real game changer!" <http://www.tedmag.com>
- 16. Ensuring Your Distributorship's Survival in a Digital World by Bridget McCrea** - It's no longer a matter of "if" your company needs a solid e-commerce strategy – it's a matter of "when" – and the time is now. Even if your top customers aren't transacting business online, price-shopping on their iPads at the jobsite, or asking you to get your proverbial digital act together, they will be soon. Research firm Frost & Sullivan expects business-to-business (B2B) e-commerce to hit \$12 trillion in sales worldwide by 2020 (up from \$5.5 trillion in 2012). The firm says the migration of B2B sales to the online world is happening for four reasons, all of which are relevant to the electrical distributor: <http://www.tedmag.com>
1. An expectation among a growing number of companies to conduct buying and selling online;
 2. A shift from some companies to conduct procurement transactions through the Internet instead of through electronic data interchange, or EDI;
 3. The growing interest of companies in placing orders through mobile commerce devices;
 4. And the increasing popularity of e-marketplaces such as Alibaba.com and Amazon Business.

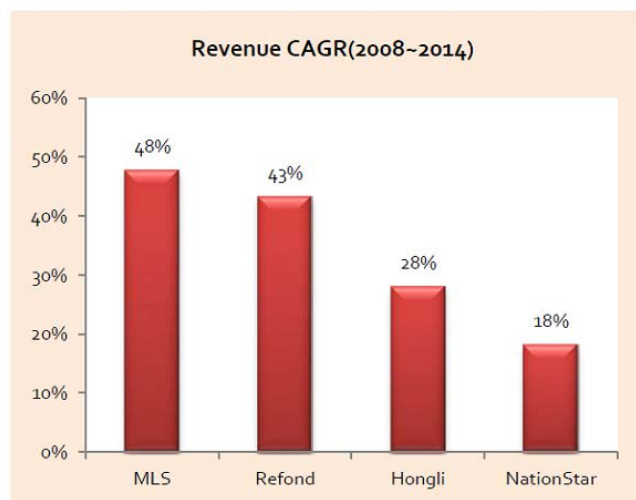


Global LED EnergyWatch...

1. *Analyses of Five Major LED Manufacturers Vertical Integration Strategies (Part 1)* - For many years, vertical integration and diversification were two parallel business models in the LED industry. Yet, in 2015 companies previously focused in the LED package market sector, such as Cree and MLS (or also known as Forest Lighting) have started to expand into downstream lighting sector, widening the scope of their vertical integration. In stark contrast, traditional lighting players including Philips and Osram have been separating key lighting businesses, and putting them up for sale. http://www.ledinside.com/outlook/2016/1/analyses_of_five_major_led_manufacturers_vertical_integration_strategies_part1 (Source: LEDinside Gold Member Report)



17. *Analyses of Five Major LED Manufacturers Vertical Integration Strategies (Part 2)* - In part one of these series, LEDinside explored Philips, Osram and Cree's vertical integration strategies. In the second part of this series we will take a closer look at major Chinese LED companies MLS and Elech-Tech International's (ETI) vertical integration strategies. http://www.ledinside.com/outlook/2016/1/analyses_of_five_major_led_manufacturers_vertical_integration_strategies_2



Source: LEDinside



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18. Osram Rebrands Lighting Business - German lighting giant Osram announced that it has dubbed its for-sale lamps and general lighting unit with a new moniker: LEDVANCE. Actually, this is more of a business story: and business-wise, the lighting business will be separated by 1st April this year, while the legal separation is planned for 1st July. Ledvance will cover:

- traditional lighting
- LED lamps
- standard over-the-counter luminaires
- connected/intelligent lighting
- solutions for smart homes and smart buildings

<http://www.electronicweekly.com/blogs/led-luminaries/osram-rebrands-lighting-business-2016-01/>

19. Epistar Denies Acquisition and Merger Rumors - Epistar Corp. is the largest manufacturer of LEDs in Taiwan (\$400 million in revenue). The company was established in 1996, and its headquarters are in the Northern Taiwanese city of Hsinchu. MLS, Philips and even Lumileds were named by speculators as potential buyers. The MLS senior officer told LEDinside at the time that it was focusing on acquiring Osram's lighting business to complement the two companies supply chain. The company was aiming to complete the talks with Osram about the acquisition of its lighting business by second quarter of 2016.

<http://www.ledinside.com/news/2016/1/epistar-denies-acquisition-and-merger-rumors>

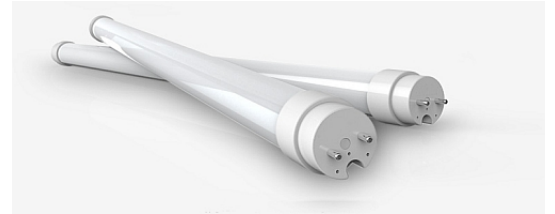
20. GO Scale Capital and Royal Philips Terminate Lumileds Purchase Agreement - Unspecified CFIUS Concerns End the Deal. GO Scale Capital and Royal Philips announced today that the parties have terminated their March 2015 agreement for GO Scale Capital to acquire 80.1% of Royal Philips' LED lighting components and automotive lighting business, Lumileds. After close to one year of best efforts by GO Scale Capital and Royal Philips to obtain approval from the Committee on Foreign Investment in United States (CFIUS), the parties have been unable to resolve CFIUS' unspecified concerns. Despite persistent attempts by GO Scale Capital and Royal Philips to make the case for the Lumileds transaction under principles of openness and fairness, unfortunately all such efforts fell short of addressing unexplained government concerns. <http://www.prnewswire.com/news-releases/go-scale-capital-and-royal-philips-terminate-lumileds-purchase-agreement-300208367.html>

21. Global Smart Street Management Revenue Is Expected to Grow from \$552.2 Million in 2015 to \$5.3 Billion in 2024. The city street is a symbol of the complexity, excitement, possibilities, and dangers of urban life. Today, people, vehicles, and objects on those streets are connected to the digital domain through sensors, smartphones, connected devices, and ubiquitous networks. Streets are increasingly furnished with intelligent street lights, smart parking systems, and sensor-enabled waste containers. Sensors are being used to monitor air quality, noise pollution, flooding, and other hazards. Streets are also monitored by city transport and public safety teams through intelligent CCTVs and other systems and are digitally mapped to provide a range of information services. This Navigant Research report, **Smart Street Management** analyzes the global market for smart street management technologies, including smart solutions for street lighting, urban mobility, waste collection, and public safety. The study investigates the key market drivers, barriers, and regional trends associated with smart street management, as well as the emergence of new city management platforms. <https://www.navigantresearch.com/research/smart-street-management>



LED Technology Watch...

22. Transcend Lighting T5 High Output LED Tube - The LED is a direct replacement for 54 watt fluorescent T5 lamps without any re-wiring. Simply plug-and-play. A custom phosphor mix applied on LEDs delivers spectral power distributions matched to specific plant types and stages of plant growth while also delivering white light. The LED T5 is better than its fluorescent counterpart in just about every way possible. It is mercury free, emits more light, lasts longer, shatterproof and Made in America. Our full spectrum photosynthetic white was formulated to grow any plant from seed-to-harvest. It works great for leafy greens, flowers or fruiting plants. For growers that specifically want to optimize fruiting and flowering we are offering a wide band deep-red lamp to supplement our seed-to-harvest spectrum. The tubes sell for \$70. http://www.transcendlighting.com/store/p5/T5_High_Output_LED_Tube_%28free_shipping%29.html



23. Sony's New Smart Light Is the Most Versatile We've Seen - Sony has upped the ante in the smart home market with the launch in Japan of a new multifunctional light called – wait for it – the Multifunctional Light. Created in partnership with Toshiba Lighting, it builds on the launch last year of a light bulb with a built-in Bluetooth speaker, but this time there's a whole lot more going on than just light and sound. The device, set to be released in Japan later this year, has two elements: a large donut-shaped LED ceiling light; and a Wi-Fi enabled communication unit that plugs into the middle and can be controlled using a dedicated smartphone app. The unit includes sensors for motion, light, temperature and humidity, plus a speaker, a microphone and infrared capability for remote control of TVs and air conditioning units. The light can be set to turn on and off automatically in response to presence, or to dim gently up and down at the start and end of the day. You can set it to turn the TV on when you enter the room. You can use it as an intercom, stream music on it from a phone (or from the built-in memory card slot) or even record messages to be played back when it next detects someone enter the house. The presence sensor can also be used for security – automatically sending you a message if it spots movement while you're out. <http://luxreview.com/article/2016/01/sony-s-new-smart-light-is-the-most-versatile-we-ve-seen>



24. ComfyLight - The Learning Light That Protects Your Home - The bulb houses a motion detector; it flashes if it detects a break-in; and it turns on and off throughout the day to mimic your normal routines. ComfyLight is the first light bulb that is able to learn how you move around at home and then to simulate your movements perfectly when you're out. It can detect and alert you to movement when you are out. The ComfyLight's presence sensor detects unexpected movements in your home and alerts you to what's happening via your smartphone. They have continuously variable dimming to ensure perfect light quality. When you enter a room, ComfyLight automatically switches the light on and off again when you leave. <http://comfyLight.com/>



25. USAI Lighting Earns Triple Honors in 2015 IES Progress Report - The IES Progress Report is designed to monitor advancements in the art and science space throughout the world.

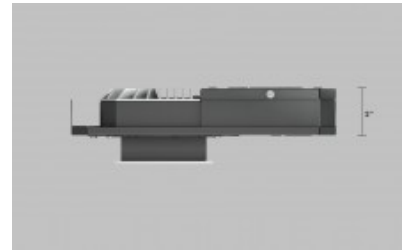
- Bevel 5.0: <http://www.usailighting.com/max-output-50>

BeveLED 5.0 Max Output Recessed Adjustable is the first LED fixture with a 10o beam delivering over 6,025 lumens. This powerful 72,000 center beam is an easy replacement for metal halide sources, lighting high ceiling spaces as never before. This fixture also requires a fraction of the energy and maintenance of traditional sources—it uses only 80W to deliver over 6,025 lumens (74 lm/W), whereas the quartz-halogen source it replaces consumes over 500W.



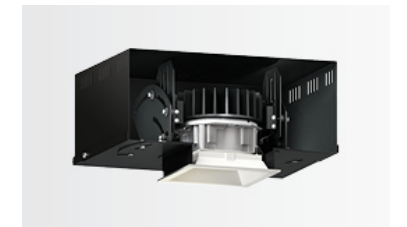
- Baby LED: <http://www.usailighting.com/babyled>

BabyLED was recognized as the shallowest recessed LED downlight housing in the world and represents an engineering achievement. Measuring less than 3" tall, BabyLED's minimal profile means anyone can use USAI recessed lighting in any space with minimal changes to finished ceiling height. BabyLED delivers over 1150 lumens and 64 lumens per watt in a variety of classic white color temperatures, all from a tiny 3" aperture.



- Infinite Color+: <http://www.usailighting.com/infinite-color-2>

Infinite Color+ is the first architectural line of LED downlights offering tunable white and full color output from 1900 to 8000k. In developing Infinite Color+, USAI Lighting took the unique approach of engineering the perfect white light source first, and then integrating colored light functionality. This method ensures the creation of rich, beautiful, high quality white light, with a full spectrum of smooth, well-blended hues to choose from in addition.



26. Terralux Unveils New LED Light Engine Series for OEM and Retrofit Wall Sconces - SR308 and

SR312 series products are an easy-to-install LED upgrade for use in commercial wall sconces. They are a UL recognized component (UL 8750), making them suitable for use in new fixtures by OEM lighting fixture manufacturers. They are also UL certified as LED Retrofit Kits (UL 1598C) for upgrade of existing incandescent or ballasted compact fluorescent (CFL) lighting fixtures to energy efficient LED. All models are ENERGY STAR certified, as Luminaire Retrofit Kits, which qualifies them for utility rebates. Designed for use in commercial applications, they are available in five different lumen packages (850 – 2100 lm), four different correlated color temperatures (2700K, 3000K, 3500K and 4000K), and include universal 120-277V 0-10V dimming, which provides additional control and energy cost savings potential. <http://terralux.com/products/illumination/>



- 27. Green Creative New T5 24W HO 4 FT DIR Lamp** - This TITANIUM LED SERIES T5 Tube has been designed and engineered for demanding commercial applications. This plug and play direct replacement tube is compatible with Instant Start and Programmed Start Ballasts and requires no rewiring during installation. This dimmable lamp's innovative design and compact light engine produce 270° of evenly diffused light. The micro-designed driver allows for a smaller end cap and end-to-end lighting with no dark spots. 3050lm - 54W Fluorescent Replacement; 109 LPW efficacy; 0 - 10V dimming; available in 3000K, 3500K, 4000K & 5000K CCT. <http://gc-lighting.com/products/direct-t5-24w-ho-4ft/>



National EnergyWatch...

- 28. Acuity Brands Acquires GeoMetri** - GeoMetri, LLC, is a provider of a software and services platform for mapping, navigation and analytics. The acquisition adds advanced indoor mapping and navigation capabilities to the ByteLight(TM) indoor positioning technology solution from Acuity Brands, which helps retailers deliver a tailored, mobile-enabled omnichannel shopping experience to their customers. Indoor positioning also can be deployed to optimize and increase understanding of how occupants interact within large-scale indoor environments. These indoor capabilities, together with the ability to provide mapping for surrounding outdoor spaces, create new opportunities for data analytics that can lead to operational efficiencies, enhanced safety, and increased revenues in spaces such as airports, shopping malls, logistics centers, universities and healthcare facilities. <http://www.tedmag.com>
- 29. LCA Offers EE107: Lighting Controls for Existing Buildings** - The Lighting Controls Association (LCA) has published a new course to enhance its popular Education Express program. EE107 introduces students to lighting control strategies suitable for existing buildings. Authored by Craig DiLouie, LC, it outlines energy code obligations, identifies rebate opportunities, and provides application guidance and provides in-depth education about lighting controls and controllable ballast technology, application, system design and commissioning.. For more information about LCA's Education Express, including a complete course listing, visit the LCA web site at www.LightingControlsAssociation.org and click the Education Express button.
- 30. Energy Conservation Standards for Ceiling Fan Light Kits; Final Rule** - The Energy Policy and Conservation Act of 1975 (EPCA), as amended, prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including ceiling fan light kits (CFLKs). EPCA also requires the U.S. Department of Energy (DOE) to periodically determine whether more-stringent standards would be technologically feasible and economically justified, and would save a significant amount of energy. In this final rule, DOE is adopting more-stringent energy conservation standards for CFLKs. It has determined that the amended energy conservation standards for these products would result in significant conservation of energy, and are technologically feasible and economically justified. The effective date of this rule is March 7, 2016. Compliance with the amended standards established for CFLKs in this final rule is required on January 7, 2019. <http://www.regulations.gov/#!documentDetail;D=EERE-2012-BT-STD-0045-0129>



31. Interested in Getting a Degree in Lighting? by Craig DiLouie - A number of education providers offer degrees in lighting: <http://www.lightnowblog.com/>

[The Lighting Research Center](#)
[The New York School of Interior Design](#)
[The New School / Parsons](#)
[UC Boulder](#)
[University of Kansas](#)
[Penn State](#)
[University of Nebraska-Lincoln](#)
[Oklahoma State University](#)

31. US Supreme Court Decision: Demand Response Forces Awaken - In a long-awaited decision sure to benefit our wallets and the planet, the U.S. Supreme Court today upheld the Federal Energy Regulatory Commission's (FERC) authority to design rules and incentives for electricity customers to get paid for reducing consumption during periods of high electricity demand. Known as "demand response," it's most often used when energy is expensive and the grid's limits are tested. The court's decision could save customers billions of dollars, move the ball forward in the fight against climate change, and remove barriers to the modernization necessary to achieve a clean, reliable and affordable grid. <http://www.renewableenergyworld.com>

32. Revolution Lighting Partners with Rexel Holdings USA - Revolution Lighting Technologies (RVLT) announced it will partner with leading national distributor of electrical supplies and services, Rexel Holdings USA. Revolution Lighting's LED products will be offered by Rexel Holdings USA and its divisions including Rexel, Rexel Energy Solutions, Gexpro, Platt and Capitol Light, including online and in more than 500 national retail locations, to its customers within the industrial, residential and commercial markets. <http://www.tedmag.com>

33. Ensuring Your Distributorship's Survival in a Digital World by Bridget McCrea - It's no longer a matter of "if" your company needs a solid e-commerce strategy – it's a matter of "when" – and the time is now. Even if your top customers aren't transacting business online, price-shopping on their iPads at the jobsite, or asking you to get your proverbial digital act together, they will be soon. Research firm Frost & Sullivan expects business-to-business (B2B) e-commerce to hit \$12 trillion in sales worldwide by 2020 (up from \$5.5 trillion in 2012). The firm says the migration of B2B sales to the online world is happening for four reasons, all of which are relevant to the electrical distributor: <http://www.tedmag.com>

1. An expectation among a growing number of companies to conduct buying and selling online;
2. A shift from some companies to conduct procurement transactions through the Internet instead of through electronic data interchange, or EDI;
3. The growing interest of companies in placing orders through mobile commerce devices;
4. And the increasing popularity of e-marketplaces such as Alibaba.com and Amazon Business.

34. 10th Anniversary LEDucation Online Registration Is Open - Tuesday - March 29th, 2016 - 10 am - 8 pm; Wednesday - March 30th, 2016 - 10 am - 6 pm; LOCATION: NY Hilton at Midtown, NYC. General Admission provides access to the LEDucation Show Floor for the entire duration of the show (2 days). Registration for Educational Seminars is available on a first come, first serve basis and is \$10 per session or \$50 for all sessions. <http://leducation.org/registration.html>



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- 35. PECO rewards Parking Authority for Airport Energy Savings** - The Philadelphia Parking Authority has received a \$121,742 rebate from Peco Energy Co. for installing 1,400 LED lights on the terminal arrivals roadway at Philadelphia International Airport between Terminals A to F. The rebate is part of Peco's "smart equipment incentives" program that gives small businesses, commercial and industrial customers, and government institutions financial rebates for energy-efficiency upgrades. The parking authority plans over the next three years to install LED lights at its seven airport parking garages and three garages in Center City, 1/28 The Philadelphia Inquirer
- 36. Energy-Saving Program Paying Off for City, Says Wilkes-Barre, PA Official** - The city issued more than \$6 million in bonds to fund the project that will repay the cost over 20 years through the energy savings from such steps as retrofitting more than 2,000 streetlights with LED lighting, Operations Director Butch Frati explained. The city "overachieved" in savings in the first year on the streetlights, he said. It also came up with an accurate account of lights and eliminated paying for hundreds of those not owned by the city. Last year former mayor Tom Leighton placed the overall savings at \$549,066. 1/27 The Times Leader
- 37. Ameren Missouri to Convert 125,000 Street Lights to LED** - The utility plans to replace about 25,000 Ameren-owned street lights each year. In five years, about two thirds of the street lights it owns will be converted to LED. For the new LED lights, Ameren also proposed lowering the flat monthly rate it charges for utility-owned street lights by about 10 percent. Local governments, who tend to be Ameren's street light customers, have long complained that the utility charges far more for the lights it owns than for city-owned lights. 1/15 St. Louis Post-Dispatch
- 38. \$1.8 Million LED Streetlight Project Begins in Saginaw, Michigan** - The city has started to replace 6,400 city streetlights with LEDs, which is estimated to cost the city \$ 1.8 million. Crews have been installing the lights since Jan. 25, 2016, which is expected to be completed within four months. The new streetlights will save 68% in energy consumption than older HPS streetlights that offer the same level of illumination. In late October the city government financed the cost of the project and invested another \$3.4 million worth of vehicle and equipment purchases and building improvements by issuing bonds that totaled \$5.2 million.
http://www.mlive.com/news/saginaw/index.ssf/2016/01/18_million_led_street_light_re.html
- 39. Rebates for LED Lights, Energy Efficient Equipment in Jeopardy in Nevada** - The Public Utilities Commission of Nevada approved cutting popular energy efficiency programs for Southern Nevada residents, programs that lowered the cost of residential LED lights, assisted customers with recycling their refrigerators and helped cover the cost of expensive high-efficiency pool pumps. Commissioners argued that the cost of residential lighting has decreased. They also expressed concern that the residential lighting program has a free-rider problem and questioned how much of a subsidy is enough, noting that if the program continues its success, NV Energy will have rebated more than three LEDs for each of its 770,000 customers in Southern Nevada by 2018. 1/20 McClatchy-Tribune



40. New CalEnergy Regs to Increase Costs, Lower Energy Efficiency for LED Bulbs - Today the California Energy Commission (CEC) unanimously approved the Title 20 Appliance Efficiency Regulations despite sound and substantive policy recommendations by industry, lighting experts, and consumer groups working to ensure sustained market adoption and energy efficiency gains. NEMA President & CEO Kevin J. Cosgriff: “CEC staff analysis acknowledges the Title 20 proposal enacted today will increase the price of LED lamps and that the proposed designs are less energy-efficient than today’s more popular LED options. Sadly today’s vote will negatively affect the growth of LED technology in California, the efficiency gains that accompany it, and the prices local citizens have to bear.” <http://www.nema.org>

Monthly Special Feature... A DOE Look Back at 2015

Looking back at the year 2015, there's been a clear recognition that SSL is in the process of redefining lighting on multiple levels – not just in terms of how it's delivered and powered, but also with regard to how we conceive of it and what we expect from it. It's also clear that SSL science and engineering still have quite a ways to go to fulfill the technology's promise and potential – despite all the dazzling progress that's been made to date. The [DOE SSL Program](#) works hard on multiple fronts to help make sure this happens. Below are some highlights of what we did in 2015:

- **DOE starts crosscutting dialogue on connected lighting.** In November 2015, DOE convened the inaugural [Connected Lighting Systems Meeting](#), which drew more than 260 participants from the semiconductor, IT, and lighting industries. The intent was to start a dialogue about how best to harness lighting systems with the rapidly emerging Internet of Things. That dialogue has continued and is spreading to include new players and efforts all the time. More details are available on the [DOE SSL website](#), where we added an informative [section devoted to connected lighting](#). Our goal is to make sure that energy savings don't get lost in the shuffle as new lighting benefits and values are enabled by SSL technology
- **Report estimates LED lighting adoption and impact.** In July 2015, DOE published a report, [Adoption of Light-Emitting Diodes in Common Lighting Applications](#), that estimated the energy saved due to current levels of LED penetration as of 2014, as well as the potential energy savings if each of the applications considered switched completely to the best available LEDs. From 2012 to 2014, LED installations more than quadrupled to 215 million units overall. That may sound like a lot, but overall market penetration was only 3% (versus less than 1% in 2012). So although LED installations saved 143 trillion British thermal units (tBtu) of primary energy in 2014 (saving about \$1.4 billion), that figure would have been 4,896 tBtu if each application had switched completely to LED – which means we're only saving about 3% of the energy today's LED products could be saving. Of those 4,896 tBtu, linear and low-bay/high-bay products account for more than 60%, indicating that those two applications hold the greatest potential for future energy savings from SSL.



- **LED Lighting Facts® database offers market snapshot.** The magnitude of SSL's remaining potential is borne out by the [LED Lighting Facts](#) database. With more than 35,000 registered products by the end of 2015, that database provides up-to-date insights into the performance of market-available LED lighting products, and a look at their efficacies shows that the average is 88 lm/W – far short of DOE's 2020 target of 200 lm/W, as set forth in our [SSL R&D Plan](#).
- **DOE funds 19 new SSL R&D projects** to help the technology reach its potential. In 2015 we awarded 10 new projects through the funding opportunity announcement process, for a total value of \$13 million. These projects include applied research in LED droop and downconverters, product development in novel luminaire systems, and research into OLED emitter materials and manufacturable light-extraction approaches. On top of this, nine new SSL Small Business Innovation Research (SBIR) projects were awarded, working on topics ranging from advanced controls to new emitter and downconverter materials.
- **CALiPER study examines color-tunable LED products.** In August 2015, DOE issued the [first report](#) in a [CALiPER](#) series on color-tunable luminaires. Report 23: *Photometric Testing of White-Tunable LED Luminaires* raised a number of questions about existing test methodology and its application to this category of products, which will require further discussion and consideration in the near future. To complement the report, we added related [web content](#) to provide preliminary guidance on testing, specifying, and controlling color-tunable luminaires. Four such luminaires were among those recognized as outstanding by the 2015 Indoor [Next Generation Luminaires™](#) (NGL) Solid-State Lighting Design Competition.
- **CALiPER and GATEWAY take deep dives into key issues.** In 2015, the [CALiPER](#) and [GATEWAY](#) programs continued to examine issues central to solid-state lighting's continued advancement, issuing in-depth reports on [MR16](#) lamps, challenging applications ([high-flux/high-temperature](#) and [airport apron](#)), university lighting ([exterior](#) and [interior](#)), and extensive streetlight conversions in [Portland](#) and [Detroit](#).
- **Clarifying color rendition.** In August 2015, the Illuminating Engineering Society (IES) published an important technical memorandum, TM-30-15, which outlines a new system for evaluating the color rendition of light sources. TM-30 remedies flaws and limitations of the widely used CRI method, while providing additional as well as more detailed information. DOE hosted two [webcasts](#) on the topic in September 2015 – which together were attended by more than 1,600 viewers – and the following month published a [Technology Fact Sheet](#), with more related resources [still to come](#).
- **Accelerating OLED development.** In September 2015, DOE hosted a meeting that brought OLED stakeholders to Pittsburgh from across the country. The goal was to build on discussions from previous DOE-hosted OLED meetings and provide a forum for open dialogue on OLED technology advances, R&D needs, opportunities for increased collaboration, and efforts to advance OLED market viability. One topic discussed was DOE's [testing opportunity for OLEDs](#), which was initiated in 2014 and picked up steam in 2015, providing companies with quick feedback on various R&D approaches, compared to the two-year timeline for traditional DOE R&D projects.

