Intelligent Lighting Systems

By Michael Shulman / Principal Engineer

The lighting world is abuzz with talk of “intelligent” systems. In this context, intelligence is understood to be the ability of the system to offer a variable response to increasingly sophisticated sensory input. The sensory input could include daylighting levels, occupancy status, and task activity that is integrated into a system response for minimizing energy consumption, maximizing safety, and ease or effectiveness of the desired behavior.

For example, photometric sensors on outdoor lighting used for illuminate roadways or pedestrian trails can increase or decrease the output of luminaires based on the need (or lack thereof) to supplement sunlight. Similarly, motion sensors can activate these luminaires only when vehicles or people are in their vicinity. In combination, these two types of “intelligence” avoid wasting energy (by not illuminating an area when there is no need for illumination) while facilitating safe passage when needed.

Some levels of intelligence have been available and in use within the built environment for a very long time. But the shift to digital controls and solid...
A Letter From Todd

Welcome to our third edition of Lumen Insights for 2013. As the fall season approaches, the leaves are not the only things that are changing. The lighting industry continues its rapid rate of technological change and UL continues to innovate new service offerings to keep pace with the changing marketplace.

We are listening to our customers and industry stakeholders, and are actively seeking to create new solutions to the issues that our customers are facing. In this issue, some of the latest changes and offerings highlighted include our new enhanced certification mark and badge, new Product Safety & Compliance Fundamentals e-learning suite, expansion of Zhaga Testing capabilities and thought leadership with respect to Intelligent Lighting Systems.

These represent only a handful of the new initiatives we are engaged in, and there are many more to come so stay tuned! Cheers

Todd A. Straka
Business Development Director
Global Lighting

File Conversion Program

By Michael Ritto / Business Development Manager, Lighting

UL’s File Conversion Program is a process for evaluating and accepting certifications and data issued by other certification bodies for the purpose of issuing a UL or C-UL Mark. If your products are certified by organizations that are qualified OSHA NRTL-, ANSI- or SCC-accredited third-party certifiers, the program allows for an easy certification path for you to obtain the UL Mark. Choosing the UL Mark provides manufacturers with a unique marketing advantage afforded by the high level of recognition of the UL Mark by U.S. consumers and demand drivers in the supply chain. Once your product is certified by UL, it will be supported by UL’s comprehensive global network of technical professionals to determine ongoing product compliance, giving you confidence that your products continue to meet the requirements established by your customers. See link to our sell sheet that can be found in the resources section of ul.com/lighting.

For additional information or questions, please contact us at LightingConversion@ul.com
Intelligent Lighting Systems (continued from cover)

state (LED) lighting has enabled expanded opportunities. Solid state luminaires can be turned on and off, and adjusted through a full range of output levels, a (theoretically) infinite number of times with (near) instantaneous response times and without any reduction in their useful life. Digital controls allow for programming that can be widely varied for the desired circumstances and (theoretically, again) infinitely precise. Neither of these opportunities existed with the legacy incandescent, fluorescent, or HID lighting technologies. Add to this the availability of low cost, sophisticated sensor technology, much more is possible than ever before.

But with opportunities also come risks. What happens when we begin to rely on this “intelligence”? Clearly, the complexity of intelligent systems can lead to failures. Programming can be inadequate to anticipate the field conditions, ‘false’ signals can be introduced (by malicious intent or by unanticipated electrical or magnetic interference), and parts can fail (due to manufacturing defects, extreme environmental conditions, or just statistical inevitability). Because human safety and achieving energy conservation goals will depend on the proper operation of these intelligent systems, their deployment requires attention to means for both reducing the probability of failure and responding to it when it occurs.

It can also be foreseen that human behavior may evolve in response to the intelligent systems in our environment. There is the possibility that long-held assumptions may no longer be valid. Consider that it was common wisdom to pump car brakes to slow or stop a vehicle under slippery conditions. Then along came ABS braking systems where drivers have to instead apply a steady pressure on the brake pedal. Anticipating human behavior is always challenging but it is part of the landscape of things to consider as intelligent systems are developed and deployed.

And this is the role of standards and certification. Standards set the expectations and certifications validate that those expectations are being met. Some standards and certification programs already exist where lighting system performance is essential for safety. For example, the Life Safety Code (NFPA 101) and the International Fire Code require emergency luminaires to be listed per UL 924 (a failure prevention measure) and that these luminaires be deployed so that failure of any one luminaire does not leave an area in total darkness (a response to failure). Similar approaches are in place for security and fire protection systems, with the individual components requiring certification and the system designed to provide notification in case of individual component failure.

As lighting systems continue to expand their intelligence by integrating a wider array of sensors and controls, the user community will at first be both impressed and delighted at how these advances can enhance their lifestyle and improve the environment. But soon enough, questions will be raised. Are parts from manufacturer B compatible with a system designed by manufacturer A? If the system is reprogrammed to accommodate a new feature, will it adversely impact the basic performance specifications? And who owns the data gathered by the system, and can / will it be used to infringe upon privacy rights? This last question actually arose several years ago during a Life Safety Code committee meeting while discussing a proposal to deploy cameras at the exits of high-rise buildings, as a means to determine the rate of occupant egress and possibly to know whether a building has been fully evacuated. Surely this can be understood to be valuable information towards the goal of saving lives, and yet our society is becoming increasingly sensitive to the potential (mis) uses of such data.

Standards are a way for society to agree upon design parameters that can establish expectations for minimum system performance. They can also be used to facilitate product interchangeability and to establish codes of conduct for system users. Standards for intelligent lighting systems face a long journey but it is time to get started. UL and industry have travelled these paths before with great success, and we are looking forward to working collaboratively with both industry leaders and innovative individuals to facilitate the deployment and success of intelligent lighting systems across the globe, so we can all enjoy their full potential.
Photovoltaic LED Electric Signs

UL announces the first Listing of a photovoltaic LED electric sign

By Cliff Adams / Senior Staff Engineer

Improved LED efficiency combined with increased battery storage capacity and efficient photovoltaic panels provide the technology to make photovoltaic LED electric signs a cost effective advertising solution, saving energy and installation costs.

A wide range of applications include temporary signs, trailer mounted signs, and permanently installed outdoor signs. For remote sign installations, electric utility connection costs increase with distance to a power connection point, and substantial effort may be required to work around existing infrastructure, such as roads, parking lots and sidewalks. In these types of installations, an “off grid/standalone” solution may substantially reduce installation costs. Opportunities also exist to install photovoltaic signs using existing structures for support of the photovoltaic panels such as bus stop shelters, adjacent buildings, and ATM kiosks.

UL’s Standard for Electric Signs, UL 48, already has in place the requirements for LED signs, portable signs, trailer mounted signs and signs made in sections. UL has developed and will soon publish a Certification Requirement Decision (CRD) that includes supplementary requirements for photovoltaic electric signs that may be designed for one of the following modes of operation:

- Off grid / Standalone – All power for sign operation is provided from the photovoltaic source or a battery, and no connection to the A.C. utility service is provided. A standalone inverter may also be provided to service A.C. loads.
- On grid / Nonutility Interactive – Power for sign operation may be provided from the photovoltaic source, a battery, or the A.C. utility. A connection to the A.C. utility service is provided, but an inverter that is used does not supply loads in parallel with the A.C. utility and an inverter does not supply (export) current or power to the A.C. utility. A transfer switch may be incorporated to switch loads between the inverter and the A.C. utility.
- Utility Interactive – Power for sign operation may be provided from the photovoltaic source, an optional battery or the A.C. utility. A connection to the A.C. utility service is provided.

continued on page 5
Photovoltaic LED Electric Signs (continued from page 4)

utility service is provided, and an inverter which complies with the Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Systems, UL 1741 requirements for Utility Interactive Inverters may supply loads in parallel with the A.C. utility and/or supply current or power to the A.C. utility.

UL certifies rechargeable batteries, photovoltaic panels, battery charge controllers, photovoltaic wire, transfer switches, utility interactive inverters, and various accessories such as wire connectors, sun tracking systems, and fuseholders for use in photovoltaic systems. The following table identifies some of the key UL product categories and requirements for components that may be used in a photovoltaic electric sign.

Photovoltaic electric signs may be self-contained where the sign enclosure houses the batteries and photovoltaic panels. The sign may also be made with separate sections for the sign, batteries and the photovoltaic panels, or combinations thereof.

Photovoltaic signs may need to include the following additional instructions:

• Instructions for grounding the system in accordance with National Electrical Code (NFPA 70) Article 690, Part V “Grounding” for systems operating above 30Vdc.
• Instructions for connecting the sign in accordance with National Electrical Code (NFPA 70) Article 705 when provided with a utility interactive inverter.

In summary, UL is ready to evaluate and certify photovoltaic electric signs and/or components for use with photovoltaic electric signs. Signs previously Listed using UL’s flexible general coverage program for signs, category UXYT, may be additionally evaluated as photovoltaic signs when equipped for photovoltaic operation. UL’s Customer Service may be contacted today for a quote. To learn more about the installation of photovoltaic systems, attend one of the public workshops in the course list below or contact UL’s Knowledge Services to arrange for a private workshop. See link below and search for “photovoltaics”:

http://lms.ulknowledgeservices.com/catalog/browse.catalog.aspx

Photovoltaic Electric Sign Components

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<th>Component</th>
<th>Product Category</th>
<th>Requirements</th>
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</thead>
<tbody>
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<td>Rechargeable batteries such as lead acid, Ni-Cad, Ni-MH, and Li-ion</td>
<td>Batteries for Use in Light Electric Rail &amp; Stationary Applications – Component – BBFX2</td>
<td>UL 1973 Standard for Batteries for Use in Light Electric Rail (LER) Applications and Stationary Applications</td>
</tr>
<tr>
<td>All battery types</td>
<td>Batteries, Household &amp; Commercial – BBFS</td>
<td>UL2054 for Household and Commercial Batteries</td>
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<td>Charge controllers</td>
<td>Photovoltaic Charge Controllers – QIBP or Photovoltaic Charge Controllers – Component-QIBP2</td>
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<td>Photovoltaic panels</td>
<td>Photovoltaic Modules &amp; Panels – QIGU</td>
<td>UL 1703 for Flat-Plate Photovoltaic Modules and Panels.</td>
</tr>
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<td>Photovoltaic wire</td>
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<td>Transfer switches</td>
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<td>Utility interactive inverters</td>
<td>Static Inverters, Converters and Accessories for Use in Independent Power Systems – QIKH</td>
<td>UL 1741 for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Systems</td>
</tr>
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UL Launches New Education Program: The “ABCs” of Product Safety and Compliance

It’s no secret that today’s manufacturers face increasing challenges in the global business environment. Nearly 10,000 employees retire from the workforce each day in the United States alone.¹ This loss of technical expertise poses a real problem for companies whose most knowledgeable senior staff are preparing to retire.

As if this wasn’t enough to worry about, product recalls have increased by approximately 62 percent between 2007 and 2011,² potentially putting consumers in danger and brand reputations at risk. Complex international regulatory requirements also weigh heavily on the minds of organizations who wish to get products into key markets quickly and maintain a competitive edge.

In response to these ongoing challenges, UL is launching Product Safety & Compliance Fundamentals, a first-of-its-kind eLearning suite that provides standardized education on product safety and regulatory requirements. The learnings extend across experience levels, global regions and business functions to address gaps, systematically and permanently upgrading organizational knowledge. Available for individual download or company-wide subscription, the program provides a baseline level of compliance knowledge and can help staff spend less time searching for information and more time applying it. Courses are only 30-60 minutes each, allowing users to learn at their own pace. And with a continually growing portfolio of courses, Product Safety & Compliance Fundamentals will keep your staff current on the most up-to-date material available.

Sample courses include:
- Introduction to Safety Standards
- Product Safety Requirements for China Market Access
- Compliance Fundamentals for Global Market Access
- Navigating the National Electrical Code® for North America
- Functional Safety
- Introduction to Hazard Based Safety Engineering (HBSE)

Learn more about Product Safety & Compliance Fundamentals at ul.com/fundamentals.

² Bureau, G.W. & Doering, C. “Surge in products being recalled may be numbing consumers.” USA Today. Web. 10 June 2012.
Enhanced UL Marks Deliver More

The world’s most trusted mark has been enhanced. The enhanced UL Certification Mark and UL Badge system was created to deliver greater clarity and acceptance in the market today.

Marks Hub is a dedicated tool for our customers and other stakeholders to access information and tools related to the evolved Certification Marks and Badges. The Marks Hub enables users — who include manufacturers, regulators and retailers — dynamically build marks and badges.

What does this mean for me?
Learn more today, markshub.ul.com
2013 ALA Annual Conference

UL Highlight
The American Lighting Association (ALA), the trade association for the residential lighting industry in the United States, Canada and the Caribbean, will host its annual conference in Lost Pines, Texas, this year Sept. 22 – 24. Attended by ALA member and nonmember showrooms, reps, designers, manufacturers and more, the “All-Star” theme will feature two of the most highly rated keynote speakers from previous events among the 18 educational seminars focused on technology, sales, marketing and other business essentials.

The main goals of ALA are to protect the industry (legislation) and promote the use and sale of quality lighting (education).

To learn more visit https://www.americanlightingassoc.com/Members/Home.aspx

Ben Miller, senior vice president & president of UL’s Product Safety Business, to present UL Leader in LED Lighting and Standards Award to 2013 recipient at ALA Annual Banquet, Sponsored by UL

UL sponsors the ALA Annual Conference’s closing event, an evening reception and award banquet where both UL and ALA honor industry members for their unique contributions and outstanding service to the lighting industry.

As has now become a tradition at the ALA banquet, UL is pleased to recognize a key member of the lighting industry who is making significant impact with respect to advancing LED technology and standards development, while preserving UL’s safety mission.

This year’s award recognizes outstanding contributions toward the advancement of high-quality, energy-efficient lighting products. As such, it is with great pleasure that we announce this year’s recipient, Dr. Pekka Hakkarainen, vice president at Lutron Electronics.

UL is keenly aware of the contributions that Pekka has made to the lighting industry on behalf of Lutron, a long-standing global leader within the lighting industry.

Pekka has demonstrated great leadership, integrity and dedication in assisting the continued progress of intelligent lighting systems. One quick review of his resume highlights his commitment to the lighting industry. Throughout his career, Pekka has been a long-time member of the Illuminating Engineering Society of North America and the National Electrical Manufacturers Association. He has chaired several IESNA and NEMA Committees and is also the immediate past chair of the Lighting Systems Division of NEMA. Pekka continues to focus his efforts in the area of government and industry relations, including standards development activities. His contributions to the lighting industry have been many, and for that we would like to take this opportunity to recognize his efforts.

Congratulations to Dr. Pekka Hakkarainen, this year’s recipient of the 2013 UL Leadership in Lighting Safety and Standards Development Award.

UL Workplace Health and Safety and UL Knowledge Services will also be at the annual conference

UL Workplace Health and Safety helps clients optimize their safety results by providing the management, analytical, learning and reporting tools they need to keep their people safe along with the guidance and expertise required to create an enduring safety culture. Learn how UL Workplace Health and Safety can help your company/showroom keep your people safe and create an enduring culture of safety. Download the latest brochure, ulworkplace.com/sites/default/files/ULworkplace_brochure2013_vWEB1.pdf and visit ulworkplace.com/about-us for more information.

UL Knowledge Services provides education solutions that help promote safer living and working environments. The world is changing. With it, the definition of safety is expanding exponentially, covering new and ever evolving areas of risk. Keep pace with new technologies and empower customers to innovate, cross-market products, improve speed to market and enhance overall product and employee safety with UL Knowledge Services. Learn here.

Lighting for Tomorrow Winners to be Announced at ALA Annual Conference

Since 2002, the Lighting for Tomorrow competition has recognized the best of the new energy-efficient residential lighting products with emphasis on those with consumer appeal and value. Lighting for Tomorrow looks for ways to eliminate market barriers that slow the adoption and use of energy-efficient residential products. A significant barrier identified by consumers, utilities and manufacturers is the compatibility of various lighting fixtures with lighting controls, particularly dimmers. In response, Lighting for Tomorrow included lighting controls in the 2010 competition which was again expanded in 2012 to include retrofit products and new in 2013, OLED fixtures were included. UL is a proud co-sponsor hosting the annual judging event along with CEE and ALA. This year’s winners will be announced at the annual ALA Conference on Sept. 23 in Lost Pines, Texas. For details about the competition judging process and past winners, visit www.lightingfortomorrow.com.
LightSmart™ App adds ROI and CO₂ Footprint Calculator

Just released, version 1.5 enhancements to UL’s LightSmart app featuring the ROI and CO₂ footprint calculators will be on display at UL’s exhibit at the ALA Annual Conference.
UL Standards encompass UL’s extensive safety research, scientific expertise and uncompromising focus on quality. With over a century of experience and the development of more than 1,000 Standards, UL continues to break new ground in its mission to help create a safer, more sustainable world.

Standards information link:

Register for "What's New" – UL Standards updates at:

**UL 1598 – Luminaires**

(Trinational standard)

Next revision cycle started, which will be a 2-year cycle. Call for Proposals went out on April 7, 2013, with new proposals due May 8, 2013, but then extended to June 22, 2013. The proposals are being prepared for Technical Harmonization Committee review.

**UL 1598C – Light-Emitting Diode (LED) Retrofit Luminaria Conversion Kits**

Proposed 1st edition went out for ballot on March 15, 2013. The proposal achieved consensus and a STP meeting was held on July 17, 2013, to discuss the comments received. The next steps are comment resolution and recirculation of revised proposals.

**UL 1993 – Self-ballasted Lamps and Lamp Adapters (Trinational standard)**

Next revision cycle started. Call for Proposals went out on July 1, 2013, with new proposals due Aug. 30, 2013, but then was extended to Sept. 22, 2013.

**UL 8750 – Light Emitting Diode (LED) Equipment For Use In Lighting Products**

Proposal went out for ballot on Sept. 21, 2012, and also discussed at a Nov. 2012 STP meeting. The proposal related to adding requirements for dimmable LED drivers for use with solid-state dimming controls electrically wired in series with the mains supply. The proposal went out for recirculation on May 31, 2013. The proposal is being prepared for publication in the standard.

Multiple proposals went out for preliminary review on Oct. 24, 2012. These proposals were discussed at the November 2012 STP meeting. Some of the proposals were reworked and went out for ballot on June 7, 2013. The remaining topics will proceed separately. Link to the summary of topics: ulstandardsinfonet.ul.com/sot/b8750_1_20130607_sum.html

Next STP meeting scheduled for Nov. 19–20, 2013, near the UL Northbrook, Ill., office.

**UL 8752 / ULC-S8752 – Organic Light Emitting Diode (LED) Panels**

Multiple proposals went out for preliminary review on May 28, 2013, and for ballot on July 12, 2013. Link to the summary of topics: ulstandardsinfonet.ul.com/sot/b8752_1_20130712_sum.html

**UL 8753 / ULC-S8753 – Standard for Field-Replaceable Light Emitting Diode (LED) Light Engines**

The 1st edition of the joint UL/ULC Standard for Field-Replaceable Light Emitting Diode (LED) Light Engines, UL 8753 / ULC-S8753, was published on July 31, 2013.

**UL 8754 / ULC-S8754 – Holders, Bases, and Connectors for Solid-State (LED) Light Engines and Arrays**

The 1st edition of the joint UL/ULC Standard for Holders, Bases, and Connectors for Solid-State (LED) Light Engines and Arrays, UL 8754 / ULC-S8754, was published on July 31, 2013.

**UL 935, UL 1029, UL 542 – Ballasts (Trinational Standard)**

The draft of Part 1 of the proposed Standard, covering general construction and test requirements is being reviewed by the CANENA Harmonization Committee (THC34/SC34C) and being prepared for preliminary review.

The Part 2 documents, which will include specific requirement for the various product types, still need to be developed.

**UL 935 (current UL Standard, 10th edition)**

Proposal went out for preliminary review on May 29, 2013. The proposal was related to the addition of requirements for ballasts intended to be dimmed using solid-state dimming controls electrically wired in series with the mains supply.
Proposal went out for preliminary review on July 26, 2013. The proposal was related to revising the arcing test method in Section 30.

**UL 153 – Portable Electric Luminaires**
Proposal went out for ballot on March 22, 2013. The proposal was related to the revision to supply cord splices for clamp-on units. These revisions were published on Aug. 23, 2013.

Proposal went out for preliminary review on March 20, 2013, and for ballot on April 19, 2013. The proposal was related to the revision of extension cord types in wet locations in Par 193.2. These revisions were published on Aug. 23, 2013.

Proposals went out for ballot on May 10, 2013. The proposals were related to (1) the revision of the cord length requirement for stake-mounted portable luminaires and (2) the revision of the power supply cord routing for portable cabinet lights. These revisions were published on Aug. 23, 2013.

Proposal went out for ballot on June 21, 2013. The proposal was related to the addition of the exception of 123C.5.2 for through-cord fittings on hand lights. These revisions were published on Aug. 23, 2013.

Proposal went out for ballot on July 12, 2013. The proposals were related to (1) clarification of scope exclusions and references to other lighting standards and (2) revision of the lamp replacement marking for screw-base fluorescent and LED luminaires. These revisions were published on Aug. 23, 2013.

**UL 1786 – Direct Plug-In Nightlights (Bi-national Standard)**
Next revision cycle started. Call for Proposals went out on Jan. 23, 2013, with new proposals due Feb. 22, 2013. Proposals have been forwarded to the Technical Harmonization Committee for review.

**UL 496 – Lampholders (Bi-national standard)**

**UL 2108 – Low Voltage Lighting Systems**
Multiple proposals went out for preliminary review on Aug. 27, 2013, with a due date of Sept. 17, 2013. Link to the summary of topics: ulstandardsinfonet.ul.com/sot/b2108_1_20130827_sum.html

**UL 924 – Emergency Lighting and Power Equipment**
Multiple proposals went out for preliminary review on April 24, 2013. The proposals went out for ballot on Aug. 16, 2013, with a due date of Sept. 30, 2013. Link to the summary of topics: ulstandardsinfonet.ul.com/sot/b0924_9_20130424_sum.html

**UL 676 – Underwater Luminaires and Submersible Junction Boxes**
Proposal went out for ballot on July 12, 2013. The proposal was related to nonmetallic and isolated, low voltage luminaires.

**UL 1241 – Junction Boxes for Swimming Pool Luminaires**
Revisions were published on Aug. 28, 2013, in accordance with the proposal dated June 28, 2013. The revisions were issued to update requirements for the number of grounding terminations required and for strain relief and installation instructions.

**UL 379 – Power Units for Fountain, Swimming Pool, and SPA Luminaires**
In March 2013, UL 379 was added under STP 676, the Standards Technical Panel (STP) for underwater luminaires and submersible junction boxes.

UL drafted the Proposed 1st edition of UL 379, which was based upon the Outline of Investigation. The Proposed 1st edition went out for ballot on April 19, 2013. The 1st edition was published on June 19, 2013.

**UL 48 – Electric Signs**
Proposal went out for preliminary review on Dec. 24, 2012. The proposal was related to two topics: (1) clarification of drain opening requirements and (2) grounding and bonding marking. The next step is for the proposal to go out for ballot.

**UL 48B – Changing Message Signs and Displays**
UL is currently developing proposed 1st edition for UL 48B.
Zhaga Authorized Services

By Michael Ritto, P.E. / Business Development Manager

Zhaga Interface Specification Book 4: High-intensity LED light engines

Book 4 defines the interfaces of a type-D LED light engine (nonsocketable LED module with separate electronic control gear). This LED light engine is intended for applications that need a high-intensity light source, such as street lighting and industrial high-bay applications. Book 4 specifies a rectangular light-emitting surface in three variants, 30 mm x 7.5 mm, 42 mm x 10.5 mm and 60 mm x 15 mm.

Zhaga Interface Specification Book 7: Indoor light engines with separate electronic control gear

Book 7 defines the interfaces of a type-D LED light engine (nonsocketable LED module with separate electronic control gear). Book 7 includes a range of indoor LED light engines with different form factors and is intended for applications such as indoor office lighting.

Zhaga Interface Specification Book 8: Socketable LED light engine with integrated control gear (85 mm base)

Book 8 defines a socketable light engine with integrated control gear — mainly used in downlight applications.

This is in addition to the two books UL was already authorized to test for:

- Zhaga Interface Specification Book 2: Socketable LED light engine with integrated control gear (65-mm base)

For the most up-to-date collateral from the Zhaga Consortium please visit http://www.zhagastandard.org/about-us/downloads.html

As an authorized Test Center and member of the Zhaga Consortium Steering Committee, UL’s participation in the Zhaga book development and initial testing process further illustrates its growing commitment to assisting in the global adoption and use of high-quality and efficient LED Lighting products.

UL offers an unparalleled portfolio of services to truly provide customers with a ‘single integrated service provider’ experience. Our capabilities in North American safety certification, global market access, performance testing, verification testing, interoperability certifications, EMC, and other services, enables us to help our clients achieve their goals and win in the market.

For additional information regarding Zhaga or any other of UL’s services please contact 1.877.ULHELPS (1.877.854.3577) or email us at lighting@ul.com.
Energy Efficiency Update

By David Edwards

New EPA ENERGY STAR® Specification Announced

On Aug. 28, 2013, the U. S. Environmental Protections Agency (EPA) released the new ENERGY STAR® Lamps V1.0 specification. This specification combines two technology specific specifications into one comprehensive standard. On Sept. 30, 2014, ENERGY STAR Lamps V1.0 will replace the Compact Fluorescent Lamps V4.3 and the Integral LED Lamps V1.4.

In order to ensure that ENERGY STAR lamps are of the highest quality and most energy efficient, many changes are included in the new specification. Some of these changes are:

• Shared color maintenance requirements for allowable variations
• Modified ambient temperature range for LED lamps
• Added tolerance for CFLs not covered by DOE standards
• Clarified sample size for lamps requiring elevated temperature life testing and that are covered by DOE's regulatory program.
• Modified rapid cycle stress testing orientation requirements.
• Updated CFL frequency requirement language.
• Included leaded glass exemption
• Modified packaging and labeling requirements.
• Clarified dimmable lamp requirements

The EPA has defined the transition timeline for certification as follows:

• Effective immediately, lamp manufacturers can ask an EPA-approved certification body (CB) such as UL to review and approve their eligible products to the Lamps Version V1.0 specification.
• After May 30, 2014, CBs will stop certifying new product submittals to the current CFL and Integral LED specifications, but models already certified to these specifications will remain listed until Sept. 30, 2014.
• On Sept. 30, 2014, all manufactured eligible lamps claiming to be ENERGY STAR, must be certified to Lamps Version V1.0. All previous certifications to the old specification will be taken off of the certified list.

Rely on UL as your full service ENERGY STAR partner. We have a global network of EPA recognized laboratories and serve as an EPA-recognized Certification Body to meet all of your lighting product qualification needs. To discover more about the energy efficiency testing and certification solutions UL provides visit ul.com/lighting or contact UL engineer Jeff Locker, Jeffrey.Lockner@ul.com.

Global Market Access: UL Webcast Through LEDs Magazine

On Aug. 8, UL's Helena Wolf, UL's Global Market Access Operations director, presented “Global Certifications of LED Products”, facilitated by LEDs Magazine. Over 300 lighting professionals representing over 210 companies from over 30 countries attended the event.

The webcast, recording available now, provides attendees with expert knowledge on product regulations for LED and other lighting product, as well as certification schemes for testing compliance with an eye on key global markets.

Is the world your marketplace?

Each country or region has its own rules and regulations. The key to success is to have a clear understanding of each.

• Tap into UL experts and learn about today's product regulations for LED and other lighting products in your key international markets.
• Get essential facts about certification schemes, including the CB Scheme, which can be utilized to consolidate testing for the global market.
• Get briefed on UL's latest regulatory information for key markets including Australia, China, Europe and Mexico.

Whether you're looking to market in one country or multiple countries throughout the world, this webcast will bring you up to speed on global compliance for your lighting products.

To learn more about this webcast and to register today please visit http://ledsmagazine.com/features/10/7/9

Also see: GMA Online Courses