

LumenINSIGHTS™

Shedding Light on Compliance

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Photobiological Testing

The primary purpose of photobiological testing of LED products is to protect the user from potentially harmful optical radiation produced by lighting devices.

Light-emitting diodes (LED) are semiconductor light sources, first introduced in 1962. Early LEDs emitted low-intensity red light, but modern versions are now available across various visible, ultraviolet, and infrared wavelengths, many with very high brightness.

As technology continues to advance and LEDs transition from 'indicator' to 'illuminating' applications, the safety profile changes as well. LEDs produce high brightness pinpoints of light that are becoming increasingly brighter and light more concentrated. LEDs are becoming so uncomfortably bright that even a short glimpse can leave 'sun-spots' in our eyes. These retinal after-images are indicative of potential safety hazards, and present many questions about photobiological safety:

- Is LED light safe to skin and eyes?
- How short and long of exposure is safe?

- What safety standards exist to measure LED light safety?
- How can consumers tell if an LED lighting product is safe?

These are all important questions, and some answers can be found in the work of national and international optical radiation safety committees currently tackling this LED safety issue.

All light sources are characterized by energy distributed over a spectrum, which in simple terms, translates into light color produced. This broad energy output is defined as optical radiation.

Underwriters Laboratories can perform evaluations to both IEC and North


American photobiological standards to help bring safer, high brightness LED products to market.

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UL University UL1598 Designing for Compliance Courses

August 3 Montreal, QC	September 14 Research Triangle Park, North Carolina	October 5 Camas, Washington	CLICK TO SIGN UP!	
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CUSTOMERFOCUSED

Variation Notice Update

Over the past several months, UL has been improving the Follow-up Service variation notice process to increase simplicity, speed, and consistency. One improvement involves reducing delays encountered due to requests for holding shipment as soon as a variation occurs. It is recognized that the disruption in production caused by an immediate hold-shipment then subsequent temporary acceptance may be

problematic for manufacturers through missed shipping deadlines and wasting materials, time and other business resources. To address this, effective June 21, UL Field Representatives will not routinely require holding shipment for product change variations while UL investigates whether a six-month temporary acceptance can be granted. This evaluation under our new processes can usually be expected within a few days. This change to requesting hold shipment of only those UL Labeled products that were found not to meet requirements will stop costly shipment interruption for many variations.

Additionally, UL Field Representatives are the primary contacts for manufacturers needing additional information and guidance.

 To learn more visit www.ul.com/fus



It was great to see many familiar faces and meet new lighting leaders at Lightfair in Las Vegas in April.

It's clear that the lighting industry is

undergoing a rapid shift from traditional light sources to more energy efficient solid state products, such as LED and OLED. This shift is globalizing the business, as traditional country-specific and fragile lighting products transition to highly advanced diodes, power supplies, and control products.

As a global organization, the UL lighting team is ready: focused on leading the third party safety certification with the highest quality, most technically advanced, and most customer friendly services and support.

Our technical teams are driving our standards forward, through the Standard Technical Panel (STP) on UL8750, writing new standards to support environmental claims, and evaluating the photobiological risks and impact of solid state lighting products worldwide.


We've received your feedback, we've listened, and are actively taking your comments and feedback to heart. Based upon your feedback, we are improving our Variation Notice process and our online Request for Quote tools. Please continue to provide your comments, your feedback and your questions, so we can continue to be partners in the Lighting business.

Alberto Uggetti
VP & GM Global Lighting



Online RFQ update

Based directly on your feedback, we've made enhancements to our online request for quote (RFQ) tool. You can now directly request quotes for International Certifications, a suite of Luminaire Testing Laboratory (LTL) services, and we've even added new 'help text' functionality to help clarify our core service offerings. Additional improvements in product search, IEC programs, and new services will be included later this year...

 [Request a quote...](#)



Conditions of acceptability

NEMA asked us to help provide Conditions of Acceptability for components, to help speed up and smooth the submittal process. We're working a new service, details will be shared soon.

LIGHTINGTECHNICALLEADERSHIP

Lightfair 2010 — Keeping the World Safe for LEDs

Mike Shulmann — UL Principal Engineer, Lighting

Some have already been calling this show LEDfair, reflecting the clear dominance of LED products on display. Between time hosting at UL's booth and attending a few technical seminars over the 2-1/2 days, I was able to walk the entire show floor. There are now so many LED products to choose from, with so many competing performance claims between them, that the challenge for buyers and specifiers has now shifted from "what products" to "whose products".

The competition between safety claims was not quite so challenging, however. I was pleased to see a huge outpouring of UL support from the suppliers in attendance. Not only was there an abundance of UL Mark placards provided by the UL tradeshow staff to qualified customers, but the booth



displays and literature provided by the suppliers themselves prominently displayed the UL logo in every direction. Both at our booth and while visiting supplier booths, there were frequent conversations that started with "We've had certification with XYZ but want to shift that over to UL". It was gratifying

to see that our efforts to provide high quality, technically competent, and thorough safety evaluations are increasingly being understood as a foundational element for a lighting manufacturer's reputation and long-term financial strength...

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CFL UL research results



"Consumers are highly receptive to CFLs and LEDs because they use less energy, produce less heat and can dramatically cut down on energy bills," said John Drengenberg, director of Consumer Safety at UL. "We conducted the study because we were seeing an increase in public concern over the safety of CFLs. Our research will provide a foundation for public education on the safety and use of CFLs."

UL's CFL Safety Study examined the following: substitution of CFLs into a variety of light fixtures, compatibility of CFLs with light controls and safety hazards related to switches. Additionally, it studied end-of-life behaviors of CFLs, which is where most consumer concerns lie

"We applaud UL's research and ongoing standards revisions to address consumer concerns and provide ongoing awareness to better understand typical behaviors and best uses for CFLs." said Alex Boesenberg, manager of Technical Programs for the Lighting Systems Division of the National Electrical Manufacturers Association.

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How do they do it?

The Discovery's Science Channel show 'How Do They Do It?' will feature Underwriters Laboratories and answer the question "How do they test every device in your home?" [Lume Learn More...](#)



STANDARDS DEVELOPMENT PROCESS



UL Environment recruiting members for lighting standards technical panel

In spring 2010, UL Environment announced its initiation to lead a collaborative effort to develop sustainability standards for indoor and outdoor lighting. These standards will assist consumers, designers, architects and building operators in identifying more sustainable options for interior and exterior light fixtures, LED modules and related

lighting components. The standards will address entire luminaires, including reflector, aperture, outer shell and connection to a power source. The standards will be based on environmental assessment of a product's entire life cycle, from raw materials to manufacture, use and disposal...

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UL8750 standards technical panel

An STP meeting of the Standards Technical Panel for Light Emitting Diode (LED) Equipment for Use in Lighting Products, STP 8750, was held in Deerfield, IL on June 15th and June 16th, 2010. The STP meeting was attended by 42 industry representatives (which included both STP members and guests). It is important for the industry to work together and keep UL 8750 current on this very rapidly developing and important lighting technology. This is the 2nd STP meeting that was held for STP 8750, but the first STP meeting since the 1st edition of UL 8750 was published on

November 18, 2009. The focus of the STP meeting was to work together and discuss future proposals and revisions to UL 8750. There were over 58 technical topics discussed at the STP meeting and 50 of the topics contained specific standards proposals that were submitted by industry members and UL. These proposals, once fully developed, will be sent out to the STP and industry for review and ballot in the future. Additional STP meetings will be held in the future, as needed. Stay Tuned!...

[Learn more about the UL standards development process...](#)

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June 17
NEMA Meeting
Northbrook, Illinois

July 10-12
Shanghai Lighting Expo
Shanghai, China

September 27-29
Strategies in Light
Sheraton Frankfurt Hotel & Towers

June 29-July 2
Greater China Lighting Forum
Singapore

August 27
The LED Show
Rio Hotel in Las Vegas

September 20-22
American Lighting Association (ALA) Conference
Encore in Las Vegas

Share Your Insights

Let us know what you think — send your comments, your feedback, and suggested story lines to Lumen.Insights@us.ul.com.



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