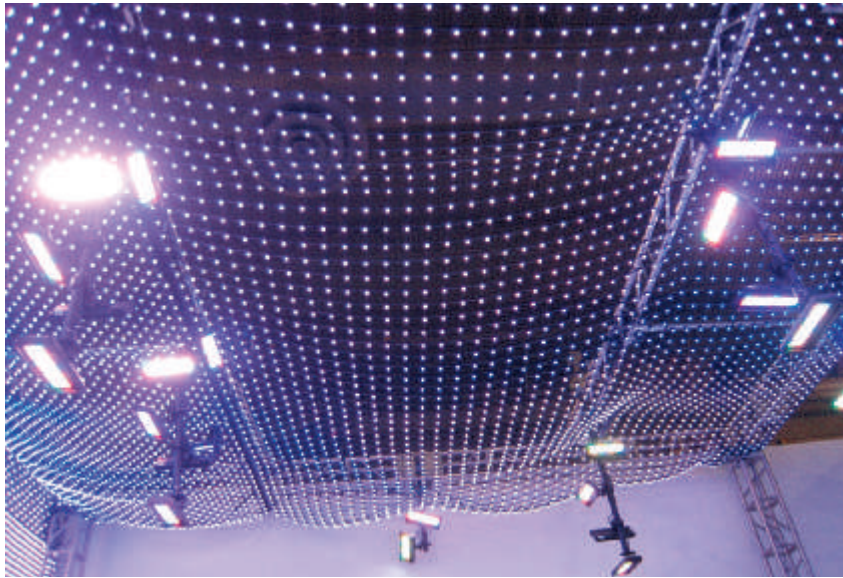




4Cs OF LIGHTING AT LIGHTFAIR

At Lightfair International 2011, the focus was on codes, controls, consistency in LED performance and mega-corporate entries into the lighting arena.



Left LUXEON A from Philips Lumileds received the Technical Innovation Award at Lightfair International 2011. The improved technology employed in the manufacturing process provides consistent quality of light from LED to LED, at 2700K and 3000K. www.philips.com

Opposite Part of GE's Lightfair exhibits was a free-standing display emphasising Energy Smart/LED Retail PAR 38 lamps that consume a low 17 watts of energy. GE estimates savings of over US\$118 in energy costs over the life of the lamp vs. a standard 60-watt halogen PAR 38. CRI has been boosted to 90 with high-saturated reds.

Lightfair International's 2011 edition drew an audience of over 20,000 for the five-day event, May 15-19, staged in Philadelphia's expanded Pennsylvania Convention Center. Lightfair moved this year to Philadelphia due to the renovation of sections of the Javits Center in New York City, the show's every-other-year destination. Lightfair returns to Las Vegas in 2012.

Filling the convention centre's exhibit floor were 475 companies, displaying their current innovations for lamps, luminaires, controls, and daylight harvesting techniques. A full slate of courses and seminars presented current illumination technology – from generation to energy-efficient delivery.

While worldwide electricity consumption (2009) was clocked in at 17.8 billion kWh (lighting accounted for 27 per cent, or 4.7 billion kWh), reducing the amount of energy expended for business, industrial and residential use was approached from numerous speciality viewpoints.

"Designers are increasingly facing more issues and restrictions that impact on how lighting installations are planned and designed," said Glenn Heinmiller, principal of Lam Partners, Inc., Cambridge, Mass., a speaker in the session called 'The

Good, Bad & Ugly of Lighting Regulations and Energy Codes'.

For retail, the improvements in light-source efficacy reported for super T8 fluorescent and ceramic metal halide lamps offer extended life and a higher colour rendering index (CRI) climbing into the low- to mid-90s that will give customers an accurate visual assessment of the product's true colour.

"Lighting technology has to mesh with merchandising strategy," said Lightfair attendee and retail lighting specialist Bernard V. Bauer, principal of Integrated Lighting Concepts, Westlake Village, Calif., following

"Lighting technology has to mesh with merchandising strategy."

a tour of the exhibits. To gain more sales floor illumination, designers can specify built-in lighting in casework and display units, Bauer suggests. "Fine jewellery, for example, can be illuminated with more impact and less watts/ft² by using lighting built into displays. Under-counter, under-



Above Backed by its parent company, Mitsubishi Chemical Corporation, Verbatim America, LLC is entering the North American LED lamp and fixture market with a product line that includes LED retrofit lamps, high-colour rendering LED components, and colour-tunable OLED panels. Verbatim's VxRGB LED lighting products were designed to replicate natural light by using violet LED chips, exciting red, blue and green phosphors and other MCC materials to enable high-quality comfortable lighting environments. It is promoting Mitsubishi Kagaku Media's quality control and warranties. www.verbatimlighting.com



Left The Halco/ ProLume Ceramic Discharge Metal Halide display demonstrated the lamp's high colour rendering index in a setting of three mannequins garbed in different-coloured gowns. In addition to high colour rendering and energy efficiency, these lamps are rated for up to 16,000 hours. The lamp's single-piece arc tube design provides even temperature distribution and results in longer life and reliability. www.halco.com

Right A two-shelf display in Halco's exhibit was illuminated by its ProLED Color PAR 16 and PAR20 lamps. Amber has been added to the colour options available. www.halco.com



cabinet and under-shelf lighting, particularly with LEDs, can do more with less wattage," he indicated.

"Although most power allowances are being reduced for retail displays, store owners are being offered offsetting power allowances as an incentive to install and implement advanced controls and control systems," observed Bauer. An international group, the EnOcean Alliance, has been formed recently to promote wireless technology that controls lighting, heating and air conditioning.

Comparisons

How LEDs compare with other high performance lamps was presented in a session led by Stan Walerczyk, principal of Lighting Wizards, Walnut Creek, California.

"Improved incandescent bulbs that can last up to 5,000 hours are entering the market."

"Because LEDs are new and different, they have the 'Wow!' factor much more than most lighting technologies," he said. LEDs (light-emitting diodes) – tiny semiconductor chips like those in computers and other electronic equipment – turn electricity into photons instead of information. LEDs have been championed as the energy-saving successor to the familiar



incandescent bulb but, because they have been calculated as giving off 90 per cent of their energy as heat – not light – some states in the US have ruled them too inefficient for commercial and residential applications, and countries such as Australia and Canada will be enforcing a ban on their sale. (In March, New Zealand Energy and Resources Minister, Gerry Brownlee, lifted a previous ban on the sale of incandescent bulbs. He cited concerns about the costs involved in manufacturing "so-called energy-efficient light bulbs.")

Walerczyk addressed these issues in his presentation, posing the question

Above RSA Combolight LED Downlights from Cooper Lighting are specification-grade, recessed LED multi-lamp directional fixtures for retail ambient or accent lighting. The RSA line is made in one-to-six lamp linear configurations, and a square four-lamp configuration.



Left In four recessed wall cases, GE showed examples of its Infusion line of LEDs that provide a simplified installation for upgrading to LED technology with replaceable modules that do not require mechanical fasteners to couple the LED package to a heat sink and a plug to make the electrical connection. Retail applications include spotlighting, downlighting, track and accent lighting from 1,000 to 3,000 lumens with CRI ratings of up to 990.
www.ge.com

Below Sylvania's introductory collection of luminaires was demonstrated with an SS6 downlight in this product display of wall-mounted shadow boxes and a clock face.
www.sylvania.com

Below left Lightronics provide green lighting solutions for retail store environments, such as accentuating colours and textures on merchandise to help motivate purchases. This display, enclosed on three sides, featured male mannequins in green shirts illuminated by Perfection LED lamps that are specifically designed for use in high-profile retail environments.
www.lightronics.com

Below centre Cool white LEDs available in tubes or individual lights for ornaments and specialty displays, such as these snowflakes, are in the collection of Snowfall for exterior and interior use.
www.snowfallusa.com





to the audience, “Are LEDs really more environmentally friendly?” He listed such facts as the toxic chemicals that are used in LED production, the water used to make the chips and the metal used to make the heat sinks that dissipate the heat generated by operating the LEDs. Fluorescent, high-intensity discharge and induction lighting sources all use mercury, Walerczyk said, “but the manufacturers have been doing a very good job reducing it.” Improved incandescent bulbs that can last up to 5,000 hours, versus the former standard of 2,000 hours,

are entering the market.

Designers and their clients can feel more confident about the luminaire life and reliability of their LED investment if the product has independent accreditation. In the US, this includes an Energy Star rating and a listing on the DesignLights Consortium SSL Qualified Product List, he noted.

Infusion

GE has introduced a new infusion LED module that looks like an incandescent bulb and has a typical screw-in base. The company is

offering the module to upgrade to LED lighting without the need to install LED integrated luminaires. The infusion line, which is dimmable and will be made available for sale in the US fall, provides illumination for ambient, spot-lighting, track and accent lighting in a range of lumen outputs, colour temperatures and CRI (colour rendering index) options.

New introductions from other exhibitors were checked out by Dan Kohnen, president of Structura Inc., maker of pole lamps and bollards shown at his firm’s Lightfair booth.

“Major manufacturers who supply everything from raw materials for lamps to components are here for the first time with their own collections of luminaires,” he reported. Diversified international companies, not previously represented at this lighting trade show, such as Toshiba Corporation, Verbatim Americas LLC, LG Innotek, and Sharp Electronics Corp., attracted visitors to examine samples – primarily LEDs – and view images of applications.

“These multi-national players will undoubtedly play a significant role in how the lighting industry will evolve over the next few years,” Kohnen said. ■

Top The L181 modular bottle rack system from MP Lighting was designed for wine stores, restaurants, and bars. Fabricated of black anodized aluminum, the unit is mounted to the wall. www.mplighting.com

Right Tetra Contour LED Lighting System from GE replaces high-voltage, neon systems with a low-voltage, long life Tetra Contour system. Up to 40 per cent more energy efficient than a typical exposed neon system, the elements are cool to the touch, provide a bright, uniform appearance and a wide viewing angle.

Below Lightfair’s most fashion-forward display was a quartet of colourfully-outfitted mannequins lit by Philips Lumileds Luxeon A lamps. Winner of the conference’s Technical Innovation Award, it is the company’s third release this year in this group. Features include consistent quality of light for each LED. www.philips.com



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Left Retail interiors specialists, Baero, provide a line of light fixtures for their installations. The Canopus group can be equipped with either the broadbeam or Batwing reflectors, or mounted to the Baero tubular rail system. The Baero 150W versions offer an adjustable reflector assembly for maximum control of the light beam. The ballast housing of all three can be custom-coated to match any décor theme. www.baerousa.com