

INDIA'S FOREMOST MAGAZINE ON THE LIGHTING INDUSTRY

Lighting India ^{₹ 125}

Vol. 9 No. 4

July-August 2014



A warm welcome at
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and significant energy savings



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PUBLISHER'S LETTER

Lighting business in India is of the order of Rs 13,000 crores. There are still 75 million rural households and 9 million urban households which are dependent on kerosene for lighting. The article, 'Configuring LED pitching for optimal design of Luminaires' presents the pitching configuration of LEDs for luminaires that are build-up of a modular design of multiple LEDs.

Energy efficiency is one of the key elements to the lighting scheme for a Van der Valk hotel project built in Dordrecht, south Holland. The write-up on 'A warm welcome at Van der Valk and significant energy savings' while talking about reflector technology features that the LED reflector lamps mimic the design of traditional light sources, delivering excellent distribution of light and providing energy saving compared with conventional lamps of the same output.

Also, this issue has an interesting write-up on Suntec Singapore Convention and Exhibition Centre, which is an award-winning multilevel space with advanced LED lighting solution. Creating a symbolic building in the aviation sector, Cinimod Studio designed a unique, innovative and eye-catching landmark that had two key lighting installations at the £2.5 billion new Terminal 2 at London's Heathrow airport.

Among other interesting article the issue contains post event report of Guangzhou International Lighting Exhibition 2014, where Lighting India participated.

Do send in your comments at miyer@charypublications.in

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UL's Manesar, Energy Efficiency Testing Lab opened in December 2011, is one of the largest Lighting, Performance testing facilities in India. This independent Lighting Testing Laboratory which is only of its kind in India with state-of-the-art equipment's such as Type C Gonio-Photometer, Thermostatic Integrating Sphere, Precision Power Analyzers, High Bandwidth Digital Storage Oscilloscope and Data Acquisition Systems. The UL Energy Efficiency Lab is the first service provider in the country to provide LED & CFL/TFL Photometry and Energy Efficiency Test Reports specific to the Lighting Industry and also assists customers in obtaining Global Product Certification such as cULus, CE, ENEC, ENERGY STAR®, IEC CB Scheme etc. UL Energy Efficiency Testing Lab is now NABL Accredited, assessed under the standard ISO/IEC 17025:2005 for General Requirements for the Competence of Testing and Calibration Laboratories.

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- Electronic Ballast
- Electronic control gear for LED module

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Vol. 9 • No. 4 • July-August 2014

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Printed, published, edited and owned by Mahadevan Iyer and published from 311, Raikar Chambers, Govandi (E), Mumbai 400 088 and printed at Finalcopy (India) Pvt Ltd., B-33, 4th Floor, Royal Indl. Est., Naigaum Cross Road, Wadala, Mumbai 400 031.

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Editor: Mahadevan Iyer

EDITORIAL



Perspective on LED Lighting Market Growth

Asian lighting market is the largest market in terms of total general lighting and LED lighting. General lighting is the dominant market, accounting for 80% of the total lighting market. It is estimated to be around Euro 88 billion by 2020 while, residential lighting accounts for over 40% of total general lighting market.

There is a need for energy efficient lighting. India's rising LED market is forecast to reach \$1,457.8 million by 2019, at a CAGR of 35.9% during 2014-19. The government initiatives to replace incandescent bulbs; widening energy demand-supply gap and declining prices are driving growth of LED lighting in India according to Research and Markets report. In terms of LED penetration, architectural lighting is the early adopter due to with around 85% market share in 2020 - cites a global lighting survey by McKinsey. And, hospitality, shop and outdoor LED technology is expected to see faster growth by 2020.

Market size for global LED lighting will reach \$25.82 billion in 2014. Digitimes Research also estimates the production value for high-bright LED chips to be \$12.74 bn in 2014. Heavy investment from companies and induced growth in office and industrial applications will prompt less costs to make LED affordability. The acceleration of investment in smart cities, urbanization and changing attitude appears to be major growth momentum.

Gopal Krishna Anand

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Eaton's LED Lighting Solutions enhance energy efficiency and aesthetics in Mumbai Airport's New Terminal



Power management company Eaton announced that more than 4.8 km – totaling nearly three miles – of the io™ LED lights from its Cooper Lighting Division have been installed in Terminal 2 (T2) of the Chhatrapati Shivaji International Airport in Mumbai. The io LED products are designed for wall grazing, combining energy efficiency with optical performance excellence, helping the facility to earn Leadership in Energy and Environmental Design (LEED) Gold Certification. “Our new terminal will not only be a high-traffic destination for travelers, but also a unique architectural design area packed full of energy-efficient products like the io LED fixtures,” said Saurabh Singh, assistant vice president - contracts at GVK - Mumbai International Airport Pvt Ltd Mumbai’s international airport recently opened the new T2 terminal, which will see more than 40 million visitors annually and features decorated carpets, an art museum and bold designs. The io LED luminaire, which was specifically designed for wall grazing applications, was chosen after rigorous competitive mock-ups. The lighting design challenge was to uniformly light a six meter high by 4.8 km long wall so that when a stainless steel decorative perforated panel was installed in front of the wall, the impact of the silhouetted stainless steel was visually powerful. Given the enormous scale of this wall, achieving the visual affect while meeting the LEED Gold power density restrictions was a challenge. The io line™ series 2.0 product was the best solution to meet the aesthetic and energy efficient design challenges. “Our award-winning LED io line series 2.0 is a perfect fit for this modern building, providing an ideal blend of energy efficiency & performance to help illuminate the architectural elements of this impressive terminal,” said Mark Eubanks, president, Cooper Lighting Division. ■

Retail Spaces take on New, Inviting Look with Revolutionary Philips Lumileds CrispWhite Technology

Philips Lumileds launches its proprietary CrispWhite PHILIPS LUMILEDS Technology, yet another quality of light breakthrough in its portfolio, making whites appear vivid and bright while colors appear saturated. LUXEON CoB arrays with CrispWhite Technology are game-changing for retail downlights and spotlights, resulting in more inviting and attractive displays. Proper lighting is central to the perception and evaluation of goods. It is a critical component of branding, highlighting and presenting merchandise and creating a space where shoppers want to visit. With CrispWhite Technology, all colors, including the white, show the best saturation, just like daylight. And unlike CDM solutions, LUXEON CoB with CrispWhite Technology turns on instantly, which is a compelling advantage for retail lighting applications. “CrispWhite really delivers the light quality that retailers have been seeking for some time,” said Eric Senders, Product Line Director, Philips Lumileds. “Shop owners have told us that CDM sources do a fine job of rendering warm colors but they would like to save energy and take advantage of the longer lifetime of LEDs.” Just like CDMs, the new CrispWhite LEDs maintain high CRI and bring out the white color in merchandise by utilizing a second peak in the blue spectrum. This approach creates the optimal illumination for retail displays. LUXEON CoB with CrispWhite Technology is available in multiple lumen packages, from 800 lumens for MR16 and PAR lamps, all the way up to 7000 lumens to replace 70W and 100W CDM solutions. ■

MyProjectorLamps India, set to exhibit at Infocomm, Mumbai during September 2014

After getting overwhelming response at Infocomm 2014 in Las Vegas, MyProjectorLamps International will participate as an exhibitor at Infocomm Mumbai in September 17-19, 2014. Infocomm is still in its infancy in India and this would mark MyProjectorLamps first appearance at this event to showcase their products, which are Original Projector Lamps for Digital Projectors. The group is looking forward to meeting with system integrators, large scale business users, theatre owners, electronic component retailers, defence organisations, universities and colleges. The major focus would be to provide solutions to the systems integrators and channel partners to grapple with the challenges faced when competing with low cost / low quality lamps available in the Indian market. The group feels, considering the market being more price sensitive; that if we can focus on educating the customer about the right product, which is currently not being communicated in regards to the total life cycle of the projector lamp, customers will get more value for their money. The current mistrust in India in this industry has developed since the customer does not have any clarity about what / which quality to buy and they end up buy anything, which the local retailer / supplier tells them to buy. After buying those low quality lamps the customer does not feel satisfied about the performance of the lamp and starts to look elsewhere outside the country. Being a global authority on projector lamps, MyProjectorLamps looks to build trust with the consumer base, and by offering a local product offering that they can trust are original and high quality. MyProjectorLamps International, with its high quality products, assures that they are at the right place to buy the right lamp for their projector. Also, the group specialises in keeping lamps for Cinema theatres; most widely used Barco and Christie lamps which are rare to find in the market, are easily available at their inventory warehouses. In India, single screen theatres are normally troubled with not having an appropriate source to get these lamps; MyProjectorLamps have connected with these small theatres and are regularly helping them with the right projector lamp for their Cinema. The response has been phenomenal. ■



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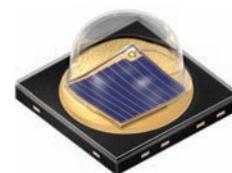
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China's LED Package Industry Market Report 2014: Nichia No. 1 manufacturer in Chinese market

The quickly spreading LED lighting market has attracted international manufacturers to enter China's LED package market, according to the latest "China's LED Package Industry Market Report 2014" by LEDinside, a subdivision of global market research organization TrendForce. In 2013, the Chinese LED package market value was up 20% Year-on-Year (YoY) to US\$7.2 billion. Top 10 ranking manufacturers in the industry clinched a combined market share of 43.6%. Japanese LED manufacturer Nichia firmly held onto its number one title in the Chinese market, while Chinese manufacturer MLS Lighting was the fastest riser, having grabbed fourth position, and demonstrated revenue growth of nearly 70% compared to 2012. "The Chinese LED packaging market can be split into three major categories—international, Taiwanese and Chinese manufacturers", said LEDinside Analyst Allen Yu. Pressured by competing global vendors and domestic Chinese manufacturers, Taiwanese manufacturers market share in China has gradually declined. As a result, the LED package market in China has mostly become a race between international and local Chinese manufacturers. "International manufacturers will still be able to maintain fast growth in the Chinese market because of patent and technology advantages, but Chinese manufacturers are more likely to succeed in the long run," noted Yu. As Chinese manufacturers will become even more cost competitive and be able to further expand market shares, they will be able to upgrade manufacturing technology. In response, international manufacturers have set up manufacturing bases in China, and are actively searching for OEM suppliers to strengthen their business development strategies. Major international manufacturers in China include Nichia, Cree, and Philips Lumileds. These companies are global leaders in LED patent strategy deployment and technology. LED products made in China by these manufacturers are mostly shipped to Europe and North America, where there are stringent safety standards, product standards, and patent issues. ■

New Osram Oslon Black achieves optical efficiency

The new Oslon Black SFH 4715A boasts a typical electro-optical efficiency of 48% – a figure never before achieved with optoelectronic elements – and thanks to the associated huge reduction in cooling requirements, it has a much longer service life, too. In other words, this latest member of the infrared LED (IRED) family is reaching previously unattainable figures. But this is not the only new product in the Oslon Black family from Osram Opto Semiconductors. The SFH 4716A has a beam angle of 150° permitting particularly narrow-angled imaging for camera-based lighting applications by using reflector optics. The SFH 4715A's high typical electro-optical efficiency of 48% is only possible thanks to the latest chip generation and the optimized housing. "We are not aware of any other optoelectronic component with an optical efficiency to rival this one," explains Dr. Jörg Heerlein, Senior Manager for Product Marketing at Osram Opto Semiconductors. Thanks to a boost in output to 800 mW (previously 630 mW) the new Osram IRED can illuminate objects over 100 m away depending on the application and type of external optics. This higher output generates more light, improving the image in the process. "The new SFH 4715A can almost match a laser in terms of efficiency, allowing for greater ranges than the previous members of the Oslon Black family. The same range can hence be achieved with fewer components – yielding a cost benefit that is not to be sniffed at." The cooling requirements also reduced. The new A-version of the product, with its much higher output and beam angle of 90°, will be replacing the previously available Oslon Black SFH 4715. ESD (electrostatic discharge) protection for up to 2 kV and extended corrosion-resistance make the new IRED ideal for outdoor applications, too, for instance in CCTV systems. ■



Philips equips Chelsea Football Club to become the world's first top club to use LED floodlights

Royal Philips, the global leader in lighting, has provided state-of-the-art LED pitch lighting for Chelsea Football Club. Stamford Bridge is the first stadium for a top flight football club equipped with this pioneering lighting system, which will ensure, stadium continues to be one of the most famous sporting arenas in the world. The Philips ArenaVision LED floodlighting system is an innovative LED pitch lighting solution. It is designed to provide footballers, fans and TV broadcasters with the best possible experience. These include lighting standards for high definition super slow-motion replays, avoiding the flicker synonymous with conventional lamps. New LED solution can be instantly switched on and off without the need for a warm up period. Ron Gourlay, Chief Executive of Chelsea FC said, "I am delighted to be able to work with Philips on delivering the best possible environment for our supporters to enjoy Chelsea matches in. Once again, Chelsea Football Club is at the forefront of innovation and we look forward to many more memorable games at Stamford Bridge under this new floodlighting system." Eric Rondolat, CEO of Philips Lighting comments, "Our LED pitch lighting meets the new stringent broadcast criteria of the English Premier League in helping to deliver high definition, flicker-free super-slow motion images and ensures that Chelsea delivers the best possible viewing experience to the 40,000 plus fans in the stadium as well as those at home." The solution includes a dedicated user interface and a control system allowing quick, easy and reliable monitoring of the system and switching between optimal lighting configurations thereby providing complete flexibility and the ability to switch and dim each floodlight individually. The Philips ArenaVision LED control system can also be used to create special entertainment lighting effects that would normally require dedicated stage-lighting, providing the opportunity for the floodlights to be integrated into pre- and post-match light shows to help build the atmosphere and excitement in the stadium. The new LED floodlights deliver flawless lighting, achieving exceptional vertical illuminance on the players and good uniformity of light. ■





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Barco delivers 500 digital cinema projectors to support rollout of digital cinema in Brazil

BARCO Digital cinema expert Barco has recently closed a deal with integrator Quanta DGT to supply 500 digital cinema projectors to theaters in Brazil through a Virtual Print Fee (VPF) financing model. Many of the largest cinema exhibitors - Cinesystem, GNC, Cine Sercla, CineShow, CineArt, AFA Cinemas, PlayArte, Arcoplex, Cinematográfica Araujo - and dozens of small exhibitor groups have chosen to go digital with Barco digital cinema projectors. While Brazil is the world's tenth most important cinema market in admissions, the digitization percentage has been quite low for a long time: only around 38% of the 2,500 screens were digitized by the end of 2013. Recent public policies encouraging exhibitors to digitize their screens, including the VPF program, are taking hold and over 70% of the country's exhibitors have already joined the program. Many of them rely on the support of system integrator Quanta DGT who, together with global digital cinema leader Arts Alliance Media have VPF agreements with the Hollywood studios to fund the rollout of digital cinema across Latin America. "We give the exhibitors full flexibility regarding the digital cinema equipment they want to use," says Tieres Tavares, CEO of Quanta DGT. "So they can choose the projectors and servers that best meet their needs." As the major cinemas chose Barco projectors, Quanta DGT & Barco struck a deal for the delivery of 500 projectors, the first of which were shipped in July. In September, more than 300 units will be transported to Brazil. Local Barco Service Partners will install the projectors commencing in September. By the end of the year, all 500 screens should be digital. "We are delighted that these cinema exhibitors decided to put faith in Barco for their digital cinema conversion. The choice demonstrates that our long-term commitment to the Brazilian cinema market, featuring a strong local support team and local stock, brings excellent results," added Ricardo Ferrari, Barco Sales Manager Digital Cinema. ■

Kwality: PolyWa KLSL505W -110 Lumens in Single Digit Price

Kwality Photonics Pvt Ltd which has been a market leader in manufacture of Light Emitting Diodes (LEDs) and LED Displays is now offering HOT New item: KLSL505W -110Lumens at Half the cost of conventional package! Kwality PolyWa 505W Series are embedded with single large chip from High reliability LED chip capable of being driven upto 350mA to obtain 110Lm. The PolyWa 505W are ideal for retrofit applications where replacement of existing incandescent & Fluorescent bulbs is desired thanks to factors like more energy efficient & uniform illumination and particularly aimed at substituting 60W Bulbs, 36W CFLs and 40 W tube lights. Kwality PolyWa focusses on conferring unique COST ADVANTAGE to you that makes the difference between MEDIOCRITY & SUCCESS. Please revert to us with trial order and long term schedules. We are quite confident that you would also REAP the BEST results by using our LED KLSL505W- 350mA. Kwality Photonics is Pioneer in LED manufacture, since 25 years, ISO9001-2008, and enjoys Highest Brand Equity in India. Our association with LED manufacturing for over 30 years enabled us to serve as President of the Apex Electronics Association, ELCINA (www.elcina.com) and win many recognitions & awards from prestigious institutions like Hyderabad Mgt Assn, FAPCCI, Dept of Industries, Hyd Exhibition Society, for our product excellence in Innovation and Quality. Kwality Awarded with INDIA's TOP LED BRAND by EFY readers in 2012, Kwality is most TRUSTED vendor for thousands of electronic industries over last 25 years for High Power LEDs Medium & Low Power LEDs for Lighting & Signages, SMD Automotive LEDs, LED Segment Displays, Dot-matrix, LED Light Bars, Bargraphs, & Indicator LEDs with a range depth of 500 types of LEDs. All LEDs are RoHs Compliant & made at the ISO9001-2008 certified Plant. All systems run on SAP ERP and customer's response time is less than one hour generally. ■



Samsung introduces new LED Modules for Flat Lighting Applications: M-series

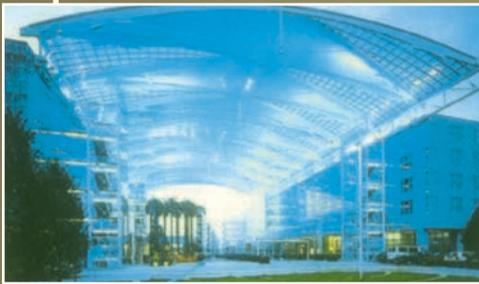
Samsung Electronics Co Ltd introduced a new line-up of LED modules called the M-series for use in flat LED lighting applications, such as troffers and linear luminaires. Samsung showcased the M-series at the LIGHTFAIR International trade show, held at the Las Vegas Convention Center during June. "The Samsung M-series offers tremendous convenience to LED lighting fixture makers with one of the most reliable and design-friendly feature-sets in the industry," said Bangwon Oh, senior vice president, strategic marketing team, LED Business, Samsung Electronics. "Through the new M-series and future Samsung LED solutions, we will increase our support for the LED marketplace by providing greater differentiated value and reducing the time to market for LED lighting makers, while accelerating market innovations for LED lighting components. Underscoring their reliability, the M-series modules feature Samsung's LM561B LED package, which has successfully completed 6,000 hours of LM-80 testing. The M-series includes three modules, the LT-M552A, M552B and M552C that have the same dimensions - 18x550x6 mm. By offering identical measurements and delivering a variety of light output options, the three modules simplify the task of designing LED luminaires. In addition, the 18mm width of M-series readily replaces T5 light fixtures, which usually have a diameter of around 0.6 inches or 16mm. It results in more design flexibility when replacing conventional fluorescent tubes or LEDs in the same luminaire. The Samsung M-series covers a lumen range from 1500lm to 2500lm based on a light efficacy level of up to 152 lm/W. By combining up to four M-series modules, a total light output of 2000lm to 7000lm can be achieved for luminaires. For example, if a luminaire requires 3500lm, combining two LT-M552B will provide approximately 4120lm, when assuming an optical efficiency level of 85 percent. Samsung's new M-series will be commercially available later this month. ■





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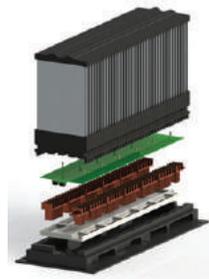
Lapp India sets up its first Warehouse in Maharashtra



Lapp India set up a new Warehouse recently in western state of Maharashtra. Located strategically in Bhiwandi, Thane, Warehouse which is a part of a shared facility will cater to Maharashtra, M.P., Chattisgarh and Gujarat, among other regions in the country. The Warehouse is located in a region that offers exemption from local taxes otherwise applicable for the entry of any goods delivered into the area. This tax advantage helps Lapp India cater in a cost effective manner to existing and potential customers across neighbouring cities such as Pune, Nashik, Baroda and Ahmedabad. Additionally, with proximity to Mumbai Port, the new Warehouse can help Lapp India reduce the duration of any import delivery as compared to the Chennai Port which was the primary import location earlier. While this is a key benefit for the logistics team of Lapp India, the larger gain here would be for the customers as they will in turn derive the benefit of faster product delivery for orders placed. Further, with the implementation of SAP, the new Warehouse will enable customers to have access to the stock status on a real-time basis. Sriram Kannan, Head of Operations & IT, Lapp India has been working closely with the team in India to drive this new development. He further said, "The location of the new Warehouse offers our Supply Chain Management team the advantage of saving a minimum of one week's time otherwise utilized for the delivery process. Thus the newly set up Warehouse will help us cater more efficiently to our set of customers in the Western region of the country & therefore enhance the customer experience at large." The Warehouse facility spread over an area of 5,000 sq ft has a capacity of 200 pallet positions and can also be scaled up further. The facility has an inventory of USD 82,950 which can be increased up to USD 331,800 in a phased manner. ■

EV-Lite project completed: exciting developments for the lightweighting of batteries

Cenex announces the completion of a Sustainable Lightweight Low Cost Battery Systems for Extended Life Cycles (EV-Lite); a two-year project co-funded by the UK's innovation agency, the Technology Strategy Board. The project consortium is formed of the Manufacturing Technology Centre, Unipart Manufacturing, Electrovaya, RDVS, CRR, Bluebird Innovation Group, Loughborough University and Cenex. After two years of intensive collaboration, the EV-Lite project is drawing to a close. The consortium has been immensely successful with the design of a new electric vehicle battery. The project targets have been surpassed with a 41% reduction in weight and a 63% reduction in cost of the non-cell components realised. This translates to a saving of 45kg at the battery pack level. The ultimate aim of this ambitious and exciting project is to enable volume manufacturing for electric vehicle battery packs in the UK through innovative design and, in doing so, help bring electrical vehicles to the mass market. Innovative design and manufacturing ideas have helped the consortium to achieve significant cost reductions and weight savings without sacrificing functionality. The new battery design has no wire or screws; this step change in design has translated into significant improvements in battery pack assembly. When compared to a benchmarked battery the EV-Lite design has a parts count of 196 vs 807 for a 4KwHr sized module. In the EV-Lite project, the main role of Cenex is managing the battery test and validation work package. The lead partner, the Manufacturing Technology Centre, has manufactured two prototype battery packs, utilising a new Battery Management System designed by RDVS. One of the battery packs has been tested by Loughborough University using real life test cycles developed by Cenex to ensure the new project battery design is tested within a performance envelope representative of conditions during in-service operation. The prototype battery pack and the mobile robotic assembly cell used for automated assembly will be presented to the public at Cenex-LCV 2014 at Millbrook Proving Ground in September. ■



Robe Enjoys another Phenomenal Prolight+Sound Frankfurt

Robe enjoyed a successful Prolight+Sound exhibition at the Messe in Frankfurt, launching a selection of new innovations and presenting another eye-catching lightshow on the booth, which attracted huge numbers of visitors to the stand and created a buzz which resonated throughout the entire trade show. Other highlights involved the inventive ROBIN MiniMe winning the Prolight+Sound International Press Award (PIPA) for 'Lights FX' [sic], and for the second year, the Robe team was joined on the stand for one day by Czech MotoGP rider Karel Abraham and his bike. Robe is one of the sponsors of the 2014 season. Robe's CEO Josef Valchar says "The show was fantastic! It is currently the best of its type in Europe for attracting quality international and leading professional visitors, and is a great showcase for our brand." The company also celebrates the start of its 20th year of business! Josef Valchar – one of the founders, attended Prolight+Sound in 1994, with many dreams and ambitions! Exciting new Robe products included the ROBIN 1000 LEDBeam and the CycFX 4 moving lights and the PARfect 100 together with the first in a line of brand new battery-powered LED range, the LiteWare HO (High Output) and LiteWare Satellite. The Actor 3, 6 and 12 LED theatre luminaires were re-launched with a new and ultra smooth dimming curve and other enhancements. Robe's very successful ROBIN MiniMe was shown with a new wide lens bringing more possibilities for special applications. All Robe's current products received lots of attention including their fastest-ever selling Pointe and the LEDWash series, which has now become an industry standard LED wash luminaire. Robe's friendly and informative multilingual team on the stand included representatives from all the key European distributors and others including South America, the US, Africa, India, Asia and Australia. ■



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Robe appoints Lighting and Sound Distribution exclusive distributor for Singapore



Leading moving light manufacturer Robe Lighting s.r.o. announces Lighting & Sound Distribution (LSD) as its exclusive distributor in Singapore as of August 1st 2014. This is part of Robe's medium term expansion strategy in the region and follows the launch of a new Asia Pacific office - also in Singapore - in January this year, which was set up in response to the brand's growing business. Robe's relationship with LSD - one of Singapore's most proactive and successful sales and installation operations - actually dates back to 2002 when LSD first started selling and specifying Robe products, a situation that has developed steadily over the years. LSD's General Manager Brenda Keung comments, "Naturally we are excited to be appointed as Robe's exclusive distributor in Singapore, which will consolidate our existing business model and enable us to work even closer with Robe. "We really look forward to shaping our markets with Robe's current and future product ranges, providing imaginative, practical, energy and cost-efficient solutions tailored to individual client's needs. We have always admired Robe's dedication to innovation & this is a big selling point here!" Brenda reports that LSD will be actively supporting Robe in a variety of events already on the horizon, including a new product launch and Roadshow in September and a series of upcoming trade expos. Josef Valchar, Robe Lighting s.r.o.'s CEO states, with the excellent history and track-record between Robe and LSD - going back to when 'Robe' was first launched as a brand at SIB Rimini in 2002 - we look forward to continuing the positive synergies with LSD. "Through the years of continuous cooperation, we have developed a real rapport and knowledge of the Singaporean market, all of which contributes to a great opportunity to strengthen our brand presence there" he concludes. Robe Lighting's Asia Pacific office in Singapore is the sales and technical support hub for all Robe's distributors in the Asia Pacific region. ■

Philips Lumileds LED Innovations and New Product Update Seminar

On Wednesday, August 6 and Thursday, August 7, Philips Lumileds hosted the 2014 LED Innovations and New Product Update Seminar in partnership with distributor Asia Lucky/RK Electro. Held in Mumbai and Delhi, the seminar invited interested parties and customers to join to learn more about Philips Lumileds new product roadmap, its latest LED technology and to demonstrate innovative lighting solutions. During the seminar, Philips Lumileds provided an update on the company's latest technology and received positive feedback as first in the industry with Hot Targeting and 1/9th color binning for Mid-/Low-Power LEDs. The seminar also detailed Philips Lumileds comprehensive portfolio of application optimized LEDs including emitters in the High-Power, Mid-/Low-Power, Array and Color ranges. Customers shared their appreciation for Philips Lumileds leadership position in High-Power, Color and CoB LEDs, as well as its continued dedication to the Mid-Power space. Based on market feedback gathered from the seminar, it was determined that LEDs in the Philips Lumileds mid-power range, such as LUXEON 3030 2D, would be ideal in addressing customer needs and expectations on performance. LUXEON 3014 was pinpointed as the perfect LED for linear/troffer applications, while LUXEON 3020 was widely discussed for troffers and downlights. Philips Lumileds recent introduction of LUXEON CoB with CrispWhite Technology, a product targeting retail lighting applications, was also enthusiastically received. Over 200 people attended both sessions, which provided a forum for the sharing of latest LED technological advances as well as open discussion about where the market in India is heading. ■



dbn Lights Up 'new' Everyman Theatre

When Liverpool's famous Everyman Theatre reopened recently, Lights Up opening celebration producers Walk the Plank asked Manchester based dbn Lighting's Stephen Page to design a spectacular lighting scheme fitting for the occasion. The theatre is known for its dedication to radical theatre and new works. The refurbishment has been 10 years in the planning and seen nearly 3 years of construction with a spend of £28 million. dbn and outdoor arts experts Walk The Plank are frequent collaborators and all their shows require an imaginative and lateral approach explains Stephen Page, and this was also the brief when it came to Lights Up. The event commenced with an illuminated procession, courtesy of Liverpool's Lantern Company, featuring 300 lanterns, created by the Theatre's community partners and groups and bands along with members of Young Everyman Playhouse. Three huge lantern puppets led the way, bearing keys to the new theatre. The parade travelled through the heart of the city centre and up Mount Pleasant towards the Everyman, collecting crowds of people as it progressed. Participants and audiences gathered at the top of Mount Pleasant between the Everyman Theatre and the Catholic Cathedral, where a small stage was set up for a series of performances including Liverpool based Sense of Sound and the screening of a specially commissioned Dear Everyman film. Page lit the circular Liverpool Medical Institution building behind the stage with SGM Palco LED wash fixtures bringing more depth and an additional dimension to the picture. At the culmination of the performance, the three illuminated lantern puppets then inserted a large, glowing red key into the 'Y' of the Everyman's sign and turned it - this was the cue to re-light the iconic sign itself and trigger a lighting and pyro extravaganza, bringing the building to life and declaring the 'new' Everyman open. Page's lighting design was a combination of style and idiosyncrasy. The dbn crew rigged LED PARs on specially designed brackets to the rear of the steel framework supporting the new, iconic 'Portrait Wall' that covers the upper two floors of the refurbished building - a grid of 105 steel stencilled figures acting as louvres to shield the offices from the sun. Page operated the 20 minute show's lighting from a doorway across the street using a Jands Vista S2 for control. ■



Global Efficient Lighting Forum Beijing, China, November 2014

The UNEP en.lighten initiative will be presenting a Global Efficient Lighting Forum to take place in Beijing, China. The event is being presented by the United Nations Environment Programme (UNEP) and the UNEP Collaborating Center on Efficient Lighting – Global Efficient Lighting Center (GELC) & will take place from November 10-11, 2014, in Beijing, China. Its aim is to achieve a consensus on the financial, technical, and policy actions required to accelerate the global transition to advanced lighting technologies in order to mitigate climate change. The Forum will address the need for an accelerated global phase-in of energy efficient lighting products. UNEP is convening national governments, private sector, development partners, international financial institutions, and key stakeholders for a dialogue about the best ways to accelerate transition to efficient lighting globally. The Global Efficient Lighting Forum will provide a unique opportunity for participants to; exchange best practices, discuss the current progress and challenges of a switch to more advanced lighting technologies, examine the benefits of a transition to higher efficiency lighting, and create a consensus regarding the technical, policy and financial measures necessary to accelerate a worldwide transition. During the Forum, a global plan of action will be developed to enable countries to make a quantum leap to

the most energy efficient and appropriate lighting systems. Opportunities, methodologies, tools, and concrete actions will be identified to support the achievement of such a transition.

At the end of the meeting, participants will develop a Resolution that is expected to reflect an international consensus for the need to accelerate the phase-in of efficient lighting globally, across all sectors. A Global Status Report on efficient lighting will include topics and recommendations from the Global Forum. The United Nations Secretary-General's Sustainable Energy for All (SE4ALL) initiative has identified advanced lighting as a "High Impact Opportunity" and UNEP, through the en.lighten initiative, is the global co-coordinator of the high impact initiative and related actions in the area of advanced lighting. The Global Efficient Lighting Forum is part of SE4ALL's effort to establish a global action plan for the adoption of energy efficient lighting technologies. This Forum will ultimately contribute to cost-effective low carbon development and the SE4ALL goals. ■



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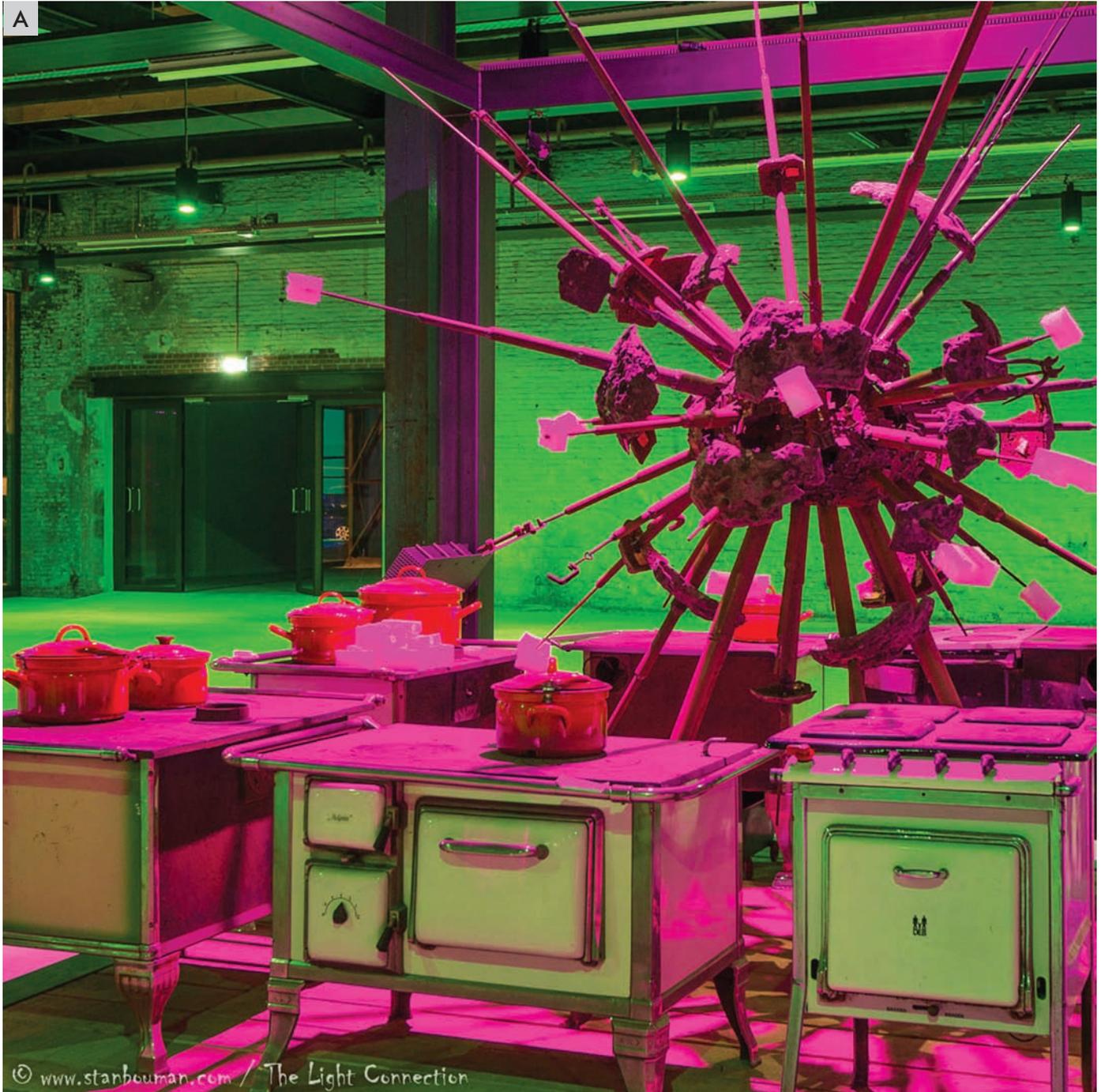


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Chroma-Q Inspire LED House Lights transform Museum into Colourful Educational Initiative

Thousands of school children are expected to visit a new 'ICER' innovation centre in the Dutch town of Ulf t, which f edures a state-of -he-art educational hub transforme d into different m oods through vibrant colour-changes provided by Chroma -Q® Inspire™ premium per f o r m a n c e LED house lights.

ICER, which stands for Innovation, Creation, Education and Recreation, was founded by the local government, several schools, artists and local businesses to provide an innovation centre for young people and other visitors interested in the technical industry. Housed in an old factory, ICER has transformed the cavernous venue into an exciting, futuristic space.

The centre is billed to be a thriving creative work space where visitors will be provided with a broad spectrum of innovative workshops, ranging from brand new product presentations to such cutting-edge activities as 3D printing, as well as robot & solar-powered car research and invention.

The museum was officially opened in May by King Willem Alexander and Queen Maxima of the Netherlands.

ICER needed an energy efficient, flexible lighting solution which was able to wash a diverse and vibrant colour palette across areas of the space, to transform the atmosphere and mood every few metres. They also needed the chosen fixtures to be premium performance and powerful enough to light up large spaces in the warehouse-style rooms.

The Chroma-Q Inspire fixtures were ideal for the project. Their fully homogenised beam provides beautifully mixed soft pastels, bold saturates and clean whites, making them suitable for both entertainment and house lighting. Other features include theatrical-grade dimming and an energy-efficient LED design for reduced maintenance and running costs.

The fixtures have been placed throughout the venue's key areas, such as the large central exhibition and museum-like hall, the presentation and innovation hall, and a further space containing a cube with a "Fab Lab", where the 3D printing workshops take place. The versatility of the fixtures creates a truly immersive and inspiring environment for visitors, and smoothly changes the ambience of each space.

They also provide illumination for fascinating artefacts in most of the museum cabinets, and for the multimedia shows for visitors, controlled by a touchscreen computer connected to a Jands Vista S1 console.

Inspire is available in a choice of black and white exterior housings and three beam angle options - including



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a 32° narrow lens, a 42° medium lens, and a 65° wide lens. The large central exhibition hall of the venue features x38 65° Inspires hanging three metres above the floor. The presentation hall includes x8 42° Inspires hanging approximately six metres above the floor, along with two Inspires featuring a 32° angled lens, hanging eight metres high.

ICER director, Barbara de Leeuw says: "At a centre like this, innovative products are shown and new developments & activities take place every day, meaning we have to be able to change colours like a chameleon. Using the Chroma-Q Inspire fixtures, every spot in the building can be given any colour we want. When the content of the exhibition changes, the colours can change with them. Also, the multimedia show that will be held twice a day can be altered as much as we

want, thanks to the incredible flexibility of the Chroma-Q Inspire fixtures with their remarkable output."

Harry de Kort, director at The Light Connection, specified and supplied the Chroma-Q Inspire fixtures, which were installed by partner, "Hendriksen bv" from Terborg.

Other recent venues investing in the Chroma-Q Inspire house light fixture include the Celebration Church house of worship in Jacksonville, Florida, the historic Pieterskerk building in the Dutch city of Leiden, and the Rondo theatre show restaurant in Sweden. ■

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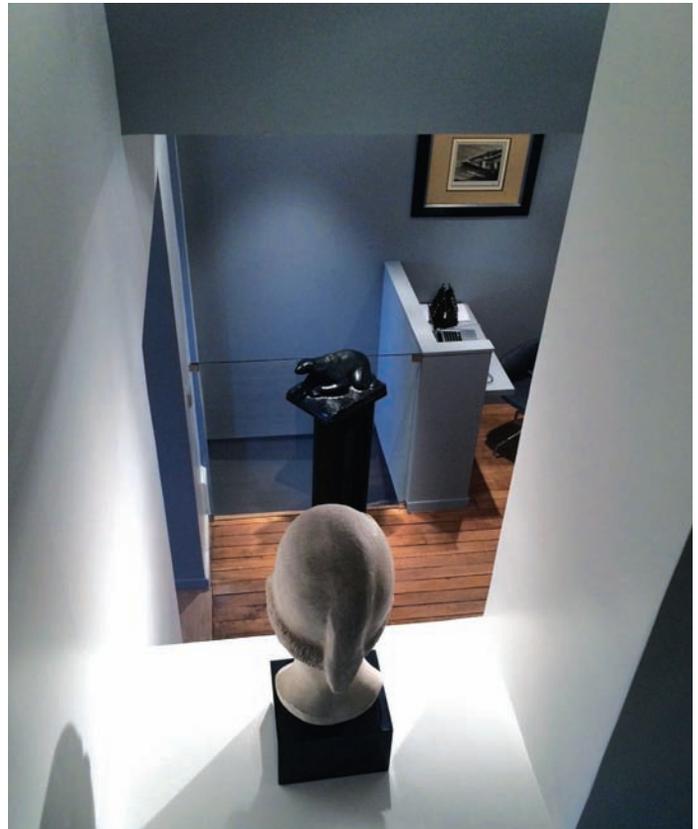
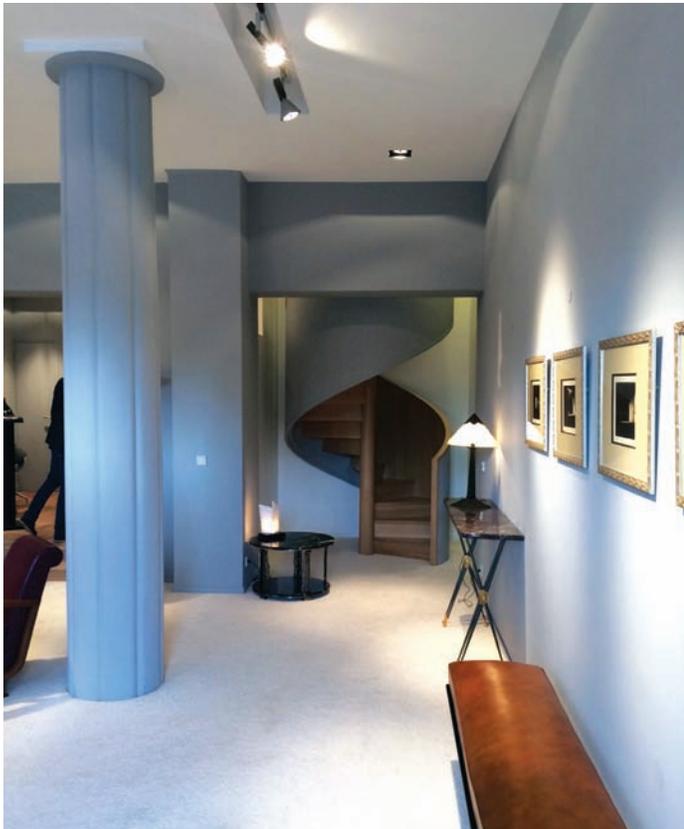


LAPP INDIA



RENOVATION of LEFEBVRE GALLERY by TRIPTYQUE - PARIS

In 2013, Romain Lefebvre, owner of the Lefebvre Gallery specialized in art decoration took over the local of Bresset gallery opposite to the Louvre. To take possession of the place, he appealed to the Franco-Brazilian agency architecture Triptyque.



The place, in front of the Seine on the Quai Voltaire, is exceptional. The building houses the headquarter of Agro engineers. It is in the process of ranking in the French heritage.

The Triptyque agency faces three kinds of problems.

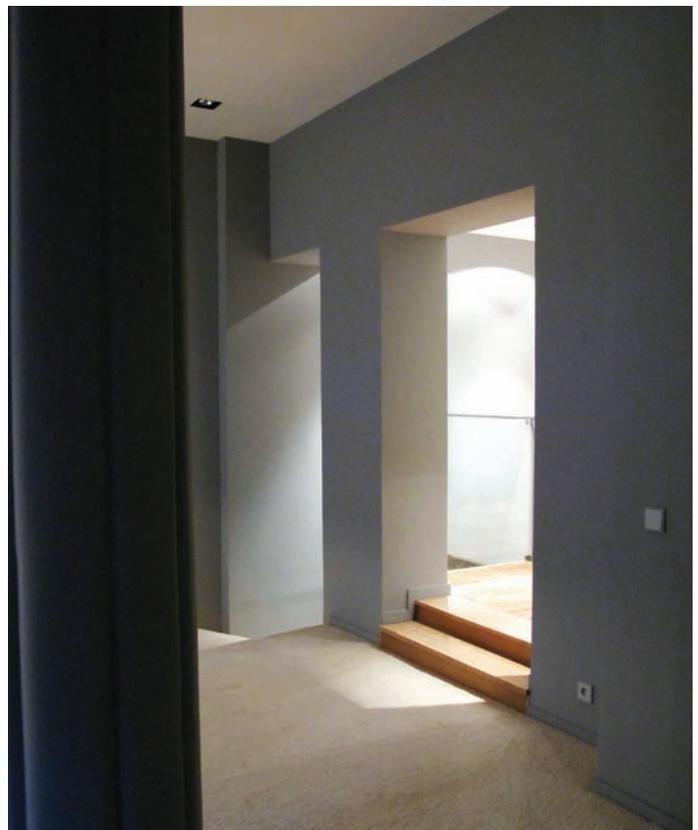
- Five generations succeeded each other and modified the gallery. The place needs to be refreshed to fit the art deco collection of the new owner.

- The succession of transformations made disordered the perception of space and the vertical connections.

- Finally, radical changes are complicated or even impossible, as the building will soon be register in the national heritage.

The Triptyque agency utmost opened horizontal spaces and openings to simplify and reconnect them, while respecting the historic character of the building. The vertical connections have been clarified through a single staircase which distributes different levels. The staircase, which is the core of the gallery, is made with Brazilian wood as the exotic wink. The interior is deliberately neutral, the lighting is scenic, embossed into the ceilings in order to not attract the attention but highlight the collection.

The agency conducted its reflection of the place in partnership with the gallery's owner, together they determined the functions of space and the way of the visitor.





The renovated cellar includes archives, storage furniture and a few rare pieces. The ground and first floors are the exhibition spaces. Above, is the office of the gallery where the owner could welcome clients.

The new Lefebvre Gallery opened in May 2014 to 5 Quai Voltaire in the 7th arrondissement of Paris. ■

Credits:

Address: 5 quai Voltaire 75007 Paris

Project area: 227 m²

Structural engineering: Oregon

Business all trades: Arc-en-ciel Building

Light: Regent

Architecture: Triptyque

Partners: Greg Bousquet, Carolina Bueno, Guillaume Sibaud e Olivier Raffaelli

General Coordinator: Luiz Trindade

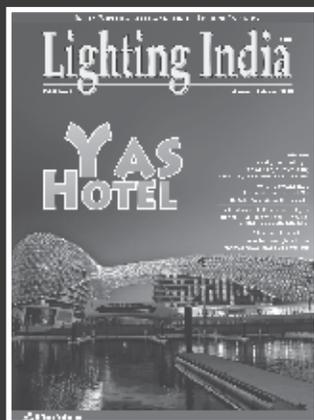
Project Leader: Morgan Rapy

Architect designer: Pedro de Mattos Ferraz

Pictures Credits: Triptyque, French-Brazilian Architecture office

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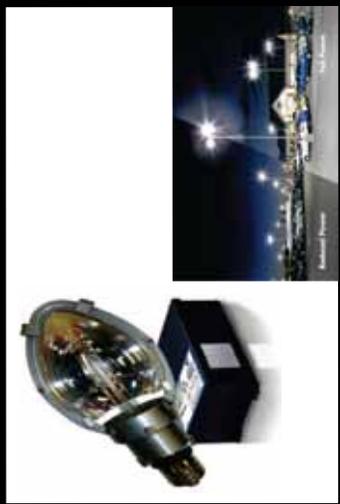
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Exmouth House

Clerkenwell, London

Speirs + Major have recently completed work on Exmouth House, a collaboration with architects CRM S that demonstrates the value that an integrated approach to lighting can bring to a re-purposed building. The project, sited in Clerkenwell, has undergone a transformation from former factory into sophisticated studio and office space, which features a dramatic atrium at the heart of the design.

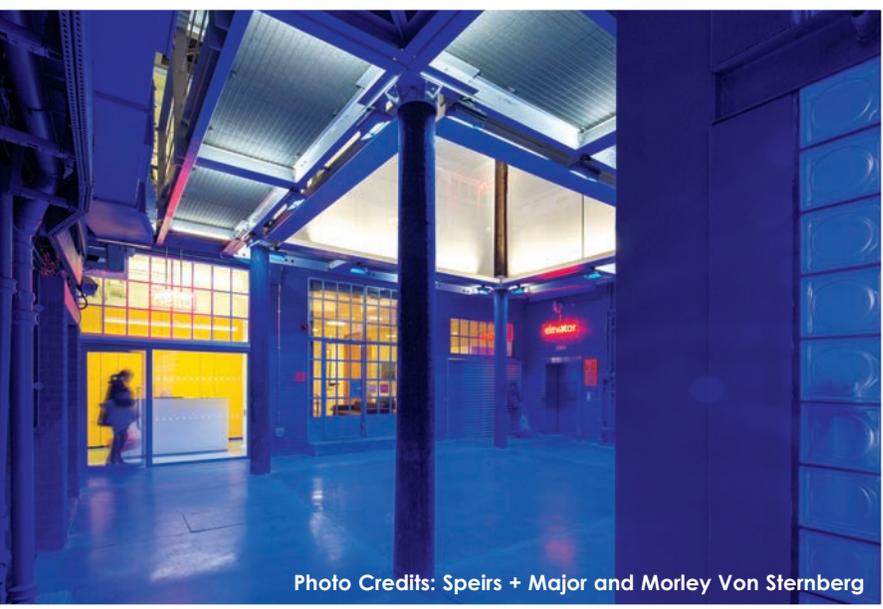


Photo Credits: Speirs + Major and Morley Von Sternberg

Photo Credits: Speirs + Major and Morley Von Sternberg

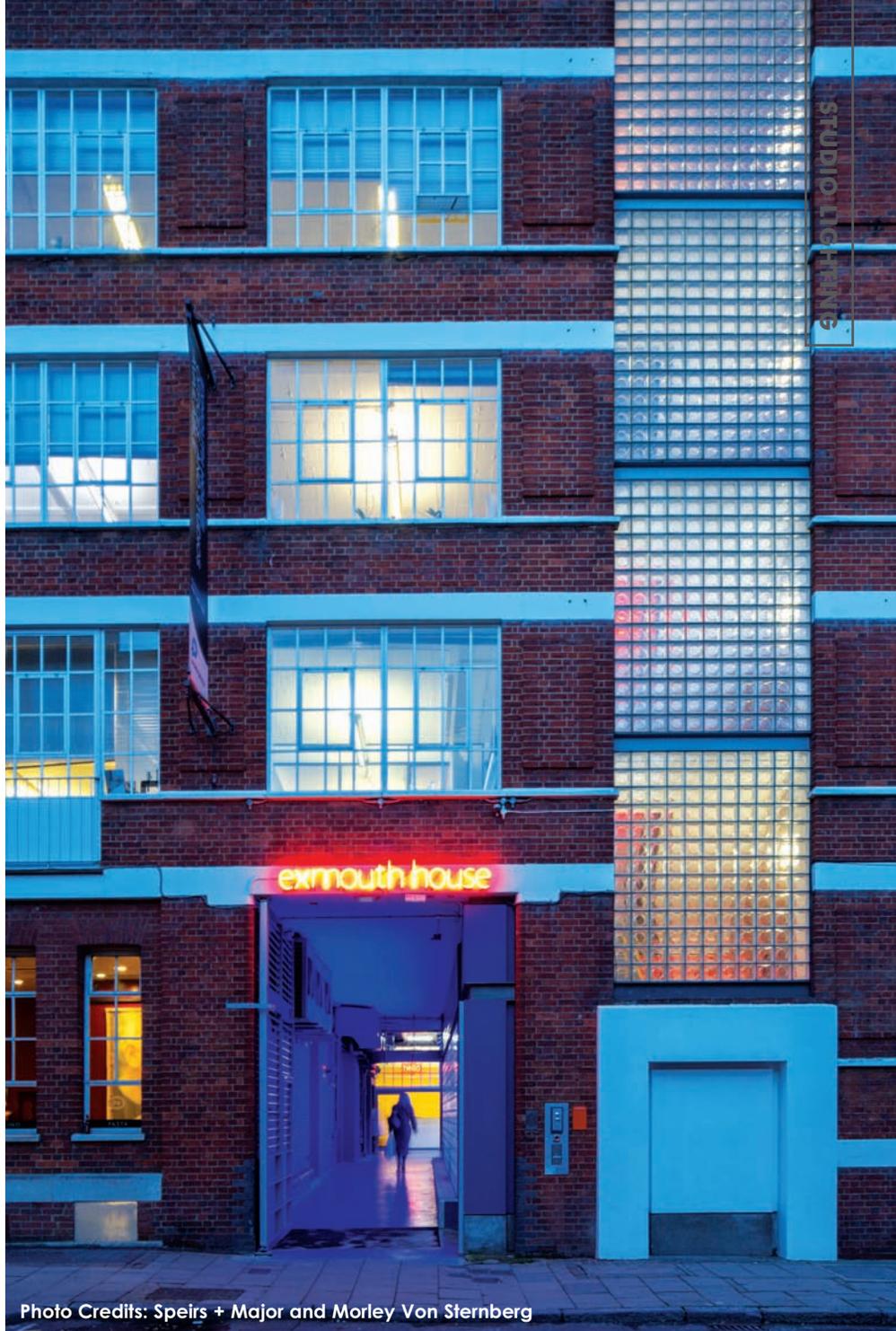


Photo Credits: Speirs + Major and Morley Von Sternberg

Workspace Group asked Speirs + Major to consider where lighting could add the most impact in a relatively low cost intervention, with a focus on the entrance and atrium spaces. An approach was developed to use light as a key contributor to the strong creative identity that the architects were aiming for, and to support wayfinding for an improved visitor experience. These aims were realised through a unique combination of light colours and techniques, resulting in a striking, yet functional, and pleasurable space that works equally well day or night.

To mark the entrance, Speirs + Major proposed a highly saturated blue light. This creates a strong contrast with the adjacent sodium street lighting and the warm brick construction, making the desired bold impact and creating an ideal background for the red neon signage.



Photo Credits: Speirs + Major and Morley Von Sternberg

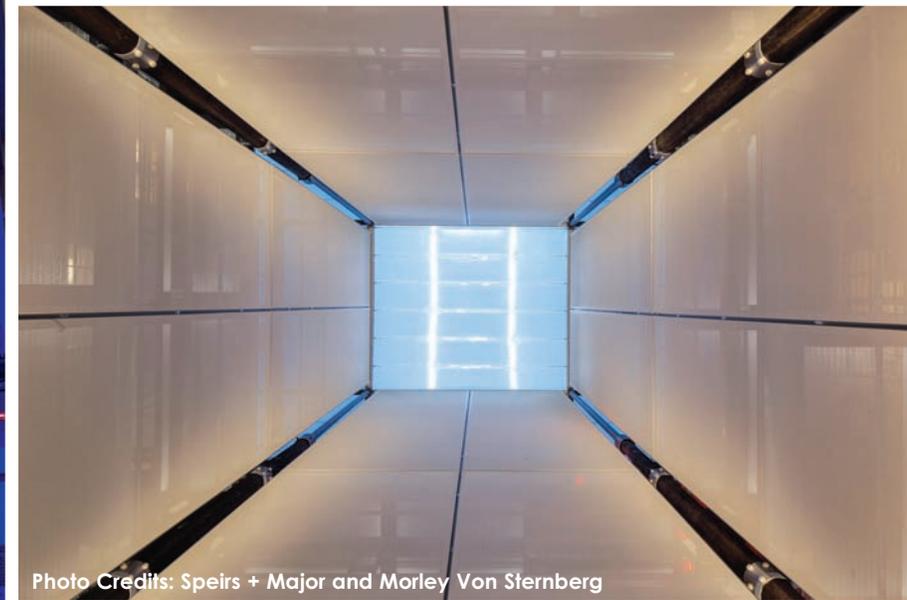


Photo Credits: Speirs + Major and Morley Von Sternberg

On entering the building, occupants have the sense of being completely immersed in the blue light, with sources concealed behind a glass block wall. Red neon way-finding graphics indicate the route through to the reception area where ORMS proposed an intense yellow finish, creating a strong focal point and a clearly identifiable destination.

The blue light is carried through to the ground level surrounding the central atrium space, setting off the diaphanous quality of cool white permeable fabric panels that stretch up the full height of the space. By day, natural light enters from above through the EFTE canopy. At night

however, artificial light is directed upward along these vertical elements. This inversion in the natural direction of the light serves to reinforce the verticality, providing upward perspective, as well as creating a deliberate dramatic tension between solidity and transparency.

The colour blue is also referenced throughout the rest of building, with gradually paler shades used to paint the brickwork in an upward progression through the building, adding a sense of depth of field.

Working with a re-purposed building always presents a challenge with respect to integrating details into existing features, finishes and electrical infrastructure. The majority of the lighting is provided by dimmable LEDs, offering the advantages of being easy to integrate, and a low energy long-life solution. ■

Credits

Client: Workspace Group

Architect: ORMS

Lighting Design: Speirs+Major
(Mark Major, Hiroto Toyoda)

Main Contractor: Kind & Co.

Electrical Contractor: Cogent Electrical Service

Major Suppliers: Mike Stoane Lighting,
Ecosense, Color Kinetics.

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Email : info@etron.in / sales@etron.in

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Configuring LED pitching for optimal design of Luminaires

AC high brightness white LED lamps, DC high brightness white LED systems powered by solar photovoltaic for portable lighting systems and off grid systems are some of the most promising emerging technologies appropriate to the Indian needs. The CAGR for LEDs and SPV is around 20%. The lighting business in India is of the order of Rs. 13,000 crores. There are still 75 million rural households and 9 million urban households which are dependent on kerosene for lighting. Lighting luminaires are build-up of a modular design of multiple LEDs. In this article the pitching configuration of LEDs for luminaires is presented. It is concluded that the pitching configurations are not optimal and more R&D studies are called for optimizing the lumen efficiency vis-à-vis the heat dissipation in the systems.



The lighting business in India is of the order of Rs 13,000 crores. The present installed electrical capacity in India is 250 GW (as on 30.06.2014) and the annual energy generation is 946 billion kWh/year. Lighting load which is accounting for nearly 18% of the total electrical energy (170 billion kWh/year) and 20% in peak (60 GW) during 1800-2100 hours is presently having virtually no digitally controllable component. There are around 280 million households in India in 2012 of which 190 million are in the rural area and 90 million are in the urban area. Nearly 40% of the rural households use kerosene/lighting systems as they are not connected by the electric grid. A small percentage of electrified households also use kerosene lamps. In the urban area nearly 90% of the households use electric power for lighting. Hence there are still 75 million rural households & 9 million urban households which are dependent on kerosene for lighting.

The challenges facing the emerging technologies in the Indian context are multiple.

- Covering the total lighting needs of the country including total elimination of kerosene lanterns.
- Change over from the inefficient lighting systems to energy efficient lighting solutions across the country. The change over requires undertaking energy audits which will provide insight into the viability of retrofits & renovation.
- Facilitating the technology manufacturing base, adoption and absorption of emerging solutions.
- Developing focus on balance of systems such as day light solutions, reflectors, luminaires, controls and automation.

Emerging technologies are those which are not fully in wide scale use and under the developmental process of improvement. The performance measuring metrics such as EMI-EMC compatibility, electrical quality, starting characteristics and equipment life are not fully developed for these.

The broad areas of emerging technologies are photonics. Photonics are on the way to take the centre stage both as basic energy converters (solar photovoltaics) (SPV) as well as light sources (LEDs). Flexible electronics based on organic systems is the emerging area in photonics.

Application wise, the most promising emerging technologies appropriate to the Indian needs are AC LED lamps for indoor, semi-

outdoor and outdoor lighting and DC led systems powered by solar photovoltaic for portable lighting systems and off grid systems.

Configurations of LEDs for luminaires

The LEDs are available as single LEDs and the luminaire configuration is built out of the individual LEDs.

Table 1 gives typical details of power density and total power of luminaires built out of individual LEDs.

It can be seen that there is a linear relationship between the power, no of luminaires and the area of cross section. The power is given by 0.14 W/cm². The number of LEDs is given

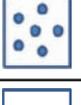
Sl. No.	Length/radius (cm)	Width (cm)	Area (cm ²)	LED configuration	Total No. of LED's	W/LED	Total Power (W)	Power density (mW/cm ²)
1	18	9	162		9	1.1	10	61
2	2		12.57		6	1.5	9	715
3	17.5	9.8	171.5		15	2	30	174
4	7	7	49		6	1.5	9	183
5	12.3	6	73.8		9	1.1	10	135
6	2		12.57		6	0.5	3	238
7	2.6		21.24		3	1	3	141
8	2.6	2.6	6.76		6	0.5	3	443
9	118	1	118		256	0.07	18	152

Table 1: Typical details of LED configurations for luminaires

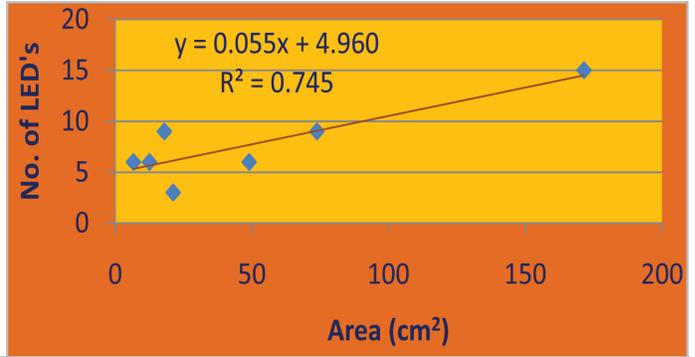
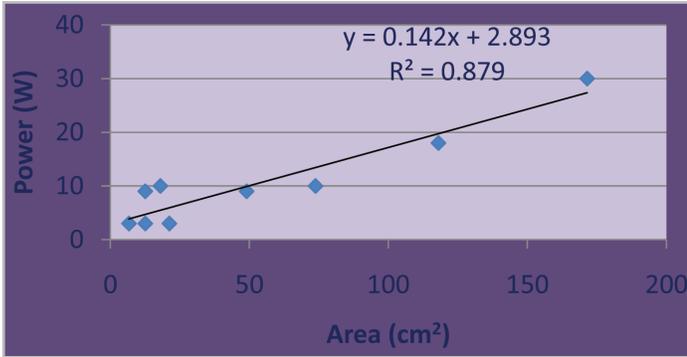


Fig. 1 & 2: give the variation of power of the luminaire and no of LEDs with area

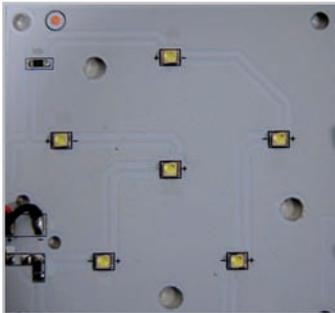


Fig. 3: Circular

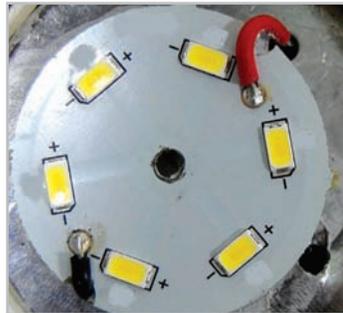


Fig. 4: Circular

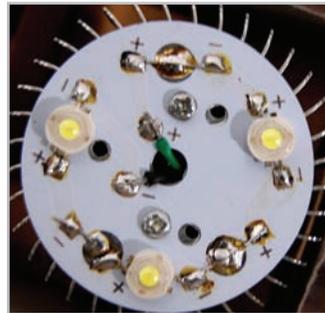


Fig. 5: Circular

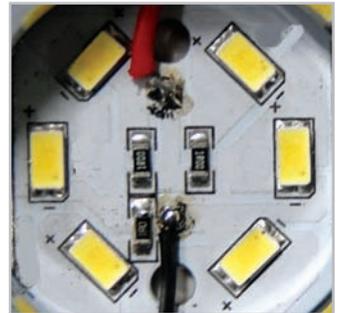


Fig. 6: Circular



Fig. 7: Circular

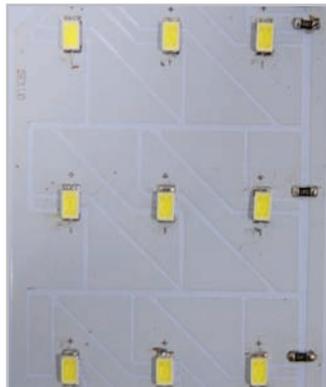


Fig.9: Rectangular



Fig.8: Rectangular

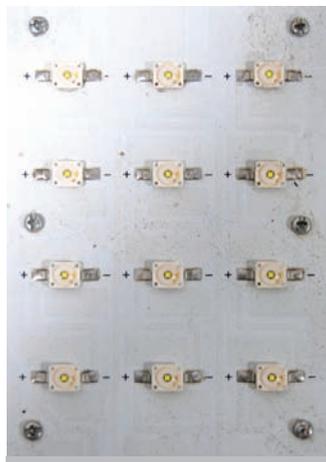


Fig.10: Rectangular



Fig.11: Tube light design

by 5.5 LEDs/100 cm² after the initial 5 LEDs. However, these configurations are not the optimal configurations and many of these are based on the ease of placement of the LEDs. For optimal pitching of LEDs to obtain the maximum lumen efficiency, the higher LED density in closer proximity gives better lumen efficiency of the luminarie. Ideally, if all the LEDs are located in close pitch the lumen efficiency of the luminaire would increase. However, consideration of heat dissipation would dominate the close pitching which would call for sparse pitching. Also the spread requirement of the application calls for sparse pitching.

Conclusions

In conclusion, it can be said that-

- Ideally dense pitching of LEDs would give the highest lumen efficiency of the luminaire. However, considerations of heat dissipation and light spread requirements of the particular application would call for sparse pitching.
- Presently designed pitching of LEDs for various applications are far from optimal and the considerations are mostly the placement of these and the heat dispersion. The pitching is not being optimized from the angle of lumen efficiency of the whole system. R&D studies are called for to optimize the pitching for maximum lumen efficiency. ■



M Siddhartha Bhatt is Additional Director and Divisional Head of the Energy Efficiency and Renewable Energy Division of CPRI, Bangalore. An energy expert he has experience of 33 years at CPRI. He has published 49 international journal papers in the area of energy efficiency and one book. He holds 7 patents. In the area of industrial consultancy he has undertaken power audits. He has been awarded the Young Scientists Award, Mysore University Golden Jubilee Award for Science and Technology, CBIP Best paper Award.



Neha Adhikari M.Tech in Energy Systems from Indian Institute of Technology Roorkee, has continued PhD in Renewable Energy Systems from Indian Institute of Technology Delhi. Presently she is working as Engineering Officer in Energy Efficiency and Renewable Energy Division, CPRI Bangalore. Her field of interest includes Renewable Energy, Control Systems & Power Electronics.



K Pradeep is working as Engineering Assistant in Energy Conservation and Development Division, CPRI, Bangalore. His industrial experience includes energy auditing and energy efficiency in thermal power plants, hydro power stations, process industries and electrical distribution system. He is working in the area of testing and certification of solar PV lighting systems.

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POWER OF TECHNOLOGY



Johnny Lo,

Asia Operations VP, Lucibel Asia Limited, in an exclusive interview to **Lighting India** remarks, Lucibel has been very proactive in designing products and solutions with respect to applications.

As a specialist in LED lighting, **Lucibel** offers innovative solutions which enable its customers to benefit from a totally controlled lighting environment, a reduction in energy costs, optimised maintenance, and tailored financing. In order to guarantee quality and longevity, its solutions are designed in France using LED technology and assembled in their own factories. With a wide range of patents and a culture of innovation, the consultant engineers define, together with customers, the lighting solution best adapted to their needs. Lucibel Hong Kong began business in April 2009. Its products have been presented at the 'Hong Kong Design Ambassadors Awards' under the patronage of the designer Vivianne Tam

Recent patent achievement is the heat dissipation methodology

According to you what scope does LED Lighting have when it comes to controlled lighting environment?

LED lighting has an indispensable role to play when it comes to controlled lighting environment. Building Management Systems (BMS)

is starting to and will dominate the architectural sector for years to come with lighting being the core of such protocol.

LED lighting, as you know, operates on the basis of electronics communication and allows smooth

control in terms of power, current and voltage. Provided that we see good compatibility between LED lighting and the different control systems on the market, LED lighting will be the frontrunner and major technology pace-setter for controlled lighting environment.

Could you share experience as an electronics expert about the transformations taking place in the LED Lighting Industry in Asia?

The transformation in the Asian LED Lighting Industry is massive. There were very few reputable LED brands ten years ago in the Asian market with even fewer factories having full facilities in manufacturing them. Over the past 5 years, we have seen a lot of factories moving into the chain of LED production from primary LED chip manufacturing to full lighting fixture assembling. The number of peripheral companies and associated industries, such as soldering or material die-casting, also jumped exponentially.

The LED Lighting Industry has taken a sharp turn in its focus and sales concentration over the past 2 years. We are all reaching a marketing tipping point where pricing has dropped down the pecking order in terms of customer purchase decision. Design, quality and sustainability have become paramount in earning customer respect and trust. I think this is the result of an overcrowded supply chain.

We have certainly touched the price bottom in terms of light sources and simple luminaires. Companies are redirecting their focus on designing more efficient and distinctive LED lighting rather than competing purely on pricing (i.e. dollar per Watt). The Asia LED Lighting Industry has reached a saturation point with smaller firms finding difficulty to survive. The success in our industry will depend a lot on branding and design. This is the way I see it.

What is the existing product range and solutions with respect to applications?

This is a board question with many

answers. The existing LED product range does offer tremendous solutions for residential, commercial and industrial applications. In the case of Lucibel, our core range of lighting covers most project needs in all sectors. Many players within the industry are able to offer ROI (Return on Investment) calculation, Lighting feasibility study, different local green rating measurement and numerous lighting control systems when it comes to fitting lights into a project. Product wise, I would say clients will always have a proposal regardless of actual project requirement.

Having said that, there are still constraints in LED when it is applied in particular areas. Does LED offers similar lighting level as a traditional sodium lamp does when it comes to lighting within a 45 meter ceiling high aircraft warehouse? Will LED provide perfect CRI for artworks like halogen lamp does within an art gallery?

Lucibel has been very proactive in designing products and solutions with respect to applications. At the same time, we make sure clients understand the feasibility and limitations in each scenario to support their decision making.

Could you describe some of the patents your company has acquired? What future plans you have for new products?

Lucibel has over 150 patents in terms of product, mechanical and technological design. Our research and development centre in Lyon has been instrumental in the overall design of the Lucibel product range. One highlight of our recent patent achievement is the heat dissipation methodology of Lucibel's unique candle lamp "LuciFlora". Basically we revolutionized the design of a traditional lamp into a piece of

lighting art where heat generated by the LEDs are dissipated through a combination of air-flow dispatch and heat management.

We have very well designed, ambitious and achievable plans for new products. Lucibel will keep focusing on commercial lamps and the integration of light sources and fixtures. Within the next 2 years, we will launch six product series to cover the needs in the retail, hospitality and educational sectors. Performance wise, all new products will attain a certain minimum requirement of lighting parameters, such as a CRI of over 85 and an efficacy of more than 100 lumen per watt. Our future products will allow users to embrace their ambient environment.

What is the marketing strategy to achieve set target?

Lucibel's strategy is to improve our products through integrating different ideas and technology advancement. Our marketing plan is to focus on differentiated advantages and market selectivity. We are firm believer of quality. A lot of players in the lighting industry, especially OEM and primary factories, made terrible mistakes to gain market share by simply cost-cutting and price slashing. This results in quality decline, customer complaints and in the end gives our industry a bad name. Our marketing strategy is to make sure the Lucibel product range offers a positive brand identity which will eventually turn into tangible results. With innovation and quality in mind, our marketing strategy is well placed to match and exceed targets and expectations.

Can you share the benefits that you have received from opening African subsidiary in Casablanca?

Having our own subsidiary in Casablanca is vital for our

development in the Africa regions. Being closer to our clients in this continent, we are able to develop tailor made solutions for local customers. Needless to say, our understanding to the local market in terms of product preference, local standards and distribution channels has been greatly enhanced.

Casablanca serves as both the continent headquarter and logistics centre for Lucibel in Africa. We maintain a healthy stock level in our subsidiary to serve local needs. Our time to market has been significantly reduced, giving us strong advantage over many competitors who can only provide solutions in weeks if not months. Our local team in Casablanca allowed us to discover new market and sales channels which were not visible to us before. For instance, we have been very successful in our sales operations in Algeria and Senegal.

Can you share about the LED technology you use to design the solutions? How productive your technologies are?

Our LED technology is a fusion of our technology know-how, manufacturing experience and applications of first class production facilities. We utilize raw material sources from all over the world in constructing and assembling our luminaires. Our expertise are not limited to applying SMD, COB and high-power LED chips. Lucibel has a team of heat-management, optical-measurement engineers and mechanical designers to design lighting solutions. Our lighting designer also provide feasibility studies for every customers, making sure solutions designed are truly in line with expectations and lighting requirements. In terms of capacity, we have been serving more than 35 countries worldwide. I would not specify in terms of quantity of

production as this offers little reference. Productivity should be measured on how well a solution performed, rather than the number of lamps produced.

How far Lucibel Asia has proved to be advantageous in the competitive market of Hong Kong?

We have been sensational in the Hong Kong market. Being a European brand with a strong local Hong Kong team to serve different clients, we truly combined quality and services, which are two key components of any success regardless of which industries we are in.

Lucibel Asia has proved to be advantageous through serving clients with passion and true professionalism. We are very active in exploring different lighting solutions for clients. Our product portfolio gives the local client a touch of French design and provides added value on their lighting proposals and applications.

We have a large and healthy stock level of SKUs residing in our local HK warehouse, serving every minute needs and demands in projects. This really strikes a cord with local customers working in such a fast and competitive market. Being there first always helps, more so in Hong Kong. All of our products are also coming with 3rd party quality certifications issued by international laboratories. Our quality shines against many competitors who are coming to a project bid with few or even zero quality proof.

Tell us something about the latest project that you are working on as well as current developments that are taking place in Asia market project?

By the time of writing, we have

already opened by our new Singapore branch which will commence business on Aug 11, 2014. Our APAC network will keep expanding to Thailand and Vietnam within the next 18 months. Hong Kong will remains our strong foothold in the Asia market.

Our latest project is a full floor office re-lamping application in Causeway Bay, Hong Kong. The objectives are reducing energy consumption, cutting utility expenses and improving productivity.

We achieved them by installing LuciPanel, our flat luminaire at 40W offering 3300 lumens. With no UV, mercury and flickering, this project passes local REA energy assessment and offers a tremendous and amazing working environment for the employees of our clients. We are working more and more in projects involving dimming and control systems. This will be a big trend for the Hong Kong market.

Could you name some of your important clients?

French International School and SMCP. We have NDA with most other clients.

Where would you envision Lucibel in the next two years?

We will be a major force in the local architectural sector in the next 2 years. Over the past 18 months we have tripled over business volume in the Asia market and we have the potential and ability to achieve this again in the next 24 months.

I would not say we will be the top market leader locally, this will be unrealistic and silly. However, we will be confident of putting ourselves in the top 10 bracket on a list of lighting service providers in the Asia market. ■



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Cinimod Studio lights

Terminal 2 at Heathrow Airport

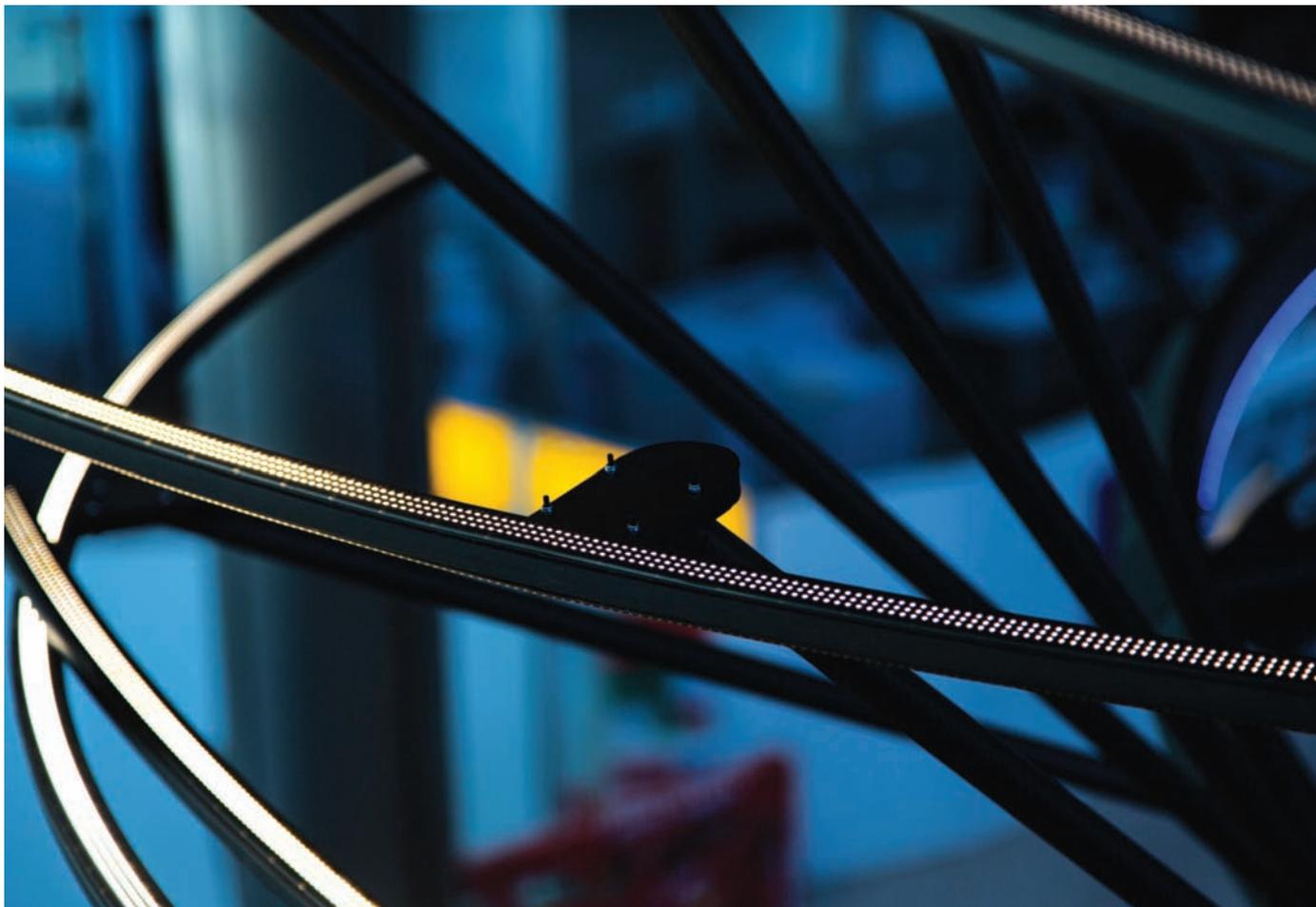
On 4th June at 5.55 am, Terminal 2 receives its first flight and Cinimod Studio is delighted to be responsible for the two key lighting installations at the £2.5 billion new Terminal 2 at London's Heathrow airport.

The new terminal was completed in November 2013 and the last 6 months have been spent meticulously planning a soft opening. The building is notable for its outstanding functionality and efficiency and will employ 24,000 people working for 160 different companies – including Heathrow Airport Holdings, airlines, baggage handlers and retailers. In 1955, as Heathrow's first ever Terminal, it catered for 82,840 passengers a year. The new Queen's Terminal has

been built with a maximum capacity of 20m passengers in mind! As a direct result of Cinimod's commercial success with "Butterfly in Flight" at Heathrow's Terminal 5, the team was commissioned by two clients to design and produce stunning impactful pieces for two new clients.

Emergence

The larger project "Emergence", for Caviar House & Prunier, is a lighting sculpture that heralds their arrival



to the heart of the International Departure Lounge. Designed in close collaboration with the client, Cinimod Studio has designed a unique, innovative and eye-catching landmark.

"Emergence" captures the re-imagined movement of a school of fish moving underwater, a playful reference to Caviar House. It is a sculptural expression of the light patterns and shimmers that are created as a school of fish moves in harmony within water.

The structure comprises LED arcs spiraling thirteen metres up to the ceiling, made from engineered carbon fibre composites as found in the newest airplanes which manifest a kinetic moment frozen, reanimated through cutting edge interactive digital lighting.

The resulting sculpture is unique for its form and is a triumph of British design, engineering and production. Some key statistics:

- Overall Height: 13 meters
- Maximum Width: 8 meters
- Diameter of main mast: 15 cm
- Weight: 1.5 tons
- Number of LEDs: 350,000 individually controllable white LEDs
- Primary structural material: carbon fibre.





Wondertrees

The second installation is for the Wondertree Restaurant (part of The Restaurant Group), situated on the mezzanine level. It comprises two elegant feature trees to bring a fresh and fluid addition to the backdrop of the restaurant – bringing the outside in - and thus highlighting a natural environment to discover and taste the exciting food and drink on offer.

The captivating design, frames and encloses the seating area and, is visible from throughout the terminal building (airside). Each leaf of the sculpture is individually illuminated, allowing seasonal hues of colour and light to appear softly across the leaf canopy.

The branches with internally illuminated leaves are constantly colour changing to reflect the time of day and year, or even to highlight special occasions. As each season passes, a greater colour shift is created - from the pinks and yellows of summer to the browns and reds of autumn.

For the Wondertrees, an ensemble of metal curved tubes form the four and five meter tree trunks from where

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- Entrepreneurs
- Investors
- Technical Management
- Education / Research Training
- Architects

Several Others.....



the branches and leaves extend. This distinctive sculpture is intended to create an iconic landmark for the Queen's Terminal.

Dominic Harris, Director of Cinimod Studio comments: "We are truly honored and delighted to be involved in the creation of such a symbolic building in our aviation industry. The retail and leisure landscape has changed dramatically in the last circa 60/70 years and thoughtful and appropriate lighting in interventions are the perfect way to enhance the customer experience, with a feel good factor that also impacts upon the bottom line for businesses." ■

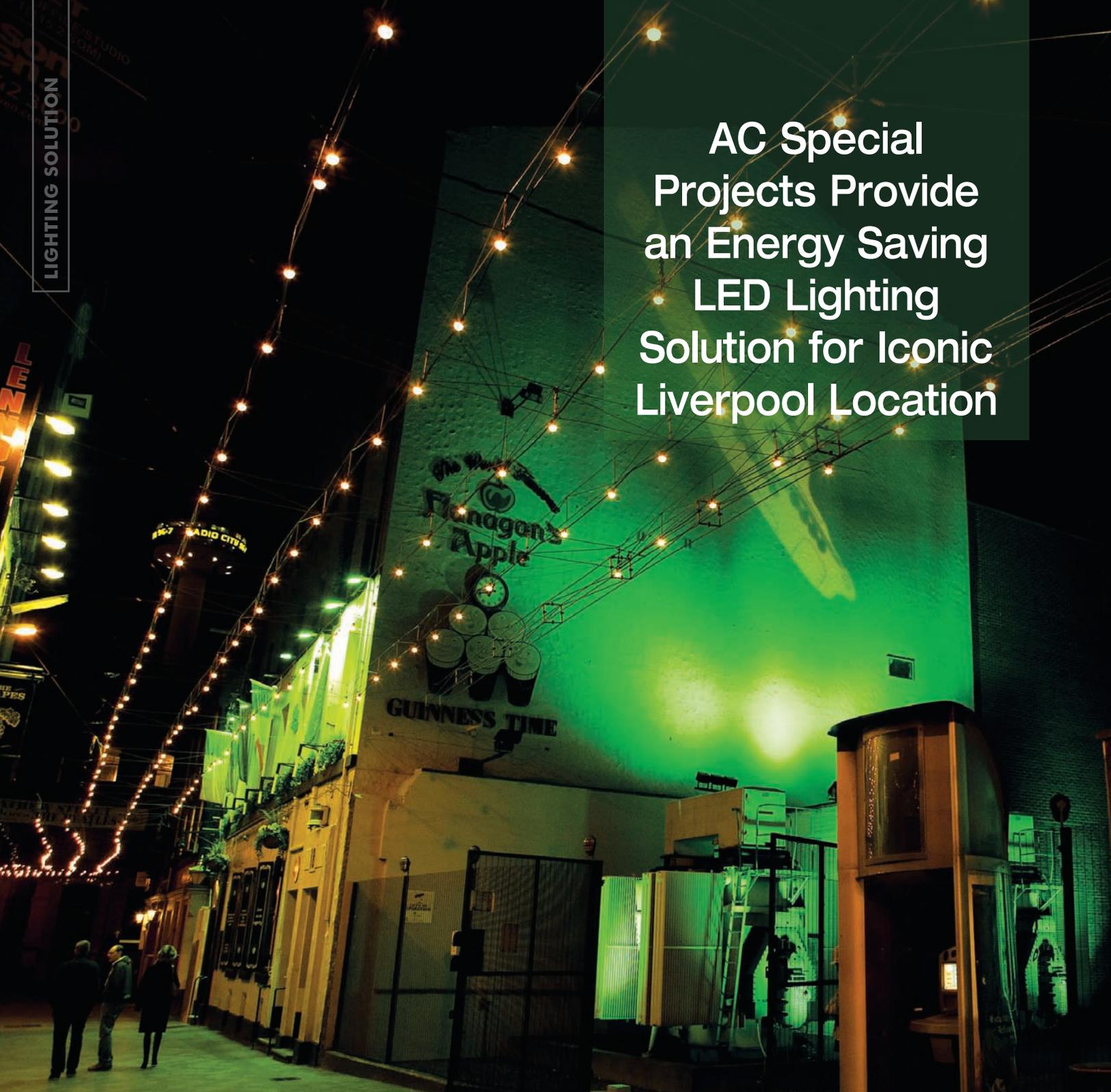
Credits:

"Emergence" Team:

Concept, Design & Production: Cinimod Studio
 Client: Caviar House & Prunier
 Structural Engineering: Tall Engineers
 Electrical Engineering: White Wing Logic
 Carbon Fibre Production: Polar Manufacturing
 Main Contractor: Powells Group
 Caviar House Architect: Design Square

"Wondertrees" Team:

Concept, Design & Production: Cinimod Studio
 Manufactured by Litestructures
 Client: The Restaurant Group PLC
 Restaurant Architect: Fusion DNA
 Onsite Contractors: Synecore, Interiors UK, Crossley Associates and CMC Projects.



AC Special Projects Provide an Energy Saving LED Lighting Solution for Iconic Liverpool Location

The A.C. Special Projects (ACSP) Ltd have provided a unique, energy efficient architectural lighting solution - complete with wireless DMX control - for one of Scottish Power Energy Networks' (SPEN) primary substations, located on the world-famous Mathew Street in Liverpool, UK. Mathew Street is one of Liverpool's most vibrant nightlife destinations. Each year thousands of tourists

visit the street's iconic Cavern Club, where the Beatles played on numerous occasions in their early career.

Situated just metres away from the Cavern Club and other entertainment venues on the street, ACSP were tasked with creating an energy friendly, architectural lighting solution to help bring the space to life at night inline with its lively surroundings.



Led by ACSP Project Manager, Lance Bromhead – a selection of low maintenance, energy efficient lighting products were specified for the project, including a number of Pulsar ChromaFlood 200 LED wash fixtures, Pharos control, Griven GoboClip MK3 fixtures, and an assortment of custom-made gobos used to project themed logos and images around the space.

As the installation is outdoors, Lance needed to ensure that all of the lighting equipment would stand up against the elements, so he chose IP65 and IP66 rated products.

Working closely with Pulsar, Lance arranged for all of the ChromaFlood 200 units to be custom-fitted with IP65 rated wireless DMX capabilities, reducing cabling and installation costs and further simplifying the system requirements.

To fulfill SPEN's low maintenance request, Lance chose a Pharos LPC1 Lighting Playback Controller with a built-in astronomical clock, which was pre-programmed to run at certain times of the day.

Based on the new LED lighting system's reduced number of fixtures and lower power consumption compared to the

original discharge lamps system, it is estimated that the LED technology will reduce the sub-station's lighting carbon footprint by up to 80%.

The installation has been a great success, attracting a lot of praise and attention amongst tourists and passersby.

John Heathman, Distribution Programmes Manager, Scottish Power Energy Networks, commented, "Scottish Power Energy Networks (SPEN) are very pleased with the energy efficient lighting solution that ACSP supplied for the Scottish Power Substation on Mathew Street, Liverpool. ACSP explained the project options in great detail, as well as demonstrating the fixtures prior to installation. The lighting installation has dramatically enhanced this facility at night, helping it to blend in with the world-famous street's vibrant nightlife." ■

Credits

AC Special Projects Ltd



Chotto Matte Restaurant

- London, UK

Photo Credits: . P&AB



Photo Credits: . P&AB





Photo Credits: . P&AB

Using Japanese and Peruvian food and culture, Chotto Matte brings modern Tokyo underground to a 1960s residential building in Soho. The brainchild of Kurt Zdesar and designed by Andy Martin Architects, the energy of underground Tokyo is communicated through a mix of eclectic collaborators without resorting to stereotypical visual references.

.PSLAB was chosen to create the lighting concepts, as well as design and manufacture custom-made fixtures for the Bar, the dining area and a full-wall graffiti mural.

To emphasize different aspects of the space, without lighting it up completely, .PSLAB divided their response strategy into two main types of insertions. The first is a set of dim sculptural lighting to create an ambient supplement to main pillars of the space, namely the bar and the columns. The second is a technical layer responsible for illuminating the tables and the graffiti wall.

The bar lighting elements are installed to create visual continuity in response to the curve of the bar counter. Each element was made to measure, with different dimensions of steel tubes mounted separately to the adjacent beams, suspending from the ceiling at different points when more support is needed.



Photo Credits: . P&AB



Photo Credits: . P&AB



Photo Credits: . P&AB



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The lighting elements installed on the columns mimic the style of the bar lighting and disperse the dimly lit glass bulbs vertically throughout the space.

To give the tables the required lighting, without flooding over to the space and compromising the low lighting ambiance, the dining area was lit using directional ceiling mounted projectors that specifically target the tables.



The full-wall graffiti mural is protected behind a layer of bespoke glass. This assembly made it impossible to light the artwork using projectors in the dining area because of the glare that would be caused by the glass encasing.

.PSLAB designed a floor mounted linear lighting system installed behind the glass along the base of the wall to illuminate the graffiti. ■

Photo Credits: . P&AB

Design Practice

Andy Martin Architects



Kit Kemp had an inspired and eclectic vision for the hotel that evolved as the project progressed. The main objective of the hotel is to make it feel like you were visiting a friend's house not staying in a hotel. Lighting Design International worked with Firmdale to create a combination of concealed lighting effects which complement the decorative lighting without dominating the spaces. The architectural lighting is discreetly integrated into coffers, ceiling slots and joinery where possible to allow the feature chandeliers and quirky neon light art to make their statement on the design as a whole. This approach adds

Ham Yard Hotel

- London

Lighting Design International were brought in by Firmdale Hotels again to work on their next distinctive boutique hotel to add to their already fabulous portfolio. The project is unique as the client is also the interior designer.

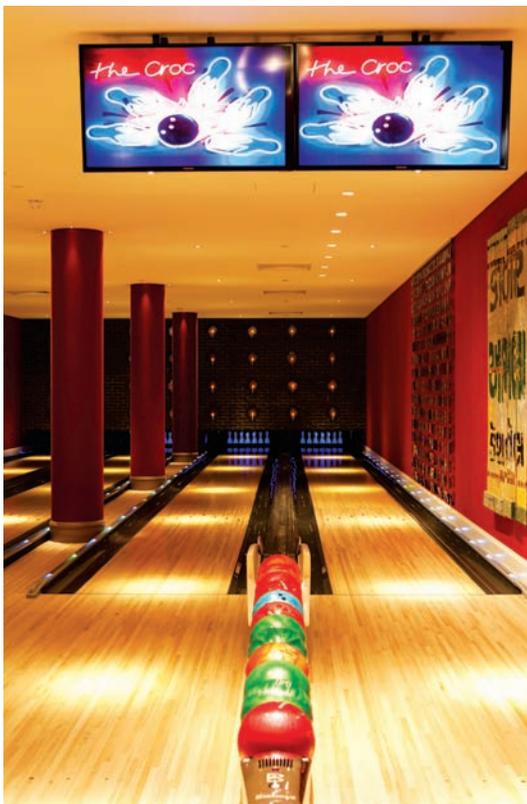


depth to the spaces complementing the vibrant colourful interior finishes.

Artwork is prominent throughout the hotel and was challenging to light as some pieces are very large, particularly the retro film posters where there is a triple height ceiling. Here remote controlled down lights and theatrical projectors are used to frame the oversized artwork.

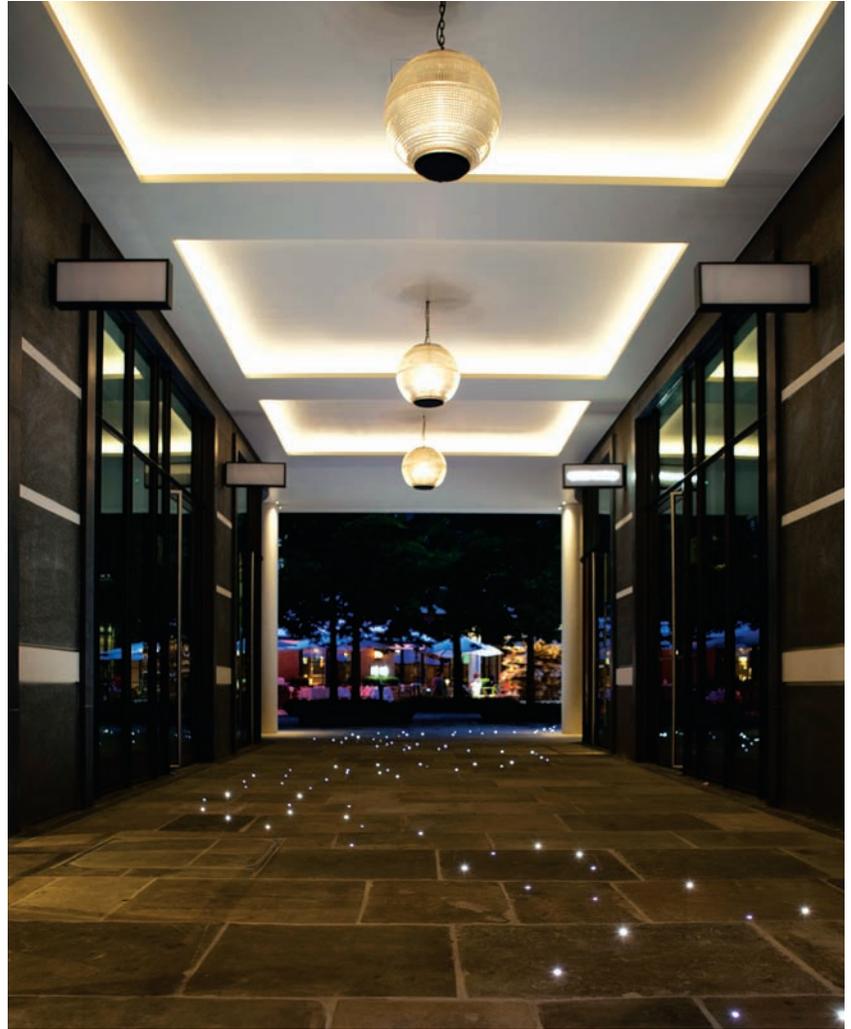
Firmdale designed an art installation of ceramic vases in niches on the back wall in the Brasserie and Bar. Following a meeting with the artist, the concept of uplighting the vases from within to create a soft warm glow was agreed. In the end





the most effective solution was achieved by installing a simple GLS LED lamp in each niche. The ceramic vase is hollowed in the base & mounted on top of the lamp and the lamp cap & heat sink were sunken to avoid shadowing. The result is a warm understated lighting element that works well with the other features in the space.

The bowling alley has a similar effect with lit niches at the back wall above the ten pins at the end of the lanes. Our concept creates the effect of moving glowing candles in each niche. Again after much discussion and



testing of fibre optic and LED's, the solution is achieved by using a dynamic LED electric candle bulb which appears like a candle set within a brick niche from the far end of the lane.

The exterior courtyard terrace is a public thoroughfare in the heart of bustling Soho. The design creates interest and draws people through the arcade into the hotel courtyard. This is achieved by creating a river of lights in the ground, using small LED marker lights in a winding stream pattern through the arcade to the courtyard and the entrance to the hotel apartments. This signals something special through the arcade and leads to softly uplit trees, decorative wall lanterns and an uplit bronze Tony Crag sculpture.

On the whole the design of the hotel owes its success to a true collaboration of the decorative lighting and architectural lighting which leave you with the impression of being in a truly unique environment, which is fun, cutting-edge and unpretentious. ■

Credits

Lighting Design by Susan Lake,
Senior Designer at Lighting Design International
Interior Design by Firrda ale

A warm welcome at Van der Valk Hotel, Holland and significant energy savings

When a new Van der Valk hotel was built in Dordrecht, energy efficiency was one of the key elements to the lighting scheme. However, the lighting also needed to communicate the warmth of halogen lighting, to reinforce the warm welcome that Van der Valk wanted its guests to receive in one of the company's hotels. Thanks to the latest in LED lamp technology from MEGAMAN®, the end result is not only a warm, welcoming place to stay, but a hotel that is predicted to save £476,268 (€553,585) and 869,830 kg CO₂ over the lifespan of the lighting installation*.

With 68 hotels in the Netherlands and a further 30 in countries as far afield as the Caribbean and the USA, the Van der Valk chain is the largest hospitality chain in the Netherlands. Originally begun over 150 years ago by Martien and Rie Van der Valk, the secret of the hotel chain's success is its focus on guests receiving a warm welcome. This warmth needed to be reflected in the modern interiors and lighting scheme at Van der Valk Dordrecht, whilst maximising cost efficiencies.

Working closely with the construction team, the MEGAMAN sales team advised on the lighting installation



at the hotel. By using a mix of MEGAMAN® LED lamps, the end result is a welcoming ambience that is not only highly energy efficient, but has already proved its low maintenance credentials; one year on the maintenance team at Dordrecht has not had to replace a single one of the 1695 lamps or drivers.

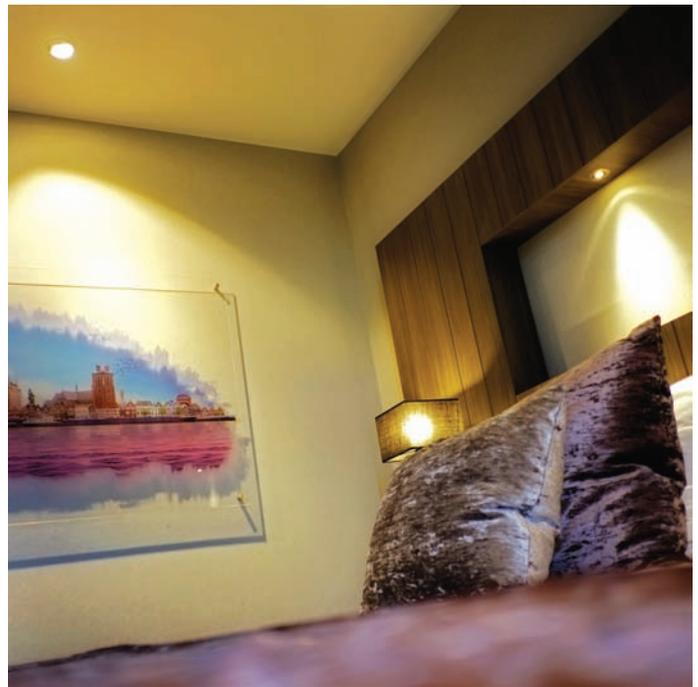
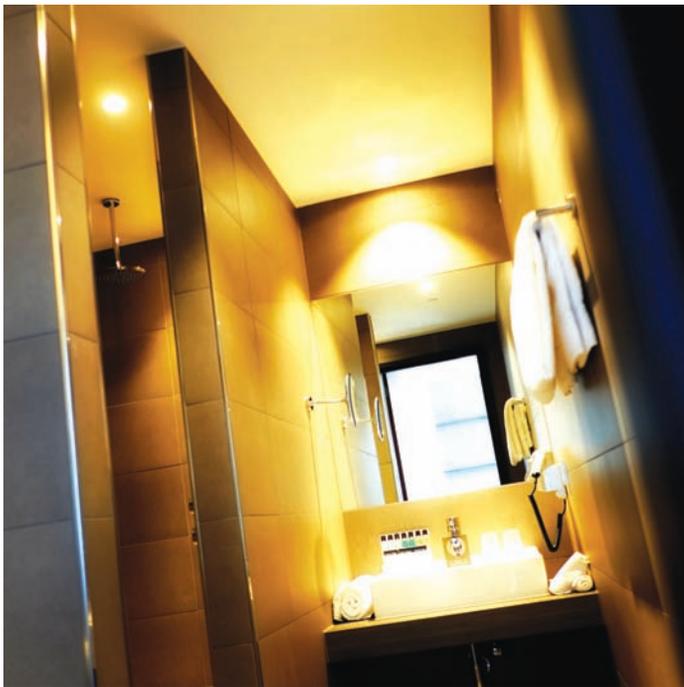
With a welcome so important to Van der Valk, warm white temperature LEDs were chosen for use throughout.



Overall, 700 MEGAMAN® LED 10W G53 AR111 8° 2800k dimmable reflectors and 385 MEGAMAN® LED 10W G53 AR111 24° 2800k dimmable reflectors were used in the reception and restaurant areas. In addition 90 MEGAMAN 4W LED PAR16/20 20° 2800K, GU10 reflectors were used in the dramatic chandeliers in the public areas.

The 8° and 24° beam angled MEGAMAN LED AR111 lamps were bundled together throughout the Deltalight



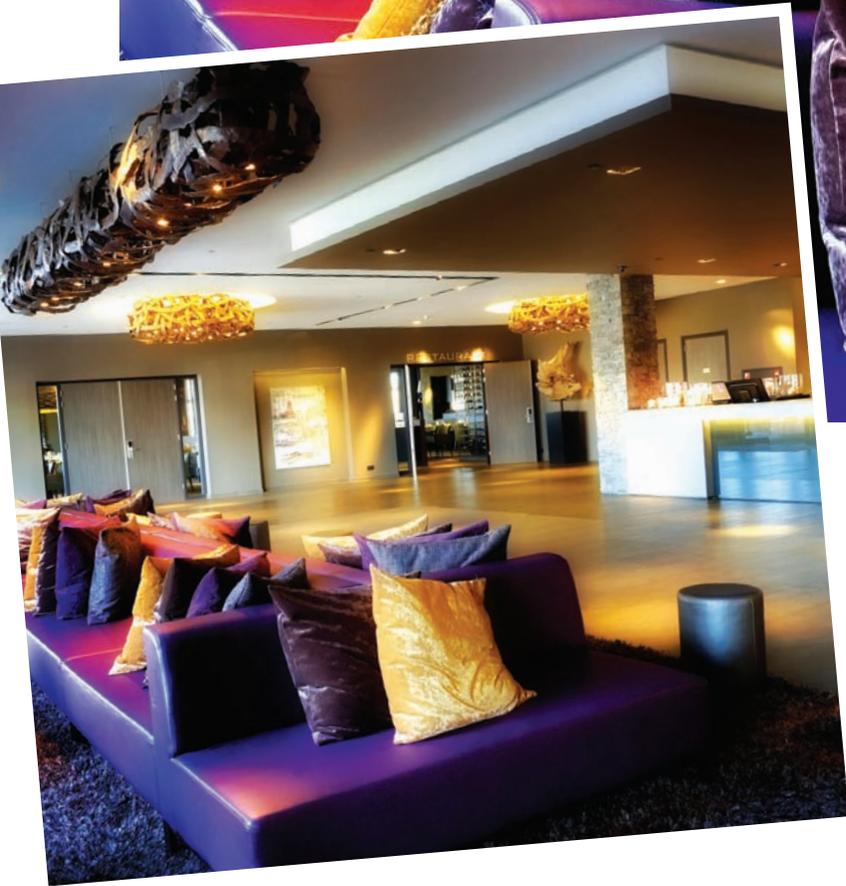


fixtures in the high ceilings of the reception and restaurant areas to increase the sparkling effect on the surfaces below. Such focused beam angles are only possible, thanks to MEGAMAN's precise light control using a unique axial geometry and patented Thermal Conductive Highway™ (TCH) technology. This focused light management also ensures that glare is minimised. With a lamp life of up to 40,000 hours it will be several years before they need to

be replaced and thanks to 100-1% DALI controlled dimming, the AR111s and PAR 16s in the reception and restaurant areas have brought lighting mood control as well as longevity to these public spaces.

As well as creating flexible, energy efficient lighting within the public spaces, the owners of Van der Valk Dordrecht also wanted to bring quality lighting into the private spaces of this new build hotel. With this in mind,





160 MEGAMAN LED Classic 8W E27 2800k dimmable lamps were used in the hotel rooms, alongside 90 MEGAMAN LED 3W, E27 Ping Pong 2800k in the bedside lamps. In the ensuite bathrooms, 90 MEGAMAN 4W LED PAR16 20° 2800K, GU10 reflectors were used, to bring warmth to even this area of the guest experience.

The end result is not only significant energy and electricity bill savings, but the scheme has been well received by staff and guests alike. The quality of the light from the MEGAMAN LEDs is of such a high

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- Other allied Industries
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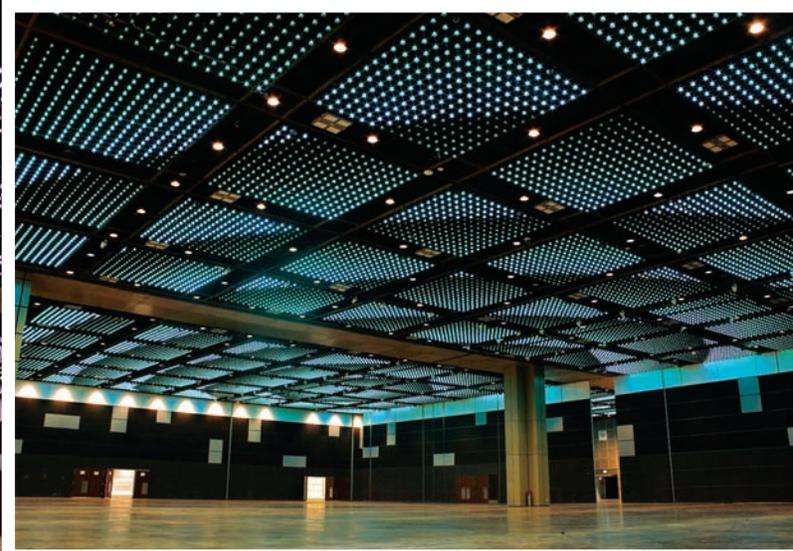


quality that after installation, the hotel owners were even approached with the request to quote for 'replacing the existing halogen lamps in the hotel with LED lamp technology'. Thanks to the design of MEGAMAN's LED reflectors, they provide a true replacement to traditional halogen, metal halide and incandescent solutions. The investment in quality LED lamp technology at the outset has not only paid off in terms of customer satisfaction for Van der Valk Dordrecht, but will bring environmental and cost savings to the owners for many years to come. ■

*Note: *Replacing 1085 x 50W 12V halogen lamps with LED 10W G53 20V AR111 and 90 x 35W halogen PAR16's with 90 x 4W LED PAR16/20 reflectors running in the lobby, corridors, restaurant and bar areas. Replacing 160 x 45W incandescent bulbs with 160 x 8W LED Classic lamps and 90 x 15W Incandescent bulbs with 90 x 3W LED Ping Pongs, running in the bedrooms. Replacing 35W halogen PAR16's with 90 x 4W LED PAR16 reflectors, running in the bathrooms. Energy Cost: €0.19/kWh, CO₂ Emissions: 0.43 kg/kWh.*

Courtesy:

Megaman Press Office



Suntec Singapore uses HARMAN's Martin Professional LED Technology to Enhance Customizable Exhibition space

As Singapore's leading venue for meetings, trade shows, lectures and other events, Suntec Singapore Convention and Exhibition Centre is an award-winning multi-level space that is home to the world's largest HD video wall.

Located in the central business district of Singapore, the convention center recently underwent a massive renovation that included an advanced LED lighting solution for the center's fourth level. Suntec Singapore originally had a different plan in mind, however, when Bo Steiber Lighting Design introduced Suntec Singapore to HARMAN's Martin Professional VC-Dot 1, the project took a different, positive turn.

Suntec Singapore takes pride in being an industry pioneer by using cutting-edge technology to improve business and minimize its carbon footprint for both Suntec Singapore and its clients. For the level 4 modernization, Suntec Singapore sought to change the way attendees interacted with the environment and revolutionize their perception of events and venues. In the downtown modern core of Singapore, space is extremely valuable. "To us, there was one - particularly relevant question to bear in mind: How can we design a space flexible enough to host an exhibition today, a wedding banquet tomorrow and a conference the next day," explained, Arun Madhok, CEO, Suntec Singapore.

The innovative renovation incorporated the venue's ceiling into the design to allow for Suntec Singapore to quickly alter an event space or set the mood of an event.

The new design is centrally programmed and controlled, eliminating the need for staff to climb the ceiling in order to make adjustments. As a result, Suntec Singapore is now a more flexible, marketable and efficient event space.

As part of the innovative ceiling design, Martin's LED VC-Dot 1's allows Suntec Singapore to offer its clients unprecedented flexibility for a single space as customers can now differentiate themselves by adding logos, messaging and graphics to their event.

Summarizing the importance of the new design, Madhok stated, "Our new system costs less to operate than our previous system. We save costs on power and cooling as well as the drastic decrease in breakdowns and necessary repairs. The installation is one of our key selling points and has definitely strengthened our brand as a venue. Saying that, we have to expect our competitors to catch up, and therefore we have to constantly renew ourselves and keep up to speed with new products and possibilities. For this, a close working relationship with Martin Professional Asia & Pacific is crucial."

As a world leader in the creation of dynamic lighting solutions for the entertainment, architectural, and commercial sectors, Martin lighting and video systems are renowned the world over. Martin (www.martin.com) also offers a range of advanced lighting controllers and media servers, as well as a complete line of smoke machines as a complement to intelligent lighting. Martin operates the industry's most complete and capable distributor network with local partners in nearly 100 countries. Founded in 1987 and based in Aarhus, Denmark, Martin is the lighting division of global infotainment and audio company HARMAN International Industries.

HARMAN (www.harman.com) designs, manufactures, and markets a wide range of infotainment and audio solutions for the automotive, consumer, and professional markets. It is a recognized world leader across its customer segments with premium brands including AKG®, Harman Kardon®, Infinity®, JBL®, Lexicon®, and Mark Levinson® and leading-edge connectivity, safety and audio technologies. The Company is admired by audiophiles across multiple generations and supports leading professional entertainers and the venues where they perform. More than 25 million automobiles on the road today are equipped with HARMAN audio and infotainment systems. HARMAN has a workforce of 15,200 people across the Americas, Europe, and Asia and reported sales of \$5.1 billion for the last twelve months ended March 31, 2014. ■

Courtesy

HARMAN's Martin Professional



Elation Lighting

Keeps High-tech H&M Flagship Store in Party Mode

Lighting designer and head of New York City-based Levy Lighting, Ira Levy, has a reputation for experimental, cutting-edge designs and has amassed an impressive list of prominent clients over the last 20 years. Elation fixtures have also found their place on his designs, most recently at the prestigious H&M flagship store in New York's Times Square.

"I decided wherever possible in retail to stay away from discharge lamps. For the H&M store, I needed an LED-based spot fixture and chose to use the Platinum Spot LED

II," Levy says of the efficient LED-based color and effect spot moving head.

Levy created an all-white moving light grid with custom-painted white Platinum Spot LED II units. "They are sending moving beams around the store all day long, creating energy and excitement for shoppers as they enter," he explains. "The idea is that the store is in New Year's Eve party mode 24/7. The moving lights make it feel like you are coming to a party or night club."

H&M is a growing clothing retailer with an innovative,



trend-setting image (an opening day appearance by Lady Gaga helped kick off the party atmosphere) and the new flagship store in Times Square reflects that with a metal decor and futuristic, tech-savvy design that the Elation Platinum Spot LEDs look perfectly at home in.

Known for fulfilling a lighting brief with a cutting-edge custom solution, Levy turned to the Platinum Spot LED's 135W cool white LED engine to cut through high ambient light levels while using the fixture's 8 colors and 14 gobos to splay effects across the space and onto the reflective surfaces.

To keep the energetic atmosphere fresh, beams can then be manipulated via a frost filter, 3-facet rotating prism, iris, focus, high speed shutter and strobe.

The H&M store in Times Square is located in one of New York City's priciest locations for real estate and the clothier needs to attract shoppers at all hours of the day. By creating the alluring party atmosphere, the Elation Platinum moving heads are helping do their part. ■



Ira Levy, Lighting designer and co-founder of the New York Festival of Light, Ira Levy, has a reputation for experimental, cutting-edge designs and has amassed an impressive list of prominent clients over the last 20 years. For two decades Ira Levy has been in the gratifying position of being able to express his love for light. Levy Lighting fuses unique architectural imagination with theatrical inventiveness to produce some of the most memorable projects in NYC and abroad. Each client receives detailed and personal attention from the conception to the completion of their project.

Credits

Photos: Levy Lighting | NYC



According to Bloomberg report 3d printing business for both service and product will reach up to \$8,000 millions in revenue by the year 2020 on world wide basis. With the latest desktop 3 d printer of less than \$3500, one can easily use the technology help to design and to manufacture a lamp.

The method is simple, using 3d printing, we can make a lighting development model of printing components, interface parts, housing, decorative enclosure, coloring and testing temperature of led.

Now, high yield smd led, because of relatively low heat output, we can use the plastic base material for well designed lampshades, housing and parts without worry about heat dissipation.

A customer came in to our newly installed light HUB in london, he wants

to give his young son, a light which is fun to look at he can use to read, and use as a night light to help to sleep. It is hard to find this kind of lamp. SKK has developed files based on images of imagination, comics, cartoons, or sole creativity to develop lamps that fits the bill.

It is a dinosaur head object, with a gooseneck that can be adjusted in every position, a retro 4.2 watts 12v led lamp that gives 300 lumens to read, and dimmed it down to 50 lumens to sleep without fear of darkness.

Recently jewellery brand FAERGE has asked SKK to develop a lamp for precious stone inspection for a prestigious show in Harrods London and in New York. SKK has used the 3dp to make a working prototype to show to the sales executive to inspect with. And after constructive comments, SKK has developed a twin color (2900 & 4500 K) narrow spot lamp for the job. The final

Scope of 3D Printing Lighting

lamp is made of brass and finished in antique bronze to go with the style of Faberge.

The twin color led lamp can be adjusted, it intensities individually and together to give a color way that gives much responses with the actual stones and its metal surroundings; i.e. the warm color reflects well with gold, and day light enhances the diamonds & even pink diamonds. Nevertheless, SKK approach lighting design with 3dp is very different from others. What is in the market now is kind of large expensive shades with lot of complexities in shapes and texture and mainly for suspension purposes. SKK 3dp lighting is about, a design philosophy, a style evolved with customers, not solely the designers, it is not design for design sake, it has to make a statement too on contemporary time frame, it has to tell the history of technology, the theory behind it and serving a very useful task for modern societies without destroying employment. SKK uses the technology to help to finalize a good product.

With the social network internet world, the magic part of 3dp industries is that, medium scale mass production of either components or final product can be gradually done with the help of networking. Apart from that there are now 3dp manufacturers springing up in the us and Europe to

produce medium size products as well for that when files are processed, it can be distributed for a network of printers, even consumers all over the world at home or workspace to complete the process unlike traditional manufacturing methods and establishments. ■

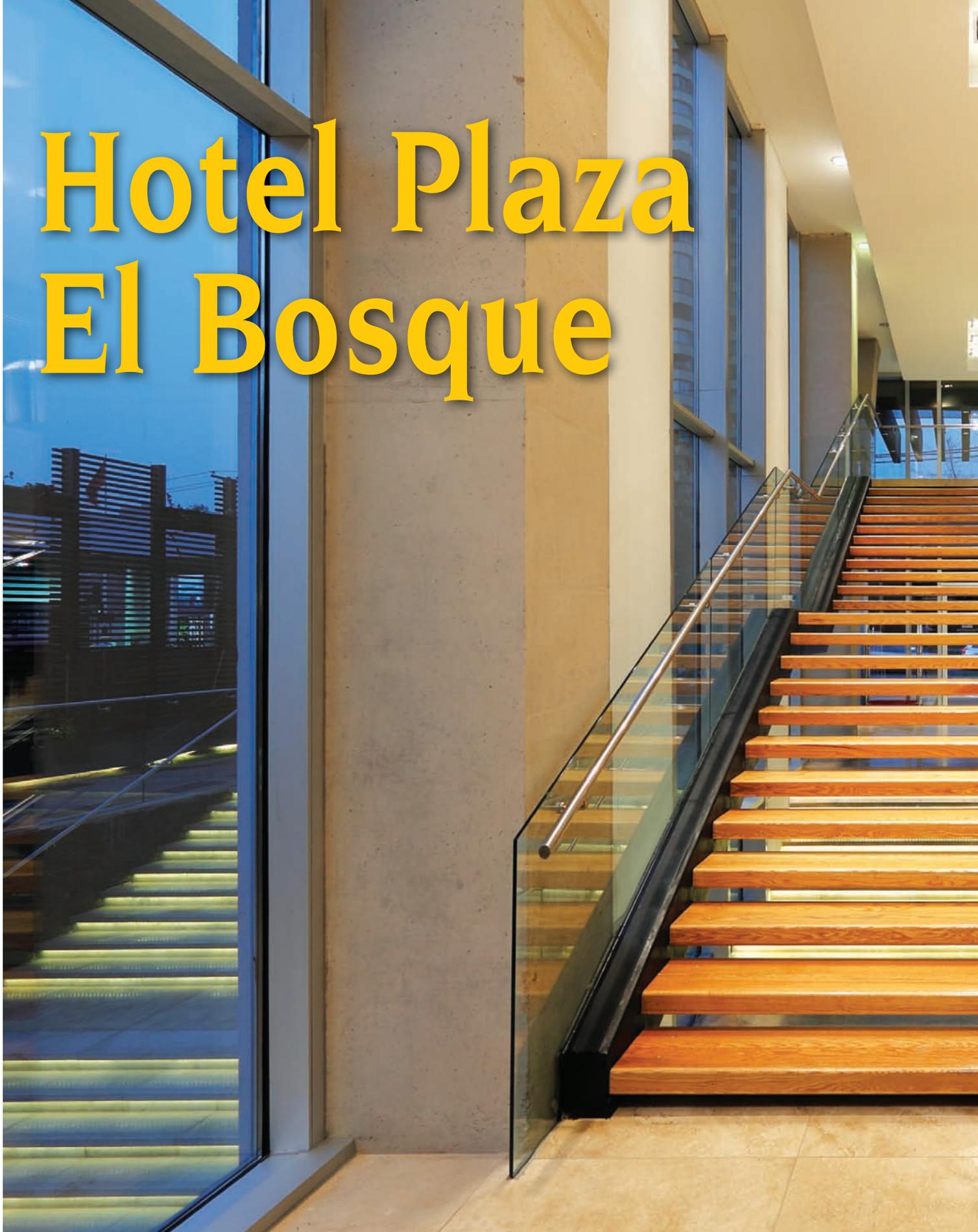
Courtesy

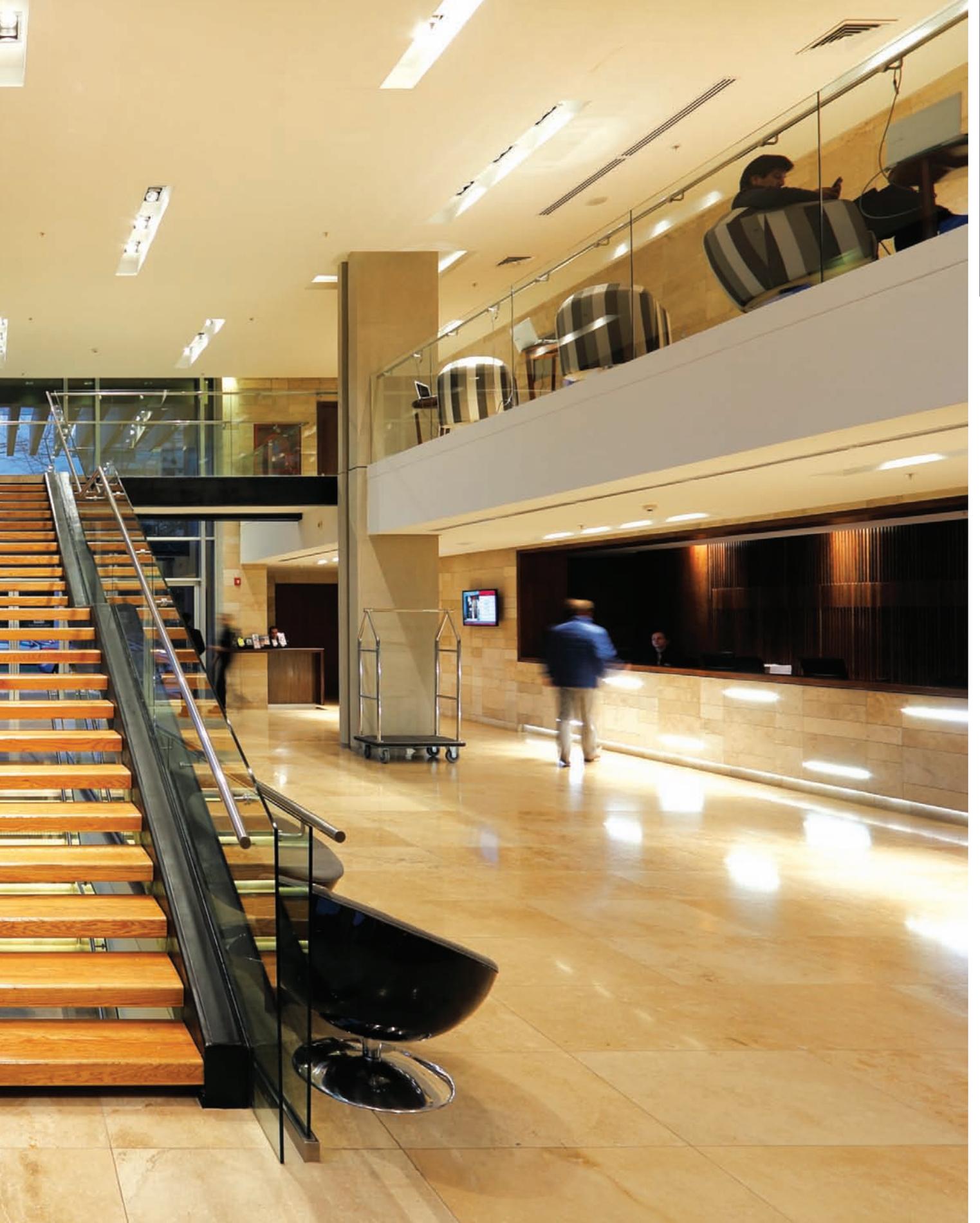
Shiu-Kay Kan and SKK Design Studio



Shiu-Kay Kan is founder & MD of SKK Lighting (1979). He studied at Telford College, & went to University of Westminster, to study architecture and got RIBA qualification in 1976. He studied garbage architecture at Architectural Association, London, and won a scholarship to go to seminar at Tallahassee University in Florida. His Garbage architectural design of a conservatory built of secondary wastes of tin cans, cardboard and Watney beer crates, gained a lot of attention from the press and Shiu-Kay was asked to appear on Blue Peter, presented by John Nokes and Percy Thrower. He wrote his thesis paper on building architecture out of waste. In 1983 he won the Philips lighting award on PL lamps.

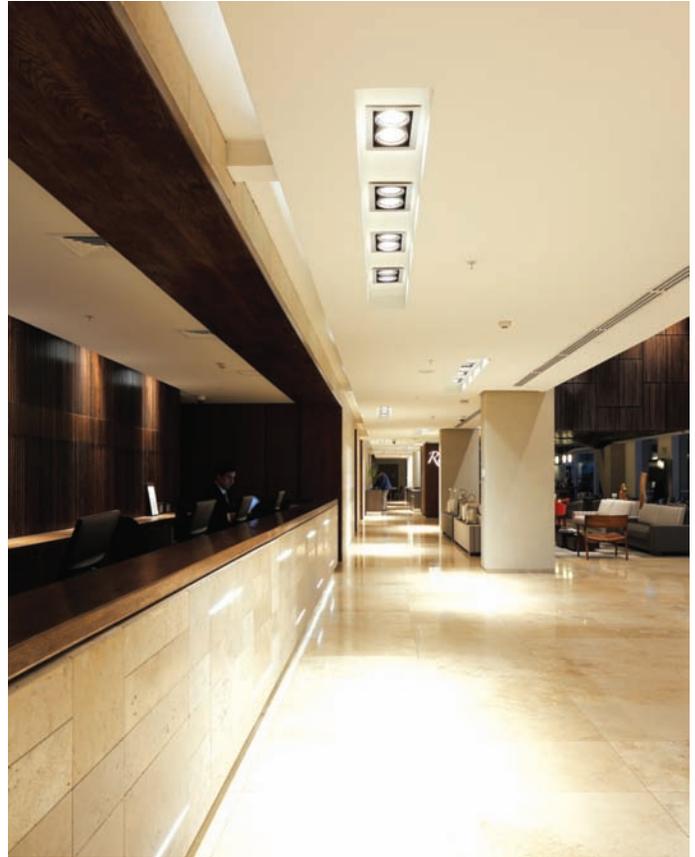
Hotel Plaza El Bosque





The hotel is located in a very active part of the city, near the crossing of two important streets that connect respectively the north with the south and the east with the west parts of town. This fact, and the proximity to some important shopping malls, gives the hotel visibility within that area.

The open exterior spaces in different levels of the building give shelter to the passing pedestrians. A garden

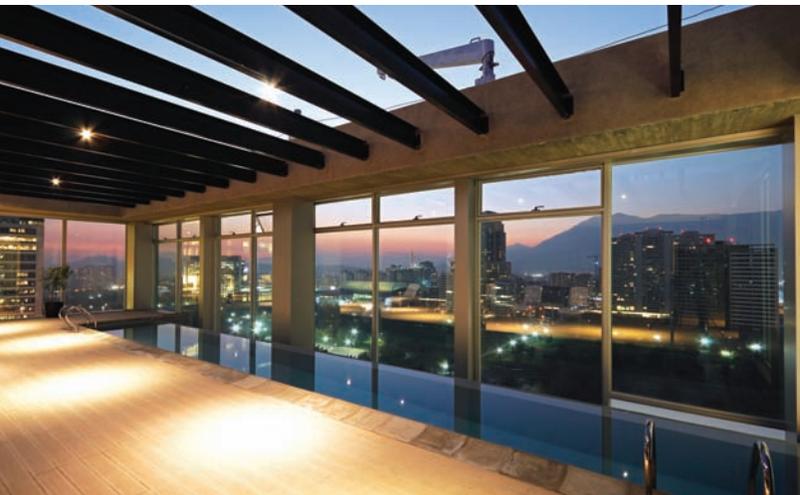






under the street level is the access to the meeting and function rooms. From this underground level emerges the crossing pillars that cover the facade all its way to the top of the building. On one side of this garden, a led strip

highlights a horizontal line in the form of a broken, winding and illuminated baseboard. On the other side were used overlaid lamps with double beams that remark the pillar diagonals. In the inner space, the double



height lobby counts on zenithal illumination, drawn in light strokes from sources hidden into slits that run down the walls. For this purpose were used square spotlights with powerful ARS111 led bulbs. The stone facing on the

walls alternates with led modules in the lobby and reception areas.

The doors to the rooms are accentuated with light and the circulation ways in the rooms are highlighted with illuminated baseboards. The bathroom contains a glass panel module that turns into a big shining lamp when lighted.

Illuminated baseboards and slits are the leading features used in the public areas. This gives visual comfort and a geometrical harmony together with the rest of the elements that are to be placed on the ceiling. ■

Credits

Lighting Design

Architect: Paulina Sir

Photographs: Pedro Mutis

Architecture: Alemparte- Morelli

GILE 2014

achieves record-breaking figures and unprecedented international participation



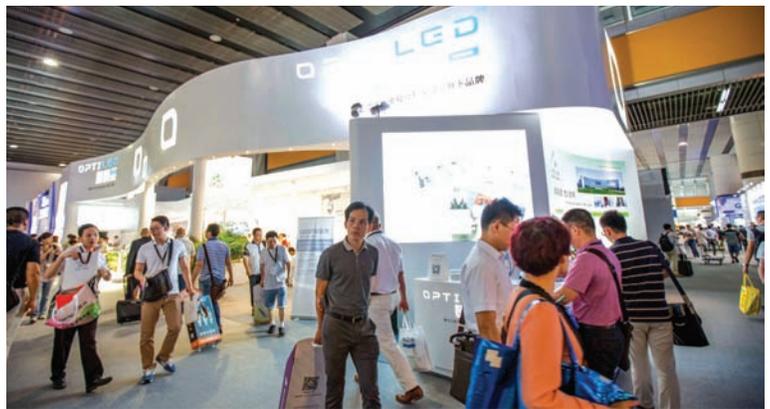
Lighting India participated in the Guangzhou International Lighting Exhibition that once again provided an impressive demonstration of the growth of Asia's lighting and LED market as well as the growing significance of the region to the international lighting community, reconfirming its role as the most influential lighting and LED event in Asia. In total, 2,621 brands (2013: 2,588) from 25 countries & regions exhibited this year, utilising a record-breaking 21 halls across 225,000 sqm of space. Meanwhile, visitor numbers increased by 11% compared to last year with the final count being 129,885 from 132 countries and regions. The level of visitor internationality also rose, with the countries and regions represented at the fair increasing by 9.17%. Celebrating 19th edition this year, fair has grown to become showcase of virtually the entire supply chain of lighting & LED technologies. Categories as well as some of their associated suppliers at the 2014 show included:

Lighting applications, accessories & electronic components: Philips (Netherlands), Everlight (Taiwan), Neo-Neon (China), Alanod and BJB (Germany).

LED chips, packages, modules & light engines: Cree (US), Epistar (Taiwan), HC Semitek (China), ROHM (Japan) and Seoul Semiconductor (Korea).

LED drivers, driver ICs and controllers: Helvar (Finland), Meanwell (Taiwan), NXP (Netherlands), Power Integrations (US) and Tridonic (Austria).

guangzhou international lighting exhibition



LED components and packaging materials: ALPHA (US), Dow Corning (US), Panasonic & Shin-etsu (Japan) and WACKER (Germany).

LED inspection, testing and manufacturing equipment: Everfine (China), Labsphere (USA), Lpck (Germany), Nordson (US), Konica Minolta (Japan), Radiant Zemax (USA) and Zvision (China).

With the support of government and industry associations, country and regional pavilions that participated this year were from Hong Kong, Korea, Taiwan, the US and for the first time, Japan. Pavilion participation added value to the show by bringing innovative companies and products, as well as showcasing the core competencies of the lighting & LED industry from a country & regional level.

Gary L Stanley, Department Director at the US Department of Commerce and organiser of the US pavilion noted, "Messe Frankfurt has been an invaluable player to us in exporting US brands to overseas markets. The exhibitors we brought to the 2014 show have overwhelmingly expressed great satisfaction with the show's quality, and a number of them have said they intend to come back to the show's next edition."

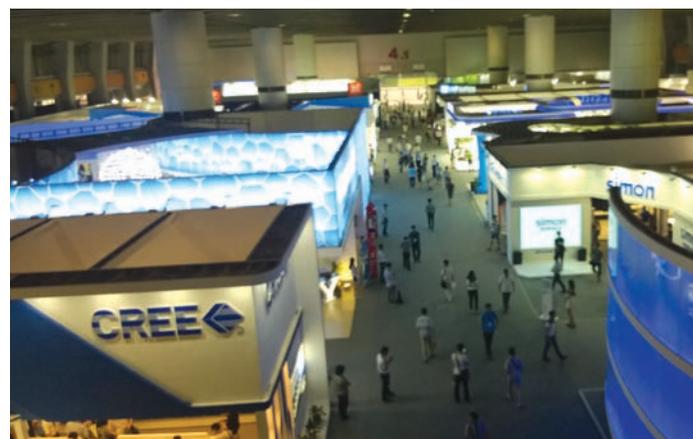
The top-five international visitor countries included India, Korea, Russia, USA & Singapore. There was also a substantial presence of overseas visitors from expanding markets such as Malaysia, Turkey, Thailand and many more. Particularly striking was double-digit rates of growth in the number of overseas delegations and group buyers, to a total of over 600 delegates from 43 countries & regions. The delegates included diversified trade-based buyers such as lighting importers and exporters, merchandisers from international chain stores, lighting e-tailers / retailers and wholesalers.

Suppliers of traditional lighting products have made considerable efforts to convert their light sources to more energy efficient systems. Among them, the adoption rate of LED lighting in commercial, residential, industry and other application markets has garnered more attention throughout the industry. At the 2014 show, many exhibitors showcased

smart lighting applications and products including drivers and control systems. Ms Lucia Wong, Deputy General Manager of Messe Frankfurt (Shanghai) Ltd, shared: "The spotlight of this year's fair was on energy efficiency, as well as the integration of LED technology with advanced intelligent lighting control systems. We observed the adoption of intelligent lighting systems in commercial lighting through features such as wireless motion controls and on/off dimming switches. In residential lighting, parallel to prevailing trends in smart home technology and the use of personal mobile devices, some lighting exhibitors showcased centralised monitoring and control interfaces for lighting so that the users could conveniently control lighting with their tablets and smartphones in any location. I believe intelligent lighting applications will be a vital ecological and economic aspect towards the future of lighting & LED industries' development."

Light-plus series of events revealed four vital areas in global lighting development

Visitors as well as exhibitors were treated to a series of comprehensive complementary programmes of events under the newly designed "Light-plus" series. Over 140 sessions took place with topics focused on the four vital areas of



lighting and LED industry development: market, technology, network and design. Some of the events included:

Light-plus DESIGN

10th Asia Lighting Arts Symposium – Focused on the two core themes of “Lighting project management: from design to implementation” and “Lighting inspiration in design”, the event invited 14 international lighting designers, architects and lighting engineers to share their inspirational projects and expertise on lighting design. 2014 Alighting Forum Guangzhou: Lighting design – The event invited nine world-class lighting designers, engineers, academics and company CEOs to share their insights on current and upcoming lighting trends.

Light-plus MARKET

Russia Lighting Information Forum – The forum introduced and educated lighting suppliers on doing business in the growing Russian lighting market.

2014 Alighting Forum Guangzhou: Channel Marketing – A networking and information sharing platform on diversified channel management strategies in China.

Light-plus TECHNOLOGY

Asia LED Summit: LED Summit 2014 – Utilising the theme “LED Globalisation: Technology, Market and Future Trends”, the summit consisted of 38 presentations and five panel discussions on recent developments in LED technology. The event presented in-depth market analysis, forecasts on technological developments in chips, packaging and modules, drivers and components as well as component, production and inspection equipment and their application to LED lighting. Over 1,200 professionals attended the two-day event. Elan Zhang, Director of Technical Marketing, Shanghai Duty Cycle Semiconductor and an attendee of the summit said: “This summit was an eye-opening experience. It gave

me a lot of ideas and inspirations in product development. I hope to see more next year.”

Asia LED Summit: LEDForum Guangzhou 2014 – Organised by LEDinside and Cnledw.com, the forum invited top executives from international firms such as Philips Lumileds, Osram, Samsung, Seoul Semiconductor, Toyoda Gosei, Epistar, Sanan and many more to talk about the current status of the global LED industry.

ZigBee Smart Lighting Control Seminar – Co-organised with the ZigBee Alliance, the seminar introduced how the innovative ZigBee wireless technology can provide cost-effective ways for smart lighting control in building and home automation.

Light - plus NETWORK

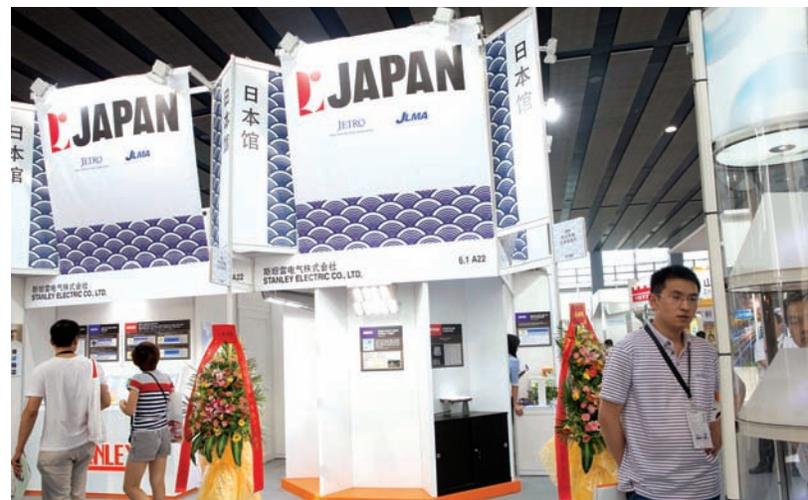
Lighting Design Gala – Celebrating its fifth edition, the gala focused on the theme of “Light & People”, and gathered worldwide & domestic lighting associations (IALD, LUCI, CLDA, AALD and CLIA) to share inspirations on lighting design. It also served as platform for lighting designers, manufactures and installers & engineers to exchange ideas.

AGORA – Returning for its fourth edition, the AGORA platform once again served as an effective networking event, with a number of influential industry associations participating.

19th Guangzhou International Lighting Exhibition:

Alighting Awards – Aimed at encouraging the future development of China’s lighting market, the award returned for a second year with greater recognition of its contribution to the Chinese lighting industry. Award categories presented at the 2014 edition included the “Top Ten Products award”, the “Top Ten Projects award” and the “Top Ten Outstanding Contribution award”.

The next edition of the Guangzhou International Lighting Exhibition, celebrating its 20th anniversary, is scheduled to take place from June 9-12, 2015 at the China Import and Export Fair Complex. ■





Contents of the magazine :

- News and views from the medical equipment industry
- Interviews and Opinions of eminent professional from the medical field
- Events
- Technical articles related to disease, product equipment
- Book reviews on the industry
- Product write-up
- New Products/ Product Launch

... and much more.



Major Industries covered :

- Pharmaceutical machineries
- Medical implements & implants
- Oxygen setup
- Dental equipments
- Hearing aids
- Pathological equipments
- Ophthalmologic equipments, devices & solutions
- Ambulance
- Air sterilization
- Surgical equipments
- Electro medical equipments / Medical technology
- Rescue & Emergency equipments
- Medical Diagnostic & hospital supplies
- Physiotherapy / Orthopedic equipments & technology
- Communication & IT
- Medical furnitures & equipments
- Cardiology equipments
- Radiology & Imaging equipment technology
- Medical disposable disinfection
- Hospital utilities & supplies
- Neonatal / Pediatric equipments & patient monitoring equipments
- Electromechanical linear actuator system for hospitals, beds, O.T tables, O.T lights
- Dental chairs, Blood donor coach
- Power backup systems (UPS, Inverters & SMF batteries)
- Rehabilitation aids

... and related accessories



Reach :

Professionals like :

- Medical Professional / Doctors
- Surgeons
- Paramedical Professionals
- Hospital Administrators
- Pathologists
- Radiologists
- Physiotherapists

Industries like :

- Medical and Surgical Equipment & Supplies
- Pharmaceutical & Bulk Drugs
- Disposable Supplies
- Diagnostics & Laboratory Instruments
- Hospital Furnishing & Related computer software
- Rehab. & Therapeutic aids
- Ophthalmic Instruments
- Oral & Dental Equipment
- Optical Equipment and supplies
- Institutions
- Other allied industries

ALEEX Set for More New Bright Business during October 2014



ALEEX HOME APPLIANCES,
LIGHTING & ELECTRONICS
EXHIBITION
家電、照明及電子產品展
Poly World Trade Center Expo • 廣州保利世貿博覽館 | 14-17/10/2014

Riding on the debut success in April, the October edition of ALEEX (Home Appliances, Lighting & Electronics Exhibition), to be held on 14-17 October, 2014 at Poly World Trade Center Expo in Guangzhou, will continue to be an exceptional sourcing platform for Asian-made products.

Bigger and Better

The inaugural edition of the ALEEX Show held on 14-17 April, 2014 attracted over 8,000 professional buyers from 139 countries to meet with 135 exhibitors from China, Hong Kong, Taiwan and South Korea. Both exhibitors and buyers were happy with the show result and keenly looking forward to the next edition this October. The upcoming October ALEEX is getting bigger and better. Moreover, the October show is taking on the new name "ALEEX Home Appliances, Lighting & Electronics Exhibition" so as to cater the growing market demand for Asian-made home appliances alongside the hot-selling consumer electronics and lighting products. The expanded product scope will definitely better fulfill the buyers' diverse sourcing needs. According to the show manager, Mega Expo, there will be 300 exhibitors, all from Asia, forming a strong line-up to present their latest best products. These Asian suppliers are famous for offering well-designed and high quality products at reasonable prices. The attending buyers will be treated to a wide variety of products, including smart home appliances and gadgets, eco & energy-

saving electronics, audio-visual products, personal electronics, electronic parts & components, household & commercial lighting LED & eco lighting, decorative lighting, etc.

A Show at the Right Time and Right Place

ALEEX is scheduled as a bi-annual event every April and October to coincide the peak buying seasons of international buyers on their Asia-South China sourcing circuit. ALEEX Show takes place at the same time as Canton Fair Phase 1. Buyers hording the Pazhou venues can visit both shows at the same time in one go. The show manager's effective promotional campaigns are also making impact to pull in buyers, particularly those who are keen to get connected with exhibitors who seldom or never show up at the Canton Fair.

Special Benefits for Pre-registered Buyers

A fast-growing number of buyers have pre-registered for the October ALEEX Show, according to Mega Expo. Buyers who pre-register early will enjoy a host of special services and benefits. The business-matching service offered by Mega Expo will enable them to meet their pre-selected target exhibitors right during the show. The buyer hospitality lounge served with complimentary beverage and snacks and unlimited Wi-Fi, is just ideal for buyers to take a break during the busy show days. Then, the free shuttle and onsite business center services all would help make visit to the show hassle-free. For more details visit website: www.aleex.cn. ■

Frost & Sullivan

Low Installed Base offers immense growth opportunities for Room ACs in India

The low market penetration of unitary heating, ventilation and air conditioning (HVAC)

FROST & SULLIVAN

systems or the Room ACs, in the Indian market has attracted investments from numerous multinational brands. Gen Y and the middle class continue to be the most influential segments of the Indian population, triggering new social, technological and economic trends that, in turn, escalate the demand for HVAC systems. While the HVAC landscape in the country offers immense opportunities for market entrants, existing leaders may lose share to smaller companies, particularly Japanese firms that are clocking high growth rates.

New analysis from Frost & Sullivan, Strategic Analysis of Unitary HVAC Systems in India, finds that the market earned revenues of 126.42 billion in 2013 and estimates this to reach 308.60 billion in 2018. The market for inverter type air conditioners, which is at a nascent stage in India, is expected to witness massive growth of nearly 120 percent in 2014 as compared to 2013. Although the growth rate is expected to dip in 2014, in volume terms it is a 1.5 times increase. According to the National Council of Applied Economic Research, 53.3 million households are expected to own air conditioners by 2015, and 113.8 million by 2025. This report covers the market for split AC, window AC, cassette AC and floor standing AC.

“Changing lifestyles, improving technology, and higher awareness are also opening up doors for the replacement market (i.e. replacement of old, outdated product with a new one),” said Frost & Sullivan Analyst for Environment & Building Technologies Practice. “The market is swiftly moving towards energy-efficient products, and suppliers should look at extending their product portfolio to include the most efficient and less power consuming products to tap this potential.”

Due to increasing temperatures, the air conditioner manufacturers in India were able to increase their topline in the first and second quarter of the calendar year 2014. Furthermore, as the ratings have been revised, the market is prone to witness a shift in the adoption of a 2 Star AC as compared to a 3 Star AC to fit their budget. Adoption of inverter ACs will be prominent in the middle-high income

group, as its aids in power saving, and a gradual increase is expected to be witnessed in its adoption between 2014 and 2018.

Most of this will be visible with declining overall share of 5 Star ACs. Unlike the star rated ACs, inverter AC run on variable speeds to adjust to room temperature. In the process they save around 20-25 percent energy as compared to a 5 Star AC and around 40-45 percent energy compared to a 3 Star AC.

Inverter ACs are expected to be adopted more in South India, as the region is struggling with power shortage, and even cities have regular power cuts. Further, as these regions are mostly hot and humid throughout the year, except for a couple of months during winters, they have high utilization rates. As a result, inverter ACs can help in bringing down the overall electricity consumption.

“Expanding distribution and service channels in tier II and tier III cities will be vital for high growth in the market,” suggested the analyst. “With the overall market in tier I cities decreasing as real estate, IT and services companies shift their base to tier II and tier III cities, these regions will constitute the future market for HVAC manufacturers in India.”

The technology advances in HVAC systems come with a higher price tag, which coupled with high inflation rates and rise in transportation costs eventually increase the price of products and affect adoption. This challenge can only be addressed through marketing activities and the creation of a high value proposition for the product. Providing easy financing schemes will boost HVAC affordability for those consumers wary of high upfront costs. Meanwhile, setting up local manufacturing bases can go a long way in reducing product costs, thus encouraging sales. Strategic Analysis of Unitary HVAC Systems in India is part of the Building Management Technologies Growth Partnership Service program. Frost & Sullivan’s related studies include - Indian Emergency Lighting Market Analysis, Analysis of Indian Automatic Door Systems Market, and Analysis of Cable Management Systems Market in India. All studies included in subscriptions provide detailed market opportunities and industry trends evaluated following extensive interviews with market participants. ■

K-Lite: India's Lighting Company

K-Lite Industries is an ISO certified company with pan India presence and Head Office in Chennai. The company, after crossing the Silver jubilee year has been steadily growing in the manufacturing of electrical luminaires, marketed under the brand name K-LITE. Along with expertise and experience in manufacturing custom-built luminaires we have an exclusive range of outdoor luminaires as a standing testimony of our commitment to innovation, quality, durability and proven performance. To assure technical excellence of our products, we have illumination laboratory that is fully equipped to international standards. K-LITE entered into the export market in '91 and since then we have been exporting to Russia, Dubai, Saudi Arabia, Sri Lanka, Maldives, Vietnam and Tanzania.

Being a trend setter in the market, we have time and again introduced innovative range of outdoor luminaries. With quality as prime objective, our aim is to achieve Clean Lighting for a Greener World.

K-Lite enjoys enviable market dominance across wide spectrum of outdoor products, including decorative poles, post tops, bollards and landscape lights. Since our inception, we have been servicing Indian Railways with unparalleled lighting solutions with recent addition being Saloon Lights for Metro coaches across India.

Our luminaires cater to Retail Lighting, Industrial Lighting, Street Lighting, City Beautification Lighting, Landscape Lighting, façade lighting, Yard Lighting, High Mast Lighting and Wind- Solar Hybrid Lighting. We have been introducing exclusive luminaires for specialized application for Hospitality industry, Ports, Railways, Metro Trains, Airports, etc.

As a part of our expansion plan, we have established facility at Bhopal M.P. recently and plan to establish another at Jaipur by March 2015. Being a proud Indian

manufacturing Company, we relentlessly give competition to companies with high international outsourcing. In our endeavor to achieve energy efficiency, we introduced energy efficient electro magnetic ballasts in all our luminaires. When the energy saving lighting sources such as Compact fluorescent lamps, T-5 lamps were introduced, we redefined our luminaires to the usage of these sources and contributed to energy saving. Similarly, with the introduction of LED lighting, we now offer an entire range of luminaires with LED.

Having started the career at a very young age at Metal Craft, Chennai, I learned about various dynamics of manufacturing processes at national & international levels.

Inspired by my father Dilip Kumbhat, I have constant focus on energy conservation and continuous

innovation for the greater good of the environment.

I believe the zest to achieve perfection in terms of design and quality has enabled the company to place itself as one of the best in premier lighting brands at a global level.

'Company's recent phenomenal success has been due to Ms. Sharmila Kumbhat's vision of growth through quality and continuous innovation. She is an interior designer by profession but a proven and dynamic entrepreneur by choice and commitment. Amongst various acknowledgements bestowed, she received award for best young entrepreneur in 1996 by the Government of Tamil Nadu and also stood state first in Fashion Designing. After completing her Interior designing in New York, she headed K-Lite's in USA operations.'



Sharmila Kumbhat
Director - Marketing
K-LITE Industries
A.I.E, Chennai.



K-LITE INDUSTRIES

Year of establishment: 1977

Line of business: Manufacturers of Indoor and Outdoor Luminaires and Lighting Poles of all types

Quality certifications: ISO 9001:2008 and CE

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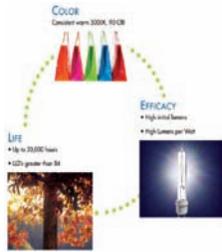


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Super Pulse Start Ceramic Metalhalide Lamp by Venture Lighting India



Venture's Ceramic Master-PLUS Metal Halide energy efficient system using the latest developments in slip cast, single piece, arc tube technology, these robust design ceramic lamps provides an unbeatable combination in terms of both performance and reliability. Consuming less energy than their halogen equivalents and reduced heat emissions, the ceramic lamps deliver up to 100 lumens per watt to provide a clean and even white light. The excellent colour rendering qualities of Venture's Ceramic Master-PLUS makes them perfect for interior applications where the light can enhance the colour, features and textures on display.

Features and Benefits:

Superior color performance;
It is best in class performance for lumen output, color & life;
Warm, 3000K/4000K CCT, up to 90CRI;
Environmental friendly compact size;
Excellent efficacy upto 118 LPW;
25% Longer life compared to conventional ceramic lamp.

For further details: marketing@vlindia.com

High Bay Light from Diamondlight



Features

The first led lamp with module replaceable function rewarded best opto-electrical product in 2010.
Highest water and dust proof level, module up to – IP 68.
Hot-swap functions for quick maintenance.
Replaceable module design extending life to 10 years.
Lightest weight within plate thermal design.
Anti-static electricity test up to 50KV.

Applications

With water-proof, dust-proof, moisture-proof, explosion-proof function, applicable to manufacturing site, factory, warehouse, gas station, supermarket, gym etc energy saving up to 70%.

Website: www.diamondlight.com.tw

PIR Lighting Sensor by Joy Life Electronic Co Ltd



Features

Designed to prevent damages caused by leaking ceiling (operable outdoor under coverings).
Optical structural design that prevents false alarms caused by insect intrusions. Utilizes relay that can withstand inrush currents for longer product life.
LED indicator behind sensor lens that flashes to indicate detection. Practical wire connection designed for easy installations and maintenance. 3600 detection angles with adjustable time setting and twilight setting.

Applications

Above desk in office, the entrance of house with vehicles passing through, large open space, such as hallway and kitchen near living room, area with pets or air conditioner.

Website: www.joylife.com.tw

Intense Lighting's V-RAILIVR15



Intense Lighting Inc, a manufacturer of LED specifications grade lighting solutions announced V-RAIL IVR15 LED lighted handrail system. The sleek V-RAIL IVR15 is a high performance handrail system designed to illuminate stairways, ramps and walkways while also acting as a handrail or guardrail. It consumes 45% less energy and delivers more than double the average foot candles of comparable products. One of the features is the performance of the lenses which prevents strobing, a problem recognized in early generation LED handrails. The V-RAIL IVR15 provides with a true 1.5 inch outer diameter illuminated rail system. The system demonstrates an extremely high level of energy efficiency, as well as ease of installation and maintenance, with performance, and aesthetic.

Features of V-RAIL IVR15 LED lighted handrail system

1.5" outer diameter; constructed with stainless steel; optional integral or remote power supply; modular or custom configuration; first product to be available with Intense Lighting's new SURFACE simulated natural finishes, a powder coat option that delivers various wood and grain finishes; IRV2, a 1.9" V-Rail LED illuminated rail system, is also available. ■

Website: www.IntenseLighting.com

Luminous Column POA by leipziger-leuchten



Organic form of urban space

POA is an elegant LED luminous column by Leipziger Leuchten, is made of hot dip galvanized steel of 6.00 m, 10.00 m and 18.00 m in total length. True to the concept of the designer "A touch of light" in the upper third are located, in 4.50 m, 8.50 m and 15.50 m high, the 2, 6 or 11 LED modules. The two shorter POA luminaries are equipped with 3000k warm white LED white LEDs on top and warm white LEDs at the bottom. Thus, the effect of moonlight light at the beach and sand area is generated and dips the place. The paths and promenades in a homely, warm light. The powerful and resistant LED modules use a DALI control system, depending on the time of the day and demand. Therefore the use of the beach can be extended beyond the twilight and at night, the energy can be reduced by 70 %, so that only the glimmer of the light on the beach can be seen. The LED control separate the beach in different areas with lighting levels, so that at the same time, different areas of the beach can be highlighted. At full power, each modules need 15W, which is not consumed due to the light control consumed. ■

Website: www.leipziger-leuchten.com

New light in a new suite by Northern Lighting AS



Seed

Finally one of their most popular lamp is available in three new and fresh colors. They present the seed lamp in mustard yellow, old rose and light blue. Seed is a wall mounted night lamp. It created a unique reading environment through its filtered light source from a low watt energy saving LED. The focused yet soft beam emitted from the diodes, makes it possible to read in bed. The revolving arm of the light can be easily fixed to a wall in any desired position. The front end light switch makes it easy to turn the light on and off and, since the lamp does not emit heat, seed is safe to the touch. Seed is now available with eight different colors of fabric. Colors: old rose, mustard yellow, light blue, black green, red or beige. Size 83 cm in length. ■

Website: www.northernlighting.no

LED grille light by Oppla Lighting Co Ltd



Feature

Up to 85% energy saving compared with halogen grille light.
Well designed structure for glare minimum.
Tensile lamp heads available.
Same cut out hole as halogen grille light.

Benefits

Significant energy cost is saved.
Minimizing glare for passing customers.
Very flexible for illuminating in all directions.

Applications

For general / accent lighting in e.g stores, bars, museum, homes. ■

Website: www.oppla.com

Quad Canopy / Garage Lighting from QSSI



QSSI's Quad LED design functions perfectly as a garage or canopy light. The Quad features a rugged low-profile die cast housing and an integrated LED module with cutting-edge Type V optics. Low energy usage, high luminous efficacy, and a robust design provide a perfect solution for your LED projects. Die cast aluminum housing 1/2" coin plugs with o-rings for conduit and photocell on two sides and powdercoat finish over a chromate conversion coating.

Mount directly over a 4" recessed outlet box, or use 1/2" surface conduit or quick-mount bracket; UV stabilized polycarbonate lens with injections-molded frame; Luminous Flux 5689 (80 LPW).

CRI of 75.

Color Temperature: -400 C to 250 C.

Drivers are universal voltage: 120-277V, 50/60Hz.

CSA: listed for west locations. (Damp Locations when used with VNQM).

Custom Colors available upon request. ■

Website: www.qssi.com

Shenzhen Mason Technologies Co Ltd offers AR 111



Appearance: by using the integration design of light source heat dissipation, it can replace 35W / 50W Halogen lamp, without changes on the appearance of the lamp, which is an ideal LED lamp to replace the traditional commercial lighting products.

Structure: combined the high reflective scale surface with the good heat dissipation aluminum body, the product is concise and qualified.

Optical design: the unique design of lens and reflectors, make the lamp effective reduce the light pollution with the narrow beam angle and also efficient reflector surface reflects the unique style of display.

Safe and energy saving: the input voltage of AC / DC 12V is completely compatible with the traditional AC / DC 12V electronic transformer. The superior light feature is 6 times more than the traditional lamp on the energy saving with the same light intensity. ■

Website: www.mason-led.com

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Xea - ultra-flat LED luminaire; Bringing elegance and visual comfort to offices



With the new pendant and surface-mounted Xea luminaire by Selux the converter and LED lighting technology is integrated into a profile just 18 mm high ensuring elegance, efficiency and perfect visual comfort for workstations. This is an absolute essence of a luminaire for offices or other workspaces looks: a minimalist housing, delicately suspended or directly mounted on a ceiling, effusing glare-free light. The new pendant and surface-mounted Xea luminaires is designed with maximum consistency using innovative LED technology. Precisely defined edges and a flush real glass diffuser are key features of its elegant design with all system or dependent elements in die-cast aluminium. Premium white surfaces with invisible locking systems emphasise the appearance of quality.

Integrated, extremely flat converter

The Xea's ultra flat construction is made possible first and foremost by the use of a bespoke, low profile converter for its high-performance LED power supply, which enables the entire electronics unit to be integrated into the aluminium housing. Operating conditions are ideal, meaning the Xea requires no additional external converter housing. The Xea pendant luminaire uses wire suspensions with a transparent power supply cable, adding delicacy.

Microprisms for anti-glare protection in workplace

Selux lighting technology in the new Xea luminaires complies with requirements for all lighting tasks in working and office environments. A lens optics system with multi-layer microprisms is located behind the glass diffuser, which reduces both direct and reflected glare) and ensures standards-compliant, state-of-the-art visual comfort for workstations. To coordinate and differentiate its lighting concept, Xea is available with LEDs in the light colours 3000 or 4000 Kelvin and there is a choice of direct or direct /indirect beaming variants for the pendant luminaire. Xea can also be dimmed for added energy efficiency via DALI and is capable of being integrated into modern light management scenes. ■

Website: www.selux.com

Did you know...

Hamburg's New HafenCity Subway Station Lit with Shipping Container-Size LED Light Boxes



Munich-based lighting company Pfarre Lighting Design is reinventing the lighting systems of European subway stations, and the firm's latest work in Hamburg has a chic, futuristic aesthetic. The new Hafencity University Subway Station was designed by Raupach Architekten and synthesized by the designs of Pfarre Lighting Design. The station is lit with creative colors, materials, and most of all, energy-saving LED lights. The new Hafencity subway station's design is industrial in nature, and the gravity-defying installation of 6-ton boxes above the platform create a modern ambiance. The light boxes are made from steel frames and translucent panels. They're designed to be the same size as a standard shipping container, and as if mimicking the subway trains themselves they hang perfectly spaced in a row. Each box is illuminated by 280 individual RGB LED emitters, giving both energy efficiency and diversity of color to the lighting design. The lighting within the station can change to create an ambiance that reflects the season, time of day, or even the subway station manager's mood. Brilliant blues, oranges, purples, and reds help to give life and light to what could have been just another mundane subway station. Cheers to Pfarre Lighting Design for thinking outside of the box, while bringing light inside the box.

Cardboard lamps by Studio 38



Our challenge is to come up with great looking, unique, design pieces by themselves, regardless of the material it's made of. Then, the upside is that on top of being something you would choose as part of your home/office/shop décor, it's made from cardboard which helps reduce your carbon footprint and are objects that are easily associated with a sustainable statement. We're trying to get the most out of certain characteristics of cardboard itself like the way you can cut it and assemble it, the way you can use it to diffuse light, it's lightweight, etc. This is what we call the "uniqueness" aspect of a design object's material. Our lamps can be used with many different type of light bulbs with E27 sockets (incandescent, CFL or LED). For any of these options, the lighting effect from our lamps will be exactly the same. However, you will notice the difference in the light color that comes from each of these type of light bulbs. Each one of our products is assembled by hand under a strict quality control process. All of them have a unique serial number and are delivered with a certificate of authenticity.

Salto pending lighting fixtures series for studio insecto



The series is characterized by fragments of organic motifs, dissolving into geometric shapes connecting as a unique joints order. This collection is made of an interesting combination of wood and Plexiglas. The parts are being painted and carefully assembled all by hand. The connecting method of the duplicated elements are converging around a central crystalline axis, creating an object with a new maverick language. The lighting fixtures give functional illumination as well as ambiance lighting. Thanks to the soft light and the shadows, the fixtures are creating a fascinating space. The series does a combination of wood and Plexiglas and creates points of osculation between natural and plastic material. The lighting fixtures are a fruit of combined technologies, computerized and handcrafted, resulting a celebration of nature and man-made creation. The design process is made on 3D computer software; the parts are being formed by laser cutting and assembled by hand. The lighting fixtures are manufactured in small series. Materials: Transparent and semi-transparent Plexiglas, Lacquer coating and painted wood.

If you don't find it in our **READYMADES**
We will **CUSTOMISE** it for you.



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Lighting that **moves** products— and customers



In the world of retail, appearances are everything. Now with LUXEON CoB arrays featuring CrispWhite Technology, there's a better way to ensure merchandise is seen in its best possible light. This revolutionary LED is perfect for lighting applications where compromise is not an option—creating richer whites, more vibrant reds and colors that pop like never before.

When it comes to retail lighting that delivers unmatched intensity—and stops shoppers in their tracks—it's time to expect more. For additional information, contact your Philips Lumileds sales representative or visit us at www.philipslumileds.com/CrispWhite today.

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