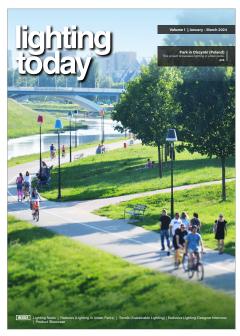
Volume 1 | January - March 2024

Park in Olszynki (Poland) This project showcases lighting in urban parks.





**ON THE COVER:**Park in Olszynki (Poland). A project by GMR Enlights.

#### **VOL 2 / 2024 TOPICS**

Features: Museum Lighting

 Trends: Tackling Light Pollution

- Spotlight: Exclusive Lighting Designer Interview
- Lighting Product
   Showcase: Smart Lighting,
   Outdoor Lighting, Indoor
   Lighting, LED Lighting,
   Lamps / LED, Ballast /
   Transformers, Lighting
   Controls, Emergency / Exit

#### ASSOCIATE PUBLISHER Eric Ooi

eric.ooi@tradelinkmedia.com.sg

#### EDITOR Amita Natverlal

lighting@tradelinkmedia.com.sg

## MARKETING MANAGER Felix Ooi

felix.ooi@tradelinkmedia.com.sg

## HEAD OF GRAPHIC DEPARTMENT/ ADVERTISEMENT COORDINATOR

Fawzeeah Yamin

fawzeeah@tradelinkmedia.com.sg

## CIRCULATIONS EXECUTIVE Yvonne Ooi

yvonne.ooi@tradelinkmedia.com.sg

#### LIGHTING TODAY IS PUBLISHED BY

#### TRADE LINK MEDIA PTE LTD

1 Paya Lebar Link #04-01 Paya Lebar Quarter 1 (PLQ 1) Singapore 408533

For interest in advertising and advertorials, please attention your query via: direct call: +65 6842 2580

ISSN 2345-7147 (Print) and ISSN 2345-7155 (E-periodical)

This publication is published four times a year and available on the digital platform.

To download a free digital copy, visit **It.tradelinkmedia.biz**.

## Other Titles by Trade Link Media Pte Ltd:

Bathroom + Kitchen Today Southeast Asia Building Southeast Asia Construction Security Solutions Today

#### DISCLAIMER

All advertisers and contributors must ensure all promotional material and editorial information submitted for all our publications, must be free from any infringement on patent rights, copyrights laws in every jurisdiction. Failure of which, they must be fully liable and accountable for legal consequences (if any) that may arise.

The editor reserves all right to omit, amend or alter press releases submitted for publication. The publisher and editor are unable to accept any liability for errors or omissions that may occur in this process, although every effort has been taken to ensure that all information is correct at the time of going to press. Edited articles or stories are returned to contributors for check on facts at the sole discretion of the editor. No portion of this publication may be reproduced in whole or part without written permission of the publisher. The editor reserves all rights to exclude or refuse submissions at any time without prior written or verbal notice if contributing parties do not provide complete text and supporting images at a minimum of 300dpi in .jpeg and .tiff format.

## Dear Readers,

Happy New Year to all of you! Welcome to the first issue of 2024. We all love visiting parks to relax or to exercise. Some of us go to parks in the day and others in the night. An important component of parks is the lighting design. Lighting up parks involves many considerations. GMR Enlights, as a leader of the Urban Lighting made in Italy, tells us how urban parks should be illuminated for the public to use. In Trends, we look at the topic of sustainable lighting and showcase a project – the refurbishment of Arup's office at Piccadilly Place, Manchester. The remanufacturing and retrofit of the fixtures has resulted in a 72 percent energy reduction and the avoidance of 5,554kg of CO<sub>2</sub>e being produced in comparison with the replacement of existing luminaires with new. Enjoy the issue! If you have any comments or feedback, feel free to drop me an email at lighting@ tradelinkmedia.com.sg. Take care and have a fantastic year ahead!

Editor

Amita Natverlal

**Industry Partners of Lighting Today** 



National Lighting Bureau

events calendar 3

16-18 January 2024

Light + Building Middle East 2024 (see show ad on page 26)

Dubai World Trade Centre

Dubai, UAE

**Website:** https://light-middle-east.ae.messefrankfurt.com/dubai/en.html

3-8 March 2024

Light + Building 2024

Messe Frankfurt Frankfurt, Germany

 $Website: \verb|https://light-building.messefrankfurt.com/frankfurt/en.htm||$ 

14-17 March 2024

**WORLDBEX 2024** 

World Trade Center Metro Manila and SMX Convention Center Manila

Manila, Philippines

Website: www.worldbex.com

6-9 April 2024

Hong Kong International Lighting Fair 2024

Hong Kong Convention and Exhibition Centre

Hong Kong SAR China

Website: https://www.hktdc.com/event/hklightingfairse/en/

30 April - 5 May 2024

Architect Expo 2024

IMPACT

Bangkok, Thailand

Website: www.architectexpo.com/2024/en/

9-12 June 2024

Guangzhou International Lighting Exhibition

(see show ad on Outside Back Cover)

China Import and Export Fair Complex

Guangzhou, China

 $\textbf{Website:} \ \textbf{https://guangzhou-international-lighting-exhibition.hk.messefrankfurt.com/}$ 

guangzhou/en.html

3-6 July 2024

**ARCHIDEX 2024** 

KL Convention Centre Kuala Lumpur, Malaysia

Website: https://archidex.com.my/

4-6 September 2024

BEX Asia 2024

Marina Bay Sands

Singapore

Website: https://www.bex-asia.com/

**5-7 September 2024** 

LED Expo Thailand 2024

IMPACT Exhibition Centre

Bangkok, Thailand

Website: https://www.ledexpothailand.com/





## contents

**03** EVENTS CALENDAR

**05** LIGHTING IN THE NEWS

## **FEATURES (LIGHTING IN URBAN PARKS)**

14 GMR illuminates urban parks

## TRENDS (SUSTAINABLE LIGHTING)

16 Refurbishment of Arup's office at Piccadilly Place, Manchester

## SPOTLIGHT: EXCLUSIVE LIGHTING DESIGNER INTERVIEW

18 Interview with Chloe Fung, Senior Lighting Designer, Nulty

**21 PRODUCT SHOWCASE** 



# Striking a balance: Human-centric vs aesthetic-centric lighting design

Nan exclusive event hosted at ILDL's experience centre, celebrates the company's mastery in architectural lighting technology in India. To commemorate this journey, ILDL organised a Panel Discussion, filled with 'Cocktails and Conversation' alongside a personalised tour of their compelling display at the Experience Centre. The event showcased their latest lighting ideas in a real-time set-up and offered visitors a first-hand 'play of light' experience that enlivens spaces and evokes feelings.

This Panel Discussion was engaged in a stimulating conversation on the pertinent topic of 'Striking a balance between human-centric and aestheticcentric lighting design' with eminent lighting designers from our country. A synergy of creative conversation was created with the panelists, Kunal Shah (Principal Lighting Designer at SPK Valo), Iftikar Ilyas (Principal designer & Partner at Litelab Consultants), Surbhi Jindal (Founder & CEO - Da Light Hub), moderated by Tanya Khanna (Founder, Epistle) and discussed the challenges faced, sharing their experiences, and paving a way for the future of lighting



Photo credit: ILDL

design in India. The audience included students from Academy of Applied Arts, New Delhi, and architects from IM Design, Studio Ivory, Resonate Designs and many more. The Panel Discussion was followed by the Experience Centre tour, which accommodates ILDL's 25+ international lighting brand collaboration fixtures, which concluded the immersive experience.

"The art and science of lighting design took center stage as leading industry experts and visionaries from the field of lighting design came together for an illuminating panel discussion aimed at shedding light on innovative approaches, trends, and insights in the world of lighting, furthering ILDL's belief in the power of collaboration," said Aryaman Jain, CEO, ILDL.

## Elation unveils new, streamlined logo

os Angeles, California, USA – Elation Professional, a leading global provider of professional lighting products and solutions, has unveiled a new logo, the first update of its brand logo since the company's founding in the early 1990's. The redesigned logo brings it up to date with today's design and digital landscape and better aligns with the progressive, innovative company that Elation is today.



The updated logo design, the creation of Elation Marketing Manager Patrick Nadjarians, maintains the brand's rich Elation identity while evolving the background oval into an elegant curve with a smooth, flowing contour that represents light, movement and the company's dynamic future. Inspired by the company's vision of innovation and continuous advancement in the industry, the more streamlined design uses sleek, clean lines to express a forward-thinking company. Additionally, as it is clearly evident to the market that the company is 100 percent dedicated to the professional entertainment lighting market, the Elation name stands alone.

"This is really about creating a brand visual that reflects who we are now and where we are headed," Nadjarians comments. "We've come a long way since the original logo was created and it was time to update the look to better represent the innovative, dynamic, and forward-thinking company that we've become. The swoosh represents our forward momentum, as well as a projection of light, and the whole look is lighter and more nimble. The design is fresh and modern yet at the same time maintains the Elation core."

A crucial component of Elation's branding and visual identity, the new-look logo underscore the company's commitment to technological innovation along with its vision for the future. The new logo's clean lines and simplicity will make it a more versatile symbol for the company and will look great across a variety of platforms, including websites and social media. The new logo is in use now and should be used as a replacement wherever the old logo was previously utilized.

## New emergency lighting conference was a sell-out

London, UK - A new event for the sector, the ICEL Emergency Lighting Conference, has been hailed a success by attendees, speakers and the organisers. The conference offered attendees the opportunity to learn from industry experts about the latest developments in legislation, standards, products and practices.

Held at the Cavendish Conference Centre in London, the event was organised by the Industry Committee for Emergency Lighting (ICEL) in partnership with the LIA. The day brought together key stakeholders from across the emergency lighting supply chain, from manufacturer to end-user and all those in-between.

A wide breadth of organisations attended including Laing O'Rourke, Mitie, CBRE, NHS and Transport for London. The event's headline sponsor, P4 Limited, was also in attendance along with other emergency lighting manufacturers.

In total 220 attendees participated in the sold-out event; engaging with the educational opportunities offered through keynote speeches and panel discussions. Topics included 'Future Emergency Lighting Standard & Legislation' and 'Batteries for Emergency Lighting'.

A particular highlight was the 'Challenges Facing Large Estates' panel discussion which featured David Mooney from WS Atkins, Colin Ball from BDP, Andy Butler from the



NHS, Peter Fordham from Sainsburys and Hywel Davies from CIBSE.

The conference also acted as the perfect platform for the launch of the ICEL Competency Scheme for the industry, ICEL Product Certification Scheme, and a revised ICEL Luminaire Conversion Scheme.

The ICEL Competency Scheme for the industry has been created as an enhancement to the Emergency Lighting Individual Competence Standard. This was first developed in response to the industry commitment to enhancing safety standards and preventing future tragedies in the wake of the Grenfell Tower disaster. The

scheme is open for any organisation that wishes to register their competence on the specification and system design domains of the standard. The remaining domains on product design, installation, sales & distribution and testing & maintenance are currently in their pilot stages and will be available in due course.

The scheme is another demonstration of how the LIA and ICEL are working to instil unwavering confidence in all emergency lighting activities.

Ayça Donaghy, CEO of the LIA, said: "It was an honour to be part of this significant event, and we are confident this new conference will become the highlight of the year for the emergency lighting sector.

"The conference certainly fulfilled its aim of uniting vital players from every facet of the emergency lighting supply chain from manufacturers to end-users."

The feedback from the attendees was very positive: "I got to fully appreciate and understand the "power" of being an ICEL member," said Eli Ward, of BLE Lighting and Power Limited.

Other feedback included: "The conference was excellent and very relevant," said Barrie Morris, Chalmor Limited; "I really enjoyed the day, learnt a lot, and it was certainly one of the better conferences I've been on recently. I will be back next year if you decide to do another," said Paul Brickell, Crown House Technologies.



## Forge teams up with Lumileds to protect dark skies

Cumbria, UK – Leading LED product designer and manufacturer, Forge is partnering with Lumileds, the global leader in innovative LED technology, to provide outdoor lighting solutions dedicated to preserving dark skies.

The partnership combines decades of experience and expertise with cutting-edge LED innovation, creating considerate product designs that help to combat the impact of light pollution on the planet.

The partnership sees the creation of turnkey solutions for professional lighting products, combining Lumileds' LUXEON NightScape technology with Forge's rapid product realisation capabilities.

## **Environmental Context**

The disruptive effects of blue light from LEDs on human melatonin levels and sleep regulation are well documented, but as the world comes to a greater understanding of the devastating effects of this blue component on nocturnal wildlife, legislation has been implemented to seed real change.

In the UK the ILP's GN08/23 gives comprehensive guidance on mitigation steps to help preserve bat populations and in Hawaii, Bill 21 Maui Ordinance restricts blue light content in new exterior lighting installations to under 2 percent.

The regulatory shifts being made have placed the onus on manufacturers to limit blue wavelength emissions and tackle light pollution head-on.

The British Astronomical



Forge Managing Director, David Scott-Maxwell.

Association's Commission for Dark Skies suggests that 90 percent of the UK population has no access to the starscape above, due to light pollution, or "skyglow".

Lumileds' LUXEON NightScape technology provides a unique spectral distribution that delivers high-quality white light at the highest flux while emitting less than 2 percent of blue light in the 400-500nm spectrum.

This allows for compliance with emerging regulations while maintaining desirable aesthetic and performance characteristics.

Forge Managing Director, David Scott-Maxwell, commented: "This technology is a revolutionary moment for outdoor lighting and its ability to support the nocturnal environment. NightScape



Allan Horn, Director, EMEA Distribution for Lumileds.

is a world-class LED innovation and Forge can rapidly integrate it into lighting products. Our global experience in LED product manufacturing delivers finished components, assemblies or luminaries, wherever and whenever they are needed which means that we can drive forward the adoption of this important new technology around the world."

Allan Horn, Director, EMEA Distribution for Lumileds, added: "Lumileds LUXEON NightScape technology and the partnership put us on the cusp of creating sustainable and compliant lighting solutions that will keep customers and end users ahead of the curve as regulation evolves. This truly is a powerful collaboration and sets a new standard for intelligent, sustainable exterior LED lighting."



Nightscape application picture.

# Global lighting marketplace in Hong Kong gathers over 3,000 exhibitors

Hong Kong – The 25th Hong Kong International Lighting Fair (Autumn Edition), organised by the Hong Kong Trade Development Council (HKTDC), opened on 27 October 2023 and ran until 30 October at the Hong Kong Convention and Exhibition Centre, featuring more than 2,600 exhibitors.

The eighth Hong Kong International Outdoor and Tech Light Expo also ran in parallel from 26 to 29 October 2023 at AsiaWorld-Expo, with 380 exhibitors.

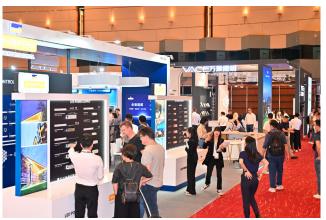
Sophia Chong, Deputy Executive Director of the HKTDC, said: "These two lighting fairs have brought together over 3,000 exhibitors from 37 countries and regions. In addition to local exhibitors, this year our exhibitors come from Mainland China, Taiwan, Japan, Korea, ASEAN countries such as Indonesia, Malaysia and Singapore, as well as European countries including Denmark, France, Germany, Switzerland and the United States, showcasing diverse lighting products and solutions. As a world-class trading hub for lighting, the fairs provide insights into products and industry trends, enabling traders to build business connections and further expand market opportunities."

## Connected Lighting Zone debuts to showcase smart-lighting products

Under the theme Light Up Every Opportunity, the Hong Kong International Lighting Fair (Autumn Edition) and Hong Kong International Outdoor and Tech Light Expo present a wide range of high-quality lighting products, including those with innovative design, sustainable development and smart elements. The Connectivity Standards Alliance introduced the cross-platform smart-home device standard Matter in 2019, making smart-home systems more convenient.

A Connected Lighting Zone debuts at the 25th Autumn Lighting Fair, showcasing more than 20 renowned international companies and brands including Leedarson, Midea, Snappy, Quectel, as well as members of DALI Alliance and Shanghai Pudong Intelligent Lighting Association. The Hall of Aurora gathers innovative lighting products and technologies from renowned brands such as Prosperity Group and Signify. Other product zones include Commercial Lighting, Residential Lighting, LED Lighting, LED Essentials, Smart Lighting & Solutions and more.

Forums also explore the latest opportunities in connected



A Connected Lighting Zone debuts at the 25th Autumn Lighting Fair, showcasing new products from various renowned companies and brands. Photo courtesy of HKDTC.



The Hall of Aurora gathers innovative lighting products and technologies from many renowned brands. Photo courtesy of HKDTC.





The 25th Hong Kong International Lighting Fair (Autumn Edition) and the eighth Hong Kong International Outdoor and Tech Light Expo brought together more than 3,000 exhibitors from 37 countries and regions. Photos courtesy of HKDTC.



Various seminars and forums were being organised throughout the period of the two fairs, with industry experts sharing their insights on market and product trends. Photo courtesy of HKDTC.

lighting during the fair period. They were: Connected Lighting Forum, themed Unlocking New Realms in Connected Lighting; and Connected Lighting Forum, themed Smart Lighting for Healthy Living.

## Energy-saving lighting products cater to sustainable development trends

The Hong Kong International Outdoor and Tech Light Expo featured several product zones, including Exterior Lighting Solutions and Systems, Horticultural Lighting, Innobuild, Outdoor Advertising Lighting, Outdoor & Public Lighting as well as Technical & Professional Lighting. The expo showcased outdoor and professional technical lighting solutions for commercial and industrial use.

For more information, visit https://www.hktdc.com/event/hkotlexpo/en and https://www.hktdc.com/event/hklightingfairae/en.

# National Lighting Bureau welcomes Tom Butters as new Executive Director

## Tom Butters comes to NLB with extensive lighting experience.

Agora, as the new Executive Director. As the new Executive Director, Tom's extensive background in lighting offers valuable insights and guidance to continue growing the NLB membership and make strides to reach goals and efforts to unite the lighting industry with outside organizations. While we eagerly anticipate Butters joining the NLB, it's essential to acknowledge the bittersweet moment as we bid farewell to Randy Reid after his impressive five-year tenure with our organization. "On behalf of the NLB Board, I want to extend a warm welcome to Tom Butters as our new Executive Director. His credentials, energy and passion for lighting excellence make him a perfect fit for our organization," says National Lighting Bureau Chair, Mary Beth Gotti.

Tom Butters will step into the role of Executive Director on January 3rd, 2024 and states, "I am simultaneously honoured, humbled, and excited about the opportunity to work with the wonderful and passionate people at the National Lighting Bureau. We all share a common desire and goal of advancing best lighting practices to create an inviting, healthier, and more sustainable future for everyone. I look forward to reaching out to like-minded organizations to develop synergistic programs to benefit the lighting industry and the general public. Finally, I have had the privilege and the challenge to follow in the footsteps of many impressive leaders, and this situation is precisely that. Randy Reid has done a phenomenal job as Executive Director of the NLB and I will work diligently to meet the high bar he has set."

Butters brings over three decades of experience to The National Lighting Bureau. With a career spanning more than 30 years, Tom's wealth of knowledge, leadership acumen, and track record of success make him a highly sought-after addition to the organization. While awards such as IES Section Service Award, IES Toronto Section's prestigious



Tom Butters

G.G. Cousins Award stands as a testament to his professional prowess, Butters was the director of the winning team for 2020 Lightfair Innovation Judge's Citation Awards. Over the years, he has played a pivotal role in the lives of hundreds of former education attendees, leaving an indelible mark on their journeys.

The NLB looks to 2024 in excitement of the positive impact Tom Butters will bring to the organization. As we prepare to achieve new goals together we equally extend our heartfelt gratitude to Randy Reid for his invaluable contributions. The transition represents both the end of a noteworthy era and the beginning of an exciting new phase for NLB, enriched by the experiences of both departing and incoming professionals.

# Obsidian lighting control marches on with European "Train the Trainer" workshops

erkrade, The Netherlands - Obsidian Control Systems recently conducted back-to-back training sessions at its European headquarters in Kerkrade, The Netherlands, aimed at training its European distributors on the specifics of the intuitive ONYX platform. lighting control The sessions were specifically designed to springboard an Obsidian awareness campaign starting with a unique program to Train the Trainers.

Koy Neminathan Elation Director of Business Development, who helped lead the sessions, commented, "Nothing is perfect until you have mastered it, and that is why we are investing our resources into educating our network of distributors and resellers. In turn, they will be available to



train those who want to learn more about the ONYX software. These sessions have been received positively by those who attended our first course and this is just the start."

Obsidian partners across the world are being offered the Train the Trainer sessions alongside Obsidian's current 3-day ONYX course, which also includes an in-depth look at the NETRON line of data distribution products. Participants complete a program in which learning techniques are explained and practical tests are delivered with the aim of equipping individuals with the skills and knowledge needed to effectively train others in the powerful features that lay within the easy-to-learn platform.

Nineteen attendees from nine countries were the first to participate in the Train the Trainer sessions with more planned in the coming weeks. "The ultimate goal is to create a knowledgeable team of trainers around the globe who can effectively transfer their knowledge and skills to others so that no matter where you live or what you work in, from students to freelancers and rental companies to TV studio technicians, you have access to Obsidian training," Koy stated. "Stay tuned for upcoming sessions as we continue to empower individuals worldwide."

# Online lighting specification platform Spektd becomes LR Spektd following acquisition

K – Following the completion of a significant acquisition, the online lighting specification platform Spektd has been bought by Lighting Reality. The design technology specialist now owns 100 percent of Spektd's Intellectual Property rights, completing a deal that will see the platform rebranded as LR Spektd.

Lighting Reality, founded in 2000, is an independent, employee-owned company based in Worcestershire, UK. With its own UK-based, in-house development team, the company has 23 years' of experience working with product & photometric data to deliver design and other productivity solutions for the unique challenges of lighting professionals & manufacturers.

"We couldn't be more delighted", commented Richard Hall, one of the Co-Founders of Spektd and Director at Lighting Reality. "Lighting Reality is the





CEO of Lighting Reality, Tony Cook.

perfect home for taking usage and membership of the platform to the next level in terms of market up-take, empowering more in our profession to increase their productivity and enabling manufacturers to connect with their customers more efficiently."

While Lighting Reality is most commonly known for its expertise within the street and outdoor lighting sector, this deal will enable the business to grow and develop.

According to CEO of Lighting Reality, Tony Cook, "Bringing LR Spektd into the Lighting Reality portfolio makes complete sense for us as we transition from being a pure-play Outdoor Lighting Design Software house into a company offering a range of innovative, lighting-specific productivity solutions, all with the goal of empowering lighting companies & professionals to thrive – whatever the sector."

The other Co-Founders of Spektd - Ida Moe Hoy and Andy Goodhand - will remain part of the business and will play key roles in ensuring a smooth transition and continued vision for the platform.

Richard Hall concluded, "We know how important it is to our customers that LR Spektd remains wholly independent from designer & manufacturer ownership. We also know that designers want to see our platform-reach become more widespread.

"Lighting Reality's ownership structure, understanding of the market processes and access to critical resources mean we are well placed to meet these demands."

## Zhaga's Book 14 published as IEC Standard

Piscataway, NJ, USA – Zhaga, the global lighting-industry organisation, is proud to announce that Zhaga's Book 14 has been officially designated as IEC Standard 63356-1. The Zhaga Consortium actively collaborates with global and regional standards development organizations, as well as national lighting entities, to promote the widespread adoption of Zhaga specifications. The Zhaga Consortium has the purpose to enable new markets for connected and serviceable lighting through interoperability.

#### **Innovative LED Lighting Solutions**

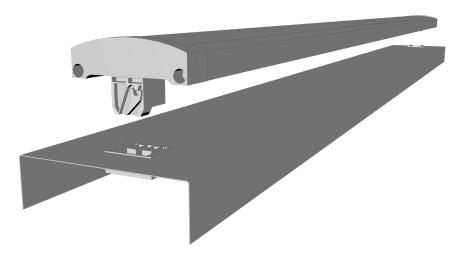
Book 14 introduces a pioneering family of flat, linear, socketable LED light sources, perfectly suited for low-profile linear lighting applications. The current edition encompasses both LED modules (requiring a separate driver) and LED light engines (LLEs) featuring an integrated control gear.

#### Tool-less Maintenance and Sustainability

One of the standout features of Book 14 is the innovative cap/holder system, which facilitates effortless tool-less replacement of LED light sources. One end of the LED light source boasts a contact cap, seamlessly fitting into the corresponding contact holder in the luminaire, while the other end is equipped with a support cap and support holder. This user-friendly design enhances maintenance convenience while promoting sustainability.

## **Applications Beyond Boundaries**

Book 14's LED light sources are designed for versatile applications, including use in free air (without the need for luminaire body enclosures).



# DALI Alliance appoints new Market Development Manager for North America

Piscataway, NJ, USA – The DALI Alliance, the global industry organisation for smart digital lighting control using DALI, has appointed Carol Jones to the newly created role of Market Development Manager for North America. She takes responsibility for promoting the benefits of DALI and its certification programs (DALI-2, D4i, DALI+), while interacting with key stakeholders and gathering feedback from the market.

Paul Drosihn, General Manager at the DALI Alliance, explains: "Carol's experience and long-term advocacy will enable her to increase adoption of high-value digital lighting and interoperability in the North American market. Her role will include education, not only about the technical merits of DALI products, but also about how DALI brings value across the entire building ecosystem."

Carol Jones is a 30+ year veteran and leader of the lighting and buildings industry with a diversity of professional experience well-suited to her new role. Her journey began as a lighting specifier, after which she served as a researcher and program manager at Pacific Northwest National Laboratory for 17 years.



Carol Jones

She has held manufacturing positions ranging from front-end innovation to product management and marketing for controls and luminaire manufacturers large and small, and most recently is the owner of Beyond Light Consulting. Carol has also been involved with various standards development activities, professional associations and policy efforts throughout the duration of her career and is well-known as a speaker and author.

## Young designer promoted after glowing year

Lighting Design International adds another designer to its talented ranks after announcing the promotion of design assistant, Jade King, following her first year with the practice.

A passionate creative with a flair for interiors, Jade completed her degree in interior design at De Montfort University in 2021 before spending six months with a small design house, joining LDI in 2022.

Since joining LDI, Jade has worked on an array of projects spanning superyacht lighting design, art galleries, luxury hotels and private residential design commissions.

On her promotion, Jade said: "My new role involves more responsibility – both in terms of project management, my level of independence and the contributions I make to a design project. Developing my design skills and being exposed to a wide range of projects has been the best part of joining Lighting Design International, as well as working alongside the talented and nurturing team that always have time to offer support and advice. I look forward to the new challenges and opportunities that lie ahead."

Sally Storey, founder of Lighting Design International, said: "It's been a joy to see Jade blossom as a valued part of the team. We are passionate about fostering young talent and honing their skills to provide clients with the best possible



Jade King

outcomes. Jade's career is off to a promising start and I look forward to seeing what is next for her as one of our design team." Lighting Design International is bastion for lighting design excellence, with over 30 years' experience in the industry and projects spanning the globe, the 20-strong team of designers are coveted for their talents, by some of the biggest and most luxurious brands worldwide.



Lighting Today is an architectural and entertainment lighting news portal which targets professionals in lighting industry including lighting designers, consultants, architects, interior designers, engineers, developers, estate management, event organisers and end users. We provide multiple platforms for our clients to communicate their target audience effectively. Scan the QR code below to access the quarterly digital magazine on our news portal and social media platforms.

Scan QR code below to read our news.
Sign up for free subscription.



Connect with us on social media!





www.twitter.com/ LightingToday



www.linkedin.com/ groups/3927350



www.instagram.com/ lightingtodaysg



# GMR Illuminates Urban Parks

Text and photos courtesy of GMR Enlights.

Trban areas play a vital role in enhancing the quality of life for city dwellers. They offer a space for relaxation, recreation, and connection with nature, providing a respite from the hustle and bustle of city life. Proper lighting in urban parks is not just about safety; it is a means to create an inviting and harmonious environment that encourages people to visit, socialise, and enjoy these public spaces after dark. For manufacturers, architects and lighting project managers, the task of illuminating urban parks is both a challenge and an opportunity.

GMR Enlights, as a leader of the Urban Lighting made in Italy, prioritises not only the quality of lighting, but the whole experience of living in a public area. Good examples of this philosophy are the Petter Forsström Park (Finland) and the beautiful park made in 2018 in Olszynki (Poland).



Photos 1, 2, 3 & 4: Park in Olszynki (Poland).









Photos 5, 6, 7 & 8: Petter Forsström Park (Finland)

Illuminating urban parks is a multifaceted endeavour, encompassing safety, aesthetics, sustainability, and accessibility. Our role is crucial in creating the right balance between these elements.

The lighting design should be in harmony with the park's purpose, environment, and the needs of its visitors.

By prioritising safety, enhancing the park's aesthetic appeal, and employing the latest lighting technologies, you can create urban parks that are not only safe and accessible but also vibrant and inviting after dark.

This, in turn, contributes to the overall well-being and vitality of urban communities, providing an invaluable asset to city residents and visitors alike.









# Landmark Lighting remanufacture project shines light on smarter techniques

The completion of a landmark lighting remanufacturing project is being heralded as the gold standard in ecofriendly office refurbishment.

The refurbishment of Arup's office at Piccadilly Place, Manchester was the stage for the project, led by The Regen Initiative and supported by technology from Tridonic UK.

Arup currently occupies the 6th Floor and the project included an expansion to the 7th Floor and refurbishment of both spaces. A key project objective was to reduce embodied carbon by renovating or repurposing furniture and equipment as an exemplar demonstration for our clients. Arup wanted to explore the refurbishment of the existing TC-L luminaires to LED and approached The Regen Initiative for their expertise in lighting remanufacture.

Conceived by F Mark and COCO Lighting, The Regen Initiative offers a lighting fixture refurbishment service, breathing new life into existing fixtures. By sharing their collective knowledge and remanufacture skills they are able to offer a service that encompasses circular economy principles to reduce carbon in refit projects. These principles and practices provide a credible alternative to just 'fitting new' that will last for generations to come.

Arup and The Regen Initiative collaborated in the design, prototyping and testing on-site of the retrofit solution to ensure the optical performance could be maintained, to define a specification for light quality, and to integrate smart wireless lighting controls to replace the existing DALI system which was unfit for purpose.

As part of a turnkey solution, the LED retrofit upgrade of the 214 incumbent TC-L fluorescent lighting was completed out of hours by fellow Regen associates Challenger Lighting Services to minimise disruption to Arup's daily operations in the office. Along with the rebuilt LED retrofits, which were remanufactured offsite, the lighting levels were balanced to meet the client's exact specification. The emergency lighting provision was also upgraded to be compliant with regulation and the whole project was fitted with wireless controls from Tridonic UK.

Overall, the remanufacturing and retrofit of the fixtures has resulted in a 72 percent energy reduction and the avoidance of 5,554kg of CO<sub>2</sub>e being produced in comparison with the replacement of existing luminaires with new.

Additionally, the Tridonic x Casambi wireless upgrades meant that PIRs and meeting room switch plates have been replaced. Regen engaged the services of Atrium to supply these components and commission all wireless lighting towards the end of the project. The emergency lighting provision is upgraded to be fully DALI auto-test compliant.

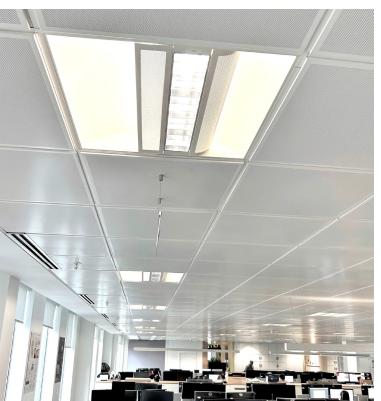
"The resulting green credentials for this project really speak for themselves," explains Simon Fisher from The Regen Initiative. "We knew what we could do to remanufacture the old fittings to make them LED-ready and utilising technology from Tridonic UK and Casambi to provide wireless controls, dimming and emergency lighting compliance, were all key parts of the project deliverables for us. But what has been truly inspiring about this project is the collaboration between The Regen Initiative and Arup to evolve the scope of work to really move the dial on the amount of carbon and money saved, as a result of these innovative green techniques being deployed.

"Finally, the success of the project has meant that we have been invited to return to provide similar capabilities as part of the renovations to the seventh floor of Piccadilly Place, which sees us taking on a role as lighting remanufacture contractor, working as part of a wider supply chain."

Richard Morris, Lighting Design leader for Arup's Manchester Office, said: "We have been promoting the lighting and circularity agenda for some time. We were keen to put this into practice and working with The Regen Initiative gave us the opportunity. Now, having been through the process, with no disruption to our daily work and validation of the energy and carbon savings, we can share our experience with our clients with confidence and promote luminaire refurbishment as a realistic proposal."

James Huntington, OEM Controls and Solutions Manager for Tridonic UK, said: "Our wireless drivers and emergency lighting solutions were the perfect fit for this project, enabling DALI-compliant wireless controls, dimming and emergency auto-testing to enhance the lighting provision which ultimately, saves the occupant time, money and carbon. It's so great to see these greener solutions being adopted and we are proud to be a part of this very special story, which I know will have far-reaching implications for the next generation of lighting refits."

Photos courtesy of Arup.









Chloe Fung. Photo Credit: Nulty

## Interview with **Chloe Fung,** Senior Lighting Designer, Nulty

# LT: Lighting studio Nulty recently expanded in Asia by opening a new office in Singapore. What was the reason behind the move and what does this new studio aim to achieve?

Chloe: We're excited to embark on a new chapter for Nulty in Singapore. We launched an office in Bangkok four years ago and have been steadily gaining new work in Asia ever since. Singapore is the logical next step – it's an incredibly creative city that champions progressive architecture and design, so we feel there's a strong synergy with us as a practice. We want to play our part by setting new benchmarks for architectural lighting design. It's also important to us that we're at the heart of the action. Our work is a collaborative process, and we achieve the best results when we're on the doorstep of our clients and able to communicate on a personal level. Ultimately, our aim is to champion the importance of great lighting design – and hopefully have some fun along the way.

## LT: Can you briefly share with us your background and your work as a lighting design professional?

Chloe: I was an interior designer before I moved into the lighting design industry and have always loved producing beautiful spaces. I particularly enjoy the emotive response that you can achieve with design; lighting is such a huge component of this. It has the power to completely transform a space,

something that I first encountered in Hong Kong where I started my career, because spaces are typically small. I learnt a lot about how to use daylight and artificial light to create the illusion of space and optimize a scheme to its fullest potential. I'm now working with light on a diverse range of projects and the basic premise is still the same, regardless of whether it's a beautiful home, cutting-edge retail store, large office space or high-end hotel. When it's been carefully considered, lighting design can elevate a space and add an emotional layer to that environment.

## LT: What will be your leadership style for the Singapore office?

Chloe: My leadership style for the Singapore studio will reflect the underlying philosophy of our other studios – we want to inspire others with our passion for light. At Nulty, we believe success is borne out of really loving what we do and going beyond what's expected to raise the bar on a creative level. This means having our finger on the pulse and seeing every project as an opportunity to redefine the way that we design with light. We want to make this passion for light the backbone of the Singapore studio, so that it comes across in everything we do – from how we train our designers and work with clients, through to how we approach a design brief and manage that project to make sure it's a success.



Galeries Lafayette in the Upper Hills Mall Location: Shenzhen, China Interior Design Team: Cardy Papa Lighting Designer: Nulty

Photo Credit: Galeries Lafayette China and Cardy Papa

The biggest challenge that we face right now is how we balance creativity and technology, with the sustainability aspirations and budget for a project.

-Chloe Fung

# LT: Can you name me some projects that Nulty has completed in Asia recently? Which ones are your favourites?

Chloe: One of my favourite recent projects is Galeries Lafayette in the Upper Hills Mall, Shenzhen. The interior design team, Cardy Papa, curated an extraordinary shopping experience centred around a 'Breathing Fashion' theme, which gave us carte blanche to be quite imaginative with the lighting design. We focused on the fundamentals by establishing a backbone of ambient and functional illumination, then weaved in distinctive lighting elements to add drama. When you arrive, you're greeted with an

illuminated archway inspired by the architectural lines of The Eiffel Tower – a symbol of Galeries Lafayette's Parisian roots. Then as you walk through to the beauty section, you encounter a huge floral installation with globe pendants artistically suspended throughout. It's an unexpected detail that turns the traditional beauty hall concept on its head. This playfulness continues in the women's fashion department where an eye-catching illuminated pink mirror turns what could have been a simple pause point into a veritable wow moment. The final scheme is a success because we finessed the user journey to ensure that every viewpoint, interaction, and moment is memorable.









Galeries Lafayette in the Upper Hills Mall Location: Shenzhen, China Interior Design Team: Cardy Papa Lighting Designer: Nulty

Photos Credit: Galeries Lafayette China and Cardy Papa

# LT: What are some of the challenges you foresee coming from the lighting industry and how do you plan to overcome them?

Chloe: The biggest challenge that we face right now is how we balance creativity and technology, with the sustainability aspirations and budget for a project. It is obviously our responsibility as designers to be on top of the latest innovations that we're seeing from manufacturers, but we need to design with a holistic mindset to bring the right proposal to the table. As clients seek more sustainable solutions, they need designers that understand every facet of light and have the experience required to produce beautiful lighting schemes that are also energy-efficient and contribute to the circular economy. And in the best attempt to beat the bottom line, quality rather than quantity of light will always be the distinguishing factor and the key to finding the most effective lighting solution to tune the emotional message.

product showcase 2

## Ayrton launches IP65 Rivale Profile - Light is Right





A yrton is excited to announce the official launch of its new IP65-rated Rivale Profile, the next in its Classical IP65 3 Series, and the first ultra-equipped luminaire in Ayrton's brand new 'ULTIMATE' series. All ULTIMATE models are perfectly homothetic, sharing common features and delivering previously unimaginable weight-to-output ratios.

## Outstanding creativity - minimal weight

Developed for mixed use indoors and outdoors, and in all conditions, Rivale Profile, with its unique visual signature, is unparalleled on the market. Weight determines performance, and Rivale Profile weighs only 28kg, yet is capable of outstanding performance unprecedented for a product in this category. And with continuous rotation of the pan and tilt movement, Rivale Profile allows you more creativity and freedom in your lighting design.

#### Unimaginable output

Rivale Profile is fitted with a brand new high-efficiency 450W sealed mono-block LED module, calibrated at 6,500K, that offers a luminous flux of 30,000 lumens with optimal positioning on a black body to obtain perfect light neutrality.

## Incredible zoom

The proprietary optical system has 13 lenses, delivering a 13-to-1 zoom ratio and zoom range of 4 to 52°. Equipped with a 160mm frontal lens, Rivale Profile can produce an ultra-intensive beam of 4°, close to that of Ayrton's famous "LT" range.

#### Perfect colour reproduction

Rivale Profile has adopted a brand-new high-definition progressive CMY colour-mixing system that delivers perfect colour reproduction as soon as the filter is inserted, regardless of the colour combination selected. An extended progressive CTO lets you fine tune the colour temperature from 2700K to 6500K, and a seven-position colour wheel completes the palette of tools dedicated to creating colour.

#### Full featured for great flexibility

For greater flexibility of use, Rivale Profile allows subtle adjustment of the colour rendering index from 70 to 86. The framing section permits accurate positioning of each shutter blade on a 100 percent surface area with a rotation of plusor-minus 90°. A fast 15-blade iris diaphragm with an aperture range from 15-100 percent enables beam optimisation in Beam mode.

The image section of Rivale Profile includes 15 interchangeable high-definition glass gobos on two wheels: one rotating wheel with seven positions and one fixed wheel with eight positions. The effect section is fitted with a monochromatic animation wheel, two combinable rotating prisms and two frost filters.

Its ergonomics have been completely redesigned with four highly integrated handles that make installation easy. In the ULTIMATE series, every detail counts.

Rivale Profile, a unique projector that boasts performance, creativity, subtlety and power, is the most versatile fixture created by Ayrton to date. A truly innovative luminaire with no equivalent on the market.

22

# Versatile KL Spot IP™ continues Elation evolution in IP65 lighting innovation

Introducing the KL Spot IP™ by Elation, the epitome of extreme outdoor lighting flexibility.

In the whirlwind of the everevolving world of production, lighting professionals yearn for dynamic tools that can be effortlessly fine-tuned and adapt in the blink of an eye. Enter the all-in-one KL Spot IP – a radiant and rugged static luminaire that can also function as an LED Profile by adding the optional motorized framing module, creating a lighting fixture that's both handily adaptable and primed to set your creative spirit on fire. What's more, its IP65 rating empowers you to conquer both indoor and outdoor spaces with unmatched versatility.

## Simplifying outdoor lighting

Elation has embarked journey groundbreaking toward simplifying automated static lighting with the KL Spot IP, a venture that began with its companion, the KL Profile FC™. The days of being boxed in by limited options are over. Need to relocate fixtures on the fly? With an integrated zoom lens spanning from 7° to 50°, you can place the KL Spot IP anywhere and still capture the perfect beam size - no extra lens tubes required. This translates to reduced costs, streamlined setups, and unprecedented flexibility for every performance venue and show.

Imagine shooting in warm white, only to seamlessly transition to a cooler daylight ambiance with built-in CCT presets ranging from 2400K to 8500K. Need to infuse vibrant coloured side lighting to delineate your speaker from the background? Tap into the full spectrum RGBMA LED engine. Feel the backdrop lacks depth? Simply select one of the 13 included gobos to add captivating texture to your shot – all with effortless ease. Plus, every aspect of this fixture is motorized, eliminating the need to open it up for adjustments.

#### Superior light and colour

This extraordinary fixture emanates a superior quality of light, courtesy of its 305W 5-colour homogenized LED array



of Red, Green, Blue, Mint, and Amber sources. This calibrated RGBMA engine, boasting a 92 CRI and native colour temperature of 6500 Kelvin, bathes your stage in beautifully diffused saturates, soft-field pastels, and tunable white light. The meticulously tuned LEDs ensure impeccable colour reproduction while delivering a staggering output exceeding 10,600 lumens.

Colour mastery takes center stage with the KL Spot IP, guaranteeing that your designs translate seamlessly to camera. You can effortlessly rectify shifts away from pure white toward green or magenta through a green/magenta shift adjustment and a virtual gel library. From 2400K to 8500K, plus CMY and RGB emulation, you gain access to a mesmerizing palette of LED colours, including exquisite mixed whites. Achieve the perfect white balance for camera without the need for green gels or filters, and rest assured of flicker-free operation when working with high-speed cameras thanks to DMX-adjustable LED refresh rates.

#### A world of lighting possibilities

Refine visual concepts with intricate designs, shapes, or textures using the fixture's included 6 rotating/indexing

glass gobos and 7 fixed glass gobos, or access the animation wheel for more organic forms or realistic effect looks.

Cast a softer light using the variable frost or unlock your creative potential further using the dual prisms and high-speed electronic shutter and strobe. And say goodbye to spill on scenery or cycloramas — the optional motorized framing/iris module offers an effortless solution for intricate shutter cuts and precise beam control.

Furthermore, the KL Spot IP is designed with utmost respect for the silent demands of professional stages and studios, operating at a whisperquiet level. You can even dial it down to Elation's Mute Mode, silencing the internal cooling fan when needed.

The KL Spot IP, with its automated lighting prowess with zoom and optional framing capabilities, is an impeccable choice for the gamut of white or colour lighting needs found in broadcasting, theatre, or any performance setting. At long last, a static LED spot solution that doesn't demand compromises. With the KL Spot IP, you can gracefully adapt to unforeseen challenges, meet the most audacious creative demands, and deliver the premium productions your clients expect.

product showcase 2.

## C&C Open House: A showcase of interactive lighting

In the summer of 2023, Seoul was abuzz with excitement as C&C Lightway, a prominent ETC dealer in the Korean market, hosted an open house event that brought together friends, customers, and industry professionals. This four-day extravaganza attracted over 300 attendees eager to witness the latest advancements in lighting technology. The event celebrated innovation, creativity, and music.

The highlight of the open house was an awesome light show that left participants spellbound. C&C Lightway - YS Choi and AI technology programmed the event theme song. The open house showcased the remarkable capabilities of Eos Apex 10, Eos Apex 5, ColorSource Spot V, Source Four LED Series 3, Source 4WRD, Desire Fresnel, Halcyon, Lonestar, and the SolaPix family. The show was expertly controlled using the highly anticipated Eos Apex 10 with Eos v3.2 software, and participants had the opportunity to experience the Apex console and explore its powerful features that promise to revolutionize fixture programming. Also, ETC Field Project Coordinator Audrey Leung introduced the updates of Eos v3.2 and how it improves networking to fixture configuration. The latest Eos software offers game-changing tools that allow the user quickly adjust colour, device and system settings and power up 3D programming.

In addition to the mesmerizing light show, C&C Lightway and ETC played

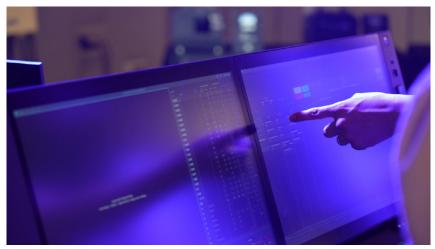


Photo credit: ETC

an interactive music light show to introduce the Eos Apex consoles. The lighting show provided participants with an in-depth experience of the console's functionalities and capabilities. This was a valuable opportunity for attendees to gain insights into the Apex console and learn tips and tricks from industry experts.

The open house was a platform for showcasing the latest lighting technology. Attendees were captivated by Halcyon, the next generation of automated framing luminaires from ETC. They were surprised by Halcyon's tighter, next-gen gradient dichroics and linear mixing curve supported by ETC's renowned colour science that creates smooth, even colours in and out of focus.

The event survey response was overwhelmingly positive. The Eos Apex and Halcyon were highly appreciated, with more than 50 percent of participants praising their high quality and willing to recommend them to customers and peers.

This open house was an incredible success, bringing together industry professionals, customers, and friends to celebrate innovation and collaboration. The event showcased the cutting-edge technology of the Apex and other lighting solutions and provided valuable insights into the evolving landscape of theatre lighting. As the industry embraces new advancements, events like this open house are crucial in showcasing innovation and inspiring the next generation of lighting professionals.







Photo credit: ETC

## LEDtronics expands its LED Post Top series for walkway and parking lot lighting with tunable wattage & CCT lamp

EDtronics® Inc., celebrating 40 years of pioneering LED lighting solutions, announces the latest product in its line of Tunable LED Post Top Lamps with even, omnidirectional lighting that offers energy savings of up to 85 percent over MH and HPS counterparts.

Known in the industry as corn bulbs for their shape, this latest high-lumen addition features multi-wattage and multicolour temperature versatility with the ability to choose from three different CCTs - 3000K Warm White, 4000K Natural White and 5000K Pure White, and variable wattage options of 45, 54 or 63 Watts.

Customizable to fit any lighting need and with a switchable selection of wattages and CCTs, this lightweight LEDtronics post-top luminaire offers a wide range of features and benefits that make it ideal for a variety of applications, easily replacing E39 CFL bulbs in street post-top lighting, outdoor parking area lighting, driveway and walkway lighting, security lighting, parks, playgrounds, railroad stations, platforms, pendant and globe lighting, among others.

The UL-listed LED26GCT series is safe to use in enclosed luminaires, and directly replaces HID lamps with a simple ballast bypass – at 45W it replaces 70W HPS; at 54W replaces 100W HPS, and at 63W replaces 150W MH - all at 5000K and 300W THQ.

Reducing additional energy consumption by bypassing the ballast allows the lamp to operate in a voltage input range of 100 to 277 VAC. It comes in E39 mogul screw base, with a wide operating temperature range of -22°F to ~+140°F (~-30°C to ~+60°C).

The new LED26GCT lamp directs a uniform, 360 degree beam, with lumens ranging from 6,610 to 9,280, and boasting luminous efficacy of 142 to 163, all depending on wattage and CCT selection. Maximum candela ranges from 663 to 914. It also features outstanding colour fidelity with a CRI equal to or



greater than 80 that enhances colour nuances.

The new state-of-the-art lamp maintains over 70 percent or greater of LED lumens for over 50,000 hours or 10 years of operation - a lifespan far longer than the equivalent halogen or HID bulb! The solid-state design renders it impervious to shock, vibration, frequent switching and environmental extremes. In addition, LEDs do not emit large amounts of heat, and little to no ultraviolet or infrared light.

Since LED lights are much more energy-efficient than old-technology lighting, this lamp is perfect for operating with an alternative or renewable energy resource such as solar or wind power in cold or warm environments.

This versatile LED26GCT omnidirectional, UL-listed LED post-top bulb with tunable wattage and CCT comes with an unconditional 5-year LEDtronics factory warranty, and is available through LEDtronics distributors. Other selectable wattages are available for large quantities and qualified applications.

## New ams OSRAM OSTAR® LEDs bring vivid colours, sharper contrast and increased brightness to mini projectors with 0.33" DLP

SRAM, a global leader in intelligent sensors and emitters, has added four new LEDs to its family of OSTAR® Projection Power products. The new LEDs produce superior optical performance in projection equipment that is based on a 0.33" DLP (Digital Light Processing) imager.

The new OSTAR® Projection Power LE xx P1MS/AS LEDs have a very close etendue match with the 0.33" DLP imager. The LEDs are available

in Blue, Amber, Deep Blue and Converted Green colours. When used in a typical four-channel configuration, these OSTAR® Projection Power LEDs produce an output of 880 lm on projector level. This is five percent brighter than the next best 0.33" DLP-compatible LEDs available from competitors, according to internal ams OSRAM tests.

The OSTAR® Projection Power LE xx P1MS/AS LEDs are supplied in

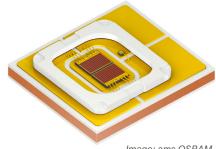


Image: ams OSRAM

product showcase 2.5

a compact package with a footprint of just 6.8 mm x 7.6 mm. The package has a copper metal-core PCB with isolated solder pad, making thermal system design easier and reducing the cost of thermal components.

The excellent thermal performance of the OSTAR® Projection Power LE xx P1MS/AS also supports very high current density and brightness – 6.6 A/mm2 for the Blue, Deep Blue and Converted Green LEDs, and 4.5 A/mm2 for Amber.

In multi-channel configurations, the LEDs support serial connection with a low forward current, enabling the use of a simpler, lower-cost LED driver.

Tony Tam, Senior Marketing Manager of ams OSRAM, said: "More vivid colours and sharper contrast in



Image: ams OSRAM

products such as home theatre projectors are now possible thanks to the high brightness of the latest OSTAR® Projection Power LEDs and their excellent etendue match with 0.33" DLP imagers."

The new OSTAR® Projection Power LE xx P1MS/AS LEDs are ideal for other applications in addition to projectors. These include endoscopes, 3D scanners, and machine vision equipment.

The OSTAR® Projection Power LE xx P1MS/AS LEDs are available now in production volume.

## Inter-lux announces a new lighting tool to reduce glare

Inter-lux is pleased to introduce ProTools 1.5" Downlights, a complete family of 1.5" aperture lighting tools to supplement an extensive offering from its Whitegoods brand.

This new product line provides a unique solution to reduce glare with a specifically-engineered deep baffle design. Equipped with a special selected lens, the light is evenly spread toward the centre to achieve the beam angles needed.

A few more notable features of ProTools 1.5" Downlights:

- Very small aperture and low brightness
- Suitable for general and accenillumination
- High lumen output and excellent colour rendition
- Multiple housing styles for mounting into all ceiling types
- Very shallow ceiling depth required for both integral and remote drivers
- · Available in round, square, trim, trimless, single and twin trim

• Downlight, Adjustable, Wallwash and Round Suspended options

"Whitegoods continues to evolve as an innovative solution to meet the needs of lighting designers who strive to illuminate spaces that require the focus to be on the architecture and not the lighting. This new addition further expands the tools they have available to implement their creative vision," says Mark DeVries, CEO.





## PRINT



Southeast Asia Building



Southeast Asia Construction

#### Please (√) tick in the boxes.

○ SGD\$220.00

#### ○ SGD\$70.00 Singapore Malaysia / Brunei O SGD\$120.00 Asia ○ SGD\$180.00 O SGD\$220.00 America, Europe Japan, Australia, New Zealand ○ SGD\$220.00

1 year (6 issues) per magazine

Middle East

## PRINT



Singapore Interior Design Directory (SIDD)

Scan QR code to order

\* Only for delivery within Singapore.

## DIGITAL



Bathroom + Kitchen Today

## Bathroom + Kitchen Today

is available on digital platform.

http://bkt.tradelinkmedia.biz



**Lighting Today** Since 2002

## **Lighting Today**

is available on digital platform. To download free PDF copy, please visit:

http://lt.tradelinkmedia.biz



Security Solutions Today

## Security Solutions Today

is available on digital platform. To download free PDF copy, please visit:

http://sst.tradelinkmedia.biz

Particul

Name:

Position:

Company:

Address:

Tel: E-Mail:

## **IMPORTANT**

Please commence my subscription in (month/year)

Professionals (choose one):

Architect Landscape Architect Property Manager Manufacturer/Supplier

Bank transfer payable to:

Trade Link Media Pte Ltd **Bank Details Account Name:** 

Address of Beneficiary Bank:

Trade Link Media Pte Ltd 033-016888-8 Account Number: Name of Beneficiary Bank: **DBS Bank** 

12 Marina Boulevard, DBS Asia Central, Marina Bay Financial Centre Tower 3, Singapore 018982

Country: Singapore SWIFT Address/Code: DBSSSGSG Interior Designer Engineer

Developer/Owner Others

PAYNOW to:

Trade Link Media Pte Ltd





PAYNOW option is applicable for Singapore companies only.

**Company Registration** Number: 199204277K



