

# lighting today

JULY - SEPTEMBER 2018



COVER STORY

Singapore

# Changi Airport

Download our new Tradecards Global App on iOS and Android to read the latest issue!



# TOTAL LIGHTING

SOLUTION PROVIDER

Lighting & Equipment Public Company Limited

539/2, 16-17th FL., Gypsum Metropolitan Tower, Sri Ayudhaya Rd., Rajthevee, Bangkok 10400,

Thailand Tel : (66) 0 2248 8133,  lightingthailand, [www.lighting.co.th](http://www.lighting.co.th)



*more than light*

# LED+LIGHT ASIA 2018

5<sup>TH</sup> International LED + Lighting Technology Show

[www.ledlightasia.com.sg](http://www.ledlightasia.com.sg)

The only show in Singapore dedicated  
to the LED/OLED industry!

**Halls B and C**  
**Marina Bay Sands, Singapore**  
**2 - 4 October 2018**

- √ Explore new opportunities within Southeast Asia
- √ Gain insider knowledge of the LED/OLED industry
- √ Meet your key buyers: Architects, Builders, Contractors, Developers, Engineers, Housing Developers, Interior Designers and many more!

**To be a part of LED+Light Asia,**

please call Jane Liu at (65) 6278 8666 ext 161 or email [jane@cems.com.sg](mailto:jane@cems.com.sg)

LED+Light is part of the Architecture & Building Services (ABS) 2018.

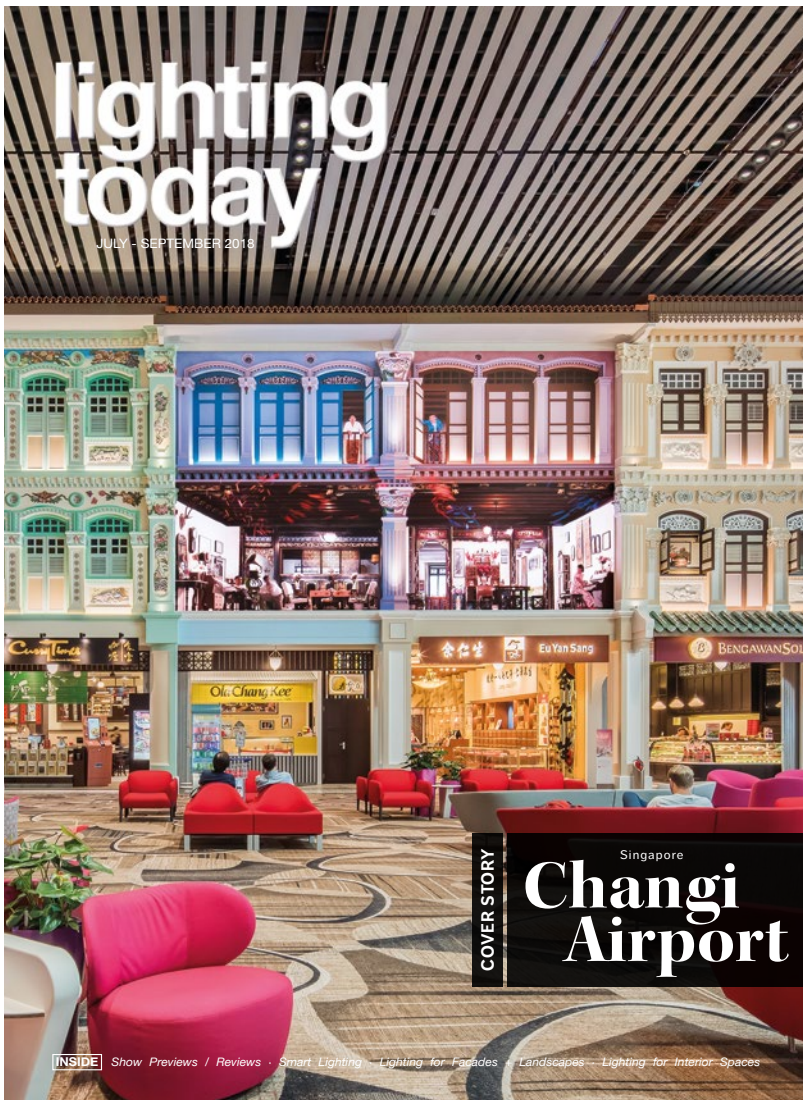
6 established exhibitions | 6 conferences | 9,000 quality delegates

Organised By



A Part of Architecture & Building Services 2018





On the Cover: Changi Airport  
Singapore  
Photo Credits: Moment Factory

#### OTHER TITLES BY TRADE LINK MEDIA PTE LTD

**Southeast Asia Building**  
**Southeast Asia Construction**  
**Security Solutions Today**  
**Bathroom + Kitchen Today**  
**Lighting Audio Visual Asia**

[www.tradelinkmedia.biz](http://www.tradelinkmedia.biz)

#### 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 300 dpi in .jpeg and .tiff format.

**PUBLISHER**  
**Steven Ooi** [steven.ooi@tradelinkmedia.com.sg](mailto:steven.ooi@tradelinkmedia.com.sg)

**EDITOR**  
**Nicole Lee** [lighting@tradelinkmedia.com.sg](mailto:lighting@tradelinkmedia.com.sg)

**MARKETING EXECUTIVE**  
**Veronica Lim** [veronica.lim@tradelinkmedia.com.sg](mailto:veronica.lim@tradelinkmedia.com.sg)

**GROUP MARKETING MANAGER**  
**Eric Ooi** [eric.ooi@tradelinkmedia.com.sg](mailto:eric.ooi@tradelinkmedia.com.sg)

**MARKETING MANAGER**  
**Felix Ooi** [felix.ooi@tradelinkmedia.com.sg](mailto:felix.ooi@tradelinkmedia.com.sg)

**GRAPHIC DESIGNER**  
**Siti Nur Aishah** [siti@tradelinkmedia.com.sg](mailto:siti@tradelinkmedia.com.sg)

**HEAD OF GRAPHIC DEPT/ADVERTISEMENT COORDINATOR**  
**Fawzeeah Yamin** [fawzeeah@tradelinkmedia.com.sg](mailto:fawzeeah@tradelinkmedia.com.sg)

**CIRCULATIONS EXECUTIVE**  
**Yvonne Ooi** [yvonne.ooi@tradelinkmedia.com.sg](mailto:yvonne.ooi@tradelinkmedia.com.sg)

#### INTERNATIONAL MEDIA REPRESENTATIVES

##### [KOREA]

MCI  
Room B615, Hanwha Obelisk 2,  
481, World Cup buk-ro,  
Mapo-gu, Seoul,  
Korea 03902  
t. +82 2 730 1234 f. +82 2 732 8899

#### CALL FOR SUBMISSIONS

Press releases, proposals for stories, and product development literature should be submitted by email to the editor at:

[lighting@tradelinkmedia.com.sg](mailto:lighting@tradelinkmedia.com.sg)

#### LIGHTING TODAY IS PUBLISHED BY:

**TRADE LINK MEDIA PTE LTD**  
101 Lorong 23, Geylang #06-04  
Prosper House Singapore 388399

For interest in advertising and advertorials, please attention your query via:  
fax: +65 6842 2581 / +65 6745 9517 or  
direct call: +65 6842 2580

Printed by KHL Printing Co Pte Ltd  
MCI (P) 060/05/2018  
ISSN 2345-7147 (Print) and ISSN 2345-7155 (E-periodical)

This publication is published four times a year and is available at no charge to subscribers in the professional lighting industry who meet the publication's terms of circulations control. For subscribers who do not qualify for free subscription, copies will be made available subject to acceptance by the publisher, for a subscription fee which varies with the requester's country of residence in the following rate for annual subscription.

**ANNUAL SUBSCRIPTION BY AIRMAIL**  
Europe/America – SGD\$130,  
Asia Pacific – SGD\$80,  
Brunei/Malaysia – SGD\$65,  
Middle East – SGD\$130,  
Japan/Australia/New Zealand – SGD\$130

**ANNUAL SUBSCRIPTION BY SURFACE MAIL**  
Singapore – SGD\$32 (Incl 7% GST Reg No.: M2-0108708-2)

4-7 JULY 2018  
KUALA LUMPUR CONVENTION CENTRE

AN EVENT OF  
**KLAF2018**  
KUALA LUMPUR ARCHITECTURE FESTIVAL



**ARCHIDEX<sup>®</sup>**  
THE 19TH INTERNATIONAL ARCHITECTURE, INTERIOR  
DESIGN & BUILDING EXHIBITION, MALAYSIA **2018**

FEATURING



CONCURRENT EVENTS



JOINTLY ORGANISED BY



AWARD WINNING EXHIBITION



ENDORSED BY



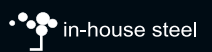
SUPPORTED BY



OFFICIAL AIRLINE



STRATEGIC PARTNERS



**STAY CONNECTED  
WITH US!**

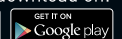


[www.ARCHIDEX.com.my](http://www.ARCHIDEX.com.my)



**ARCHIDEX APP**

Available for download on:





# Contents

008	Light Talk by Martin Klaasen
010	Lighting in the News
025	Show Review <ul style="list-style-type: none"> <li>• Light + Building 2018</li> <li>• Light Fair International 2018</li> </ul>
034	Special Feature <ul style="list-style-type: none"> <li>• LEDVANCE Advertorial</li> </ul>
036	Smart Lighting <ul style="list-style-type: none"> <li>• Giant Works of Art</li> </ul>
038	Cover Story <ul style="list-style-type: none"> <li>• Changi Airport</li> </ul>
046	Lighting Façades and Landscapes <ul style="list-style-type: none"> <li>• Bhumibol Bridge</li> <li>• Göppingen Park                     <ul style="list-style-type: none"> <li>• Hyatt Place</li> <li>• Platinum Hotel</li> <li>• UAE Pavilion</li> </ul> </li> </ul>
072	Lighting Spatial Envelopes <ul style="list-style-type: none"> <li>• Christie's</li> <li>• S.E.A. Aquarium</li> <li>• The Covette Clinic</li> <li>• Sky Gallery at the O2</li> <li>• Vicarage Gate House</li> </ul>
098	illumina Product Showcase <ul style="list-style-type: none"> <li>• Industrial Lighting By YAHAM Lighting</li> <li>• Product Showcase By Fael Luce</li> </ul>
102	Lighting Controls <ul style="list-style-type: none"> <li>• LEDSpots For Retail Lighting By Vossloh-Schwabe</li> <li>• Holders For Luga Shop Modules By Vossloh-Schwabe</li> </ul>
104	Product Focus Interior / Exterior
108	Events & Expositions / Advertisers Index

# thailand lighting fair

The future of light:  
Smart, sustainable, human-centric

8 – 10 November 2018

Bangkok International Trade & Exhibition Centre  
(BITEC), Bangkok, Thailand

[www.thailandlightingfair.com](http://www.thailandlightingfair.com)



**Contact:**

Messe Frankfurt New Era Business Media Ltd

Tel: +852 2238 9969 / 2802 7728

[light@china.messefrankfurt.com](mailto:light@china.messefrankfurt.com)

Concurrent event

# thailand building fair



The Electric Utility of the Future

PEA  
4.0

The ExhibiZ



messe frankfurt

## Dear Readers,

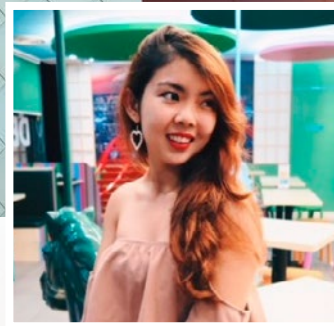
We are almost at the final stretch of 2018! How has your year been? For this issue, we had the honour of bringing onboard an impressive arsenal of designers and their top projects. Some of the biggest names in the business are here, championing their projects through our beloved magazine.

One unmissable project is the Hyatt Place Rameswaram, an effortless blend of traditional ethics and modern ethos. This structure sets a new benchmark for the select-service industry and lends precedence for future innovation in hospitality design. Light had to be thoughtfully infused into its architectural folds to accentuate and further empower its spatial design. A small pilgrimage town teeming with Hindu temples and medieval Dravidian architecture, Rameswaram is considered one of the most sacred in India.

Have something lighting related to share? Send it in! We welcome submissions and would be happy to feature pieces from loyal readers. Till then, happy reading!

*Nicole Lee*

Nicole Lee  
Editor



The international exhibition & conference on building maintenance and facilities management



**12-14 SEPTEMBER 2018**

**HALL 5-6, IMPACT, BANGKOK, THAILAND**

# **INTEGRATED FM OF THE FUTURE**

**BMAM Expo Asia 2018 offers exciting possibilities for businesses keen to be at the forefront of innovation and technology in facilities management.**



**EXHIBIT NOW!**

FM Products & Services | Plant Maintenance | Facilities Management Software  
Workspace Management | Smart Building Solutions | Cleaning Products & Services  
Security | Interior & Landscape Design | Green Building Technologies | Health & Safety

Scan to book  
your booth



# MAKING A DIFFERENCE

In a world that changes at a fast pace around us...

After a life time in lighting design one of the biggest challenges is to continuously reinvent yourself to stay relevant in the lighting industry. I have always felt, looking at my peers in the industry, that as you get older you tend to "rust" into habits. You develop your lighting design style, you are comfortable with your way of working and even your design concepts may follow a proven path to success. You may even fall into using the same lighting fixtures that worked for you in the past over and over again. And with an established practice and reputation it probably works and keeps working well, but the risk is that you become oblivious to what is happening in the world around you. It has been a frequent topic in some of my previous Light Talks.

Running a practice of course means that you need to keep an eye on the bottom line, salaries have to be paid, overheads to be dealt with, but passion and the will to make a difference has to come into play as well. I have always thought that my passion for lighting was what drives me doing what I do. But also, the desire to make a difference by empowering people through my lighting design skills and lighting expertise and so, sharing my knowledge through my writing, my blog, my book, my articles and my public engagements has been an embedded part of exercising my work and skills as a meaningful lighting designer.

How can we make a difference in lighting design? There are many ways...First let's have a look at being considerate in lighting design in itself. It's our bread and butter, we listen to the clients' brief, develop a lighting concept that not only meets the clients criteria (often just time and money targets) and we make sure that we coordinate and consider the needs of our fellow project team members. We are all in it together and finding a lighting solution that not only satisfies the client but also considers the desires of the architect and others only wins you friends. No one wins from a high horse approach is my experience...being a team player often brings the best results, though standing your ground when needed is of course important.

Making a difference is also about intangible things. Reducing the carbon footprint of your lighting. It may not be that obvious to others but striving towards a minimal (perhaps optimal) lighting installation in terms of balancing energy consumption and performance should be embedded in our thinking. It's about satisfying yourself first that you have done the best possible job. A client will rely on you and will accept your recommendations regardless whether it is 3.5W/m<sup>2</sup> or 5.4W/m<sup>2</sup>. You know you provided the best possible scenario for that particular space or building.

There are many more design considerations that will make your client's life easier and that will provide not only comfort and a worry-free installation and the goal is the same for all...deliver a responsible design. Remember there is no Planet B, so being considerate to our environment is an integral part of our design responsibilities.

How often do we look at the potential of recycling our lighting? I often advocate that we should move to a circular economy where products can be reconfigured, re-used or recycled rather than today's waste economy where products are designed to fail (limited warranty) and discarded after use...we should engage more to make this a reality and educate our industry and clients to follow on that path. Implementing Light as a Service seems to fit right into this vision as the service

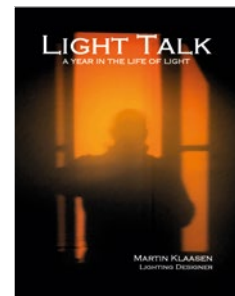
providers have only to gain by providing lighting installations that last long, have virtually no maintenance and can be reconfigured and re-used afterwards!

Then there is one of the other pillars of lighting design that can make a (big) difference, and that is lighting for health and well-being, some call it human centric lighting, some circadian lighting, but in essence we are talking about using good and well-balanced lighting to improve peoples health, improve productivity and create a relaxed environment were people feel good (stress is one of the world's biggest health issues!).

But there is circadian lighting and circadian lighting...initially we just started to follow the colour temperature of natural daylight as a progression during the day, increasing or decreasing the lighting levels according to time of the day. Tunable white light is the tech term. However, after having been questioned by a researcher how I made sure that the "dosage" of circadian lighting was correct (too much active daylight in a school class may actually negatively impact the children...) I realised that circadian lighting is a science, just like growth lighting for plants and green walls requires an in-depth study to achieve the right energy radiation rather than just flooding it with a "daylight" simulation... Lighting for people requires the same researched approach, different people need different things, different environments need different approaches...

Making a difference often lies in the unseen things that we can do, that makes our world a better place... making a difference can be very satisfying...

Follow Martin's daily blog about lighting, Light Talk, at:  
<http://lighttalk.via-verlag.com>



Martin's Book, '**Light Talk, A Year in the Life of Light**'

(ISBN: 978-981-07-0120-8),

To order a hard copy →

email: [lighttalk@kldesign.co](mailto:lighttalk@kldesign.co)

or log into the website at [www.kldesign.co/media/lighttalk](http://www.kldesign.co/media/lighttalk)

To purchase the book → Kinokuniya bookstore →

Ngee Ann City, Singapore

A soft copy of the book is now available for download  
from Martin's blog site.

**CAMBODIA'S BIGGEST INTERNATIONAL BUILDING,  
CONSTRUCTION AND M & E INDUSTRY SHOW**

# **CAMBUILD'18**

**CAMBODIA BIGGEST INTERNATIONAL BUILDING & CONSTRUCTION INDUSTRY SHOW**

**12-14 SEPTEMBER 2018**  
**DIECC (KOH PICH), PHNOM PENH**

To Book Your Booth at the Expo, Contact  
Mr. Richard +603 2692 6888 or  
[richard@ambtarsus.com](mailto:richard@ambtarsus.com)

Co-located with:



**CAMBODIA ARCHITECTS  
FORUM 2018**

12-14 SEPT 2018-KOH PICH, PHNOM PENH

Endorsed by:



Ministry of  
Commerce  
Cambodia

Hosted by:



Board Of  
Cambodia  
Architects

Organised by:



**AMBTarsus**  
EVENTS GROUP

## PHILIPS LIGHTING APPOINTS ALOK GHOSE AS MARKET LEADER FOR ASEAN

Philips Lighting, a global leader in lighting, announced the appointment of Alok Ghose as the Market Leader for ASEAN. Mr Ghose, who was previously Managing Director and Cluster Leader for Singapore, Malaysia and Exports, now leads the operations and the transformation in lighting for the Internet of Things within ASEAN.

Mr Ghose will continue to be based in Malaysia, and report to Mr Murali Sivaraman, President for Philips Lighting Growth Markets.

Having joined Philips Lighting in 1996, Mr Ghose has built an illustrious career with the company spanning over two decades around the globe. He played an integral role in spearheading the evolution of lighting from conventional to LED, launching one of very first LED portfolios for the world almost a decade ago. Today, Mr Ghose steers his teams and clientele towards the Internet of Things (IoT) ecosystem with digital lighting for public and commercial applications via Interact, Philips Lighting's newly-announced IoT data-enabled platform and connected

lighting systems; and Philips Hue, the company's flagship personal wireless system to make home-lighting smarter. Mr Ghose also continues to champion the EyeComfort proposition for the LED consumer lighting range, as well as Brighter Lives, Better World, Philips Lighting's commitment toward sustainability.

Mr Murali Sivaraman, President for Philips Lighting Growth Markets, commented: "As ASEAN continues to build itself up as one of the world's highest functioning economic trading blocs, the demand for connectivity continues to multiply exponentially. We are positive that our ASEAN business will reach new heights with Alok at the helm, his stellar track record gives us the confidence in finding new ways to serve the growing and diversifying needs of the region. We look forward to creating additional value for our professional and home customers with data-enabled services, while unlocking new capabilities and experiences in delivering light beyond illumination."

For more information, visit [www.philips.com](http://www.philips.com).

## PETER SPADARO III GOES ROGUE FOR MATISYAHU WITH CHAUVET PROFESSIONAL

A little over two years ago, lighting designer Peter Spadaro III dropped in at a local pub outside New York City. He left with a future client, one who would help push his career in new creative directions. His new friend was Matisyahu, a fiercely independent artist who has blazed new paths since he arrived on the music scene in 2004 by blending his Orthodox Jewish heritage with a genre-defying mix of reggae, beatbox and alternative rock sounds.

Matisyahu, who reached the Billboard Top 40 with his single "King Without a Crown," happened to be looking for a lighting designer at the time of their meeting. Spadaro, who was designing an upcoming show at the iconic Capitol Theatre, was seeking a new creative challenge. The two hooked up, and, as Spadaro says, "The rest is history." In March, the latest chapter in this history was on display, as Spadaro unleashed an intense razor-sharp lightshow for his client at the New Orleans House of Blues with help from CHAUVET Professional Rogue fixtures.

The stop was part of Matisyahu's US tour in support of his fifth studio album. Spadaro has been traveling with eight Rogue R1 Spot fixtures as the foundation of his floor package on the tour. He paired these with the Rogue R1 Wash and Rogue R1 FX-B units that were already in the House of Blues rig.



"I travel with and depend on the Rogue Spots," said Spadaro. "They're extremely versatile, real workhorses that allow me to create a variety of looks, so I can keep up with the musical directions that Matisyahu and his band take. It was nice when we walked into the House of Blues and found all these other Rogues there, especially the FX-Bs. I worked with the FX-B on the Jam Cruise, so I know what this fixture can do. The possibilities with it are pretty much endless."

Spadaro positioned his Rogue R1 Spot fixtures on ground cases that were flipped vertically. These fixtures were used for aerials and worked in concert with the Rogue R1 FX-B units and Rogue R1 Washes that were flown on two levels of upstage and midstage truss to create rapidly moving crisscrossing patterns of light. Together, the intersecting rays of light evoked a matrix-like image that seemed to invite the audience to step into another dimension with the artist and his band.

"When I am lighting Matisyahu, I like to take the audience on a journey that reflects the one that the band and Matisyahu are going through on stage," said Spadaro. "My lighting contributes to the music in a big way in this regard. Whether the band delves into some kind of jam that's dark and spacey, or moves into a deep dub sequence, the light will change to reflect this movement."



**23-25 AUGUST 2018**  
SLECC, COLOMBO, SRI LANKA

# LANKA BUILD '18

SRI LANKA INTERNATIONAL BUILDING AND CONSTRUCTION EXHIBITION

**SRI LANKA'S NO.1 INT'L  
BUILDING, CONSTRUCTION  
AND M&E INDUSTRY SHOW**

**“This is definitely a 5-STAR  
exhibition in Sri Lanka”**

To Book Your Booth at the Expo, Contact  
Mr. Darren +603 2692 6888 or  
darren@ambtarsus.com

Organised by:



Co-organised by:



 [www.lankabuild.org](http://www.lankabuild.org)

 [lankabuild](https://www.facebook.com/lankabuild)

That's why having flexible fixtures is so important for me.

"Matisyahu has his own intense vision," continued Spadaro. "He follows this vision, which always adds a level of spontaneity to his shows. So, when he just goes off on an improvisational beatbox, or his band goes on an extreme progression, my lighting follows suit to support them. I have to be in the moment understanding what they're doing and feeling where they're going, so I can capture it all in light. When you're working with a client that is this improvisational, you have to have the confidence to take chances."

Taking chances and keeping pace with an improvisational artist is a challenge, acknowledges Spadaro, but it's why he's glad he had that chance encounter at his local pub.

For more information, visit [www.chauvetprofessional.com](http://www.chauvetprofessional.com).



## ERCO INDIVIDUAL: NEW PRODUCTION TECHNOLOGIES AND PROFESSIONAL SERVICES FOR PROJECT-SPECIFIC PRODUCT SOLUTIONS



**E**RCO looks back on a long tradition of outstanding projects that have used customised-individual solutions. Examples are the Louvre in Paris, the recently opened Louvre Abu Dhabi, the Guggenheim Museum in Bilbao, the Reichstag in Berlin and the New York Times Building in Manhattan.

The starting point for specific lighting solutions is the quality of the series products – whether this be required visual comfort for work environments, low-maintenance operation for public buildings, luminous efficacy for retail applications or the photometric precision required for illuminating artworks.

The decades of experience with special products, together with new forms of generative production methods enable ERCO to rapidly produce lighting tools for sophisticated architecture in compliance with the needs of the project. However, not only product concepts are found behind the name ERCO individual. Specialists from various technical areas are available as contact persons for creative and technical planners in order to develop the ideal solution for their specific tasks together with the lighting company.

### **New Production Technologies Provide Speed And Flexibility**

ERCO continues to invest in digitalisation, new production methods and production technologies. The extensive depth of production at its headquarters in Lüdenscheid, Germany and the proximity of the development engineers to the production plant enable ERCO to develop and produce customised-individual

solutions with high levels of flexibility and speed. New, generative production methods such as 3-D printing enable economical solutions even in small batches. A global network of ERCO customer consultants and decades of experience with special solutions guarantee competent communication and load handling during the planning process.

Feasible special solutions start with the individualisation of series products with e.g. special colours or modified details for the assembly or electrical connection. Existing products and modular photometric systems can also be further developed. Other high-performance or mid-power LEDs as well as luminaires with in-house developed optics for chip-on-board LEDs can be realised. For products needing completely new developments, lighting designers are able to benefit from ERCO's specific experience in special luminaire construction. In this way ERCO offers customers application-oriented lighting tools with LED technology for optimally meeting the variety of requirements found in differing types of projects. Customers benefit from the complete wealth of expertise gained from many decades in architectural lighting.

For more information, visit [www.erco.com](http://www.erco.com).

# MYANMAR'S NO.1 INT'L BUILDING & CONSTRUCTION INDUSTRY EXHIBITION AND CONFERENCE

## MYANBUILD'18

MYANMAR INTERNATIONAL BUILDING & CONSTRUCTION INDUSTRY SHOW

16-18 NOVEMBER 2018  
MEP MINDAMA, YANGON

*"INNOVATIONS IN MYANMAR'S  
ARCHITECTURAL LANDSCAPE"*

To Book Your Booth at the Expo, Contact  
Mr. Darren +603 2692 6888 or  
darren@ambtarsus.com

Hosted by:



Organised by:



 [www.myanbuild.net](http://www.myanbuild.net)

 [www.fb.com/Myanbuild](http://www.fb.com/Myanbuild)

## CLAYPAKY FIXTURES LIGHT BLACK PANTHER EUROPEAN FILM PREMIÈRE

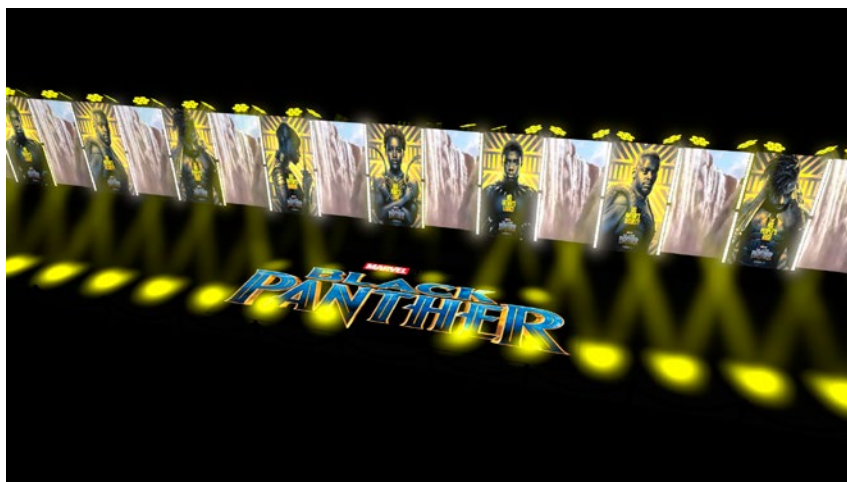


The new blockbuster superhero movie from Marvel, Black Panther held its European première at London's Hammersmith Apollo earlier this year with a star-studded guest list including celebrity cast members Chadwick Boseman, Michael B. Jordan and Lupita Nyong'o. The event was lit by lighting designer Luke Edwards of Cue Design who specified a range of Claypaky fixtures to help deliver his Marvel-ous concept.

Working alongside James Barnfarther, managing director of Limited Edition Design, Edwards crafted the event's 15-minute opening light show, as well as lighting the media line and auditorium. Discussing his design, Edwards alludes to the 'Afrofuturistic' vibrancy of the film's main aesthetic, as well as its high drama content as inspiration.

"The design of the film is very different from other Marvel films," he says. "We had to create a light show that supported and complemented that. The black, yellow and blue colour branding of the film's marketing helped us in creating dramatic colour palettes. We only had 10-15 minutes to make an impact before the film started, so we wanted the show to be as dramatic as possible to get everyone in the mood."

Edwards rigged the fixtures onstage at the base of the large projection screen displaying the movie and trailer content, as well as out in the auditorium, the lighting covering both



the stage and audience area. He and his team selected the Claypaky Mythos2, Claypaky Sharpy and Claypaky Sharpy Wash 330, supplied by IPS Impact Productions, to deliver the rapid beam looks and wide 'superhero' sweeps.

"We used the Sharpys to create high-impact and extreme drama," says Edwards. "Sharpys easily create that dynamic, high-energy look. To complement these, I wanted a similar top-standard washlight. I have always liked the Sharpy Wash 330 so I spec'ed these alongside the beam fixtures. We then zoomed the Sharpy Wash 330s right out to get a narrow beam which made it look like we suddenly had double the amount of Sharpy fixtures on stage."

Edwards also rigged 16 Mythos2 above the stage. "We needed a spot fixture to gobo wash the audience, but also to work alongside the Sharpy and Sharpy Wash 330s as beam light for the high impact part of the show," explains Edwards.

Black Panther is produced Marvel Studios and can now be seen in cinemas across the globe. The film has been nominated for 13 Saturn Awards including Best Director, Best Writing and Best Special Effects, and recently topped \$1.2 billion in Box Office revenue.

For more information, visit [www.claypaky.it](http://www.claypaky.it).

THE INDONESIAN GOVERNMENT'S FLAGSHIP CONSTRUCTION EVENT  
FOR ENGINEERS, CONTRACTORS & CONSULTANTS



Hosted by



Ministry of  
Public Works  
and Housing

## DRIVING THE NATIONAL AGENDA FOR THE FUTURE OF INDONESIA'S CONSTRUCTION INDUSTRY THROUGH:



INNOVATION &  
NEW TECHNOLOGY



BEST PRACTICE  
IN CONSTRUCTION



SUSTAINABILITY  
IN CONSTRUCTION



CONSTRUCTION  
HEALTH & SAFETY



INVESTMENT IN  
SUPPLY CHAIN

- EXHIBITION • CONFERENCE • CPD TECHNICAL WORKSHOPS • MARKET SOUNDINGS •
- BUSINESS MASTERCLASSES • SAFETY ZONE PAVILION •

+ Konstruksi Indonesia's largest-ever outdoor exhibit space featuring the latest heavy machinery, equipment and vehicles

Organised by



Media Partner



Co-located with



Book your stand today! Contact Gregorius Harvin  
+62 21 57992308 or email: [sales@constructionindonesia.com](mailto:sales@constructionindonesia.com)

[WWW.CONSTRUCTIONINDONESIA.CO.ID](http://WWW.CONSTRUCTIONINDONESIA.CO.ID)

## ELATION LIGHTING RIG FOR SHAKA PONK 2018 “MONKADELIC” TOUR



French band Shaka Ponk is one of the most eclectic you'll ever run across. Adored by a growing fan base captivated by the group's artistry and wildly energetic mix of rock/funk, the band is touring through 2018 with a rig that includes flexible lighting pods full of Elation Rayzor 360Z™ LED fixtures, as well as Elation's new narrow-beam DARTZ 360™ LED moving head.

Lighting design is by Alexandre Bucher of the 4eleven company, who has worked with Shaka Ponk for seven years as a lighting and video programmer and has toured with the band several times. The current “MonkAdelic” tour is his first as lighting designer. The LD, who also serves as lighting director on the tour, works with a set rich in scenery and detail with accompanying video show that flows in imagery and imagination. Bucher uses lighting to add another layer of dynamism to the set while accentuating the on-screen visuals and has integrated the two Elation LED source luminaires in his design in large numbers.

### Lighting Pods

Compact Rayzor 360Z fixtures, high-speed LED beam/wash luminaires with zoom, are located in six kinetic lighting pods that form a central element of the set. “I wanted massive fixtures that could do a powerful beam with pixel control of each LED but I never found it,” the LD said of



his search for a super big LED light. “Therefore I thought I would design it by assembling a lot of little LED fixtures. I tried several different small fixtures and was finally enticed by the Rayzor 360,” which was demoed for the LD by Dushow, who provide lighting for the tour. “I chose this fixture because it fit perfectly, it has pixel control of each LED and it has continuous and unlimited rotation on pan and tilt.”

The moveable pods, which appear and disappear often during the show, were designed to integrate with the decor and video and are used during specific segments to accentuate the visual impact. “I like using them as a big beam effect, like a Svoboda, with a color temperature close to the original conventional fixture,” Bucher says. The pods work with the scenic visuals as a flexible element that can either heighten the atmosphere of the show or make it more intimate. Taking advantage of the Rayzor 360's continuous pan and tilt, at times Bucher turns the units around to illuminate the interior of the pods, creating a type of large projector lens. “More than a fixture, it then becomes a deco object,” he said.



#### Dual DARTZ duty

The Rayzor 360s and LED wash lights are reinforced by floor-positioned DARTZ 360s, Elation's new narrow-beam LED beam/spot fixture that houses an effects package that includes gobos and dual prisms. Bucher explains that on the Shaka Ponk show the DARTZ 360 has two roles: "The key role is to do backlight effects to empower the rhythm and give dynamism. It also reinforces the video effects. For example, in the song "Gung Ho," the entire floor on the video leans stage right. At this moment, I use the DARTZ on the same side to give the audience the feeling that not only the video but all the stage is leaning. The other role of the DARTZ is to light the musicians with its frost for an intimate front light."

Bucher says he chose the DARTZ because of the power of the beam, its two prisms, gobo projection capabilities, and also because of the continuous and unlimited rotation on pan and tilt. "I needed small sources on the ground that do not take up space on the stage and which are punchy," he said. "After several tests at Dushow, I fell in love with this source and its functions. When it is lit in a tight beam, the rendering is unmatched compared to other LED projectors of this type."

The Shaka Ponk tour is Bucher's first experience with Elation lights. "Dushow are continuously looking for new and interesting products. They introduced me to the Elation lights and I decided to trust this product and give it a try. They are good advisors," the LD said of the French technical production company, adding that he was the first to use the DARTZ on a large tour in France.

The "MonkAdelic" show has received praise with a lighting design that supports all that Shaka Ponk encompasses without stealing the show. The band has been on the road since the beginning of the year and will be playing dates across France through November.

For more information, visit [www.elationlighting.com](http://www.elationlighting.com).

**YAHAM** Lighting

## Compact LED High Mast Light Super Hero for Stadium Lighting



**140**  
lm/W

**IP66**  
IP Level

**16**  
windproof

- **Up to 168,000lm**  
400W/600W/800W/1200W.
- **Precise distribution**  
20°/30°/60°/90° & Unique sighting device.
- **Tool-less maintenance**  
With separable electric box.
- **Fulfill large power lighting demands**  
Stadiums, Airports, Harbors, Squares, Highways, etc.



+86-755-29435812

sales@yahamlighting.com

yahamlighting.com

## THE BRAND NEW FLOW FITS SEAMLESSLY INTO ANY SETTING, EMPOWERING DESIGNERS TO CREATE URBAN SPACES WITH A UNIFIED APPEARANCE



Thorn Lighting is proud to announce the launch of Flow, taking versatile outdoor lighting to the next level. The timeless, understated design language of this brand new luminaire makes it easy to picture in any setting. But it's not just Flow's appearance that makes it so flexible. The luminaire features six mounting variants: post-top, lateral, amenity, suspended, catenary and wall-mounted. There are a range of positive and negative tilting options, and a total of 13 optical possibilities. As a result Flow suits all kinds of urban applications including large urban roads, smaller streets and residential areas, city centres, car parks, cycle paths, footpaths, train platforms, education and sports institutions, industrial buildings and area applications.

Flow makes it easy to meet the needs of any urban lighting challenge using the same design of luminaire, empowering designers to create city spaces that are unified and harmonious. Flow has been designed with visual comfort in mind, to provide lighting that is not only safe and functional, but pleasant and welcoming. Benefitting from Thorn's highly efficient R-PEC and Area optics for streets and open spaces, the luminaire uses prismatic glass and a white reflector to achieve excellent glare control. Flow is available in colour temperatures ranging all the way to a warm 2700K, lending a hospitable ambience to any urban area.

Flow brings intelligence to urban spaces through a wide choice of control options, including DALI (HFX), bi-power switchable (BPS), LRT, power-line or wireless Radio Frequency Incity (RF) control PN7 socket for RF sensors and presence detection. This enables significant energy savings while improving safety and contributing to a sense of wellbeing in the city.

As well as being highly flexible, Flow is a cost-effective LED solution, that is just as suitable for refurbishments and retrofits as it is for brand new installations. Its efficacy reaches 139 lm/W, enabling it to save significant amounts of energy compared to conventional solutions, and it comes with a 10kV surge protection device. Lumen packages ranging from 1700lm to 13,600lm are available. This lightweight luminaire makes life easy for contractors too: it's easy to handle and install, with with tool-free gear tray maintenance. Flow will be available from May 2018.

Corinne Delor, Global Product Manager, Urban Streets: "Getting the light distribution you need while keeping urban spaces looking clean and consistent is hard. That's why we designed Flow to fit in everywhere. The combination of its understated, timeless design and huge variety of mounting and optical choices, gives users the freedom to create consistent, unified solutions for any urban lighting challenge."

For more information, visit [www.thornlighting.com](http://www.thornlighting.com).



MEDIAVISION OF THAILAND HAS INVESTED IN A PAIR OF ROBERT JULIAT MERLIN FOLLOWSPOTS, SUPPLIED BY RJ'S EXCLUSIVE DISTRIBUTOR FOR THE REGION



MediaVision provides high quality equipment and services for live music, K-Pop, EDM and both local and international concerts, as well as corporate events and conferences, and prides itself on setting new standards by investing in state-of-the-art tools, backed by knowledge and a commitment to its clients.

When the company decided to invest in some new followspots, Robert Juliat's Merlin 2500W HMI touring followspot was to provide the perfect solution. Merlin's powerful output and 3°-12° zoom range makes it wonderfully suited for venues of all sizes – an invaluable quality for rental houses which supply many types of event – and its rugged construction allows it to cope with high levels of use and transportation between venues.

“We chose the Merlin after Total Solution brought it to our attention in late 2016. We needed a followspot that was reliable and versatile enough to adapt to the many demands of a rental company,” says MediaVision's Joe Thanaruch. “Robert Juliat's reliability and build-quality is well-known, and Merlin turned out to be surprisingly light-weight for a followspot of its size. We were also happy that it proved easy to use with no complications. But the real selling point for us was Merlin's internal power supply which makes it so easy to transport and set up at every event and venue. Finally, we have always trusted Total Solution's after-sales service and reliable support for many years which made our purchasing decision very easy.

“Our technicians and operators are already familiar with Robert Juliat's other range of followspots. But now after having the chance to use Merlin on some shows we all agree that the Merlin is not only reliable and easy to use, but its light output is extremely good with a nice even beam. We are very happy with them.”

For more information, visit [www.robertjuliat.com](http://www.robertjuliat.com).



## DIALux

Market your products to designers, architects and engineers worldwide.

Have your brand in DIALux to offer professional service to your clients.

Contact [asia@dial.de](mailto:asia@dial.de) for more information.

[www.dialux.com](http://www.dialux.com)

## PHILIPS LIGHTING ACCELERATES STRATEGIC PUSH INTO SOLAR-POWERED LIGHTING WITH NEW PRODUCTS AND SYSTEMS AND LARGE-SCALE STREET LIGHTING PROJECTS IN INDIA AND THAILAND



Philips Lighting (Euronext: LIGHT), the world leader in lighting, is accelerating its strategic push into solar-powered lighting as it launches a new generation of solar-powered products and systems. These include an innovative all-in-one solar street light, Philips SunStay, which combines solar panel, battery and light in one housing, and Philips LifeLight, a solar lantern which comes with a replaceable battery. Testimony to the company's commitment to solar lighting and the vast potential that this market has to offer are two recent large-scale solar-powered street lighting installations in India, and the completion of 700 sets of connected solar street lights with remote monitoring and data capabilities in Thailand.

Approximately 17% of the global population has no light after sunset, i.e. more than 1 billion people on this planet have no grid connection. Philips Lighting invests in relevant lighting technology and expertise to improve lives and enable communities to grow. The company has raised awareness about the role of renewable solar lighting in sustainability, including its contribution to the UN's Sustainable Development Goal number 7 by making cities and communities safe and green.

This focus on sustainability inspired Philips Lighting to launch Philips SunStay, an all-in-one integrated solar street light, in India earlier this year. This street light combines the solar panel, luminaire, charge controller and battery in one housing, thus making it compact and easy to install and maintain. This also saves on cabling costs and reduces the carbon footprint, thereby lowering overall capex and opex cost. With an output of 2,000 lumens and an efficacy of 175 lm/W, it is more efficient compared with existing systems in the solar street lighting market. Philips SunStay will be launched globally in the second quarter of 2018.

### Extending Light After Dark

To enable access to lighting and power off-grid communities, Philips Lighting launched the Philips LifeLight solar lantern in India in December 2017. Along with a USB port for charging phones and other devices, LifeLight comes with a replaceable new generation battery, which extends its life far beyond its two years warranty.

"Lack of light after dark is the single largest factor making women feel unsafe in their communities. Introducing the

Philips LifeLight to off-grid areas is helping transform the lives of people in these communities. It extends their day for commercial activity, education, and community life. The replaceable battery feature is highly valued by end customers," said Shalini Sarin, Head of CSR at Philips Lighting. "On top of bringing light to off-grid communities, replacing kerosene-powered lamps with solar-powered lanterns is saving lives. According to a World Bank report, every year 1.5 million people die due to woodfires, kerosene or candles. This amounts to twice the population of Frankfurt."

### Thousands Of Lights In The Sky

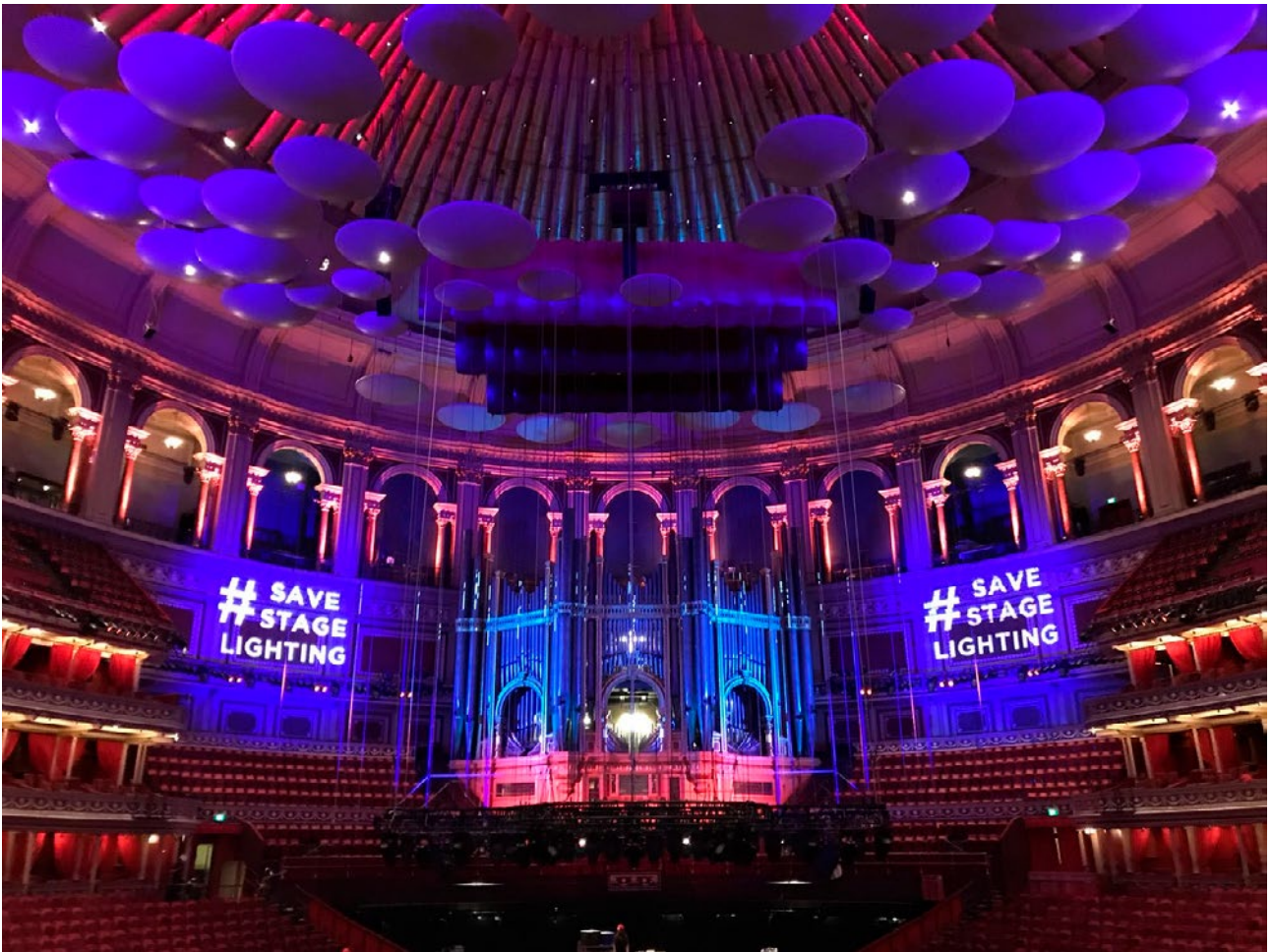
To increase the safety of citizens and help rural communities, Philips Lighting will install approximately 84,000 solar street lights in India. Together with Energy Efficiency Services Limited (EESL), an energy service company of the Government of India, the company will install 60,000 Solar Smart Bright street lights in off-grid villages in Uttar Pradesh, Bihar, Jharkhand, Orissa & Assam. The company is also providing Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA) with 24,000 Solar Green Lightline Smart street lights in the state of Uttar Pradesh.

"Installing solar street lighting in rural communities in India really enhances lives after sunset," said Sumit Joshi, Market Leader for India at Philips Lighting. "Citizens feel safer and it allows children in these communities to play in the streets after dark."

In Bangkok, Thailand, Philips Lighting has successfully installed more than 700 sets of Philips Solar RMU (remote monitoring unit) street lights with tele-management capabilities, located at the cycling facility near the main airport in Bangkok, Suvarnabhumi. Thanks to the tele-management functionality, facility managers can remotely monitor and manage the lights, which also provide them with useful data for energy management and solar applications.

For more information, visit [www.philips.com](http://www.philips.com).

## GOBOPLUS.COM SUPPORTS #SAVESTAGELIGHTING AT PLASA FOCUS LEADS SHOW



**#SaveStageLighting** was formed to highlight and protest against the legislation proposed by the EU Eco-design Working Plan 2016-2019 that would bring devastating change to the rules that govern the light sources used in theatrical productions.

As part of this, the Association of Lighting Designers' Robbie Butler spearheaded the Light Up to #SaveStageLighting Campaign which encouraged theatres and other performance venues all over Europe to project a '#SaveStageLighting' gobo on the outside of their buildings as a way of, literally, bringing the plight of theatre lighting to public attention. The aim was to encourage people to sign the #SaveStageLighting petition and to respond to the public consultation which closed on the 7th of May 2018.

GoboPlus.com was proud to support the campaign by gifting 150 metal gobos, free of charge, in any size required, to ALD members to project on Light Up day which took place on 28th April 2018.

The #SaveStageLighting gobos were given to any venue which wanted to take part, and theatres, schools, opera houses and even television studios all over the UK and mainland Europe took up the challenge. The National Theatre, English National Opera, Glyndebourne, Brechin High School, West Yorkshire Playhouse were just some of the names in the UK, with Teatro Coliseum, Madrid and Teatre Lliure, Barcelona amid the 60+ requests received from mainland Europe, illustrating the far reaching implications and concerns raised by the proposed new legislation.

"We were delighted to have more requests for #SaveStageLighting gobos on the stand at PLASA Focus," says GoboPlus.com's Vicky Fairall. "It just proves the enormity of the situation and how passionately people are determined to fight back."

Managing Director of Goboplus.com, Paul de Ville, adds: "Over the years the UK has been at the forefront of innovation within the entertainment technology sector and especially in stage lighting and our knowledge and creative excellence is respected around the world. Entertainment lighting is a vibrant market sector with all new technologies in light sources embraced and used over many years. I am in no doubt that the transition to an energy-efficient future is a worthy goal, but this journey should be measured and not adversely affect the creative options available to large parts of our community.

"I truly believe this ill-informed legislation will hurt the grass roots of our sector and especially disadvantage those without the financial ability to replace perfectly serviceable equipment like schools, small venues and rental companies. For their part government needs to take advice and soundings from experts and organizations before implementing a policy that hurts more than it helps our special community.

"I am happy for Goboplus.com to be part of this awareness effort and will help in any way we can now and in the future."

For more information, visit [www.goboplus.com](http://www.goboplus.com).

## PROPLEX DATA DISTRIBUTION AT THE NEON MUSEUM LAS VEGAS



Launched in February 2018, Brilliant! is the latest addition to the popular Neon Museum Las Vegas, featuring a unique, augmented-reality A/V system designed, installed, and programmed by Earth Water Sky of Las Vegas. Combining art, history, and technology, the innovative Brilliant! neon experience, featuring 40 historic neon signs from the museum's collection, is highlighted by Earth Water Sky's 360-degree laser video projection system, a unique 24-channel 3D audio system with multitrack 3D audio soundtrack, and outdoor lighting system with automated show control. DMX signal distribution for the entire production is handled by ProPlex Opto-Splitters and Data Cables.

"ProPlex was selected as a critical component to handle all of the DMX signal distribution needs for this complex installation," says John Humphries of Earth Water Sky. "We are avid proponents of ProPlex, given our passion for robust products that are brilliantly engineered and extremely stable. TMB's team consistently delivers world-class product support and customer service, making them our exclusive, preferred vendor for data networking products specified for our permanent installation and A/V integration projects, large and small."

Humphries designed the technology systems and related hardware for the Brilliant! project, with his team handling the design, programming, and installation of the lighting, projection, and audio systems, as well as the 3D soundtrack production. Earth Water Sky also designed and installed the automated show control system.

Since 2004, Earth Water Sky of Las Vegas has specialized in custom, permanent Audio, Lighting, and A/V installations for leading hospitality clients, nightclubs, and entertainment venues. Earth Water Sky's experienced team of world class designers, installation engineers, and skilled programmers create custom turnkey solutions for a wide range of project-specific requirements. Earth Water Sky's creative group delivers unique immersive environments that are intelligently engineered and flawlessly executed. Find out more about Earth Water Sky at [www.lightandvideo.com](http://www.lightandvideo.com).



Founded in 1996, the Neon Museum Las Vegas is a non-profit 501 (c) 3 organization dedicated to collecting, preserving, studying and exhibiting iconic Las Vegas neon, for educational, historic, arts and cultural enrichment. Learn more at [www.neonmuseum.org](http://www.neonmuseum.org).

ProPlex Data Distribution Devices and Cables offer a truly integrated, complete data management and networking solution for entertainment production and staging. Built for extreme conditions with features including shock-mounted circuitry, Neutrik™ connectors, and advanced thermal management, ProPlex Devices are available in RackMount, PortableMount, Mini, Micro, DIN Rail, and IP Rated formats of various sizes. ProPlex Data Cables are world renowned for combining unparalleled data integrity with extreme durability.

For more information, visit [www.tmb.com](http://www.tmb.com).

## “DAY AND NIGHT”: TUUCI'S KEYNOTE THEME FOR THE SALONE DEL MOBILE.MILANO 2018



The new design for the 110 m2 exhibition stand was developed by architect and designer Dick Spierenburg. The aim was to create a space that would showcase the versatility and the many different application options of TUUCI's outdoor products. Dick Spierenburg explains the idea behind the new concept: "The design of the exhibition stand is inspired by the uniqueness of the parasols and cabanas. These products not only provide shade, but also create very special and atmospheric environments – by day and by night. This led us to the 'Day and Night' theme that allows us to showcase the versatile models, variants and applications and stage them as part of a holistic experience."

### TUUCI by Night

In Milan, TUUCI will be presenting the LUNA lighting system, perfect for long summer nights. The LED spots are almost invisibly integrated on top of the hub of the cantilever parasols to distribute light evenly underneath the umbrella. Thanks to a touch sensor, the LEDs can be easily dimmed or switched on or off. LUNA is available for all single and dual cantilever umbrellas from the Ocean Master MAX and Plantation MAX collections. Additionally, these models can also be fitted with 1,500 w heaters that provide pleasant warmth. With a motor that is fully integrated into the mast, opening and closing the umbrella is child's play. A special highlight: all technical features can be controlled with the new control panel on the mast.

### TUUCI by Day

During the day, the new EQUINOX double chaise longue provides a comfortable place for the whole family. Thanks to adjustable backrests, the modular design allows for side-by-side or face-to-face relaxation. The high-end frame is made of polished aluminium extrusions and is optionally available with a powder-coating or Aluma-TEAK wood look finish. For maximum comfort, additional



cushions are also available. All cushions are covered with Sunbrella® fabrics. The padded daybed can also be combined with the TUUCI cantilever umbrellas that either create pleasant shade or, thanks to LUNA, cast indirect light over the whole surface.

For more information, visit [www.salonemilano.it](http://www.salonemilano.it).

# SINGAPORE

## 25. - 27. OCTOBER, 2018

28 paper presentations

4 Keynote speakers

Manufacturers' exhibition

Pre-convention meetings

Cities' Forum

Moderated discussions

Excursions

Gala dinner + After Show Party

Initiated by: PROFESSIONAL LIGHTING DESIGN



Steering Committee:  
Joachim Ritter  
Alison Ritter  
Martin Klaasen



Organised by:  
VIA Events  
Louise Ritter  
Franziska Ritter  
Kristina Lutscher

### PLDC 2018 in Singapore set to offer an impressive supporting programme

PLDC has developed immensely over the past decade, not only building up the conference programme to become the largest one worldwide (European edition), but also setting standards in the accompanying programme that to this day remain incontestable – albeit often challenged. The accompanying programme in Singapore boasts of exciting seminars, excursions and master classes, offering attendees a multitude of chances to further educate themselves in different fields.

The Cities' Forum is a platform of learning and discussion between cities, city planners and lighting designers, and targets cities from around the world who are currently investigating the potential and sense of digitalisation in the public realm. The goal of this forum is to inform the cities attending of the scope and risks of digitalisation, and to provide them with some practical input and guidelines for approaching this issue and implementing solutions to the benefit of the users of the public spaces. Besides key presentations, the Cities' Forum incorporates a work-in-progress session, plus F2F talks where attendees take part in a series of moderated discussions.

The Educators' and Researchers' Meeting addresses key questions on the current status quo on the lighting education and research landscape. This interactive meeting encourages discussion and exchange amongst educators and researchers from around the world, and serves to strengthen the international network.

Thorsten Bauer will be offering a practical workshop on design content for media architecture. The workshop will focus on the general approach to this field of design, and how to design moving image content for media facades. General input will be provided on Thorsten Bauer's design philosophy, followed by a practice-oriented brainstorming session as the second part of the workshop.



### PARTNER ASSOCIATIONS TO DATE

ACE – Association des Concepteurs lumière et Eclairagistes/FR  
APIL - Associazione Professionisti dell' Illuminazione/IT  
ARI - Asociatia Romana pentru Iluminat/RO  
AsBAI - Brazilian Association of Lighting Architects/BR  
Assodel – Associazione Nazionale Fornitori Eletttronica/IT  
BNCI - Bulgarian National Committee on Illumination/BG  
CICAT – Clúster de Iluminación de Catalunya/ES  
DiiA – Digital Illumination Interface Alliance/US  
ILA - International Light Association/CA  
Lonmark International/US  
The Institution of Lighting Professionals/UK  
Israel Lighting Society/IL  
SLG – Swiss Lighting Association/CH

### PARTNER UNIVERSITIES TO DATE

Aalborg University/DK  
Brunel University London/UK  
Eastern Mediterranean University/TK  
ITMO University/RU  
King Mongkut's University of Technology Thonburi/TH  
Parsons the New School for Design/US  
Politecnico Milan/IT  
The University of Applied Sciences Wismar/DE  
Temasek Polytechnic Singapore/SG  
TU Berlin/DE  
TU Darmstadt/DE  
Universidad Nacional Autónoma de México/MX  
University of Applied Sciences Hildesheim/DE  
University of Applied Sciences Kaiserslautern/DE  
University of Cambridge/UK  
University of Idaho/US  
University of South Wales/UK  
Vilnius Gediminas Technical University/LT

### PARTNER INSTITUTES TO DATE

DIAL GmbH/DE  
LiDS – Lighting Design School/RU  
Lighting Design Academy/NL  
The Lighting Education Institute/US  
Lighting Research Centre/US  
VNISI– Russian Lighting Research Institute/RU  
MARKHI – Moscow Institute of Architecture/RU

### PARTNER EVENTS TO DATE

Balkan Light 2018  
ELA Expo Lighting America 2018  
LED Forum 2018  
Thailand LED Expo 2018  
World Cities Forum 2018

Keynote Speaker Sven Martin will offer an in-depth master class on visual effects and the relation to lighting (design) in his everyday work. A strong focus will be on the creation of the Game of Thrones dragons, revealing the different skills and tasks involved. This master class will explain the special skills of the artists working closely together, and how classic film arts such as acting, set design, cinematography and lighting have been transferred into the digital world.

The pre-convention meeting day will conclude with a variety of excursions to fascinating projects in Singapore. Three tours will go to the Gardens by the Bay, one of the world's most famous projects to date, headed by the design team from LPA. Martin Klaasen will be guiding a tour to the ATLAS bar, inviting attendees to experience different lighting scenarios choreographed for this high-class establishment. South Beach, one of Singapore's biggest mixed-use developments built in the heart of the city is the third excursion, offering attendees insight into key design features. This excursion is headed by Brice Schneider, Lead Lighting Designer for the project during his time with Light Cibles.



P | L | D | C

PROFESSIONAL LIGHTING  
DESIGN CONVENTION

2 0 1 8

[www.pld-c.com](http://www.pld-c.com)

**Speakers:**

Akari-Lisa Ishii, Brice Schneider, Chris Lowe,  
Chris Mok, Dr. Don Slater, Dr. Emrah Baki Ulas,  
Francesco Iannone, Greta Smetoniute,  
Iben Winther Orton, Johanna Enger, Juan Ferrari,  
Kaoru Mende, Linus Lopez, Marinella Patetta,  
Martin Valentine, Matt Waugh, Michael Beckert,  
Michael Grubb, Nour Moussawi, Philip Rafael,  
Rick Morrison, Sara Leino, Serena Tellini,  
Silvia Tripsa, Stephan Horn, Ta-Wei Lin,  
Tapio Rosenius, Thorsten Bauer, Ya-Hui Cheng

**PRINT MEDIA PARTNERS TO DATE**

arc magazine/UK  
Compolux/IT  
darc magazine/UK  
Italian Lighting/IT  
L+D Magazine/BR  
Lumières/FR  
Ljuskultur/SE

**ONLINE MEDIA PARTNERS TO DATE**

A1 Lighting/UK  
City Life Magazine/IT  
EdisonReport.eu/US  
Lighting.eu/PL  
Lux-N-Lum/IN

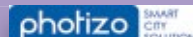
**LOCAL MEDIA PARTNER**



**GOLD SPONSORS**



**SILVER SPONSORS**



# show review

Light + Building 2018

18<sup>th</sup> – 23<sup>rd</sup> March 2018  
Frankfurt am Main, Germany



Light + Building opens its doors in Frankfurt am Main from Sunday, 18 March, to Friday, 23 March 2018. Over 2,700 exhibitors from 55 countries are showing their latest products and innovations for the lighting, electrical engineering, home and building automation and safety and security sectors on more than 260,000 square metres spread in 25 exhibition halls. "The echo to date has been excellent and we are delighted to announce three percent more exhibitors and six percent more exhibition space than at the last edition of the fair. Moreover, we have opened an additional exhibition hall, which provides the basis for further growth at Light + Building – these positive developments reflect the highly dynamic nature of the sector", says Wolfgang

Marzin, Chairman of the Board of Management of Messe Frankfurt.

'Connected – secure – convenient' is the motto of this year's Light + Building whereby the focus is on the trend subjects of the 'Smartification of Everyday Life' and 'Aesthetics and Well-being in Harmony'. At the world's biggest trade fair for lighting and buildingservices technology, the industry presents intelligent and inter-connected solutions, future-oriented design trends that not only increase a building's economic efficiency and level of convenience but also satisfy the need for safety and security. And, as a fair of innovations, Light + Building brings together all power-controlled building-



services systems and promotes integrated building planning with a spectrum of products – from the smart home to the smart building – that is unrivalled both horizontally and vertically.

One of the main themes in 2018 is security technology. And, with the new 'Secure – Connected Security in Buildings' special show, the Intersec Forum and around 150 suppliers from the building-automation and security-technology segments, Hall 9.1 is the centre for integrated building-services technology. There, the focus is on the interconnection and interfaces between the various disciplines. Additionally, the Secure! special show presents innovative solutions from the field of electrical security in a realistic setting. Also in Hall 9.1, the Intersec Forum takes an in-depth look at the subject of inter-connected security technology on five days, from Monday to Friday. Moreover, leading manufacturers of security equipment and home and building-automation technology are presenting their innovations in other exhibition halls of Frankfurt Fair and Exhibition Centre.

In addition to the broad spectrum of products being shown by the exhibitors, Light + Building is also distinguished by a multi-faceted complementary programme that, for the first time, is split into four categories – Emotion, Skills, Career and Selection – offering a theme-specific range of events for all trade visitors – from special shows, via expert lectures, to trend presentations.

This year's Luminale – Biennale for Light Art and Urban Design – is distinguished by a new concept. Held concurrently with Light + Building, the popular event in Frankfurt und Offenbach takes advantage of the

presence of lighting experts and artists from home and abroad for an interdisciplinary discourse on the city and the future. There are no less than 149 projects in five categories: ART, SOLUTIONS, COMMUNITY, STUDY and BETTER CITY on the programme. With the Römer town hall, the Alte Oper concert hall, the European Central Bank, St. Catherine's Church (Katharinenkirche) and the 'Eiserner Steg' bridge, five of the most important sights in Frankfurt are venues for widely differing artistic interpretations of lighting and the urban environment. Luminale was founded in 2002 by Messe Frankfurt. Since then, the fair and exhibition company has comprehensively promoted and supported the festival. Full details can be found at [www.luminale-frankfurt.de](http://www.luminale-frankfurt.de).

Further information about Light + Building is available on the internet at [www.light-building.com](http://www.light-building.com).

#### Statements from the sector at the opening of the fair:

Michael Ziesemer, ZVEI President: "Digitalisation is playing an increasingly important role in buildings. Intelligently interconnected devices and systems offer great chances for both residential and commercial premises. They can, for example, make the time spent at work more pleasant, efficient and secure. Light + Building presents multifaceted solutions with the potential for new business models in the building automation, lighting and energy management segments. With this year's focus on safety and security, it is also tackling one of the most important aspects of digitalisation. Thus, Light + Building not only generates new impulses for the market but is also the venue for an interdisciplinary dialogue."

Lothar Hellmann, President of the ZVEH: "Many fields of business of the electrical-engineering trade are closely bound up with digitalisation and smart solutions for buildings. Systems integration, innovative building connectivity and energy management are important markets for our member companies. Light + Building is the perfect venue to exchange information about the latest trends in these segments. Given that the challenges thrown up by digitalisation are increasing continuously, it is essential that particular attention be paid to employee training."

#### Background information on Messe Frankfurt

Messe Frankfurt is the world's largest trade fair, congress and event organiser with its own exhibition grounds. With over 2,500 employees at some 30 locations, the company generates annual sales of around €661 million. Thanks to its far-reaching ties with the relevant sectors and to its international sales network, the Group looks after the business interests of its customers effectively. A comprehensive range of services – both onsite and online – ensures that customers worldwide enjoy consistently high quality and flexibility when planning, organising and running their events. The wide range of services includes renting exhibition grounds, trade fair construction and marketing, personnel and food services. With its headquarters in Frankfurt am Main, the company is owned by the City of Frankfurt (60 percent) and the State of Hesse (40 percent).

For more information, visit [www.messefrankfurt.com](http://www.messefrankfurt.com).

..... Light + Building 2018 .....

## PRODUCT SPOTLIGHT

### Trittico

By 3F Filippi  
[www.3f-filippi.com](http://www.3f-filippi.com)

A new light, designed to improve comfort and efficiency at work, especially in offices. This is the new idea 3F Filippi is showcasing at the latest edition of Light + Building, the most important international trade fair dedicated to the world of lighting held in Frankfurt from the 18 to the 23 March in the exhibition centre of the city. During these days in this international context the Italian company, leader in the design and manufacture of highly efficient technical lighting systems, will launch a new range of light fixtures primarily designed for these working environments: 3F Architectural.

Proud to be able to say that their production is "100% Made in 3F Filippi" (all products are manufactured in their plants in Pian di Macina - Bologna), the company has chosen to entrust the design of new fixtures to talented Italian designers. On stand D60 (Pavilion 3.1) a special space dedicated to the 3F Architectural range will display the new fixtures designed in collaboration with Atelier(s) Afonso Femia, PARK ASSOCIATI, GEZA and Andrea Ciotti.

"Over the years – explains Giovanni Bonazzi, managing director of 3F Filippi – office design has evolved considerably to meet new requirements especially the increasing versatility required in environments of this type. With the 3F Architectural range our company wants to propose a new lighting approach, essentially dedicated to these kinds of spaces to assist professionals in their design activities that often require greater flexibility than in the past".

Designed by the firm Atelier(s) Alfonso Femia, 3F Trittico is a ceiling light fixture composed of three or four arms to provide direct and indirect light. The light modules can be modified giving the designer the possibility to adapt the lighting to layout changes in the workplace. The contribution from Studio GEZA in the development of the 3F Architectural range is reflected in the creation of 3F Filoluce, a steel floor lamp with a purely industrial design. Its cylindrical shape rises from the floor evolving into a series of bluntly rigid bends to spread light on work surfaces which is effective and comfortable at the same time through the use of a high-performance methacrylate screen.

Available for recessed, ceiling or suspension installation the 3F HD light fixture by PARK ASSOCIATI with a H shaped profile can be installed singularly or in-line. The system also has blind modules to house electrical components to service projects (signage, emergency lights and natural light detection and/or presence sensors). Light + Building 2018 will also see the launch of the new versions of 3F Mirella by Andrea Ciotti. As well as the original suspension version the aluminium and



shaped methacrylate fixture is also available in a Floor and XS version that can be installed on the ceiling using special rods. Also being previewed in Frankfurt will be the new versions of 3F Emilio. Created as a spot light the fixture designed by Serge and Robert Cornelissen is now available in a recessed, table and floor version.

The new products which 3F Filippi will present in Germany are not only those developed for offices. In addition to the new versions of existing fixtures the 2018 edition of Light + Building will also witness 3F Filippi present new light fixtures developed internally. This is the case of 3F Diagon, the square shaped fixture whose 16 recessed cells are equipped with state of the art LED sources. This ceiling mounted fixture provides a significant degree of uniformity to environments that exceeds requirements established by current regulations with its patented design given that the honeycomb cells are positioned at a 45° angle to the sides of the fixture.

Equally innovative is the new 3F Reno, the versatile recessed spot light equipped with a LED source that can enhance environments with four different beam openings (wide, elliptical, concentrated and UGR for offices). The particular jagged optic makes it possible to drastically reduce the degree of glare in the environment with significant benefits in terms of visual comfort.

..... Light + Building 2018 .....

## PRODUCT SPOTLIGHT



The launch of the new products will be accompanied by the implementation of technology developed to manage light. With this year's edition of Light + Building focusing on the triple concept of "Connected – Secure – Convenient", a visit to the company stand will allow visitors to appreciate the remarkable results achieved for example in managing light fixtures remotely using various types of state of the art devices. 3F Filippi technology makes it possible to interface with the most popular and high-performance fixture control and regulation systems from Casambi to Beg Luxomat, as well as ZetaQlab and Micas: versatility that gives professionals maximum freedom to choose between the various types of technology on the market.

As well as being the ideal platform to present new developments and ideas the Frankfurt fair provides 3F Filippi with the possibility to communicate for the first time in an international context the creation of the "3F Filippi | Targetti" Group, one of the five most important Italian companies in the lighting sector in terms of turnover and size. "While remaining two separate companies – continues Bonazzi – Light + Building is certainly the ideal environment to inform a wide audience of the creation of this group. This is the reason we have added the Group name to our stand and the Targetti stand".

Founded in 1952, over the years 3F Filippi has become synonymous with highly efficient lighting in terms of technical

and energy saving features. In more than fifty countries their light fixtures are chosen to light the production plants of some of the most prestigious companies, including some of the most important Italian brands such as Ferrari, Maserati, Barilla and Tod's. With production exclusively in the plant in Pian di Macina (Bologna), without any kind of outsourcing, 3F Filippi today represents the true excellence of Made in Italy in the professional lighting field thanks to ongoing research and development activities, as well as the joint commitment of their more than three hundred employees.

3F Filippi and Targetti, two brands that have shaped the history of lighting in Italy, are now embarking on a new venture with an ambitious common goal: to be the sole partner for lighting professionals and designers looking for quality solutions for all their project requirements. By combining their respective expertise in technical and architectural lighting the two brands together provide a broader portfolio of products that proudly take Made in Italy technology to more than 50 countries worldwide. The 3F Filippi-Targetti Group today is able to meet and satisfy any kind of design approach and requirement. Our partners can count on a vast selection of solutions; from highly technical and functional products from the 3F Filippi catalogue to indoor and outdoor architectural light fixtures designed by Targetti, as well as a wide range of LED sources and fixtures from the Duralamp brand.

..... Light + Building 2018 .....

## PRODUCT SPOTLIGHT



### Humans, Light, Rhythm

By Louis Poulsen  
[www.louispoulsen.com](http://www.louispoulsen.com)

The space will present Louis Poulsen's newest indoor and outdoor lighting designs – including the LP Capsule post top by Henning Larsen and the new Rippl and LP Slim Round fixtures – as well as exciting new autumn 2018 releases. Titled Humans, Light, Rhythm, the stand design explores the role of light in diverse urban environments, from city parks and streets to homes and workspaces.

Henning Larsen – a firm well-known for creating innovative relationships between space and light – found a mesmerising way to bring visitors' attention to urban illumination. The flow of light through the mini-city is controlled in part by perforated steel walls on many of the cube-shaped buildings. Light channels freely through these openings and lands in changing patterns on surrounding surfaces, mimicking the dynamic effect of city windows at night – and encouraging people to reflect on how light affects everyday experiences.

#### **Louis Poulsen + Henning Larsen: A Union Of Two Bright, Scandinavian Legacies**

Humans, Light, Rhythm brings together two major Danish design players with common values and a shared focus on lighting innovation. Louis Poulsen first established its reputation with the ingenious work of visionary lighting designer Poul

Henningesen. Similarly, the architectural firm Henning Larsen was founded by legendary Danish architect Henning Larsen, known for making light to the essence of his architecture.

Echoing the principles at the heart of Louis Poulsen's work, Signe Blomquist, Design Lead and Project Manager at Henning Larsen, says, "Our architectural process is rooted in the question of how we can shape room and space with light. Based on our research we know daylight has a huge effect on people's wellbeing, therefore daylight is an essential part of our design."

#### **Louis Poulsen Press Release February 2018**

A shared Nordic aesthetic and design philosophy also contributed to the process of presenting a unified vision of the ideal urban space. Louis Poulsen CEO Søren Mygind Eskildsen says: "Both Louis Poulsen's and Henning Larsen's work is rooted in the philosophy that form should follow function – and all elements of our design bear the touch of Scandinavian simplicity. Together, we very much look forward to inviting visitors to examine how thoughtful illumination can enhance the way we live today."

Humans, Light, Rhythm demonstrates the extent to which we can shape our physical environment and the ambience of our surroundings with light. The stand offers a vision of safer public spaces, and presents a case for more human-centred indoor design for better working and living. The concept's ultimate goal is to offer solutions that make people feel good anywhere in the city.

# show review

Light Fair  
International 2018

8<sup>th</sup> – 10<sup>th</sup> May 2018

McCormick Place  
Chicago, IL USA



LIGHTFAIR® International (LFI®) opened at McCormick Place in Chicago May 6 with the 29th edition of the world's largest annual architectural and commercial lighting trade show and conference. Thousands of attendees from around the world streamed into the LFI exhibit halls to experience the products and knowledge transforming the future of light and technology.

Preceding and setting the stage for the trade show opening, the prestigious LFI Innovation Awards® highlighted the industry's most innovative products and designs introduced during the last 12 months. The excitement extending from the Awards is expected to continue through the close of the show on Thursday.

The 2018 LFI Innovation Awards® saw 238 entries spanning 14 categories, with each submission judged by an independent panel of lighting professionals. Winning entries exemplified the best in innovative design and thinking. Among the 18 winning entries are these key awards:

- **LEDRA BRANDS (Vector):** Most Innovative Product of the Year—the program's highest award, recognizing the most innovative new product, Booth 1648;
- **ACUITY BRANDS LIGHTING (Juno FlexConnect™ featuring micrOptix™ technology):** Design Excellence Award—recognizing outstanding achievement in design, Booths 1802/2602;



- **CRESTRON ELECTRONICS** (CCT & Lux Sensor (GLS-LCCT)): Technical Innovation Award—recognizing the most forward-thinking advancement in lighting technology, BOOTH 3012;
- **RESILIENT, LUMEFFICIENT** (LumEfficient’s LiFi): Judges’ Citation Award—special recognition of an innovative product at the judges’ discretion, BOOTH 438

Visit [lia.lightfair.com](http://lia.lightfair.com) for a full list of LFI Innovation Awards 2018 entrants and winners.

LFI has also awarded exhibitors that excelled in visual display and product presentation. The 2018 Best Booth Award Winners are:

- 100 Square Feet: LENOX LIGHTING – 3457
- 200 to 300 Square Feet: GREEN LED LIGHTING SOLUTIONS, LLC – 2779
- 400 to 500 Square Feet: LUMIUM LIGHTING – 5234
- 600 to 800 Square Feet: TLS INTERNATIONAL – 3467
- 900 Square Feet and Larger: TECH LIGHTING – 1443
- Exterior & Roadway Lighting Pavilion: AURORALIGHT, INC. – 4448
- Global Light + Design Pavilion: KUZCO LIGHTING LLC – 851
- Design Pavilion: OCL ARCHITECTURAL LIGHTING – 1448
- Intelligent Lighting Pavilion: TUYA GLOBAL INC. – 631
- IoT Pavilion: CASAMBI TECHNOLOGIES OY – 131
- New Exhibitor Pavilion: MEDIAFRONT – 5416

Events at LIGHTFAIR International 2018 take place at McCormick Place located at 2301 S. Martin Luther King Drive, Chicago, IL 60616.

For LIGHTFAIR International 2018, the Pre-Conference program will take place from Sunday, May 6 – Monday, May 7 and the LFI Trade Show and Conference will run from Tuesday, May 8 – Thursday, May 10

**About LIGHTFAIR International**

LIGHTFAIR® International is the world’s largest annual architectural and commercial lighting trade show and conference and is sponsored by the International Association of Lighting Designers (IALD) and the Illuminating Engineering Society (IES). The event is produced and managed by AmericasMart® Atlanta.

For more information, visit [www.lightfair.com](http://www.lightfair.com).

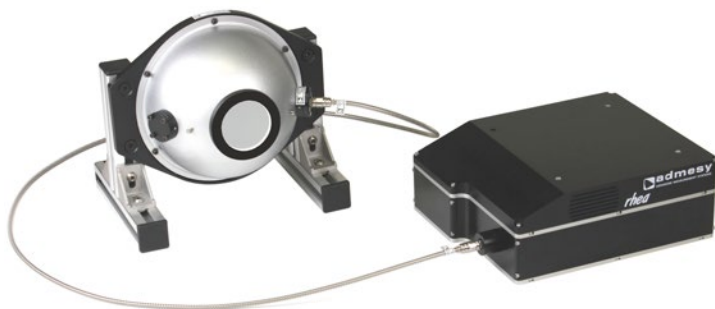


..... LightFair International 2018 .....

## PRODUCT SPOTLIGHT

### Light Measurement

By Admesy  
[www.admesy.com](http://www.admesy.com)



Modern lighting is dominated by LED and Solid-State Light (SSL) sources which have become affordable and efficient to produce. They can be minutely tuned for specific optical characteristics, emitting light of different wavelengths, colours and brightness – yet this wide range of choice does present a margin of error. Minor issues which can potentially arise during the manufacture of lighting diodes can detrimentally affect the quality of the end-product. Therefore, it is important to perform rigorous light measurements during development to ensure a high-quality is maintained throughout production. Typical lighting measurements include luminance, illuminance, luminous intensity and luminous power as well as their spectroradiometric equivalents radiance, irradiance, radiant intensity and power.



In addition to these well-known lighting parameters, the introduction of SSL lighting products has also raised issues around rapid fluctuations in light output, known as flicker. Viewing a light source with even minimal flicker can have a harmful effect on the health and wellbeing of individuals. Robust light measurements are therefore essential during luminaire development, to ensure that products pass quality assessments when it comes to flicker levels. This type of measurements is typically done during development of LED drivers and power supplies as well as during production of luminaires.

Admesy offers a significant range of light measurement equipment to ensure light sources are performing at their intended level, combatting avoidable issues inherent in the production and implementation of LEDs and SSL. The Rhea spectrometer series for example is the ideal high-end spectral measurement solution for R&D and in production lines to determine all necessary lighting parameters in terms of light output in all photometric and spectroradiometric measures as well as colour, CRI, CCT, peak and dominant wavelength.

The Asteria light meter from Admesy is a compact high-speed light measurement device which can perform advanced flicker measurement; capable of detecting flicker at rates of 186.567 samples per second. Supported flicker standards widely used are flicker index and percentage, but also new upcoming standards and recommendations like IEEE PAR 1789 are supported.

# ADVANCING LIGHT –

## LEDVANCE PRESENTS NEW PRODUCT FAMILIES AT INTERNATIONAL FAIRS



**LEDVANCE has showcased its new product families for a wide range of lighting applications along with the innovative “Scale” design language at Light + Building Frankfurt in March and Guangzhou International Lighting Fair China in June 2018.**

Light means life. And at LEDVANCE, our mission is to make the world a greater place by advancing light through design that makes genuine sense to everyone, anytime and anywhere.

When we talk design, we mean lighting experiences that make people’s lives easier. We mean honest solutions that speak your mind. We mean reshaping our industry by creating simply better basics. With the distinctive “Scale” design-language, our customers can immediately recognize trusted LEDVANCE quality.

Our design-hallmark scales consistently across our entire product portfolio to create coherent, comforting assurance that this very product is an original LEDVANCE product that is easy to install and use in any environment.

### DISTINCT



BORED BY THE ORDINARY?  
THIS SHOULD HELP.

### FLEXIBLE



THIS IS OUR FUTURE VISION  
OF CANDLES AND YOGA.

### ATTENTIVE



NO DEVIL IN THIS DETAIL,  
JUST A CLEVER IDEA.



# LEDVANCE

## WHY LEDVANCE? BECAUSE WE ARE DEVELOPING LIGHT

We have set ourselves some ambitious targets for the coming years. By 2020, LEDVANCE intends to be among the top five luminaire players in Europe and the top ten luminaire players globally. We are therefore expanding our international product business in various areas of application, extending our range of design-based premium products and continuing to focus on our expertise in consultancy and service.

For example, in our office segment, we offer luminaires in a wide range of forms, including panel, linear and downlight, to suit all room types.

The new Direct/Indirect Panel luminaire is ideal for these specific requirements. It delivers 70 percent direct light for the workplace and 30 percent indirect light for basic illumination. The luminaire, which is only one centimetre thick, features sleek high-quality styling with an aluminium frame and rounded edges. This is also a part of the new "Scale" design concept that LEDVANCE is unveiling for its professional LED luminaires.



## MANY SMART HOME SYSTEMS, ONE LIGHT SOURCE: SMART+ FROM LEDVANCE

Since September 2017, Smart+ has been the name for LEDVANCE's entire new generation of smart lighting products for end users. These replace the products, which LEDVANCE had previously marketed under the name of Lightify. At Light + Building, the leading LED lighting company showcased the latest members of its intelligent Smart+ product family. LEDVANCE introduced both a greatly extended, dedicated ZigBee portfolio – using the Zigbee 3.0 wireless standard – and also innovations specifically for Apple HomeKit. Assistants such as Amazon's Alexa and Apple's Siri allow easy control of the products via voice commands – and in the case of Apple and Amazon without the need for additional gateways.

Not to forget: Smart+ products' capabilities make them great tools to bring down users' energy bills, in addition to their long rated life and steady light output, which comes with the high-quality standards of LED lighting specialist LEDVANCE.

LEDVANCE continues to use the OSRAM product brand for its Smart+ products.



## ABOUT LEDVANCE

With offices in more than 50 countries and business activities in more than 140 countries, LEDVANCE is one of the world's leading general lighting providers for professional users and end consumers. Having emerged from the general lighting business of OSRAM GmbH, LEDVANCE offers a wide-ranging assortment of LED luminaires for a broad spectrum of application areas, intelligent lighting products for Smart Homes and Buildings, one of the largest LED lamps portfolios in the industry, and traditional light sources. Since 2017, LEDVANCE has been owned by a consortium, consisting of the leading Chinese LED lighting company MLS and the investment firms IDG Capital and Yiwu. In the fiscal year 2017, LEDVANCE achieved a turnover of around 1.9 billion Euro. Based on an agreement with OSRAM, LEDVANCE will continue to use the trusted OSRAM brand for many of its products (SYLVANIA for the USA and Canada). Further information can be found at [www.ledvance.com](http://www.ledvance.com).





# Giant Works of Art

Skyscrapers In Chinese City Become Giant Works Of Art With Smart City Lighting

Philips Lighting (Euronext: LIGHT), the world leader in lighting, has completed a large-scale project that uses connected LED architectural lighting to illuminate the facades of 37 buildings, along a 9.2 km stretch of road in the city center of Ningbo, China. The project, one of the largest of its kind, is aimed at boosting the city's cultural heritage and tourism, as well as stimulating commercial activities in the city center. It also illustrates the company's position as the lighting company for the Internet of Things.

## Highlighting 9.2 Kilometers Of Cultural Heritage

Buildings along the 9.2-kilometer-long Zhongshan Road are a magnet for tourism. The new lighting system, designed by Toryo International Lighting Design Center and Huazhang Lighting Design, uses nearly 2,000 Philips Color Kinetics fixtures controlled and managed by Philips ActiveSite software. The lighting accentuates the architectural features of the buildings while creating sparkling night scenes in the city's business district and Ningbo's main square Tianyi Square.

"The lighting design of the Zhongshan Road project illuminated took advantage of powerful mix of color architectural lighting and world class narrow projection. Philips Lighting brought our design concept to life, delivering high performance energy efficient lighting and control software which enable everything to be monitored and controlled remotely. The design, the technology and controls combine to not only raise the bar of city illumination in China but does this in a highly sustainable way," said Concept Designer, Dongliang XU from Toryo International Lighting Design Center.

## Advanced Lighting Technology

The Philips ActiveSite lighting management system makes the lighting run flawlessly with dashboards for real time monitoring, control and management of individual light fixtures. It also enables energy savings of 30-40% to be realized compared to the previous lighting used.

"Philips Color Kinetics LED lighting fixtures are installed in more than 50,000 projects around the world. The Zhongshan Road project is our most extensive in China, spread out along a 9.2 kilometer stretch in which illuminated 37 buildings. This transformative project accentuates the city's rich cultural heritage while enhancing tourism and raises the bar on smart city illumination in China, said Samuel Xiang, Head of Professional Channel, Philips Lighting China.

## Setting The Benchmark

Philips Lighting is committed to help cities and customers illuminate business landmarks more efficiently by providing advanced lighting systems and services that meet their design goals, lower energy use and operating costs.

For more information, visit [www.philips.com](http://www.philips.com).

# Changi Airport

Singapore



Singapore's Changi Airport, voted by air travellers as the World's Best Airport (Skytrax) for the sixth consecutive year, is taking its passenger experience to a new level with Terminal 4. As part of their quest for excellence, Changi Airport Group commissioned Moment Factory to produce two media features designed to entertain passengers as they navigate the airport's remarkable interior.

From optical illusions to cinematic storytelling, the architectural media features transform the least-appreciated travel moments into surprises of delight and discovery. Passing through security screening, travellers are enveloped by an immersive media wall with a variety of content capsules that transform the ambiance. Picturesque high altitude

landscapes alternate with virtual bas-relief sculptures that subtly come to life. In the heritage zone, real and virtual traditional shop house façades create an authentic backdrop for local culture and storytelling. Appearing static at first, the two LED façades spring to life with an engaging neighbourhood love story that brings two Peranakan families together.

Building on Moment Factory's reputation for creating signature media environments, this collaboration with Changi Airport Group (CAG) pushes ambient entertainment in new and meaningful directions. Each of the media features was built with a distinct purpose in mind: to create wonder and captivate audiences in unique ways.





The Media Features:

**The Panorama—Security Zone**

This enormous LED screen provides a panoramic experience, allowing travellers’ imaginations to begin the journey even before they’re through security. To transport viewers’ imaginations to far-off places, Moment Factory created seven panoramic content capsules, each with a unique story and environment:

- The Suitcase Machine offers a whimsical and playful glimpse behind the scenes of Changi’s baggage handling system. Each machine has its own wacky personality in this fantastical rendering of what a child might imagine is going on behind the scenes.
- Through the Lens brings viewers on an imaginary international voyage. Soaring to new heights, travellers catch glimpses of various ASEAN destinations, peering through the clouds. A mysterious photographer’s camera takes visitors on a trip through worlds real and imagined. Each click of the shutter is a new chapter of the journey.
- The Frieze creates calming beauty and trompe-l’oeil wonder. Travellers encounter what appears to be an enormous carved frieze in a traditional style. But as the carved animals begin to move, they understand that appearances can be deceiving. In fact, they are looking at an enormous, virtual 3D sculpture.
- World Skies: Famous city landmarks emerge out of the clouds and the starry sky, accompanied by live data such as weather and flight information.
- Lion City Panoramas: Time-lapse and tilt-shift imagery reveals unexpected beauty in panoramic views of Singapore and its many icons.
- Drifting Petals: This identity content creates an iconic statement in the space. Like a virtual kinetic sculpture of golden petals embedded in the architecture, this content sequence enlivens the security area with gentle, flowing movement.

**Technical Details**

- The total resolution of the Security Area screen is 10,704 x 768 pixels, for a total pixel space of 8,220,672 pixels.
- Its physical dimensions are 70 m wide by 5 m tall.
- The LED pitch of the screen is 6 mm (1 pixel every 6 millimeters).







### Peranakan Love Story

The idea for Peranakan Love Story was developed in collaboration with the iconic Singaporean singer Dick Lee, and was inspired by the row of traditional Peranakan shophouse façades being built inside the terminal. Using large format LED screens and a trompe-l'oeil approach to content, Moment Factory decided to bring one of these façades to life with a playful and local love story. While visitors shop and get something to eat, their mood is lightened by this touching story of two families coming together through a marriage.

The show takes travellers on a journey deep into the heart of Singaporean culture. Music was a key ingredient for this show, and fortunately, the team had the perfect collaborator in Dick Lee who provided music and conceptual guidance that evokes the perfect romantic and authentic mood. His uniquely Singaporean sensibility adds a level of detail that incorporates all the elements into an unforgettable experience.

One of the most challenging aspects was working and testing in an active construction site. The virtual lighting in Peranakan Love Story needed to perfectly match the ambient lighting conditions of the space to achieve the trompe l'oeil effect. But because the lighting wasn't fully installed yet, there was a lot of postulation to do about the final lighting conditions. Fortunately, calculations of the eventual lighting were right on, and the capsule has been such a hit that CAG commissioned Moment Factory to add even more content. Travellers will be able to experience whole new dimensions of the story in summer 2018.



### Collaborating to Push the Industry Forward

To adapt to the changing face of travel and the unique challenges of 21st century retail, airports are innovating like never before. Architectural media features are quickly becoming a key ingredient for creating the kind of iconic visual identity, and unforgettable experience that appeals to travellers. Moment Factory is leading the way with game-changing partners like the Changi Airport Group.

From the beginning the media features were developed in close collaboration with the client in order to perfectly understand the client's design and business objectives. But content and the final look and feel were always at the forefront of the exchanges. CAG's primary concern was to provide the highest quality experience to visitors by immersing them in lush, beautiful content. As in any great collaboration, both sides took the time to learn from the other. The process was explained, as well as the thinking behind Moment Factory's proposals, and CAG elaborated on their goals, limits and airport guidelines. Because of this close collaboration, the content ideas that emerged perfectly embody the airport's guiding principle of "pleasant surprises".

Even with the close collaboration, the project was not without its challenges. Coming in late in the design of the entire terminal 4, it was essential that the immersive experience integrate smoothly with traveller needs, and not interfere or slow down any other elements. By accompanying CAG throughout the 15-month process of procurement, construction, installation





and integration, a solid foundation was laid for the smooth integration of all multimedia elements. An extremely user-friendly show control system was even designed, provided by E&E that allows an unprecedented flexibility and simplicity in programming content. This ensures that the local staff can adjust and optimize the content schedule in just minutes.

All deadlines were met because of this excellent relationship between Moment Factory, Changi Airport Group, the local integrator Electronics & Engineering Pte. Ltd. and LED supplier Nanolumens.

#### **About Moment Factory**

Moment Factory is a multimedia studio with a full range of production expertise under one roof. Our team combines specializations in video, lighting, architecture, sound and special effects to create remarkable experiences. With its headquarters based in Montreal, the studio also has offices in Los Angeles, Tokyo, London, New York City and Paris. Since its inception in 2001, Moment Factory has created more than 400 unique shows and destinations. Productions span the globe and include such clients as Los Angeles Airport, Nine Inch Nails, Microsoft, NFL, Sony, Toyota, the Sagrada Familia in Barcelona, Madonna and Royal Caribbean.

#### **About Changi Airport Group**

Changi Airport Group (Singapore) Pte Ltd (CAG) ([www.changiairportgroup.com](http://www.changiairportgroup.com)) was formed on 16 June 2009 and the corporatisation of Singapore Changi Airport (IATA: SIN, ICAO: WSSS) followed on 1 July 2009. As the company managing Changi Airport, CAG undertakes key functions focusing on airport operations and management, air hub development, commercial activities and airport emergency services. CAG also manages Seletar Airport (IATA: XSP, ICAO: WSSL) and through its subsidiary Changi Airports International, invests in and manages foreign airports.

Changi Airport is the world's sixth-busiest airport for international traffic. It served a record 62.2 million passengers from around the globe and handled 2.13 million tonnes of airfreight throughput in 2017. More than 400 retail stores and 140 F&B outlets are situated across four terminals to cater to passengers and visitors. With over 100 airlines providing connectivity to 400 cities worldwide, Changi Airport handles about 7,200 flights every week, or about one every 80 seconds.

For more information, visit [lickst.at/changi-airport-en](http://lickst.at/changi-airport-en).

# I Bhumibol Bridge

*Bangkok, Thailand*

Lighting Design & Solution: Lighting & Equipment Public Company Limited (L&E)

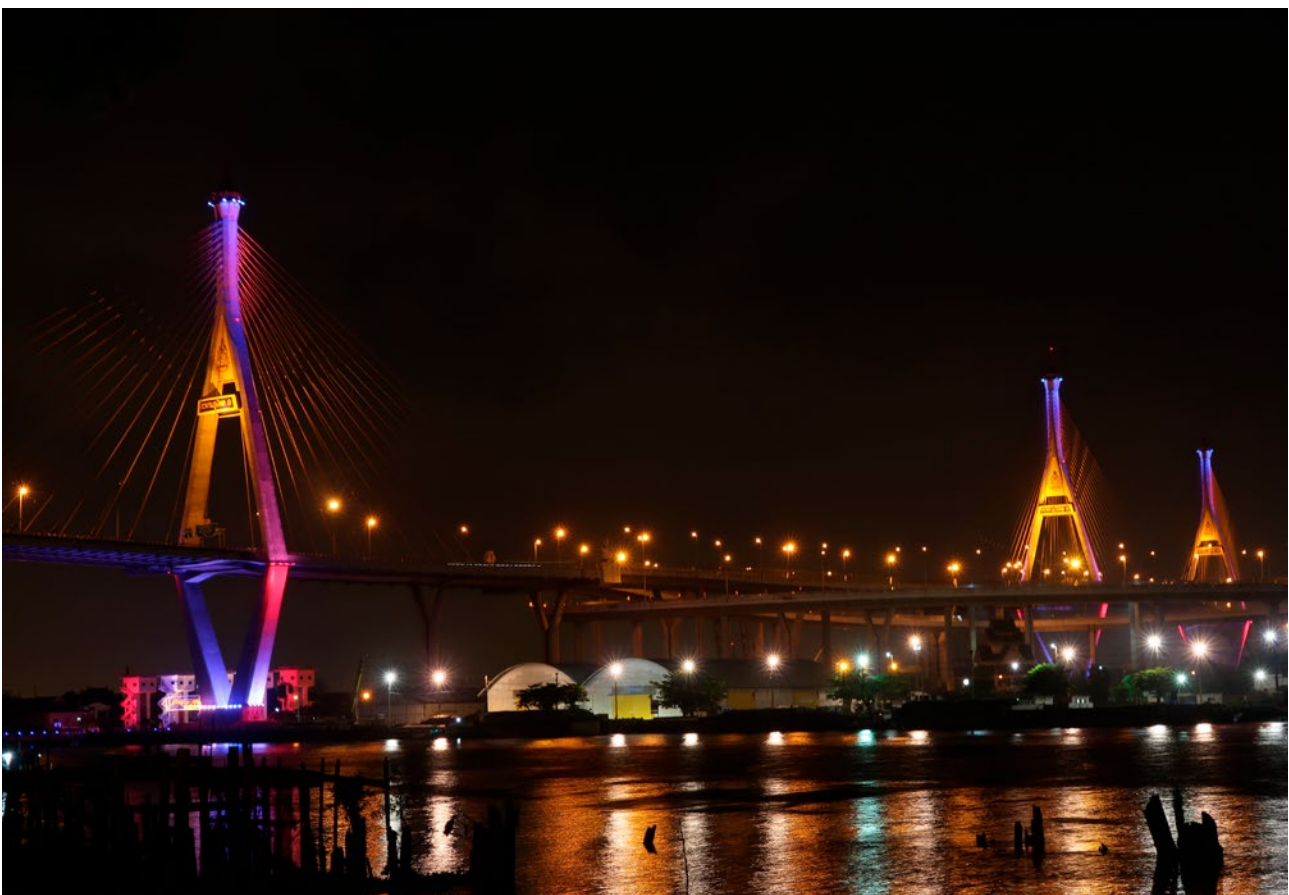
Photo Credit: Lighting & Equipment Public Company Limited (L&E)



The Bhumibol Bridge is part of the 13 km long Industrial Ring Road connecting southern Bangkok with Samut Prakan Province. The bridge crosses the Chao Phraya River twice, with two striking cable-stayed spans of lengths of 702m and 582m supported by diamond-shaped pylons. The bridge officially opened on 5 December 2006 with the unofficial name, Mega Bridge. According to tradition, all bridges over the Chao Phraya in Bangkok are named after a member of the royal family. In October 2009, it was announced that both bridges would be named after King Bhumibol Adulyadej with the northern bridge officially named Bhumibol 1 Bridge and the southern bridge named Bhumibol 2 Bridge.



The collaboration between L&E and Department of Rural Roads, Ministry of Transport to renovate the lighting design and installation for the bridge has been started in 2016 and completed in March 2018. 216 Watt RGB colour changing LED floodlight is the solution for this renovation. All floodlights are arranged orderly on the catwalks or at the positions that easy for maintenance. The only existing luminaires which still have





been used since previous design are the High Pressure Sodium floodlights for inner side of pylons facing traffic on the bridge.

Lighting design concerns on every approaches to the bridge during nighttime. Driving up the bridge, people find the suitable functional and ambient light from High Pressure Sodium light without any colour lights disturbing. Riding on a boat under the bridge, people see colour changing light highlighting piers and beams. And from the viewing distance of overall bridge, lighting presented the beautiful nighttime identity from dynamic light with colour contrast between outer and inner sides of pylons. Various lighting scenes are designed and provided for everyday uses and for special occasions such as national day, religious holidays and festival holidays. Lastly, lighting creates impression and Bhumibol Bridge becomes one of the beautiful spots in Bangkok night scenery.

#### About L&E

L&E is a lighting equipment manufacturer and lighting solution provider based in Bangkok, Thailand. We have been specialists in lighting for 25 years and engaged in many prominent projects in Thailand and other Asian countries.

For more information, visit [www.lighting.co.th](http://www.lighting.co.th). ■



# Göppingen Park

*Göppingen, Germany*





Thorn Lighting is proud to announce the launch of Flow, taking versatile outdoor lighting to the next level. The timeless, understated design language of this brand new luminaire makes it easy to picture in any setting. But it's not just Flow's appearance that makes it so flexible. The luminaire features six mounting variants: post-top, lateral, amenity, suspended, catenary and wall-mounted. There are a range of positive and negative tilting options, and a total of 13 optical possibilities.

As a result Flow suits all kinds of urban applications including large urban roads, smaller streets and residential areas, city centres, car parks, cycle paths, footpaths, train platforms, education and sports institutions, industrial buildings and area applications. Flow makes it easy to meet the needs of any urban lighting challenge using the same design of luminaire, empowering designers to create city spaces that are unified and harmonious. Flow has been designed with visual comfort in mind, to provide lighting that is not only safe and functional, but pleasant and welcoming.

Benefitting from Thorn's highly efficient R-PEC and Area optics for streets and open spaces, the luminaire uses prismatic glass and a white reflector to achieve excellent glare control. Flow is available in colour temperatures ranging all the way to a warm 2700K, lending a hospitable ambience to any urban area.



Flow brings intelligence to urban spaces through a wide choice of control options, including DALI (HFX), bi-power switchable (BPS), LRT, power-line or wireless Radio Frequency Incity (RF) control PN7 socket for RF sensors and presence detection. This enables significant energy savings while improving safety and contributing to a sense of wellbeing in the city.

As well as being highly flexible, Flow is a cost-effective LED solution, that is just as suitable for refurbishments and retrofits as it is for brand new installations. Its efficacy reaches 139 lm/W, enabling it to save significant amounts of energy compared to conventional solutions, and it comes with a 10kV surge protection device. Lumen packages ranging from 1700lm to 13,600lm are available. This lightweight luminaire makes life easy for contractors too: it's easy to handle and install, with with tool-free gear tray maintenance.

Flow will be available from May 2018. Corinne Delor, Global Product Manager, Urban Streets: "Getting the light distribution you need while keeping urban spaces looking clean and consistent is hard. That's why we designed Flow to fit in everywhere. The combination of its understated, timeless design and huge variety of mounting and optical choices, gives users the freedom to create consistent, unified solutions for any urban lighting challenge."

For more information, visit [www.thornlighting.com](http://www.thornlighting.com). ■



# Hyatt Place

*Rameshwaram, India*

Client: JKR Enterprise

Architect: Centre for Design Excellence

Interior Designer: ASC Interiors

Landscape Architect: ONE Landscape Design + Design Accord

Lighting Designer: Lighting Research & Design

Luminaire Supply & Installation: Gojis Lifestyle + Unilites India

Photo Credit: Gowtham Raj, Amardeep M. Dugar





*A trained architect and an advocate for all the elements of lighting – design, education and research – **Dr. Amardeep M. Dugar** is the founding principal of Lighting Research & Design. After completing a Masters degree in Architectural Lighting from University of Wismar/Germany, he pursued a Ph.D. from Victoria University of Wellington/New Zealand to solidify his academic and professional leadership role into a career at a higher level. Aside from working on high profile projects and teaching at several architecture and design schools, he has been instrumental in establishing the International Association of Lighting Designer's Local Region – IALD India.*

An effortless blend of traditional ethics and modern ethos, Hyatt Place Rameswaram sets a new benchmark for the select-service industry and lends precedence for future innovation in hospitality design. Light had to be thoughtfully infused into its architectural folds to accentuate and further empower its spatial design. A small pilgrimage town teeming with Hindu temples and medieval Dravidian architecture, Rameswaram is considered one of the most sacred in India. However, when a new generation hotel that offers casual services in a smartly designed, high-tech and modern environment comes up within an extensively charged historical context such as this, it is bound to face challenges. Concept was to create a seamless stay with modern comforts combining style, innovation, and round-the-clock convenience. Hundreds of hours of research helped create an exciting hotel design with a competitive cost-per-key rate in the upscale select-service category. Experience envisioned for guests included open-air dining and range of public spaces.





Brief was to be mindful of capital and operational expenses. Considering all constraints, going 100% LED way seemed the best option. Lighting had to be married to architecture with numerous custom designed luminaires and incredible attention to detail, revealing textures, highlighting forms and reinforcing a sense of luxury and sophistication. Exterior and façade lighting treatment had to emphasize unique architectural and design features to create a dramatic tonal contrast between natural materials and incredible Rameswaram night sky. However these lighting treatments had to be carefully integrated into architectural features so as to reduce light pollution as well as light sources' visual presence. Dramatic tonal contrast leaves structure with pockets of light, focusing attention on certain areas of architecture.

The hotel's illuminated branding and series of illuminated column-like façade articulations formed by recesses between guestroom windows enable easy identification from the highway. Light from 36W-LED linear grazers gets capped and captures the underbelly of extended roof-overhang, preventing light trespass and spill into night sky. Similarly, 2x18W LED up-downlights highlight vertical elements between upper ground floor lounge windows with roof overhangs; here too, preventing sky glow. An interesting artistic installation rendering pieces of stone facing in an eclipse-like glow against ramp wall becomes a marker subtly guiding passage towards main porch.

Even landscape has been adroitly lit with full cut-off angle bollards and post- top luminaires that facilitate a pollution free soft illumination across hotel grounds. Thin 14W/m LED strips concealed within coves along edges of beams accentuate the gracefully gabled roof structure and provide gentle ambient illumination for main porch.

Adding a touch of local Rameshwaram culture reflecting on a maritime heritage is a ceiling suspended installation of a cluster of custom-designed fish shaped pendants. Like a massive piece of gilded amber set ablaze, its organic form breaks monotony of striated roof structure



while rendering dynamic reflections and shadows. While lighting of various water-features, selected structures, planting and built elements present 'each-as-a-part-of-the-whole', hierarchy of light planning ensured pools were more dominant elements at night. With extremely strict budget and energy constraints, entire project was completed for less than 0.5 US\$/sqft. with an energy consumption of less than 0.5W/sqft. for all luminaires and controls. The project has aptly been awarded the 2018 IES Illumination Award of Merit.

For more information, visit [lighting-rnd.in](http://lighting-rnd.in). ■



# I Platinum Hotel

Taipei, Taiwan

Entrant Title: Landscape Lighting Design

Category: Exterior Lighting

Project Location: 231 No77 AnXing Rd., Xindian Dist., New Taipei City, Taiwan

Lighting Designer: Kaneda Atsushi, Sean Hsiang, Oscar Lee

Architect: DAJ Design / [dajdesign@gmail.com](mailto:dajdesign@gmail.com)

Client: Platinum Hotel / [service@platinumhotel.com.tw](mailto:service@platinumhotel.com.tw)

Photographer: Kyle Yu / [kps2003@gmail.com](mailto:kps2003@gmail.com)

Luminaire and Lamp Types:

*LED Spike Spot Light For Tree:* LED 10.5 W, 30 degree, 3000 k LED

*Water Spot Light For Feature Wall:* LED 30 W, 20 degree, 3000 k LED

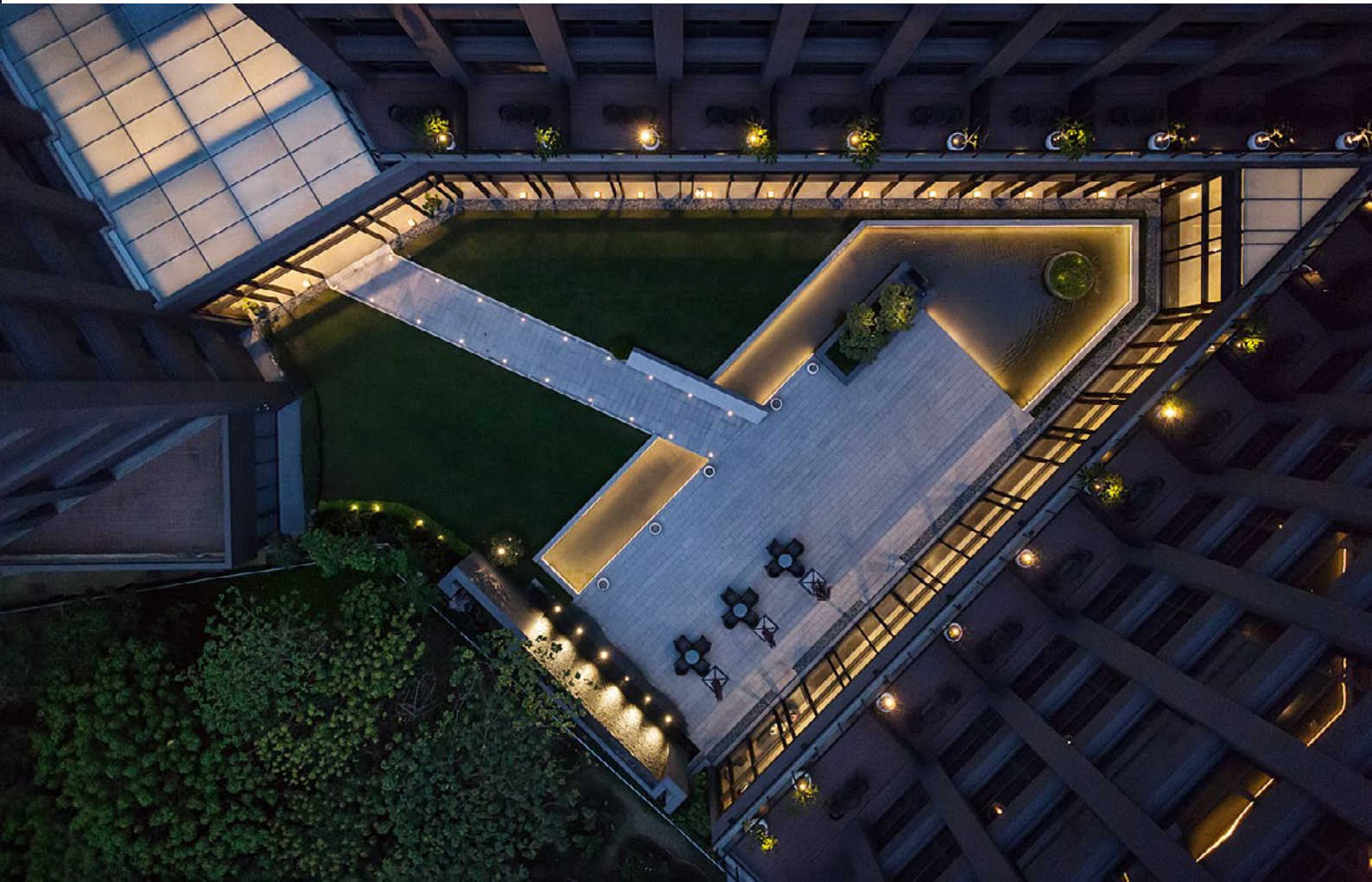
*In-Ground Up-Light For Bridge:* LED 3 W, 8 degree, 3000 k LED

*Water Prove Strip Light:* LED 10 W/m, 3000 k, IP 68 LED

*Flood Light For Platform:* LED 28.5 W, 30 degree, 3000 k LED

*Lantern:* LED 10 W, E27 bulb

Text and Photo Credits: Worktecht



**Sean Hisang**  
 Representative Director of Taiwan Worktecht /  
 Lighting Designer

*Graduated from Taiwan, Shin Chien University, and Tokyo Designer Gakuin, major in industrial design. With working experience in industrial design and interior design field, Sean joined Worktecht as a lighting designer in 2014. He believes that "The most beautiful light we have ever seen must be the first light we saw when we were born if we could still remember."*

*Worktecht Taiwan has been built since 2016 since then Sean has been the representative director of it. In the future, he wishes to broaden the market in Taiwan to let more people know about what lighting design is.*

This project is a hotel courtyard located near a park and an ecological zone. The space is mainly used for wedding ceremonies and serves as a coffee shop during other days. Taking this into consideration, their design concentrated on aligning the lighting concept with the wedding ceremonies.

Firstly, the up lights were lined-up on both sides of the walkway located across the pool to simulate runway lights at the airport. This symbolizes a new chapter of a just-married couple's life and makes the walkway appear longer. By using the water light, the shape of the pool is clearly defined. Thus, the "water" and "land" area are created to make people feel more layers in the space. During the daytime, it portrays a modern garden with minimal design, and during nighttime the "land" area appears like a romantic floating tropical island.

The main space for events is the platform in the courtyard near the hotel lobby used specifically for marriage solemnization. Therefore the challenge for this project was "To provide enough light for the activities at night without losing focus on the overall concept". However, the main building and the external wall were constructed first before they started the





lighting design. Thus, small floodlights were installed with minimal design on the bottom of the external wall of the platform on the 2nd floor, with the track made of the same material as the baluster, so as to simulate interior light from the lobby that spreads softly from the inside to the outside to make the view from the top can be seen with gradient colors. Therefore, it was catered to the functional usage for the event light and the overall concept of the hotel aesthetics.

For more information, visit [www.worktecht.com](http://www.worktecht.com). ■

# I UAE Pavillion

*Milan, Italy*

Client: National Media Council

Architects: Foster + Partners

Collaborating Architect: Marco Visconti

Lighting Design: David Atkinson Lighting Design (DALD)

Senior Lighting Designer: David Atkinson

Assistant Lighting Designer: Pedro Pinto

Lighting Programming: Stewart Parker & Matt Simpson

Lighting Management: Lighting Assist

M&E: Foster + Partners

Project Management: Fraser Randall

Quantity Surveyor: Fraser Randall

Landscape Design: WATG

Visitor Experience Design: Land Design Studio

Interactive Design: CLAY Interactive

Media/Film Production: FQC Media

Area: 4,386m<sup>2</sup>

Height: 12

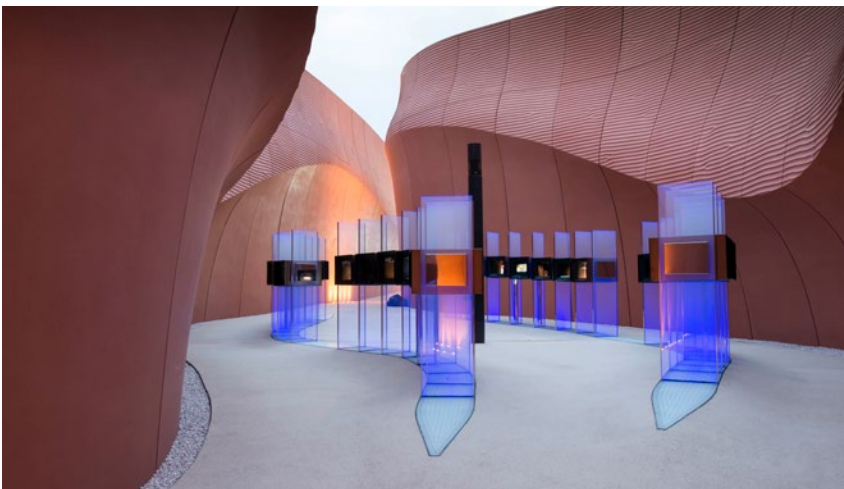
Lighting Suppliers: Atrium, The Light LAB, IGuzzini, MJ Lighting,

UFO, Robe, Martin Professional, Lightworks,

Luce & Light, Lighting Assist, Modular, Tryka

Image Credits: Nick Wood/BigFeatures/FQC Media/Clay Interactive

Text Credits: David Atkinson Lighting Design (DALD)



### Lighting Concept

The United Arab Emirates Pavilion at the 2015 Milan Expo recently opened to the public.

Foster + Partners and Land Design Studio (Visitor Experience Designers) required a varying lighting design approach which had to cover several different disciplines from architectural and landscape to theatrical lighting. With extensive experience in theatre and architectural lighting DALD helped create a sympathetic synergy between the architecture and the visitor experience.



The pavilion occupies a large site close to the centre of Expo and is accessed via its main circulation axis, the Decumanus. From here, visitors are drawn into the mouth of a canyon-like ramp space, defined by two undulating 12-metre-high (GRC) walls. The high walls continue through the 140 metre site in a series of parallel waves, unifying the visitor spaces within a dynamic formal language designed to convey the ridges and texture of sand dunes.

After extensive lighting trials with samples of the GRC wall material



000



adjustable buried lighting fixtures fitted with 2700K LED, light straw filters and spreader lenses were chosen to up light the walls, which subtly create soft warm brush strokes of light across the undulating surface complementing the wall pigment.

Within the central ramp as a part of the visitor experience, dynamic interactive displays housed within cubes are supported by glass fins which feature a dot manifestation, which is edge illuminated, creating an interesting ethereal contrast between the spine of the ramp and the walls.

As the ramp weaves a path, small custom designed buried fixtures fitted with a 2700 Kelvin LED and diffusion film up light the walls at the pinch points, effectively creating an interesting perspective vista at night through the canyon-like space.

At the top of the ramp a large drum houses a state-of-the-art auditorium and interactive post show space.

The external lighting of the drum plays an important part in creating a dramatic focal point to the pavilion. Extensive lighting trials took place in Italy with Foster + Partners to establish what cladding material and light source should be used for the exterior of the drum – a Gold Tecu material was chosen along with a high output linear LED strip fitted with an amber filter. The LED strips are positioned at the top of the drum, which uniformly

graze the Tecu material, without creating any glare issues. The light in turn reflects off the drum and onto the surrounding GRC walls and perimeter staircase, creating an ambient depth.

Within the drum is an auditorium, with a 360 degree perimeter screen. As the creative design team required the space to be more than just a cinema, but also an immersive experience. DALI chose to use a combination of automated LED wash lights and spots.

The automated lighting fixtures are positioned off a large circular truss, which allows for multiple lighting positions for illumination of the perimeter screens, suspended casement roof and the tiered audience seating block.

The perimeter staircases are edge illuminated by custom lengths of LED strip set within an extrusion.

After the screening of the film, the visitors enter the post show space, which features a large holographic experience. As with the auditorium automated lighting is used, which helps to add to the immersive quality of the space.

On exiting the post show space the visitors move to the external 'Oasis' area, linking the first floor level with the ground floor. The 'Oasis' features desert flora planting as well as two large palm trees. By night the space is lit by a combination of sources, which includes the projection of dappled palm leaves and low level accent spots set behind planting, creating a sense of intimacy within the 'Oasis'.

Influenced by ancient planning principles, the pavilion's interior evokes the narrow pedestrian streets and courtyards of the traditional desert city, and its contemporary reinterpretation in the sustainable Masdar masterplan.

The first floor level features an exhibition of cultural objects, discretely lit by small linear fittings recessed up between dark slatted ceilings that are almost invisible off axis and a detail which is used throughout the pavilion. A 3000K LED source was chosen to compliment



the interior terracotta wall colour.

All the curved staircases throughout the pavilion are illuminated by custom designed side emitting diffused LED strips set within the handrail, which when viewed from below appears homogenous.

An exhibition on the ground floor of the main drum celebrates Dubai as host city for the 2020 Expo and is lit by a selection of RGB and single colour LED fittings to graphics and design detail.

Although the Pavilion is large the lighting design approach was minimalistic stretching the light sources to their maximum potential.

The design of the pavilion follows the principles of LEED with a combination of passive and active techniques. Most significantly, the building is designed to be recycled and rebuilt in the UAE after the Expo. In creating the pavilion, Foster + Partners have worked closely with The National Media Council, United Arab Emirates, Chairman, Sheikh Abdullah bin Zayed Al Nahyan and Commissioner General Salem Al Ameri.

The project won 'Leisure Project of The Year' at the 2016 Lighting Design Awards.

For more information, visit [www.dald.co.uk](http://www.dald.co.uk). ■



David Atkinson

#### David Atkinson BIO

David Atkinson Lighting Design (DALD) is an independent architectural consultancy whose practice spans contemporary architectural projects, landscape lighting, hotels, heritage sites and interactive museums.

DALD is based in the UK and operates globally in collaboration with world-class architects and designers. An unusual breadth and depth of experience enables DALD to work effectively in multidisciplinary teams, proposing and executing designs that are characteristically creative, sympathetic and inventive.

Its founder, David Atkinson, was named Lighting





Designer of the Year in 2011 and has won numerous international awards since forming DALD more than 30 years ago.

Many of the practice's architectural schemes are informed by David's early background in theatre, film, music and fashion lighting, all of which have distinct techniques and technologies. David studied at the London Academy of Music & Dramatic Art and then worked in disciplines such as TV and commercial presentations before entering the architectural lighting field. He still has an active interest in these fields.

David's versatility as a designer, though, has its probable roots in an artistic upbringing. This coupled with a sustained interest in new ideas and a facility for cooperation may also explain the respect in which he is held by other professionals. Many of them are fellow associates of the International Association of Lighting Designers or have enjoyed his many international public-speaking engagements.

The broad range of talent assembled by DALD is often directed at creating synergy between a venue's architecture and the visitor experience. DALD's design for the interior and exterior lighting of Foster + Partners' United Arab Emirates Pavilion at the 2015 Milan Expo, for example, combined subtly layered architectural, landscape and theatrical techniques, to award-winning effect. A key element of the interior lighting

was the invisibility of its source. DALD was also responsible for the lighting element of visitor experience design, which included interactive touch displays and a theatre.

David himself, has a reputation for the deft use of techniques 'without borders', combining industrial lighting and filters to conjure the atmosphere of the Antarctic; using movie-style 'soft boxes' to create diffuse light in a gallery, or specially adapting fittings to create an individual lighting solution.

DALD turned the red-brick Royal Albert Hall in London into a cool white ice palace for a 007 World Premiere marking the 40th Anniversary of the James Bond movies. And when Ron Arad showed 30 years of work at London's Barbican, he drew on film lighting techniques to illuminate highly polished stainless sculptures from every angle without reflection or glare.

At times, projects involve a sensitive balance of priorities. Cases in point include DALD's lighting of the Eurostar Business Premier Lounge at London's St Pancras station where the brief was to create spaces that were both dramatic and functional. The Sky Gallery is a three-storey building located within The O2 in London, where the public can experience 3D TV; the lighting had to be warm, engaging and impactful but not detract from the experience and it had to have a small carbon footprint. Once again, DALD's success was acknowledged in the form of an award.





ZENG FANZHI (b. 1964)  
Mask Series 1999 No. 8  
Sold in Hong Kong for HK\$ 7,607,500

# Christie's

*King Street, London*

Designers: Land Design Studio LTD

Lighting Consultant: David Atkinson Lighting Design (DALD)

Lighting Suppliers: AC Lighting Special Projects Anolis, Anytronics, Commercial Lighting Systems, Foscarini, Forma Lighting, iGuzzini, Light Projects, Norlight IT, Mode Lighting, Oldham Lighting, Selux Lighting

Text Credits: David Atkinson Lighting Design (DALD)

Image Credits: Timothy Soar, photographer for Land Design Studio LTD



### Architectural Lighting Concept

Land Design Studio recently completed the interior design for Christie's headquarters in King Street, London. David Atkinson Lighting Design (DALD) worked closely alongside the design team to produce a sympathetic approach to the overall lighting design of this unique site.

Christie's design brief was quite clear that they wanted to the main reception, valuation rooms, cashier, collections and all new Duke Street galleries (a cutting edge feel), which would radically update the previous guise.

DALD wanted to give the reception area a soft diffused quality, which was achieved by positioning custom designed down lights around the stepped columns. By focusing the down lights to the column and limestone floor it gives the desired diffused quality within the space.

With the ceiling having a series of coffers a combination of warm and cold cathode lighting is applied inside the perimeter coving. At different points of the day the cold cathode is mixed to achieve the varying colour temperatures.

The Christie's directors wanted the main staircase, which leads from the ground floor reception to the main sales rooms to make a real statement and focal point.

DALD chose to position three large trimless Barrisol ceiling panels with full colour change directly above the

staircase. The system allows for subtle to dynamic mood change, subject to the time of day or for specialist sales and events.

With the cashier's area directly off the main reception having a higher ceiling it was decided to position six internally lit pendant rings. As there is a practical lighting requirement behind the cashier points, suspended direct/indirect fixtures allow sufficient light to the working area.

The link space through to the collections area is often used to exhibit work, so a combination of trimless T5 wall washers and three circuit lighting tracks with Iguzzini Technica spots are recessed into the ceiling, which allows flexibility within the space.

The collections area maintains its traditional Georgian features, so it was decided to minimise the amount of lighting within the space. As with the reception coffers, discreet runs of cold cathode are set into the perimeter dropped ceiling cove. A period chandelier is positioned to the middle of the space.

The individual valuation rooms are lit by suspended Selux direct/indirect fixtures which are locally dimmed to allow the use of mobile UV units when detail analysis is required.

The new gallery on Duke Street has a contemporary quality, effectively it's a white rectangular space with a limestone floor. To allow total flexibility within the space a continuous run off trimless T5 wall wash with daylight

colour corrected tubes illuminate the perimeter walls. In addition to this accent lighting to the walls and space comes from Light Projects Raylight fixtures which are discreetly positioned to tracks which are stepped up within the perimeter ceiling void. The windows which link to Duke Street have been fitted with a combination of blinds, which effectively can seal off the gallery space. Linear lengths of RGB LED strips are mounted internally above the windows between the blinds to wash the voids at night when required.

The lighting design included the washrooms, the approach was soft yet practical with fluorescents being stepped in behind the large wash basin mirror creating a diffused glow and small baffled low voltage down lights reflect off the various surfaces.

The lighting control for all the areas is via Mode Lighting dimmers and ScenStyle control plates, which allow for subtle change when required.

Through the careful choice of lighting fixture types and the different effects of light on the various finishes the lighting works harmoniously within this important landmark.

For more information, visit [www.dald.co.uk](http://www.dald.co.uk). ■



David Atkinson

#### David Atkinson BIO

David Atkinson Lighting Design (DALD) is an independent architectural consultancy whose practice spans contemporary architectural projects, landscape lighting, hotels, heritage sites and interactive museums.

DALD is based in the UK and operates globally in collaboration with world-class architects and designers. An unusual breadth and depth of experience enables DALD to work effectively in multidisciplinary teams, proposing and executing designs that are characteristically creative, sympathetic and inventive.

Its founder, David Atkinson, was named Lighting Designer of the Year in 2011 and has won numerous international



awards since forming DALD more than 30 years ago.

Many of the practice's architectural schemes are informed by David's early background in theatre, film, music and fashion lighting, all of which have distinct techniques and technologies. David studied at the London Academy of Music & Dramatic Art and then worked in disciplines such as TV and commercial presentations before entering the architectural lighting field. He still has an active interest in these fields.

David's versatility as a designer, though, has its probable roots in an artistic upbringing. This coupled with a sustained interest in new ideas and a facility for cooperation may also explain the respect in which he is held by other professionals. Many of them are fellow associates of the International Association of Lighting Designers or have enjoyed his many international public-speaking engagements.

The broad range of talent assembled by DALD is often directed at creating synergy between a venue's architecture and the visitor experience. DALD's design for the interior and exterior lighting of Foster + Partners' United Arab Emirates Pavilion at the 2015 Milan Expo, for example, combined subtly layered architectural, landscape and theatrical techniques, to award-winning effect. A key element of the interior lighting was the invisibility of its source. DALD was also responsible for the lighting element of visitor experience design, which included interactive touch displays and a theatre.

David himself, has a reputation for the deft use of techniques 'without borders', combining industrial lighting and filters to conjure the atmosphere of the Antarctic; using movie-style 'soft boxes' to create diffuse light in a gallery, or specially adapting fittings to create an individual lighting solution.

DALD turned the red-brick Royal Albert Hall in London into a cool white ice palace for a 007 World Premiere marking the 40th Anniversary of the James Bond movies. And when Ron Arad showed 30 years of work at London's Barbican, he drew on film lighting techniques to illuminate highly polished stainless sculptures from every angle without reflection or glare.

At times, projects involve a sensitive balance of priorities. Cases in point include DALD's lighting of the Eurostar Business Premier Lounge at London's St Pancras station where the brief was to create spaces that were both dramatic and functional. The Sky Gallery is a three-storey building located within The O2 in London, where the public can experience 3D TV; the lighting had to be warm, engaging and impactful but not detract from the experience and it had to have a small carbon footprint. Once again, DALD's success was acknowledged in the form of an award.



# IS.E.A. Aquarium

*Singapore*



**Jenni Gillard** is the CEO of the Gillard Group, comprising companies specialising in architectural lighting design and Lighting as a Service. Her Bachelors and Masters degree were wholly devoted to light and associated sciences. Jenni was one of the first ten in the world to be independently Certified as a Lighting Designer (CLD). She is also a full member of the IES and IALD. Jenni has won many local and international lighting design awards and lectures periodically at two Universities. She has managed two art galleries, exhibited her own work, managed other artists and been a professional model.

When opened in November 2012, the S.E.A. Aquarium, Resorts World Sentosa was the world's largest Oceanarium. It also contained the world's largest viewing panel and aquarium. The complex covers 80,000 m<sup>2</sup> and is home for 800 species and 100,000 animals across 43 marine habitats. While it may not be the biggest of its type anymore, on 27 March 2017 it celebrated its 10 millionth visitor.

What all these visitors might not appreciate is almost the whole complex relies on artificial lighting. In fact, so too do all the marine life. To replicate light-behaviour throughout the day and across the seasons for many diverse marine habitats, is very complex.

In this article we explore light and lighting with Jenni Gillard, one of the world's leading architectural lighting designers and the person responsible for lighting the S.E.A. Aquarium and many other buildings, landmarks and parklands. We were keen to understand what drew her to this profession, what is happening in the lighting industry from her perspective and its implications for our readers.

My father is an engineer and mathematician and worked in the energy industry, says Jenni. My parents were keen for their four daughters to use our brains, love life-learning and enjoy the arts and outdoors. I guess I let them down because my first major work was being a Model. I did, however, retain my love of art and through it, various roads led me to study lighting to Masters level. I fell in love with the discipline because it combines art, business, maths, science and increasingly technology.



The S.E.A. Aquarium is a good example. Light behaves differently through water. How much energy (X) is required to generate enough illumination (Y) to produce a desired outcome (Z)? There were more than 2,000 calculations and 600 renders produced to create the lighting environment to sustain healthy marine life. I worked with marine experts to interpret the needs of marine creatures and replicate needs via the properties of light and programming lighting-controls. For example, living coral requires certain light wave lengths to grow and crabs like certain light levels to come out and feed.

I think the business of lighting design can improve. Too many designers want grand designs and product suppliers want to sell luminaires and tend to over-light. It is much harder to design well and cost-effectively. For the S.E.A. Aquarium, I was a pioneer in using LED on this scale and for water exhibits. At the time, LED was expensive, untried and evolving and warranties were immature. However, LED is also very low-energy and long-life. The business side of me sought to balance many competing demands, including up-front versus running and ongoing maintenance costs.

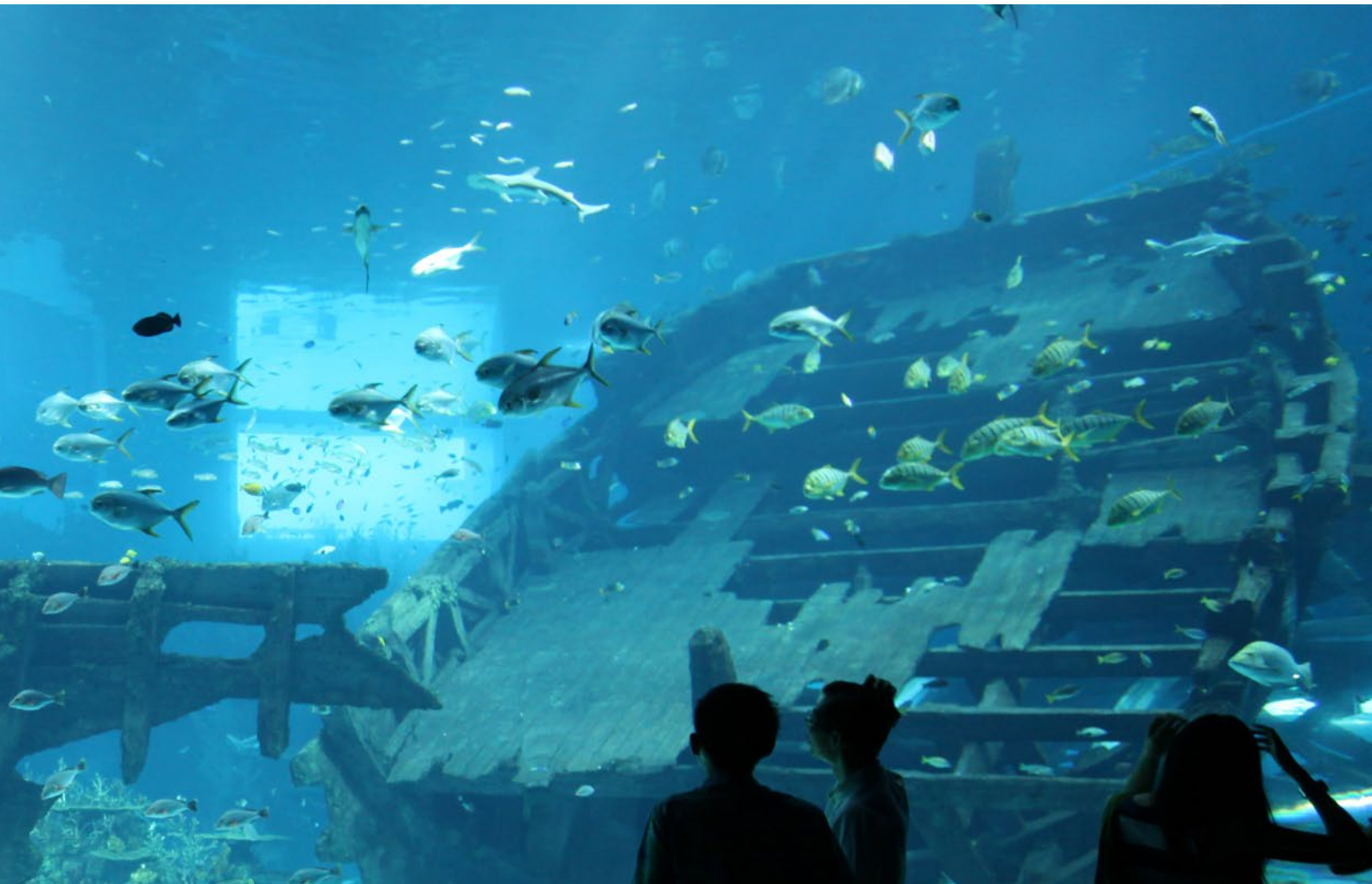
My company, the Gillard Group, does work for an affordable housing company. The first apartment building we did for them was a disused 1960s U-shaped

brick edifice. The client was gobsmacked about the quality of our lighting design and how little it cost relative to past efforts. The building went on to win their first local and international lighting awards.

Fast-forward and the last building completed by the same company won similar lighting awards. Spectrum's façade features four three storey waterfalls of neon light carefully graduated to reflect the colours of a rainbow. Inside, all areas are lit indirectly and lighting aids were used to help people with disabilities, including vision impairment. Our bespoke LED luminaires can be easily reached for maintenance, are lamp replaceable and consume little energy. The latest building, currently under construction, for example, will only consume .43 watts per m2 to light the car park!

The art of lighting has fascinated most great artists. The artful use of light and dark together with composition and colour reflect many intangible skills, including talent and experience. I like lighting churches because many historic buildings have special qualities which can be leveraged. However, even simple structures can be enhanced through clever design.

For example, the Mitchell Fine Art Gallery is a major new edition to the city of Brisbane's growing art scene. The gallery features many Aboriginal works from around



Australia and increasingly, contemporary art. The owner wanted his long high walls uniformly lit with best-quality colour rendering. The issues here included mounting arrangements, cut-off and spill light and potential for glare. The owner and Jenni were also keen to keep running costs low. Another issue is too many manufacturers make false claims about the quality of light and colour for LED product. Many manufacturers no longer pay independent Lighting Laboratories to test and verify LED lamps.

The Gallery walls are now bathed in uniform quality light and the owner can run many different types of exhibitions without having to adjust anything. However, in the smaller private spaces of the Gallery, special luminaires intimately frame small paintings. For this project, the art of lighting, was not to complicate the space. Ultimately, the Gallery is a business and lighting designers must deliver value.

Jenni trusts that sharing examples of her work will motivate other woman into the profession. Artificial illumination is everywhere and most of it is poorly done. Smart woman can reduce global warming by designing-out high-energy lamps, return the star-studded night sky and help birds and turtles find their way by eliminating glare, spill light and over-lighting in our urban spaces and make humanity healthier by

helping our circadian rhythm and aged populations with smart lighting. She hopes that Governments wake up and mandate lighting designers to improve the built environment.

However, beyond all of this, LED is digital friendly. The Gillard Group realised in 2012 that LED would be transformational. Light, in the form of digitised photons, can transmit data via LED. Photons have many more qualities over electrons, especially speed, bandwidth and spectrum, says Jenni. The world is experiencing a paradigm shift and a casualty is the traditional lighting industry which is being profoundly disrupted. Our foresight gave the Gillard Group the time to become the first product independent lighting design company in the world to launch Lighting as a Service and build a system to manage installed LED. I am very proud of our ongoing success, said Jenni.

The decade ahead is very exciting with many new light-based technologies reshaping how the art, business, maths and science of lighting will be done. These changes will impact how we live, work, learn and play into the future. I could not have chosen a better time and profession, concluded Jenni.

For more information, visit [www.jennigillarddesign.com.au](http://www.jennigillarddesign.com.au). ■

# The Covette Clinic

*Orchard, Singapore*

Client: Global Wellness Holdings

Interior Designer: The I.D Department @ The Mill

Lighting Designer: Light Collab (Yah Li Toh, CLD, IALD, IES and Michelle Tang, Associate IALD)

Builder: Taishin Builders

Lighting Supplier: Strongly Lighting

Image Credits: ND Photography





The Covette Clinic is an exclusive, one-stop beauty clinic at Ion Orchard, Singapore. The Covette Clinic comprises of Hair Scan, body scan rooms, consultation rooms, treatment rooms and private suites. The services provided have a single aim of perfecting the beauty to the client's requirements. Light Collab was appointed to create the lighting concept and lighting design to complement the identity of The Covette Clinic, using light to bring out the special materials and interior spaces, working alongside with the interior design team from The I.D Department @ The Mill and also ensuring that people also looked beautiful in the space.

To create an overall cozy and welcoming environment, indirect lighting concealed in the ceiling coves were implemented to create diffused lighting and placing spotlights strategically to highlight certain features. All lighting fixtures were using high colour rendition of above CRI95 and colour temperature of 3000K to create a warm and cozy environment and also to render materials, colours and skin tone beautifully.

Special details were incorporated into display shelves at the reception, to illuminate the products, which were black in colour. The glowing thin shelves were able to illuminate the black finished boxes and products effectively.



Another striking feature at the reception and waiting lounges was the circular feature walls made of glass rods. Prior to execution, mock-ups were done to explore how the glass rods can be lit and sparkle in a cost and design effective manner.

In the hair treatment area, concealed lighting in vanity mirror and tables were incorporated, with the aim of creating soft diffused glow to light up the customers. In treatment rooms and suites, concealed lighting behind the shelves and ceiling coves were also controlled separately to create different lighting levels and requirements.

For more information, visit [www.lightcollab.com](http://www.lightcollab.com). ■



**Yah Li Toh**, CLD, IALD, IES is the Principal of Light Collab. She is one of the first 5 to be recognized with the Certified Lighting Designer (CLD) Certification globally and the first in Asia and Singapore.

With Light Collab, an award-winning lighting design studio based in Singapore, with offices in Japan and Indonesia, she led the team on various notable award-winning international projects such as monuments, commercial buildings, hotels and residence in Japan, Bangladesh, Indonesia, Myanmar, Malaysia and other parts of Asia. She is a professional member of International Association of Lighting Designers (IALD) and the regional coordinator of IALD Southeast Asia. She also speaks about lighting, is an educator and engages in facilitating workshops for design and lighting at tertiary institutions. She is also part of the content steering committee for the IALD Enlighten Conference in Denver 2017, and PLDC Singapore 2018.

Light Collab worked on various notable international projects such as Audi Minato Mirai, Yokohama Japan which have won multiple international illumination awards such as Award of Merit by IES 2014 and Good Lighting Award by Illuminating Engineering Institute of Japan 2013; Tower of Light, a special glass tower which is a Freedom Monument symbolizing hope and freedom of the sacrifice of the selfish freedom fighters, commissioned by the Ministry of War Liberation, Government of Bangladesh and Public Works Department. The impressive illumination of the Tower of Light also received a Section Award presented by IESNA in section recognition of commendable achievement in lighting design, 2014. Other projects also include Bukit Timah Tua Pek Kong Temple in Singapore which has also received Award of Merit by IES 2015 and Yizheng Brand Experience Center, which has also received Award of Merit by IES 2017, Bronze for A\*Design Award for the Lighting project and LIT Awards 2017 for both Interior Architectural Lighting and Light Art categories.

Yah Li was one of the few shortlisted for the Designer of the Year for President Design Award of 2017 and was commended by the Jury for the outstanding "body of work that is conceptually clever, boldly experimental and narratively powerful" and "skillful use of light as a medium to tell stories".



# ISky Gallery at the O2

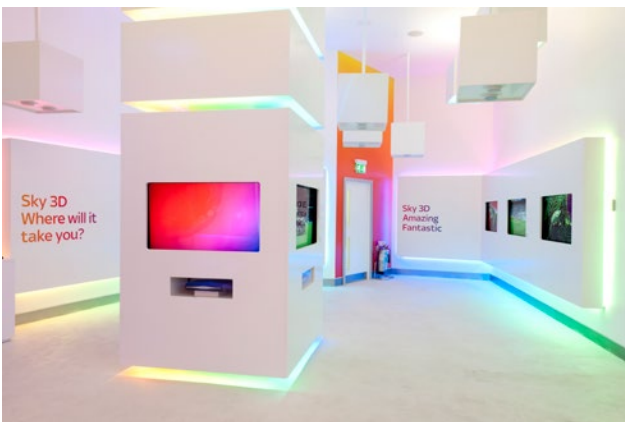
*London, United Kingdom*

Lighting Design: David Atkinson Lighting Design

Client: RPM

Principal Suppliers: Chroma-Q, Flos, Forma Lighting, GLP,  
James Thomas, Osram, Reggiani, Robe, RZB,  
Santa And Cole, Sculptivate, Tom Dixon, Traxon

Image Credits: BSKyB



There was an inherent challenge in the lighting brief for the Sky Gallery, a new three-storey building in the main entrance to The O2 that gives Sky customers an exclusive route into the arena on event days.

On the one hand it had to create an impact among the plethora of visual stimuli and concerns that confronts visitors when they enter the vast space. At the same time, it couldn't be so obtrusive that it conflicted with the large O2 permanent display screen outside or detracted from the 3D TVs in the gallery itself. Ensuring that the effect lighting particularly was dimmed down to exactly the right level was a mix of calculation and extensive on-site calibration.

#### Keeping The Load Down

"We had to be very aware of the O2 screen because that would have had a significant effect on what we were trying to achieve," says David Atkinson of DALD. "Rather than trying to work against it we worked with it, although obviously it's difficult because the screen content changes. However, it helped to keep our loading down."

As well as the main access to Sky Backstage, the space is also open to members of the public as the world's first 3D gallery, showcasing Sky's breadth of 3D programming. The 3D TVs are housed in floating wall panels on two sides of the ground floor and the non-glazed perimeter walls of the floor above. RGB LED strips, each individually addressable by DMX, are stepped behind the panels. These morph through a rainbow colour sequence, reflecting Sky's corporate identity according to the brief of 'experiential' agency RPM.

This continuous flowing effect made the proposition more expensive and gave it a slightly higher headline figure – a total of 20W per square metre – than a sequence of single colours. “It probably wouldn’t have been anything remotely like that if we hadn’t had to achieve this lighting effect around the walls,” says Atkinson. “That was what pushed it.”

For instance, one of the smaller halo walls on the right hand side of the ground floor alone needed 56 LED strips with 168 DMX channels. Fortunately, the Traxon RGB strips were capable of creating the desired pastel colours without the addition of amber and white. “It was a matter of cost and the increased number of channels we would have needed,” says Atkinson. “It already meant an awful lot of LED strips in there to create that band effect, and we were into a lot of DMX universes to make this happen anyway.”

Other colour elements on the ground floor are the reception desk – fitted with opalescent material backlit with RGB LED strips that link with the perimeter panels – and a light box incorporated into the wall leading to the stairs. This has a spectrum-coloured graphic backlit by white LEDs.

The first floor has a much higher ceiling void, which was countered with customised suspended 600mm-square cubes at varying heights, some fitted with speakers and others with lighting. RGB LEDs are set behind opalescent polycarbonate to create a soft diffused glow from the bottom of the cubes. The central column in the space incorporates bands of RGB LED strip, linked in with the overall lighting sequence in the space.

General lighting on this level is through reflected light from dimmable CFLs recessed into the top of the cubes. At ground level it comes from dimmable, trimless, recessed Reggiani Sombrado 11W LED downlights. They are square, and reflect the geometry of the interior. They are fitted with medium optic lenses and warm (3000K) CRI 90 LEDs.

It was a key part of the brief to have a small carbon footprint. “Going down the LED route helped us right from the beginning,” says Atkinson. Only budget prevented an all-



LED solution. The linking landings and stairways are lit by a combination of LED downlights, wall-mounted LED light boxes and ceiling-mounted T5 fluorescent light panels. On two of the stairwells, floating ceiling panels incorporate recessed fluorescent strips and stepped T5 fixtures, dimmed to create a soft, diffused but practical level of light. Recessed custom-designed 2W LED wall fittings define the treads. Cooler 4000K temperatures are used here to define these areas and better tie together the fluorescent and LED sources.

The third level, an open balcony, is lit by reflecting light off large graphic panels using custom Meyer 70W metal halide sources on 600mm arms. This leads to Sky Backstage.



### Sky Backstage

This area, directly behind the arena stage, is for the exclusive use of Sky customers and their families and friends. By registering online for a backstage pass, they, and up to three guests, can gain access to Sky Backstage before and after the main arena show.

The lighting brief for this series of zones evolved from extensive workshops with the Sky branding and design teams. The aim was to create bold, dynamic, immersive spaces, again with a low carbon footprint.

Visitors move from the top of the Sky Gallery along a link corridor with a wall backlit by Chroma-Q Color Force 48 colour-change fittings running its length. "It's a fantastic unit," says Atkinson. "Very punchy." The first area they arrive in is the Welcome Zone, illuminated by backlit opalescent suspended sails lit by automated RGB LED fixtures (initially in red). They are snapped by the virtual paparazzi – a wall incorporating custom-designed miniature white LEDs triggered to replicate photographic flashes – and led to an interactive photographic area where they can pose in front of a media wall lit by discharge theatrical fixtures.





Next is the Interactive Zone, lit by high-level automated LED fixtures. Their intensities and positions are carefully controlled to avoid interfering with the large interactive projection wall. Next door is the Dressing Room, a hair and make-up area that is lit to a practical task level using decorative golf ball lamps around large mirrors, as well as a large suspended RGB oval-shaped pendant.

#### Black Barn Of A Bar

Which brings customers to the bar, via giant lattice shapes with colour-change Osram Dragonchain LED strips behind opalescent material on internal and external faces.

Unlike the contained white canvas of the gallery, this was a beast of a space to contend with. "It was a black barn," says Atkinson. "It had been used as a backstage bar area but it was totally soulless – lit with a few old Source 4s and metal halide. It was a challenge because it was all about lighting – that was what was going to create the environment."

With a massive dark void above, the first priority was to bring the ceiling down. Working closely with the designer, Atkinson's first idea was light boxes that evolved into suspended Barrisol elements based on pieces of the Sky logo.

These are interspersed with RZB's Stadion RGB T8 oval-shaped pendants, which act as colour-block foils to the pastels on the Barrisol. General lighting to the bar top is from high-level dimmed track fixtures, and the bar front is delineated by recessed white LED strips. Over the bar is a centrally suspended feature comprising a series of corrugated polycarbonate panels.

"We needed a central focal point above the bar," says Atkinson. "The panels took light so well, with amazing refraction – it was not just about top lighting but cross lighting them as well." Both this and the Barrisol elements are lit from above by GLP moving-head, RGB LED fixtures – "very effective, very punchy and with the best dimming" – chosen after extensive trials at supplier AC Lighting.

Although moving head, the GLP fixtures remain static, moved and focused remotely only during commissioning. They are slightly modified with a diffusing effect to soften and spread the light over the Barrisol panels. All these components come together to create coordinated, bold, contrasting colours in the space.

### Low Key Ambience

Another key area is the Green Room, which has a more low key ambience. A large central feature pendant (designed by furniture and fixtures creative design agency Sculptivate) is fitted with dimmable CFLs, supplemented by various decorative lamps around the space. The scheme is brought together and coordinated with the other Sky Backstage zones by subtle colour washing to the space from high-level LED sources.

The Sky projects were something of a career summation for Atkinson, who this year received the Lighting Designer of the Year Award. "Having begun in theatre lighting and moved to architectural lighting, I found there was a real harmony between the two areas in both Sky Gallery and Sky Backstage," he says. "They were really exciting, diverse projects to work on."

For more information, visit [www.dald.co.uk](http://www.dald.co.uk). ■



### David Atkinson BIO

David Atkinson Lighting Design (DALD) is an independent architectural consultancy whose practice spans contemporary architectural projects, landscape

lighting, hotels, heritage sites and interactive museums.

DALD is based in the UK and operates globally in collaboration with world-class architects and designers. An unusual breadth and depth of experience enables DALD to work effectively in multidisciplinary teams, proposing and executing designs that are characteristically creative, sympathetic and inventive.

Its founder, David Atkinson, was named Lighting Designer of the Year in 2011 and has won numerous international awards since forming DALD more than 30 years ago.

Many of the practice's architectural schemes are informed by David's early background in theatre, film, music and fashion lighting, all of which have distinct techniques and technologies. David studied at the London Academy of Music



& Dramatic Art and then worked in disciplines such as TV and commercial presentations before entering the architectural lighting field. He still has an active interest in these fields.

David's versatility as a designer, though, has its probable roots in an artistic upbringing. This coupled with a sustained interest in new ideas and a facility for cooperation can also explain the respect in which he is held by other professionals. Many of them are fellow associates of the International Association of Lighting Designers or have enjoyed his many international public-speaking engagements.

The broad range of talent assembled by DALD is often directed at creating synergy between a venue's architecture and the visitor experience. DALD's design for the interior and exterior lighting

of Foster + Partners' United Arab Emirates Pavilion at the 2015 Milan Expo, for example, combined subtly layered architectural, landscape and theatrical techniques, to award-winning effect. A key element of the interior lighting was the invisibility of its source. DALD was also responsible for the lighting element of visitor experience design, which included interactive touch displays and a theatre.

David himself, has a reputation for the deft use of techniques 'without borders', combining industrial lighting and filters to conjure the atmosphere of the Antarctic; using movie-style 'soft boxes' to create diffuse light in a gallery, or specially adapting fittings to create an individual lighting solution.

DALD turned the red-brick Royal Albert Hall in London into a cool white ice palace for a 007 World Premiere

marking the 40th Anniversary of the James Bond movies. And when Ron Arad showed 30 years of work at London's Barbican, he drew on film lighting techniques to illuminate highly polished stainless sculptures from every angle without reflection or glare.

At times, projects involve a sensitive balance of priorities. Cases in point include DALD's lighting of the Eurostar Business Premier Lounge at London's St Pancras station where the brief was to create spaces that were both dramatic and functional. The Sky Gallery is a three-storey building located within The O2 in London, where the public can experience 3D TV; the lighting had to be warm, engaging and impactful but not detract from the experience and it had to have a small carbon footprint. Once again, DALD's success was acknowledged in the form of an award.



# Vicarage Gate House

*London, United Kingdom*

Architect: Eric Parry Architects

Interior Design: Forme UK

Landscape Design: Bowles and Wyer

Lighting Design: Syntax Lighting

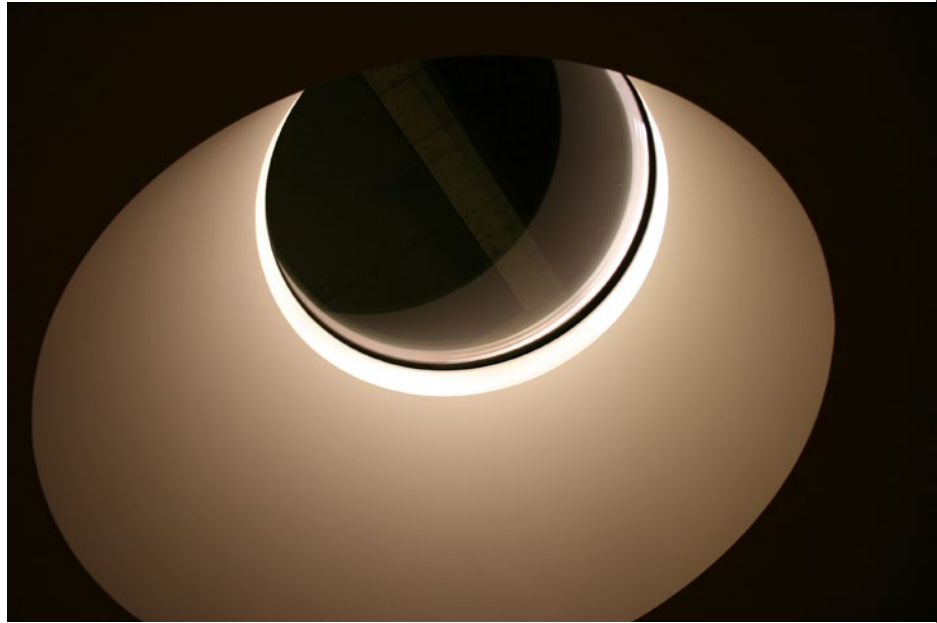


A carefully composed and highly detailed lighting scheme has evolved in conjunction with the architectural design development of this remarkable piece of new built housing architecture located in the heart of the conservation area of Kensington in London. In accord with the surroundings, lighting seamlessly supports architectural design and enhances material finishes to best effect. Fully integrated exterior lighting solutions, promoting comfort and safety within controlled darkness, are a considerate response to the challenges of a sensitive location.

Despite a constricted urban environment, lighting concept is based on enhancing a sense of spaciousness, links between interiors and exterior and an experience of a continuous space flow.



The eight-storey building offers a mix of thirteen duplex and lateral apartments, with concierge and complementing leisure facilities. Architects' vision draws on both precedent and modernity with a contemporary interpretation of neighbouring Victorian buildings, whilst the south facing façade features full height windows maximising light and space. Duplexes are designed around generous light wells for visual interest and daylight access. This is supplemented by a lighting scheme where a sense



of spaciousness and an improved perceived brightness are achieved by illumination of vertical surfaces and indirect lighting effects, an approach consistently applied throughout.

Exterior lighting was required to be visually interesting and provide a sense of comfort and safety, particularly along a narrow blind alleyway to duplex entrances, whilst being inconspicuous for minimal impact to the existing surroundings. A discrete scheme was developed with specific care to minimise overall light levels, carefully control light distribution and be glare-free. All external lighting is concealed within bespoke architectural and landscape elements: handrail, door surround, stone copings, benches, planters, resulting in fixture free environment.



Natural earthy materials of dominant vertical surfaces (brick walls, timber fence, 'rusty' corten steel sculptures), illuminated by warm white light sources, result in pleasant welcoming environment. Dark colour stone paving and bronze doors help avoiding overlighting the space. Close offset directional wash lights to brick boundary wall and pebble floor emphasize their rich texture, whilst indirect reflected light makes decorative bronze planting pots sparkle and glow.



Open to the sky during daytime, gym skylight is delineated by concealed perimeter detail creating soft cone of light at night. Two circular tuneable white backlit ceiling features seamlessly follow day cycle from cool daylight to warmer effect in the evening. Softly illuminated internally from gym skylight below, reception garden sculptural feature is acting as a giant uplight to canopy above.







Ana Stojadinovic

### Syntax Lighting

Syntax Lighting is an independent architectural lighting design practice run by Ana Stojadinovic based in London. Drawing on broad experience in architecture and understanding of light and design at all levels, Syntax Lighting has been consistent in providing well considered, meticulously detailed and thoroughly coordinated lighting schemes for all manner of high profile architectural projects and all over the world.

Unreserved dedication and honest professional approach have been proven to result in an enjoyable yet productive design process and admirable projects, regardless of their size and type. This has been acknowledged many times by both the clients and the architects Syntax collaborated with. Design excellence has also been recognised by the lighting design professional community in various awards' competitions.

For more information, visit [www.syntaxlighting.com](http://www.syntaxlighting.com). ■

# A Professional Solution for Industrial Lighting

By YAHAM Optoelectronics Co., Ltd  
[www.yahamlighting.com](http://www.yahamlighting.com)

The Compact Mg LED High Bay Light is designed for industrial lighting. The magnalium design provides an up-to-date aesthetic feeling and ideal thermal dissipation. The 160lm/w high efficacy, Low UGR, and reliable quality will offer users the best industrial lighting performance than ever.

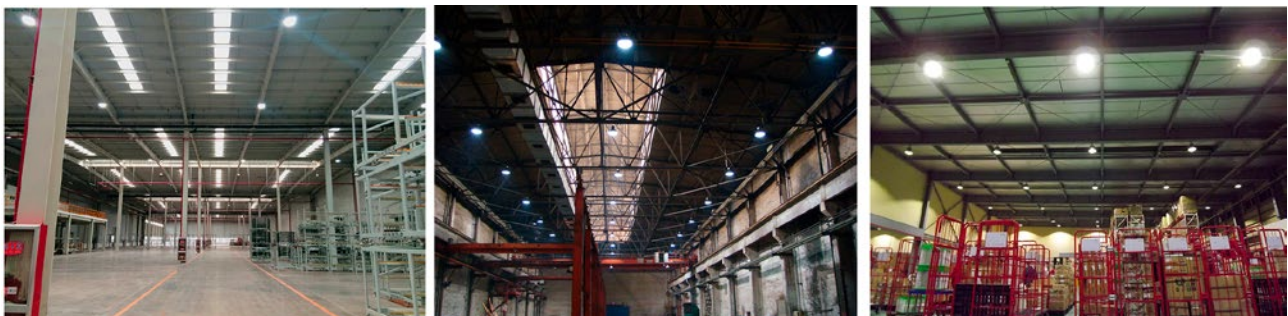


## Features and Benefits

- **100W/120W/150W/180W/240W**  
Higher efficacy, and more lumen output, it's about 3 times energy saving than MH lights.
- **Up to 38,400lm**  
Ideal 1 for 1 replacement of 750w MH light.
- **60°, 90° and 120° Beam Angles**  
Multiple lens for option, to fulfill different mounting height and width demands.
- **Various Styles**  
Different styles to cater for different feeling of beauty.



- **UGR<19**  
Better visual performance with a special anti-glare reflector.
- **Super Easy Installation**  
Classic Eyebolt or Hook mounting, super easy for mounting.



### Intelligent Control

For even more Energy-saving and better lighting management

- **Microwave Motion Sensor**

PIR (Passive Infrared Sensor), Photo Sensor, Voice Sensor and Microwave Sensor are generally most common sensors used in lighting industry. Among these solutions, the Microwave motion sensor with a lux level detector is proved a best solution for industrial lighting control based on it's reliable performance. Here is a brief comparison of these sensors.

Sensor Type	PIR Motion Sensor	Microwave Motion Sensor	Photo Sensor	Voice Sensor
<b>Working Principle</b>	PIR is an electronic sensor that measures infrared (IR) light radiating from objects in its field of view.	Microwave motion sensor detects motion through the principle of Doppler radar.	Photo sensor detects the lux level changes and turn on/off and dim fixtures.	Photo sensor detects the voices of the environment.
<b>Object for detection</b>	Human body temperature.	Moving object	Lux Level	Voice
<b>Advantage</b>	1. Low power consumption. 2. Applicable to both indoor and outdoor.	1. Longer interaction distance, generally about 8-18m for industrial lighting. 2. Strong penetrating power, no visual shadow area. 3. Can be used in harsh environment. 4. Strong antijamming capability	1. Low cost 2. Widely used in outdoor.	1. Low cost
<b>Disadvantage</b>	1. Not sensitive when environment temp. close to human body temp. 2. Easily disturbed by warm objects. 3. Small detecting area, eg. 5-12m.	1. Cost higher than PIR. 2. Not ideal for outdoor.	1. Energy waste duing to long-time working in night. 2. The sensor may be easily disturbed by lamplight if not well installed.	1. Easily affected by noises. 2. Short lifespan.
<b>Suggested for</b>	Outdoor lights.	Indoor applications, Industrial Lighting, Security deives.	Outdoor lights	Low wattage home lightings.

- **Janus Intelligent Control System**

Janus Lighting System adopts PLC (Power Line Communication) technology, that transfers signals by existing power lines. It does not require additional signal wires or any wireless communication devices, which makes the system much more economic than other intelligent Control solutions (E.g. Dali, Zigbee, Bluetooth). And it's much more safer than wireless solutions while achive a better control to lighting fixtures.

With multiple control options, the Janus system will help users to save a lot more energy than normal sensors. And the reasonable management for lamps will also greatly extend their lifespan.



Intelligent terminal, remote control



Single lamp, group, global network dimming



Real-time lamps monitoring



One-click Scene Change



Time Schedule, Dimming

- **Dali (Digital Addressable Lighting Interface)**

As one of the most popular intelligent lighting control systems, Dali features higher security and reliability.

Each device on a DALI network can be individually addressed, which enables accurate control for every fixture. And Dali also allows multiple devices to be addressed simultaneously via multicast and broadcast messages, which enables easy group control.

With a Dali system, users can easily achieve On/Off control, brightness control, scene setting, timing and Device status Monitoring.



# LEDMaster One, Proximo-Challenge Way And Domino

By Fael Luce  
www.faelluce.com

FAEL is proud to offer an innovative spectrum of advanced, energy-saving lighting products and systems suitable for stadiums, airports, and harbours that will be the most demanding projects.



**LEDMASTER ONE** is a newly high power wattage floodlight complete of either symm and asymm distribution beams which may replacing the existing 2000W MH.

**PROXIMO-CHALLENGE WAY** perfectly combines innovations in heat management, optical performance and energy saving in a beautifully simple aesthetic exterior.

It minimises energy and operating cost by reducing over-lighting: a result of very low thermal resistance LEDs that gives exceptionally low lumen depreciation over life, representing the state-of-the-art in the design of high power LED luminary at a surprisingly competitive price.



**DOMINO** a newly multi-purpose outstanding range which impressively can accommodate various accessory suitable for pole-mounting V-shape garden light, urban light, outdoor light and wall mounting light with the latest energy-efficient Leds technology.

The LED luminary can be individually set according to needs via the microprocessor-controlled LED operating electronics for the performance packages 'Plus' with Street Light Control.

The 5<sup>th</sup> Edition of Myanmar Build & Decor



MYANMAR  
**BUILD & DECOR**

Building Materials, Interior, Furniture & Decor

**4-6 October 2018**

**MYANMAR EVENT PARK (MEP)  
AT MINDAMA  
YANGON, MYANMAR**

**Myanmar's Best Source for  
Architectre/Interior Building Materials,  
Interior Design,Furniture and Decor**

[www.myanmarbuilddecor.com](http://www.myanmarbuilddecor.com)

Organized by



**Ind9x**  
CREATIVE VILLAGE

Officially supported by



Supporting Media



**MORE INFORMATION  
OR SPACE BOOKING  
Ms.Salela**

**ICVeX Co.,Ltd.**

**Tel : +66 2 713 3033**

**Email : salela@icvex.com**

# An Impressive Range Of LEDSpots For Retail Lighting

By Vossloh-Schwabe  
www.vossloh-schwabe.com

## NEW NEXT 111 / EVOLVE 111

### The best solution to replace AR111 HID lamps

More than just a simple update, but a complete redesign of high-end LEDSpots. Your NEXT 111 has been substantially improved to maximise performance and simplify installation. The Evolve 111 is the next generation of AR111 engine with lens; compact dimensions and incredible light spot. Both products offer the possibility to easily replace optics, 4 different beam angles (from 14° to 50°) for Next 111 and 3 beam angles for Evolve (from 14° to 35°).

- Narrow colour tolerances: 2 step MacAdam
- Replacement for HID lamps 20–150 W (up to 4000Lm)
- Built-in spot based on LUGA modules (AR111 shape)

### Typical Applications

- Replacement of AR111 lamps
- Integration in luminaires
- Retail lighting
- Downlights
- Entertainment

## EVOLVE 111 TW – TUNEABLE WHITE LEDSpot

The Tuneable White LEDSpot with LUGA Shop TW with dynamic colour temperature enable seamlessly dynamic light control from 2900 K to 5700 K.

- Tuneable white: from 2900 K to 5700 K
- Narrow colour tolerances: 4 step MacAdam
- Long service lifetime

### Typical Applications

- Built-in luminaires / general illumination
- Residential lighting
- Retail lighting
- Downlights

## EVO 75 / EVO 90

As a perfect replacement for HID lamps, these lighting spots are ideal for integration in luminaires like tracks, spots or downlights. The light engines are ideal for applications like retail, halls and public buildings.

The aluminium reflectors offer an homogeneous light distribution spot and it is possible to interchange the reflector easily. 4 different beam angles for each size in spot application (12°/25°/36°) and 2 beam angles for downlight (50° or 60°). LES protection for open luminaires is also possible.

- Narrow colour tolerances: 2 step MacAdam
- Built-in spot based on LUGA modules
- Replacement for HID lamps 20–70 W
- Interchangeable aluminium reflector for homogeneous light distribution

### Typical Applications

- Integration in luminaires
- Retail lighting
- Downlights



NEW NEXT 111 / EVOLVE 111

EVO 75 / EVO 90

Photo Credit: Vossloh-Schwabe



Photo Credit: istockphoto.com

# Easy Holders For Luga Shop Modules

By Vossloh-Schwabe  
www.vossloh-schwabe.com



Photo Credit: Vossloh-Schwabe

## EASY HOLDERS FOR LUGA SHOP MODULES

For simple and secure fixation with multiple optical options. With separate holders a simple and secure fixation of LED modules is possible. The reflectors and lenses can easily be fixed by clicking-in or bayonett fixing.

Holders are designed to work with welded leads.

### Reflectors and Lenses

- One platform for multiple optics configurations
  - Holder with click-in fixation for MR16 lenses (series Evolve) and reflectors (series PLUS). 3 beam angles each.
  - For PCB: 13.5x13.5 mm – LES < 10 mm
  - For PCB: 12.5x12.5 mm – LES < 8.4 mm
  - For PCB: 12x15 mm – LES < 8.4 mm

Holder with bayonett fixation for 75 and 90 mm reflectors (EVO family). 4 beam angles for each size.

For PCB: 19x19 mm – LES < 14 mm  
For PCB: 28x28 mm – LES < 22 mm

### Exchangeable LED Modules

- Using the holder makes it possible for trained staff to easily exchange LED modules, provided ESD protection measures are observed.
- Can be combined and used with other COB's of different brands.



## *EDGE LED STREET LIGHT* *SMART AND PROFESSIONAL*

By **Yaham Optoelectronics Co. Ltd**  
[www.yahamlighting.com](http://www.yahamlighting.com)

The well-shaped streamline heat sink enables excellent heat dissipation performance, and the smooth surface efficiently avoids dust and water accumulation on fixture.

140lm/w high efficacy enables up to 60% energy-saving than MH, and the photocell helps to save even more.

The various lens makes it more professional for streets, and the tool-less access to driver box makes repair and maintenance easier than ever.

Edge LED street light will be your better street lighting choice.



## *LA ROCHELLE*

By **Annabel James**  
[www.annabeljames.co.uk](http://www.annabeljames.co.uk)

Bring seaside chic into your home or garden with this free-standing La Rochelle lantern. With its robust rope handle, these lanterns have a gorgeous nautical feel to them - perfect for the summer months.

## *SELETTI MONKEY*

By **Hurn & Hurn**  
[www.hurnandhurn.com](http://www.hurnandhurn.com)

Striking and distinctive, this Hanging Monkey Wall Light by Seletti is sure to attract attention. A quirky and original design, the light would make a real statement piece in a room and would suit many homes or other interiors. This monkey can be teamed with a standing, sitting or ceiling hanging monkey lamp to create a visually impressive set. Presented in a Seletti gift box, this light would make an ideal gift.





## *CIARA O NEILL VAULT MEDIUM ROSE*

By Rume  
[www.rume.co.uk](http://www.rume.co.uk)

This unique curiosity was created by Ciara O'Neill in her London studio, inspired by the elegant ceiling supports found in church architecture, the Vault Pendant really is an extraordinary design, the organic sculpted form allows light to filter through with varying degrees of intensity, the interaction between light and shade is something observed throughout the collection. O'Neill certainly has crafted a complex yet elegant pendant. All of the designs are entirely handcrafted in small batches from a corrugated strong and lightweight polymer and laminated in cotton book cloth or metallic vinyl in their London workshop.



## *DEXTER CEILING*

By Atkin and Thyme  
[www.atkinandthyme.co.uk](http://www.atkinandthyme.co.uk)

The Dexter Ceiling Light looks fabulous hung over a dining table, island unit or breakfast bar and is especially eye-catching when hung in a row of three. Atkin and Thyme offers three different styles to choose from – burnished copper/black wood top, ivory/natural wood top and zinc gold finish/natural wood top - so there's bound to be one that suits the homeowner's scheme.

## *SOUKI FILIGREE SILVER*

By Artisanti  
[www.artisanti.com](http://www.artisanti.com)

Add some exotic illumination to your home with this round silver filigree pendant light. Beautiful when lit with the fretwork casting mesmerizing patterns, the silver nickel finish to the intricate design will also brighten a room by day. The bulbous light bowl joins a top cone to give a distinctly Moorish feel, giving a sophisticated metallic shine overhead.





**We have made it easier for you to read on your phone!**



**TRADECARDS**  
GLOBAL

### App features include

- Digital issue browsing
- Industry news update
- Events update
- Organisation listings and more...

VISIT OUR WEBSITE AT  
[www.tradecardsglobal.com](http://www.tradecardsglobal.com)

Download **Tradecards Global** mobile application to browse and read our current and past issues of

**bathroom  
+kitchen**  
today

**SEAB**  
SOUTHEAST ASIA BUILDING

**SOUTHEAST ASIA  
CONSTRUCTION**

**Lighting Audio Visual**  
today

**lighting  
today**

**Security  
Solutions**  
Today





# Subscription Form

Fax your order today  
+65 6842 2581

(Please tick in the boxes)

**Southeast Asia Building**



**SINCE 1974**

1 year (6 issues)

Singapore	S\$45.00
Malaysia / Brunei	S\$90.00
Asia	S\$140.00
America, Europe	S\$170.00
Japan, Australia, New Zealand	S\$170.00
Middle East	S\$170.00

**Bathroom + Kitchen Today**




**SINCE 2001**

1 year (4 issues)

Singapore	S\$32.00
Malaysia / Brunei	S\$65.00
Asia	S\$80.00
America, Europe	S\$130.00
Japan, Australia, New Zealand	S\$130.00
Middle East	S\$130.00

**Southeast Asia Construction**



**SINCE 1994**

1 year (6 issues)

Singapore	S\$45.00
Malaysia / Brunei	S\$90.00
Asia	S\$140.00
America, Europe	S\$170.00
Japan, Australia, New Zealand	S\$170.00
Middle East	S\$170.00

**Lighting Today**



**SINCE 2002**

1 year (4 issues)

Singapore	S\$32.00
Malaysia / Brunei	S\$65.00
Asia	S\$80.00
America, Europe	S\$130.00
Japan, Australia, New Zealand	S\$130.00
Middle East	S\$130.00

**Security Solutions Today**



**SINCE 1992**

1 year (6 issues)

Singapore	S\$45.00
Malaysia / Brunei	S\$90.00
Asia	S\$140.00
America, Europe	S\$170.00
Japan, Australia, New Zealand	S\$170.00
Middle East	S\$170.00

**IMPORTANT**

Please commence my subscription in \_\_\_\_\_ (month/year)

**Personal Particulars**

NAME: \_\_\_\_\_

POSITION: \_\_\_\_\_

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

TEL: \_\_\_\_\_ FAX: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

Professionals (choose one):

- Architect     
  Landscape Architect     
  Interior Designer     
  Developer/Owner  
 Property Manager     
  Manufacturer/Supplier     
  Engineer     
  Others

I am sending a cheque/bank draft payable to:  
**Trade Link Media Pte Ltd, 101 Lorong 23, Geylang, #06-04, Prosper House, Singapore 388399**  
 RCB Registration no: 199204277K \* GST inclusive (GST Reg. No: M2-0108708-2)

Please charge my credit card (circle one): Amex / Diner's Club

Card Number: \_\_\_\_\_ Expiry Date: \_\_\_\_\_

Name of Card Holder: \_\_\_\_\_ Signature: \_\_\_\_\_

## July 2018

### ARCHIDEX 2018

July 4 – 7

Kuala Lumpur Convention Center

Kuala Lumpur, Malaysia

Email: [info@archidex.com.my](mailto:info@archidex.com.my)

Website: [www.archidex.com.my](http://www.archidex.com.my)

## August 2018

### LANKABUILD 2018

August 24 – 26

Sri Lanka Exhibition and Convention Centre

Colombo, Sri Lanka

Email: [syed@ambtarsus.com](mailto:syed@ambtarsus.com)

Website: [www.lankabuild.org](http://www.lankabuild.org)

## September 2018

### BMAM EXPO ASIA 2018

September 12 – 14

IMPACT Exhibition Center

Bangkok, Thailand

Email: [wingyanw@impact.co.th](mailto:wingyanw@impact.co.th)

Website: [www.bmam-gbr.com](http://www.bmam-gbr.com)

### CAMBUILD 2018

September 12 – 14

Diamond Island Exhibition and Convention Center

Phnom Penh, Cambodia

Email: [kim@ambtarsus.com](mailto:kim@ambtarsus.com)

Website: [www.cambuildexpo.com](http://www.cambuildexpo.com)

## October 2018

### LED+LIGHT ASIA 2018

October 2 – 4

Marina Bay Sands Expo and Convention Centre

Singapore

Email: [led@cems.com.sg](mailto:led@cems.com.sg)

Website: [www.ledlightasia.com](http://www.ledlightasia.com)

### MYANMAR BUILD AND DECOR 2018

October 4 – 6

Myanmar Event Park (MEP)

Yangon, Myanmar

Email: [info@icvex.com](mailto:info@icvex.com)

Website: [www.myanmarbuilddecor.com](http://www.myanmarbuilddecor.com)

### PLDC 2018

October 25 – 27

Marina Bay Sands Convention Center

Singapore

Website: [www.pld-c.com](http://www.pld-c.com)

# Events & Expositions 2018

### KONSTRUKSI INDONESIA 2018

October 31 – November 2

Jakarta International Expo

Jakarta, Indonesia

Email: [sales@constructionindonesia.com](mailto:sales@constructionindonesia.com)

Website: [www.constructionindonesia.co.id](http://www.constructionindonesia.co.id)

## November 2018

### THAILAND LIGHTING FAIR 2018

November 8 – 10

Bangkok International Trade & Exhibition Centre

Bangkok, Thailand

Email: [scarlet.mak@hongkong.messefrankfurt.com](mailto:scarlet.mak@hongkong.messefrankfurt.com)

Website: [www.thailandlightingfair.hk.messefrankfurt.com](http://www.thailandlightingfair.hk.messefrankfurt.com)

### MYANBUILD 2018

November 16 – 18

Myanmar Event Park

Mindama, Yangon

Email: [darren@ambtarsus.com](mailto:darren@ambtarsus.com)

Website: [www.myanbuild.net](http://www.myanbuild.net)

## Index Of Advertisers

ADMESY	33
ARCHIDEX 2018	3
BMAM EXPO ASIA 2018	7
CAMBUILD 2018	9
KONSTRUKSI INDONESIA 2018	15
DIAL GMBH	19
LANKABUILD 2018	11
LED+LIGHT ASIA 2018	1
LEDVANCE	34, 35
LIGHTING & EQUIPMENT PUBLIC COMPANY	IFC
MYANBUILD 2018	13
MYANMAR BUILD AND DECOR 2018	101
PLDC 2018	24, 25
THAILAND LIGHTING FAIR 2018	5
VOSSLOH-SCHWABE	OBC
YAHAM OPTOELECTRONICS	17

# Our tribute to Lighting...



TradeCards Global mobile application is offering **50% discount** for one-year organisation listing to suppliers and service providers that serve our Lighting Community. With the reduced price of USD500 / \*SGD700 for one-year organisation listing, suppliers and service providers get to enjoy an **additional 10MB of product listing** tagged to your organisation listing.

Visit [www.tradecardsglobal.com](http://www.tradecardsglobal.com) to sign up for a new account and your organisation listing. Input "**LIGHTRIBUTE**" as promo code before proceeding to payment page. The promo code is valid until 31 December 2018.

\*Rate excludes 7% GST applicable for Singapore-registered companies

**TRADECARDS**  
GLOBAL

Supporting mobile version of:

**SEAB**  
SOUTHEAST ASIA BUILDING

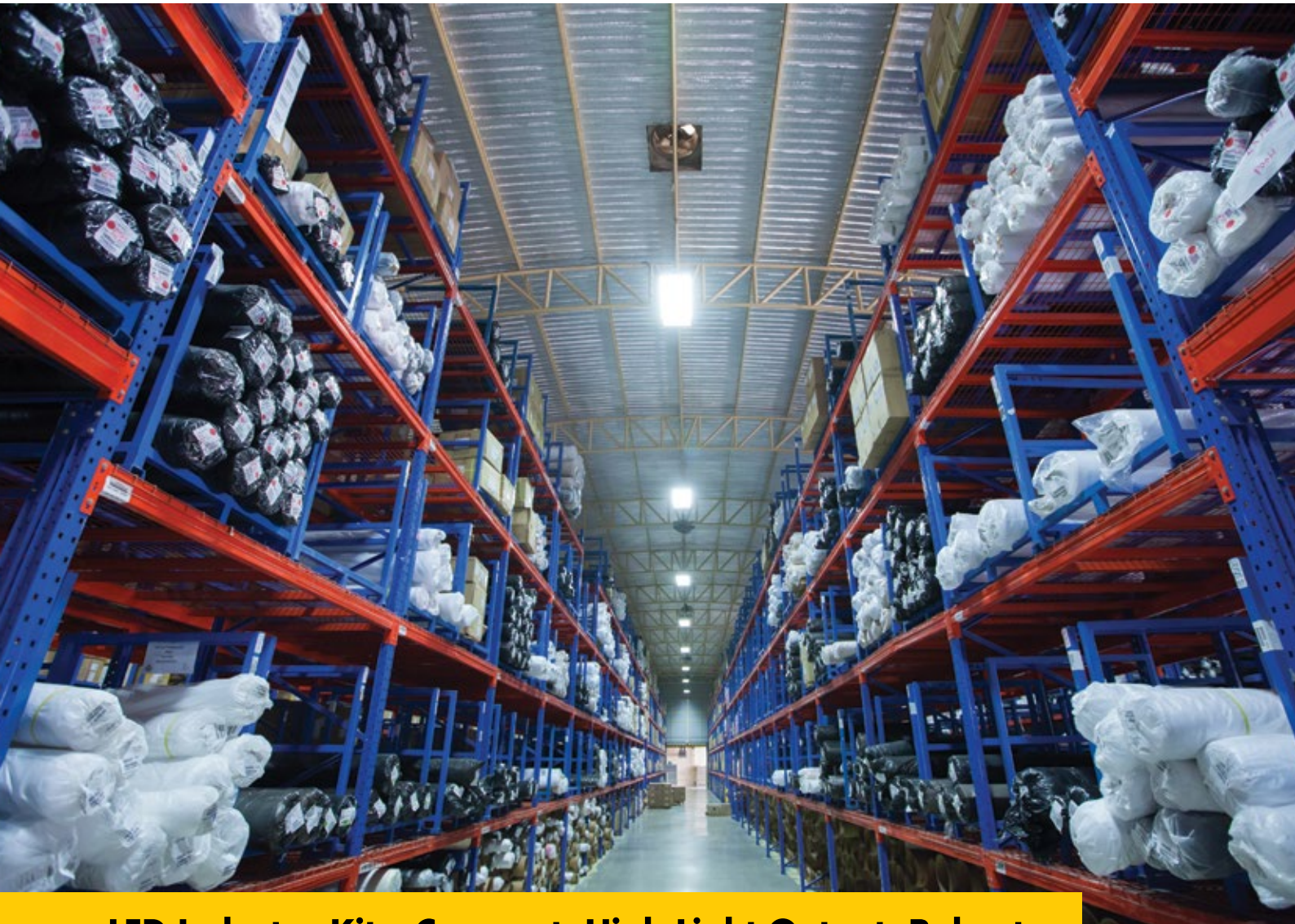
**SOUTHEAST ASIA**  
CONSTRUCTION

**Security**  
Solutions

**bathroom**  
+kitchen

**lighting**  
today





## LED Industry Kit – Compact, High Light Output, Robust

First-class all-in-one solution for industrial and high-bay lighting; Vossloh Schwabe's highly efficient and durable LED system ensures optimum lighting for working spaces, traffic areas and extreme ceiling heights.

Our LED modules, optics and heat sinks are specifically optimised. They come as single components or fully assembled including pre-assembled cables. Highly efficient optics, up to 92%, are available with 90°, 60° and high rack distributions and offer optimum UGR values and an IP65 protection grade.

The system is rounded off by the matching VS LED drivers, which are ideally suited to industrial lighting applications. Connect with us now to learn more!

- Up to 10,700 lm at 154 lm/W ( $t_p = 50\text{ °C}$ ); max. efficiency: 181 lm/W
- Degree of protection: IP65, impact resistance: IK08 (impact test: 5 joule)
- Very long service life: > 60,000 hours; L90/B10 at 700mA/ $t_a$  50 °C
- 5 year warranty

