

# POWER THROUGH LIGHT NEW SOLUTIONS NEW BENEFITS NEW ERA

**HIGHLIGHTS 2024** 



Jue Wang,
Executive Senior Vice President

#### **PROFILE**

Jue Wang joined LEDVANCE in December 2020 as CFO and board member. In her new role as Executive Senior Vice President, she oversees the Regional Managing Directors. In this position, Jue Wang looks forward to advancing customer relationships under the umbrella of "POWER THROUGH LIGHT".

Dear Readers.

We live in exciting times. To be successful in the long term, it's more important than ever to plan today for tomorrow. In our industry, this can only mean rethinking the potential of light. LEDVANCE is again a pioneer in this area. Because with our "POWER THROUGH LIGHT" concept we are heralding a new era of light.

Specifically, this means that LEDVANCE delivers innovations – even beyond classic lighting. We are broadening our horizons in terms of what light can accomplish for our customers, our partners and our day-to-day business. We are bringing the best out of light and are now offering photovoltaic solutions alongside our extensive range of lamps and luminaires.

In each and every one of our business units we stand for useroriented and intuitive solutions. Our full range of innovative LEDs, all-round service and tailor-made concepts give our customers the unique and energy-saving solutions they need to succeed.

We recognize the crucial importance of sustainability, particularly in the context of the energy crisis and climate change. Sustainability plays an integral role in LEDVANCE's corporate philosophy. Our commitment extends beyond product and environmental management to our interactions with employees, suppliers, and society. With these considerations in mind, we develop innovative solutions that contribute to positive change – for a greener planet and a better quality of life. The EcoVadis Silver Medal that we were awarded in 2023 for our achievements in the areas of "Environment", "Labor & Human Rights", "Ethics" and "Sustainable Procurement" serves as both validation and motivation for our ongoing efforts.

In this magazine, we will show you how we combine innovation, sustainability and efficiency for the benefit of our customers. I invite you to join LEDVANCE in harnessing the power of light.

me Co

Sincerely, Jue Wang

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# "FOR US, SUSTAINABILITY IS NOT AN AFTERTHOUGHT **BUT A BENCHMARK** FOR INNOVATIVE PRODUCTS"

AN INTERVIEW WITH JEAN-MARC VOGEL. MANAGING DIRECTOR WESTERN EUROPE AT LEDVANCE

Mr Vogel, why does LEDVANCE, a leader in general lighting, now also offer photovoltaic systems?

JEAN-MARC VOGEL: Actually, if you think about it, lighting and PV have some common ground, both based on silicon technology. Plug a luminaire into the grid and it will produce some light. Expose a solar panel to the sun and it will produce electricity. We aim to give our customers the opportunity to harvest the power of light on an entirely new scale: for lighting and power generation, fully in keeping with our new brand positioning of "POWER THROUGH LIGHT". Against this backdrop, we use intelligent energy solutions such as solar technology and innovative lighting systems to provide improved working and living environments. We are also sending a signal for greater sustainability and are giving our customers the option to benefit

from this change through tangible savings in energy costs.

In what way is LEDVANCE really becoming "areener"?

JEAN-MARC VOGEL: By pledging to contribute to a greener planet as a company. We aim to significantly reduce our CO<sub>2</sub> emissions and the waste associated with our work by developing and implementing sustainable products, solutions and processes. For us,

"Commitment to greater sustainability is effective only when applied across the entire chain. That's why we're providing sustained impetus throughout all areas of application."

sustainability is not just an afterthought but a benchmark for truly innovative products and a crucial ingredient for our corporate strategy. With this in mind, we increase lighting efficiency by means of a strategically planned product lifecycle, contribute to an effective circular economy and promote people's health and well-being.

Where is this focus on sustainability specifically reflected in the range?

JEAN-MARC VOGEL: Commitment to greater sustainability is effective only when applied across the entire chain. That's why we're providing sustained impetus throughout all areas of application. Using new retrofit LEDs in outdoor lighting LEDification, increasing energy efficiency with the Panel Protect luminaire family, and, thanks to our EVERLOOP product segment replacing light sources and

control gear in LED luminaires very easily and therefore making them truly circular.

What other priorities will LEDVANCE have in the future?

JEAN-MARC VOGEL: Regardless of its enormous importance, sustainability is just one of several areas we are particularly invested in. We aim to set new standards in luminous efficacy and output with a new generation of products. The same applies to groundbreaking design concepts, such as the new decorative luminaires for residential application, or when it comes to the variety of types in the new high bay generation. Speaking of variety, our new and existing product solutions are not just available "off the shelf". Many products can be customized as part of our SPECIFY program.

Thank you very much for your time.

#### **PROFILE**

Jean-Marc Vogel, CEO Europe West has been at LEDVANCE/OSRAM since September 2012. Prior to joining LEDVANCE, Jean-Marc Vogel worked at Siemens in Germany and Canada for 14 years. He brings over 25 years of experience in portfolio development, product management, sales and marketing in high-tech companies and over 10 years of market experience in the lighting industry.

# POWER THROUGH SUSTAINABLE SOL FROM LEDVANCE MORE LIGHT, MORE POWER SUSTAINABLE SOLUTIONS

Here at LEDVANCE tradition meets innovation. Back in 2016 we spun off from lighting pioneer **OSRAM** and have now successfully established ourselves as a global player on the lighting market. Our next goal is to turn LEDVANCE into the world's leading supplier of sustainable lighting solutions that will give a real boost to people's productivity, health and well-being.

True to our motto of "POWER THROUGH LIGHT" we also empower our customers to fully use the possibilities of light, both as a means of illumination and for power generation. Our intelligent energy solutions, solar technologies and modern lighting

systems for improved working and living environments help our customers to make significant savings in energy costs. We are also committed to a greener planet by reducing CO<sub>2</sub> emissions and waste through sustainable products, solutions and processes.

And when it comes to future legal requirements to be met by sustainable lighting solutions, the products from LEDVANCE always put you as a wholesaler, installer, facility manager or electrical planner and their customers in a good position. Let's work together to use the full power of light!

# **OUR VALUES**

# THE DNA FOR SUCCESSFUL PARTNERSHIPS



#### **EXCELLENCE FROM A SINGLE** SOURCE

enough if we can do better. Only then can we make your success. You can get all the necessary components at products to lighting systems. This allows us to deliver holistic solutions for a variety of demands using top-quality LED technology. #StrivingForExcellence



#### **SHAPING** CHANGE

We want to be ahead of the global curve when it comes to developing sustainable lighting solutions. That's why our top priorities are energy and resource efficiency as well as the circular economy. We are convinced that sustainability is the only possible way to lasting success. Join us on our journey to a sustainable future.

#MakeChangeHappen



# BETTER TOGETHER

Teamwork is everything to us – in our company and with our customers. It's these long-term relationships built on trust, our extensive portfolio, powerful sales network and outstanding global access to markets that make LEDVANCE your ideal strategic partner to turn your goals into reality. #WinningTogether



#### COURAGE TO TREAD **NEW PATHS**

You don't reach big goals by following beaten tracks. The lightning-fast developments in our industry give us a chance to come up with new products, enter new markets and change the way we think. We embody progress and innovation and want to shape the future of light by combining our over 100 years of lighting expertise with the courage to tread new paths. #BreakingNewGround

# LEDVANCE **IN FIGURES**

**OFFICES** IN MORE THAN COUNTRIES

> **ACTIVE IN MORE THAN** COUNTRIES



# **GLOBAL**

**PRODUCTION** TO THE HIGHEST **STANDARDS** 

#### WORKING TOGETHER WITH **LEDVANCE MEANS:**



#### HOLISTIC SOLUTIONS

Products and systems for your projects



#### ACTIVE **SUPPORT**

Lighting experts for lighting planning and other services at your side



#### **GREEN AGENDA**

Focus on sustainability through energy efficiency and the circular economy



#### SOLUTIONS **BEYOND LIGHT**

Bespoke photovoltaic solutions



#### INDIVIDUAL **SOLUTIONS**

Lighting concepts tailored to your projects



#### **PROFESSIONAL TRAINING**

Fit for the project and market requirements of the future



#### **VARIOUS TOOLS**

For efficient. customer-focused work

# YOUR ONE-STOP SHOP

Are you looking for the perfect solution for your lighting project? Then LEDVANCE is your best choice. We are constantly working to tailor our products and services to your needs and wishes with our comprehensive, innovative and sustainable range: with customer-focused support and with offers that show light in a new dimension.



# **LEDVANCE – YOUR PARTNER FOR SUCCESSFUL LIGHTING PROJECTS**

#### SIMPLY RELIABLE

We advise you on all matters relating to legal regulations, energy efficiency, installation and maintenance. We also plan your lighting project from A to Z and develop solutions tailored to you – throughout the world thanks to our global sales network.

#### SIMPLY FUNCTIONAL

Whether you need lamps, luminaires or light management systems – you'll get everything from a single source from us. Your benefits include perfectly matched components, easy installation and a perfectly functioning system. Based on state-of-the-art LED technology and with a guarantee of up to five years.

#### **SIMPLY FUTURE-PROOF**

EU-compatible LED lamps and tubes, high-efficiency luminaires or IoT-based light management systems – our innovations save energy and CO<sub>2</sub>, increase well-being and user comfort and meet all the legal requirements for future-proof lighting.





LEDVANCE stands for advancing light. Now it also stands for ADVANCING SOLAR ENERGY. Why is that? We are lighting enthusiasts. Sunlight is our inspiration. We bring light into people's lives and are driven by the goal of increasing our impact on net zero.

By harnessing the power of the sun, we enable private and business customers to generate their own clean energy, reduce their dependence on traditional energy sources and minimize their impact on the environment – we fuel people's lives with smart energy.

LEDVANCE offers a unique vertically integrated solution for the building sector covering energy supply, energy storage, energy use and integration with power systems. LEDVANCE Renewables not only drives positive change, but also contributes to a brighter, greener future for our planet.











# 4 COMPONENTS MANY ADVANTAGES

# 01 PHOTOVOLTAIC PANELS

Our panels are designed to meet various requirements from residential to commercial applications. You can choose between power ratings from 405 to 660 W, monofacial or bifacial modules and from a variety of designs.

# HYBRID OR STRING

We offer robust, highly efficient and smart string as well as hybrid inverters – all compatible with various photovoltaic system components. By meeting all technical and safety requirements our inverters are easy to install, to operate and to handle.



LEDVANCE

Our various battery types are available for ideal performance and energy storage, which can be expanded in modular form at any time. The range covers low-voltage batteries from 5.12 to 20.48 kWh and high-voltage batteries from 8.19 to 20.48 kWh.

#### 04 LEDVANCE RENEW-ABLES APP

LEDVANCE

The LEDVANCE Renewables
App provides a convenient
overview of the entire photovoltaic system and its energy
management. Find out in real
time about the status of battery
levels, inverters and the power
consumption or you can decide
when it is most profitable to sell
electricity back to the grid.

# INTERACTION OF SYSTEM COMPONENTS



# LEDVANCE RENEWABLES – SYSTEM OVERVIEW

#### 

- ► Low voltage and high voltage stack system
  - Easy to extend
  - ► Capacity up to 24.5 kWh, 6000 charging cycles



# SUSTAINABLE SUCCESS MANY WAYS, ONE DIRECTION



Sustainability is a hot topic of our time. But just talking about it isn't enough. Instead we need to back up our good intentions with concrete action. That's why LEDVANCE has come up with a new, comprehensive sustainability strategy to create a solid foundation for aligning the company with a sustainable future.

At LEDVANCE, sustainability is not a destination but a continuous journey. It's about more than just being environmentally conscious; it's about reshaping our practices, reducing our carbon footprint, creating collaborative spaces, and promoting ethical business conduct. This includes new product ranges, reducing CO<sub>2</sub> levels by a million tonnes annually in transportation and improving demand planning with AI.



### ECO PASSPORT – VERIFIED ENVIRONMENTAL INFORMATION ABOUT PRODUCTS

Sustainability needs reliability. That's why LEDVANCE offers you and your customers lighting solutions with Type III environmental product declarations from the PEP ecopassport® program. The

verified declarations\* are based on life cycle assessments which determine the ecological footprint of a product and precisely document and explain the data, including its energy demand and global warming potential.

\*According to DIN EN ISO 14025 and DIN EN 15804+A

#### SUSTAINABLE WITH OUR SEAL OF APPROVAL

LEDVANCE is aware of its responsibility as a global company. Just how serious we take our commitment is demonstrated by the silver medal awarded by EcoVadis, one of the world's most renowned providers of sustainability assessments.



Performance of LEDVANCE in EcoVadis business sustainability rating

#### FROM LINE TO LOOP

WE INTRODUCED THE
"LEDVANCE LOOP", A NEW
UMBRELLA SUB-BRAND THAT
CONSOLIDATES ALL OUR
GLOBAL SUSTAINABILITY
EFFORTS AND MEASURES.

Our sustainability tagline "From line to loop" refers to LEDVANCE's transition from linear processes (take-make-waste) to circular ones (take-make-reuse + repeat).





# **EVERLOOP**GREAT YESTERDAY, BETTER TOMORROW

EVERLOOP is the designation that we give to luminaires with conveniently replaceable LED light sources and drivers.

This promotes the circular economy by maximizing the luminaire's lifespan as certain components can be replaced individually, rather than having to replace the whole luminaire. EVERLOOP is not only a sustainable choice but also a convenient one for installers.

See more: ledvance.com/everloop-video

OUR EVERLOOP RANGE: Linear IndiviLED, Damp Proof, Surface Flat





#### \*Calculation must be based on applicable standards e. g. Ecodesign Directive 2009/125/EC, DIN EN 15343:2008-02, DIN EN 45557:2020, etc.

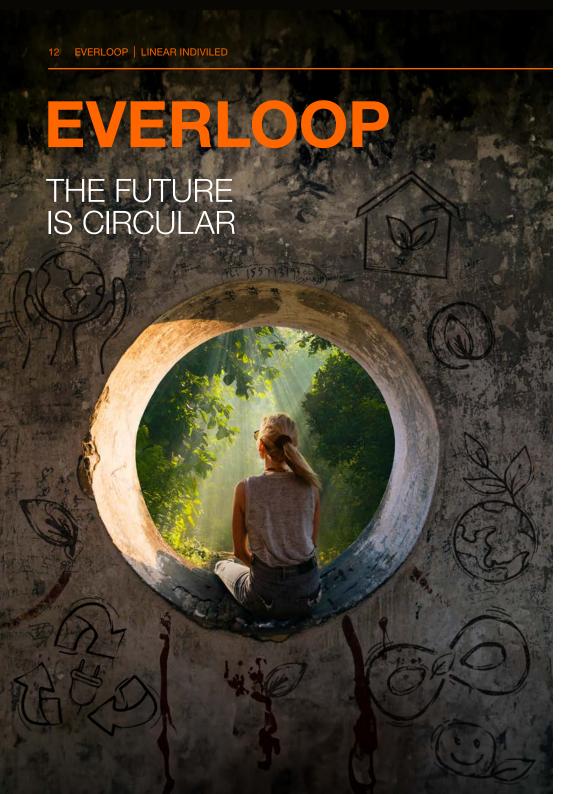
# NATURELOOP YESTERDAY'S PLASTIC FOR TOMORROW'S LIGHT

NATURELOOP is the designation that we give to products that are sourced from and are packaged in recycled materials.

Our commitment: any LEDVANCE product marked with the NATURELOOP badge will contain at least 40 % recycled plastic content based on the plastic of the product\*. It will also be delivered in plastic-free packaging that is made from at least 80 % recycled paper. Our NATURELOOP packaging is fully recyclable.

Various LED Classic NATURELOOP LED lamps available for general lighting in private households.

Assortment at: ledvance.com/natureloop





# LINEAR INDIVILED THE FUTURE HAS BEGUN



Using its new direct or indirect Linear IndiviLED luminaires, LEDVANCE demonstrates how a sustainable circular economy can be combined with modern, individual and efficient lighting.

Thanks to great light output, excellent color rendering and an ideal distribution of direct and indirect light, Linear IndiviLED is always the right product for environments where a high quality of light and people's well-being are equally important – from offices to educational establishments.

Unlike conventional LED luminaires, this product's drivers and light sources are easy to replace and upgrade – either as a pendant or surface-mounted luminaire, or as an individual luminaire or light strip, depending on your needs.



#### WOULD YOU LIKE MORE INFORMATION?

Just scan this QR code and check out the special benefits of EVERLOOP in our explainer video: **ledvance.com/linear-indiviled-video** 

Discover more about our new EVERLOOP luminaires at: ledvance.com/everloop





# OUR EVERLOOP PIONEERS

# LINEAR INDIVILED DIRECT AND LINEAR INDIVILED DIRECT/INDIRECT

The Linear IndiviLED luminaires are the first products in the new EVERLOOP range from LEDVANCE and are both available as on/off versions or ones with additional functions. Here are the most important facts at a glance:

- ▶ Light source and driver easily replaceable and upgradeable
- ▶ Tailor-made look with direct (70 %) and indirect (30 %) light distribution
- ► High flexibility thanks to Power Select driver (ON/OFF), programmable DALI-2 IoT driver and different lumen packages
- ► Very good efficiency (up to 137 lm/W)
- Excellent color rendering (CRI 90), homogeneous light distribution and reduced plare thanks to UGR19
- ► Long life up to 100000 h (L70/B10 @ 25 °C)
- ► Zigbee, emergency, daylight and motion DALI sensor types available
- ▶ Wide range of mounting options thanks to various accessories















and DULUX LED

lamp replacement

for easy, quick and safe

# **SIMPLY SWITCH TO LED NOW!** FLEXIBLE SOLUTIONS FOR AN EASY SWITCH

The ban on mercury-containing and inefficient lamps has been in force since 2023. With high energy costs and increasing demand for sustainable lighting, now is the best time to move over to EU-compliant, energy-efficient and cost-effective LED lighting.

LEDVANCE offers an alternative for every need with a comprehensive range of luminaires, intelligent lighting products and advanced LED lamps. The solutions with LED lamps are simple and economically attractive as the luminaire can be retained. Switching to LED luminaires can also optimize light output and quality, which can also significantly increase productivity.



# **SOLUTIONS WITH LED LUMINAIRES UPGRADE NEW INSTALLATION** If the focus is on optimal light output and quality, maximum efficiency and perhaps added benefits, it's worth upgrading the luminaires or installing new ones. **Upgrade luminaire New luminaire** - If an existing luminaire

#### YOUR SHORTCUT TO THE **RIGHT LED LAMP ALTERNATIVE**

Go directly to the Lamp Finder: ledvance.com/lampfinder



needs to be kept but

electric or mechanical

interfaces are too old

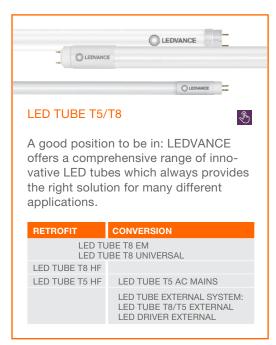
for a retrofit or

conversion

- Optional matching conversion kits for LED tubes for easy rewiring
- LED TUBE EXTERNAL SYSTEM when a dimmable LED tube or emergency lighting solution is needed

- If the existing housing or other components have reached the end of their life
- If lighting performance requirements have changed (e.g. light distribution or quality)
- If a light management system needs to be integrated, or there's an upgrade to human centric lighting
- If aesthetical or functional design requirements have changed







DULUX LED lamp to 230 V:

in the installation guide

ledvance.com/services

please find more information





LINEAR MAGNETIC BATTEN T5 is an innovative luminaire insert using strong magnets for easy LED modernization of existing T5 and T8 metal louver luminaires - especially if the luminaire has other functions or its connections are too old for retrofitting. The CE label doesn't need to be reapplied by the installer.

#### **DAMP PROOF HOUSING**

DAMP PROOF HOUSING is a robust, IP65-protected, IK08-rated, economical and - thanks to the replaceable T8 LED tube – sustainable lighting solution: easy to handle, faster to install and even more versatile to use.



#### **NOT SURE WHAT TO CHOOSE?**

LEDVANCE takes care of tailormade calculations and offers you a customized solution for your lighting requirements - all from a single source. Please get in touch.

Email: contact@ledvance.com Phone: +49 89 780673-660

#### LED PANELS



⊮

portfolio for a wide range of needs – from ON/OFF solutions and HCL-compatible models to integration into light management systems via DALI or Zigbee.

#### LED TRUNKING **SYSTEM**

A highly efficient, versatile and durable solution, TRUSYS FLEX is LEDVANCE's trunking system for a variety of applications with different luminaire inserts.









# BEST PLANS, BEST LIGHT OUR SERVICE OFFERING FOR YOUR PERFECT PROJECT MANAGEMENT

Every successful project starts with a good plan. So why not benefit from our tailor-made advice for planning your lighting project smoothly and successfully? We take care of the whole process and offer you individual solutions for your wishes. Your options at a glance.



#### PROFESSIONAL LIGHTING DESIGN:

DIALUX AND RELUX: Thanks to our cooperation with software manufacturers DIALux and RELUX, LEDVANCE products can be easily integrated into your lighting plans. Our luminaire data is also **BIM-compatible** and we support users in the form of consultation, calculation and after-sales services.

**EVEN MORE CONVENIENT:** LEDVANCE takes care of tailor-made calculations and offers you a customized solution for your lighting requirements – all from a single source.

#### YOUR BENEFITS AT A GLANCE:

- Uniformly good light distribution
- Precise wattage per m²
- Maximum efficient calculation of required number of luminaires and VIVARES components

#### **VIVARES LIGHT MANAGEMENT:**

LEDVANCE offers you special services for this.

PLANNING AND PRECONFIGURATION: On request, we will take over complete preconfiguration of the system and all its components. This will allow you to carry out commissioning on site quickly and easily.

COMMISSIONING AND INSTRUCTION: After installation, you can also use our professional programming and commissioning service. Our experts will commission the system for you and show you how to use it.

**DURING OPERATION:** From fault analysis and troubleshooting to reprogramming, reconfiguring and expanding the system – our experts will support you during operation on site.

# WE CARE ABOUT THE ENERGY TRANSITION

We help you make the most of our photovoltaic solutions – from initial planning and calculation to final implementation.

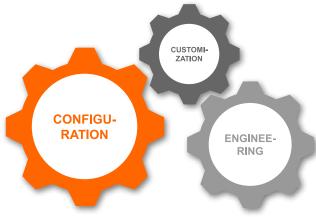




Even the smallest changes can turn a good lighting solution into a perfect one. Do you want to integrate a presence sensor? Perhaps tweak the wiring and connections? Or adjust the housing colors of the luminaires? With SPECIFY we make all this possible for you and much more.

Depending on requirements, the SPECIFY program comprises three stages – from a slightly modified standard solution to a completely customized product:

- Configuration: We adapt products from our portfolio to precisely suit your needs by replacing individual components.
- Customization: We modify our products to meet your individual requirements.
- Engineering: We develop and deliver special solutions outside our range together with our European partners.



### ANY QUESTIONS? TALK TO US. Discover the possibilities of the SPECIFY program

and make your lighting projects even more successful.

We are happy to offer you individual advice.

Just get in touch at: contact@ledvance.com



# CUT ON DEMAND SERVICE FOR LED STRIP SYSTEMS

LEDVANCE offers you a Cut on Demand service from its broad portfolio of LED strips that are prewired on both sides, and tailor-made electronic components.

We'll put together all the components you need for your specific requirements.

The Cut on Demand options from our LED strip range include ...

- tailor-made cutting of LED strips, profiles and covers
- variable cabling options in different lengths
- painting of profiles in different
   RAL colors and coatings
- assembly of all elements from drivers to end caps

#### Find out more:

ledvance.com/CutonDemandVideo

# SHINING SUCCESS STORIES



# DISCOVER OUR INTERNATIONAL PROJECTS

LEDVANCE boosts the power of light around the world. We are a global player and come up with ideas for innovative sustainable lighting in more than 140 countries, where we use our know-how to provide better lighting. Our solutions are as varied as the wishes and needs of our customers. See for yourself.

- 1. KING'S CROSS, UNITED KINGDOM
- 2. SCHREINER GROUP, GERMANY
- 3. BICYCLE GARAGE, NETHERLANDS













- ULRICH HABERLAND STADIUM, GERMANY
- 5. EDUARDO TORROJA INSTITUTE, SPAIN
- NORSEA POLARBASE, NORWAY

### MUNICIPAL POOLS OF SON HUGO, MALLORCA, SPAIN SWIMMING IN THE BEST LIGHT



#### THE CHALLENGE

As part of the modernization of the municipal pools of Son Hugo, a renowned sports and competition venue in Palma de Mallorca, it was necessary to replace the HID lighting in order to achieve energy savings and to enhance the light quality to meet the Class I requirements for hosting international swimming competitions.

#### THE SOLUTION

LEDVANCE developed and implemented a lighting concept that not only meets the requirements for illuminating the pool areas by increasing the luminous flux by up to 48% but also optimizes facility maintenance and enables significant energy savings by reducing energy costs by approximately 50%.

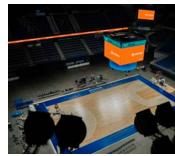
#### PRODUCTS INSTALLED

FLOODLIGHT MAX PROJECTORS, ECO HIGH POWER FLOODLIGHTS and HIGH BAY LED



# WIZINK CENTER, MADRID, SPAIN SPORTS LIGHTING AT ITS PEAK







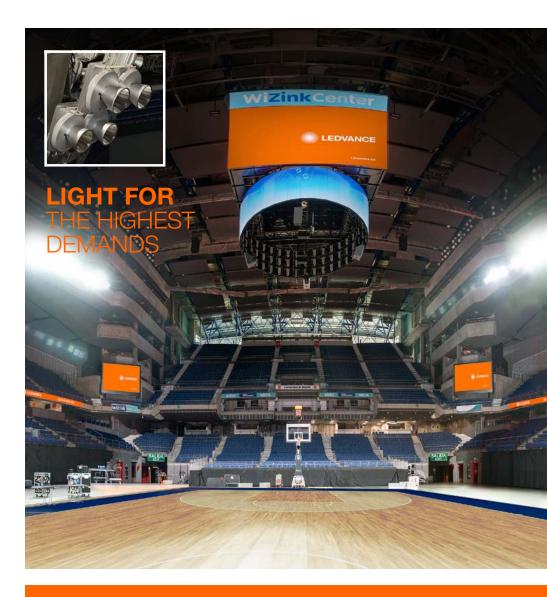
#### THE CHALLENGE

The WiZink Center, a key venue in Madrid for cultural and sports events with a capacity of up to 18 000 spectators, serves as the home arena for multiple basketball clubs. To enhance the lighting at WiZink Center, LEDVANCE provided a tailored solution to meet the challenging needs of sports and entertainment. With the venue hosting international basketball events, the objective was to surpass FIBA's competition standards for luminance and color rendering while offering adaptable intensity control.

#### THE SOLUTION

The new lighting meets all the necessary requirements for Class I basketball games with television broadcasts at both national and international levels. LEDVANCE has developed custom LED projectors according to the client's needs and the capabilities of the venue. A total of 224 320 W LED modules, with a very high color rendering index (CRI), are assembled in groups of four LED modules, with external and independent power supply and DMX control. This setup allows for individual control of each lighting module. The lighting system has been fully designed and manufactured in Europe.

▶ The new system implemented meets all the requirements for basketball games and television broadcasts at both national and international levels. The new lighting offers multiple benefits, including a significant improvement in color reproduction on television, increased brightness levels, and uniformity on the court.



#### ANY QUESTIONS? TALK TO US.

Would you like to know how we can support your projects? Feel free to ask; we look forward to hearing from you! contact@ledvance.com

+49 89 780673-600

All project information and other cases can be found here:

ledvance.com/projects







# LIGHT MANAGEMENT FROM A SINGLE SOURCE

# SUPER EASY WITH LEDVANCE

Are you looking for efficient, intelligent and environmentally friendly lighting? One thing is clear: You can only achieve maximum energy savings by using lighting control – after switching to LED. With the VIVARES light management systems, LEDVANCE offers both single room solutions up to 200 m² and floor solutions up to 1000 m². Benefit from:

- control units, luminaires, LED tubes and lamps, sensors and pushbutton couplers from one supplier
- simple configuration and commissioning from plug and play to more complex, customizable solutions or app control
- individual support from lighting planning to commissioning of the system and on-site instruction
- ► comprehensive after-sales service
- ► a 5-year system guarantee

<sup>1</sup> Potential savings of an optimized sensor-controlled LED lighting system compared to a conventional system with fluorescent tubes

# FOR NEW AND EXISTING BUILDINGS THANKS TO DALI OR ZIGBEE TECHNOLOGY





# VIVARES DALI THE DALI-2 INDUSTRY STANDARD SOLUTION

Established for the future: The VIVARES DALI control units are able to control up to 1 024 luminaires and 1 008 input devices using the established DALI-2 industry standard. They are therefore also compatible with other DALI-2 products on the market. VIVARES DALI systems are suitable whenever additional control lines can be laid without any problems, for example in suspended ceilings, when retrofitting existing DALI installations or when equipping new buildings. With DALI-2 it is even possible to install light management for entire buildings of up to 8 000 m². VIVARES DALI also has an optional KNX interface and can be integrated into the building control system.

# VIVARES ZIGBEE WIRELESS NETWORK SOLUTION

is flexible and easy to adapt.

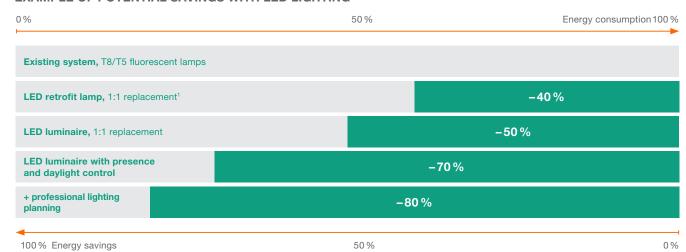
Perfectly connected: The VIVARES Zigbee control unit communicates with up to 200 compatible devices using the highly reliable Zigbee 3.0 wireless standard. This makes the system the first choice when no additional control lines should or can be laid, for example when modernizing existing buildings or refurbishing listed buildings. VIVARES Zigbee systems are

also ideal for changing room situations because the system

A look at numerous applications shows that many lighting systems are outdated and far from future-proof.

Sustainable modernization reduces energy consumption, saves costs and brings a significant increase in lighting quality.

#### **EXAMPLE OF POTENTIAL SAVINGS WITH LED LIGHTING**



<sup>&</sup>lt;sup>1</sup> Efficiency class C, 160 lm/W – light distribution/illuminance must be checked in advance. Source: licht.de





#### **DALI LMS COMPONENTS**





#### **OSRAM DALI ECO BT** RTC CONTROL UNIT

BT = Bluetooth interface, RTC = With real-time clock functionality



#### **DALI-2 SENSOR** LS/PD O CI

LS = Light sensor PD = Presence detection O = Office CI = Ceiling integration

# ... of daytime is spent in rooms with artificial light.

LEDVANCE

**BIOLUX HCL** uses human centric

in daylight and

lighting to simulate the natural changes

increases productivity by up to ...

# ONE ROOM, MANY SOLUTIONS

VIVARES offers solutions for single rooms with a size of up to 200 m<sup>2</sup> based on individually configured light management systems, including up to 50 DALI or 40 Zigbee components and luminaires. Simple, intuitive control from manual and automated lighting control with sensors to app solutions.

#### YOUR BENEFITS:

- ► Clear: one room, one system install and forget
- ► Simple: fully functional LMS following installation
- ► Flexible: manual and automatic lighting control
- ► Energy-efficient: optimal energy savings achieved through lighting control - after switching to LED
- ► Feel-good factor: the BIOLUX HCL human centric lighting system for a positive biological effect with a possible increase in productivity
- ► Customizable: Tunable White solutions with adjustable light colors thanks to a wide range of VIVARES control units

<sup>2</sup>E = Exchangeable cover

#### OUR DALI- AND ZIGBEE-BASED LMS SOLUTIONS FOR SINGLE ROOMS. WE OFFER YOU BOTH.

#### **NEW:**

#### DALI CONTROL UNITS - MORE STYLISH AND FUNCTIONAL THAN EVER





DALI CONTROL **UNIT TOUCH** 



DALI CONTROL **UNIT TOUCH TW** 



**DALI CU** SELECT E TW2



**DALI CONTROL** UNIT SELECT



DALI CONTROL **UNIT SELECT TW** 

#### **COMING SOON:**

#### **ZIGBEE DIRECT - WORK IN** PROGRESS AT LEDVANCE

- no control unit. no control cables
- no IT/WIFI network planning required
- focus on lighting control for one single room

STAY TUNED FOR THE FINAL PRODUCT!





in production1

1www.ecodesignconsultants.co.uk/healthy-buildings/





# MANY ROOMS, ONE SOLUTION



Light management systems are supposed to be complex.

LEDVANCE helps you to get off to a great start on your LMS journey:



Installation



Project planning



Energy monitoring and maintenance assistence



One light management system for an entire floor? No problem for VIVARES DALI and Zigbee control units. One centrally controlled system can be used across multiple rooms (up to 1000 m²) with optional IoT\* functions. However, the lighting of each room within the floor solution can still be controlled and adjusted separately. Lighting options such as scenes or Tunable White and human centric lighting personalize the light in rooms.

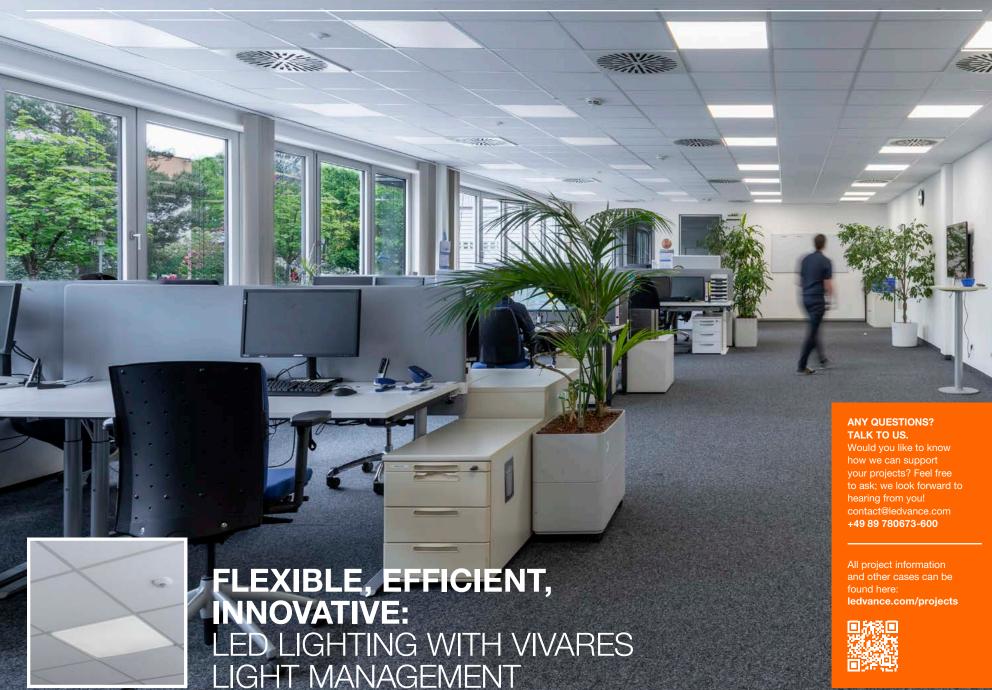
#### YOUR BENEFITS:

- ► Versatile: one system for all requirements
- Independent: remote access without needing to be present to configure the light management system
- ➤ Transparent: optional VIVARES cloud services with energy consumption monitoring and maintenance management always keeping an eye on costs
- ▶ Just in time: time settings for individual lighting scenes
- ► All options: from standard monochromatic light and Tunable White to biologically effective light with the BIOLUX HCL human centric lighting system through DALI Pro2 IoT control unit

\*IoT = Internet of Things. This means that the systems can provide evaluations in the form of dashboards or can be connected to cloud solutions that monitor energy consumption and maintenance cycles, for example. \*Proven by reference projects

Want to discover the potential of our cloud services? You can find out more at: ledvance.com/vivares-cloud











#### PANEL CMFT 625 P 33W 840 U19 ZBVR

- \*Light sensor/Occupancy sensor
- <sup>1</sup>Compared to luminaires that use fluorescent lamps
- <sup>2</sup> Annual average based on the energy savings indicated, see p. 59 for calculation details





# SCHREINER GROUP GMBH & CO. KG, OBERSCHLEISSHEIM, GERMANY BETTER ILLUMINATED WITH A SYSTEM

#### THE CHALLENGE

Efficiency in modern businesses is no longer limited to organization and production; today, it also encompasses factors such as intelligent and demand-oriented lighting. Against this backdrop, Schreiner Group GmbH planned to equip the spaces of its corporate headquarters in Oberschleißheim with a new, energy-efficient lighting system. In response to the initial request for 240 switchable LED panels, LEDVANCE proposed combining the transition to LED technology with the installation of the VIVARES Zigbee light management system.

#### THE SOLUTION

Schreiner Group GmbH decided to install the VIVARES Zigbee light management system. As a wireless system, this is ideal for installation in existing buildings and can communicate with more than 200 Zigbee-capable devices via the VIVARES Zigbee control unit. The system-controlled LED panels ensure significantly improved light quality and more even illumination of different spaces. Compared to the previous lighting, in this case energy consumption is reduced by more than 61 % through LED and another 30 % by VIVARES, as the light intensity adjusts to daylight and turns off when rooms are unoccupied.



#### YOUR CONTRIBUTION TO CARBON FOOTPRINT REDUCTION

Switching to LED and installing automated lighting control on top of that is a crucial step in reducing the carbon footprint of lighting.

ENERGY SAVINGS WITH LED UP TO

FURTHER SAVINGS WITH VIVARES UP TO CO<sub>2</sub> SAVINGS WITH VIVARES 73 %<sup>2</sup>





# SPOTLIGHT ON EMPLOYEES OFFICES IN A NEW LIGHT

Digital, hybrid, flexible – today modern offices are more than just a functional framework for a variety of workplaces. Modern office spaces are geared towards the needs of employees and call for a networked working culture that harmonizes concentrated work, social interaction and creative teamwork.

An essential factor to make this a success is an innovative lighting concept. That's why LEDVANCE makes your office lighting ready for the future with groundbreaking and user-friendly products and systems. And with sustainable, high-quality and interactive lighting solutions that reduce CO<sub>2</sub> emissions, lower maintenance and energy costs, and most importantly increase employee well-being and performance.

# OUR OFFICE HIGHLIGHTS FOR YOU

Versatility is king in professional life – also when it comes to office lighting. That's why our current office highlights meet a wide range of requirements for modern workplace lighting – from the highly efficient and durable PANEL HIGH OUTPUT to the LINEAR INDIVILED DIRECT/INDIRECT 1 200 DALI, which is included in the EVERLOOP series and combines sustainability, high quality of light and easy installation.



Focussing on sustainability and the circular economy, this EVERLOOP luminaire offers convenient replacement of light source and LED driver, making it ideal for office and education applications. Very good glare control (UGR < 19), Power Select, excellent color rendering CRI 90 and up to 137 lm/W, VIVARES ready: DALI-2 and Zigbee, multiple mounting options.







S<sub>m</sub>



LED solution to replace compact fluorescent lamps (CFLni) like in offices, hallways or shop applications. Easy relamping thanks to compact design, low energy consumption, operation on CCG or directly on AC mains, for vertical applications.









<sup>3</sup>L80/B10 at 25 °C

see p. 59 for calculation details



Office luminaire with high lumen output and Power Select, economical high efficiency and long lifetime. Additional versions with DALI-2 or for emergency installations available. Up to 5216 lm, efficacy of up to 170 lm/W, long lifetime: 100 000 h³, VIVARES ready: DALI-2, connector box preinstalled.







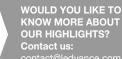
# PANEL TUNABLE WHITE

Panel for office and education applications that enables an individual Tunable White lighting solution in combination with compatible DALI-2 lighting controls and supports LEDVANCE human centric lighting. High system efficacy with up to 115 lm/W, low flicker light, good glare reduction (UGR < 19), DALI-2 certified, VIVARES ready: DALI and DALI HCL.















### ON/OFF LED TUBE SOLUTION

#### LED TUBE T5 HF P SIMPLE 1:1 REPLACEMENT





#### LED TUBE T5 HF P



LED retrofit replacement of existing T5 lamps on compatible HF ballast in linear (louvre) luminaires installations. Splinter protection and no bending thanks to glass technology, quick and safe replacement without rewiring, high luminous flux, also suitable for operation at low temperatures.

#### LMS SOLUTION WITH LED TUBE EXTERNAL SYSTEM AND VIVARES DALI LIGHT MANAGEMENT

#### **VIVARES DALI**

#### AUTOMATED LIGHTING CONTROL AND BUDGET FRIENDLY

At LEDVANCE you get everything you need for innovative light management in one place. VIVARES DALI and our LED EXTERNAL SYSTEM help you design your lighting projects in an intelligent, efficient, energy-saving and environmentally friendly way.





#### OSRAM DALI ECO BT RTC



Controller for daytime-dependent change of brightness and color temperature for office and education applications. Control and adjustments of light via smartphone, up to 4 timers with ON-/OFF-time and weekday configurable, up to 4 groups separatly controllable.

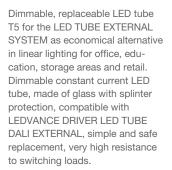








### LED TUBE T5 EXTERNAL FOR LED DRIVER EXTERNAL





### LED DRIVER LED TUBE EXTERNAL DALI P



Multi-watt constant current SELV driver for the LED TUBE EXTERNAL SYSTEM for advanced applications with DALI light installations. Adjustable output currents via dip switch, fit for T5 and T8 LED TUBE EXTERNAL, DALI-2 for dimming and sensor operations, suitable for installation in emergency lighting systems according to IEC 61347-2-13.

#### OSRAM DALI COUPLER PB



DALI pushbutton coupler for installation in flush-mounted boxes. For standard pushbuttons/switches, DALI-2 certified, DALI Bus powered (no mains connection necessary), multiple couplers connectable to the same DALI line.



#### DALI-2 SENSOR LS/PD O CI



Sensors for light management systems with DALI-2 technology with motion detection range optimized for corridors. Wide detection range, DALI-2 certified input device (303, 304), modern reduced design, occupancy detection via Passive IR element, light sensing up to 2 000 lx, IP54 with Ceiling Mounting Kit (optional), powered via DALI Bus.





#### YOUR CONTRIBUTION TO CARBON FOOTPRINT REDUCTION

Switching to LED and installing nutomated lighting control on top of that is a crucial step in reducing the sarpon feetprint of lighting.









# FORMER PARLIAMENT BUILDING "LANGER EUGEN", BONN, GERMANY CONTEMPORARY HISTORY IN A NEW LIGHT

#### THE CHALLENGE

Known as "Langer Eugen", the high-rise building is an important monument in the history of the German parliament and still characterizes the cityscape of Bonn today as the headquarters of international organizations. As part of a comprehensive modernization of the building, the lighting on the walls, in the corridors and in the offices is also to be converted to LED technology while retaining the existing optics and luminaires, saving CO<sub>2</sub> and significantly reducing the need for spare parts and maintenance work.

#### THE SOLUTION

On behalf of the Gegenbauer Group, LEDVANCE is making the lighting for walls, corridors and offices in the former Bonn "Langer Eugen" high-rise building for members of parliament future-proof and EU-compliant. By integrating LED tubes and LED downlights into the existing luminaire stock, not only the light quality and the maintenance effort – the ROI is 1.3 years (including installation costs) – are optimized. Through a CO<sub>2</sub> reduction – of 49 to 61 %, depending on the area – LEDVANCE also sets a strong example for sustainable lighting solutions in this prominent environment.









#### **ANY QUESTIONS?** TALK TO US.

Would you like to know how we can support your projects? Feel free hearing from you! +49 89 780673-600

and other cases can be found here: ledvance.com/projects



# INDUSTRY Demands are high in industry. Lighting is no exception. Lighting systems in industrial facilities have to work in damp, hot or dusty environments - and be reliable at all times, economically viable, automatic if possible, and meet relevant guidelines. And in light of high energy prices, a lighting solution's efficiency is also becoming more and more important. They sound like big challenges. Challenges you can face at any time with LEDVANCE's industrial portfolio.

# A BRIGHT FUTURE NEW PROSPECTS FOR INDUSTRY

Light gets our industry going – whether in production, lab areas, logistics or warehouses. Even more so when the lighting solutions combine long-lasting robustness with great potential savings in CO<sub>2</sub> emissions and energy consumption and boast an excellent quality of light, creating the foundation for safe, efficient and concentrated work for the entire workforce. And when they meet all the requirements and standards for industrial applications, of course. Our innovative lighting solutions satisfy all these expectations. Because we want to use excellent light to help keep the industry going.



# 01

# OUR INDUSTRY HIGHLIGHTS FOR YOU

Industry delivers top performance, even under tough conditions. Just like our highlight products. For example, high-performance LED tubes such as the T8 EM LED TUBE HIGH TEMPERATURE ULTRA OUTPUT can be used in a temperature range from -20 °C to +80 °C. And the energy-efficient and powerful PANEL PROTECT luminaires are particularly suitable for applications that require high IP protection.





Square recessed panel luminaires for applications where a higher IP (IP54) protection is needed. With DALI-2 IoT technology and sensor versions on request. Highly versatile due to 4 step Power Select on the driver, up to 5040 lm, energy savings thanks to high system efficacy of up to 140 lm/W.







€m)

- <sup>1</sup>Compared to fluorescent lamps
- <sup>2</sup>Annual average based on the energy savings indicated, see p. 59 for calculation details



#### HEAVY DUTY LED TUBES T8 EM



- 1. LED TUBE T8 EM HIGH TEMPERATURE ULTRA OUTPUT for ambient temperatures of up to to +80°C.
- 2. LED TUBE T8 EM HIGHBAY ULTRA OUTPUT with a beam angle <100° and significantly higher lux level than standard LED tubes.
- 3. LED TUBE T8 EM CHIP CONTROL with special sleeve which filters light below 500 nm for demanding applications like semiconductor production.



#### TRUSYS FLEX



# DAMP PROOF HOUSING DALI

Versatile linear trunking system with fixed energy rail and flexible installation of linear light source with optional blind cover and spots, tubes or sensor inserts. For medium heights in industry halls, high rack warehouses, garages. Directed light distribution for great heights, energy saving and cost-effective, various lumen packages and wide range of beam angles, multiple driver versions ON/OFF, DALI-2, emergency.







Robust housing for dimmable T8 LED tubes with already installed dimmable EXTERNAL SYSTEM driver for parking garages, warehouses and production areas. DALI-2, IP65, IK08, easy and toolless installation, suitable for LED TUBE T8 EXTERNAL, versions for emergency lighting available.













KNOW MORE ABOUT OUR HIGHLIGHTS? Contact us: contact@ledvance.com

+49 89 780673-600

**WOULD YOU LIKE TO** 

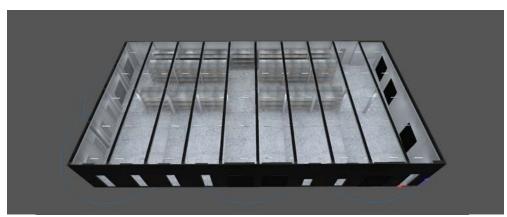




# SUSTAINABLE LED SOLUTIONS FOR WAREHOUSES

The task? To upgrade the lighting in a warehouse from linear fluorescent tubes to LED technology.

The objective? To provide a high-quality, sensor-controlled and energy-efficient lighting solution within the existing housings despite high shelves, narrow aisles and little daylight. The results? Leave a lasting impression.



#### **ON/OFF LED TUBE SOLUTION**



#### LED TUBE T8 EM **ULTRA OUTPUT S**



High performance LED tubes with extra high light output for electromagnetic control gear (CCG) and AC mains. A LED alternative for linear luminaires. Luminous flux up to 4100 lm, efficiency up to 185 lm/W, Energy Class B, lifetime of 75 000 h (L70/B50 at 25 °C), 1200 mm and 1500 mm versions, shatterproof.

#### LMS SOLUTION LED TUBE T8 EM CONNECTED WITH EXTERNAL CONNECTED SENSOR



#### **CONNECTED P**



LED tube for intelligent control via connected sensors to reduce energy consumption in parking, warehouses and production applications. Short payback period thanks to low energy consumption and maintenance costs. LED tube for EM ballast (CCG) or direct mains. Works with LEDVANCE connected sensors via Zigbee 3.0.

#### CONNECTED SENSOR **HIGH BAY**



Wireless smart PIR motion sensor for LED TUBE CONNECTED. Controls compatible products without Internet connection or smart devices. Multiple sensors can be networked, CONNECTED SENSOR HIGH BAY is ideal for installation heights of 4-14m, for indoor use only (IP54).

#### LED TUBE T8 EM **ENERGY EFFICIENCY CLASS A S**

LED tube with maximum energy savings thanks to energy efficiency class A for linear luminaires.

No bending thanks to glass technology, efficiency up to 210 lm/W. lifetime of 100000h, 10-year quarantee, quick, simple and safe replacement







#### YOUR CONTRIBUTION TO CARBON FOOTPRINT REDUCTION



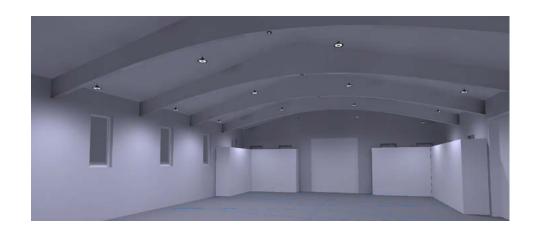
GLOBAL PARAMETERS: Days in operation: 300 | Hours/day in operation: 24, with sensor: 14.4 warehouse | 16.8 production | Price of kW/h [6]: 0.4\* | \*Potential savings of an optimized sensor-controlled LED lighting system compared to a conventional system with traditional light sources. Prices may vary in your country. Trade sales rebates taken into account. This is a sample calculation and does not replace a detailed calculation for your specific project. \*Compared to fluorescent lamps/conventional high bay luminaires

<sup>2</sup>Annual average based on the energy savings indicated, see p. 59 for calculation details

# **SUSTAINABLE LED SOLUTIONS**FOR PRODUCTION HALLS

The task? To modernize the lighting of an industrial production hall and switch to LED technology.

The objective? To realize a lighting concept that improves the quality of light even in demanding circumstances and saves energy at the same time. The results? Meet the highest expectations.



### ON/OFF LUMINAIRE SOLUTION



#### **HIGH BAY**



Attractive performance LED high-bay luminaire for versatile high ceiling applications. High luminous efficacy, long lifetime, up to 175 lm/W, IP66, IK10, optimized weight and size due to compact design, down to UGR ≤ 22 in combination with reflector, various luminous flux and beam angles, in 4000 K or 6500 K.

### LMS SOLUTION WITH HIGH BAY DALI GEN 3 LED LUMINAIRE AND VIVARES DALI AND SENSOR



#### HIGH BAY DALI



LED high-bay luminaires with DALI interface for versatile high ceiling applications with light management control. High compatibility thanks to DALI-2 interface for dimming and sensor operations, low flicker light thanks to special electronic control gear, high luminous efficacy up to 175 lm/W, IP66.



#### DALI-2 SENSOR PD HB CM



Sensors for light management systems with DALI-2 technology for versatile high ceiling applications.

Detection range optimised for great heights of up to 14 meters, motion sensor for surface mounting, robust housing, IP54.



#### OSRAM DALI PRO 2 IOT LDVV



Controller for DALI-2 IoT light management systems with BIOLUX human centric lighting option for high quality daylight simulation.
Suitable for indoor installations.
DALI-2 certified, IoT ready with built-in gateway for remote data access, LAN Interconnect to connect up to 8 controllers into one network, Cloud API for direct connection of a 3rd party cloud.

# KING'S CROSS STATION, LONDON, GREAT BRITAIN ENERGY SAVINGS AND LOWER RUNNING COSTS

#### THE CHALLENGE

The old lamps originally installed at the iconic train station King's Cross were failing frequently and changing them required specialist lift equipment which, for health and safety reasons, could only be used at certain times of the night when the concourse was empty. The station needed new luminaires that were far more reliable and energy efficient, but to keep in line with the original appearance of the building, they had to look the same as the old lamps.

#### THE SOLUTION

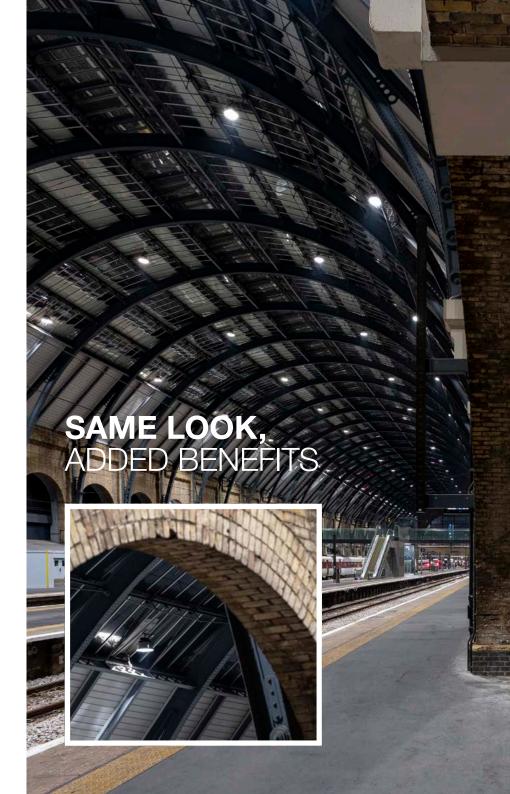
Over 160 High Bay DALI 155W, 4000 K LEDs and reflectors have been installed across eight platforms at London's historic King's Cross Station. While looking the same as the old lights and providing the same amount of brightness, the new High Bay units last far longer – thanks to a five-year guaranteed lifespan – and will significantly reduce maintenance costs and provide energy savings of up to 60 % compared to conventional high-bay luminaires. The High Bay solution additionally offers the flexibility of being dimmable and switched on and off instantly.

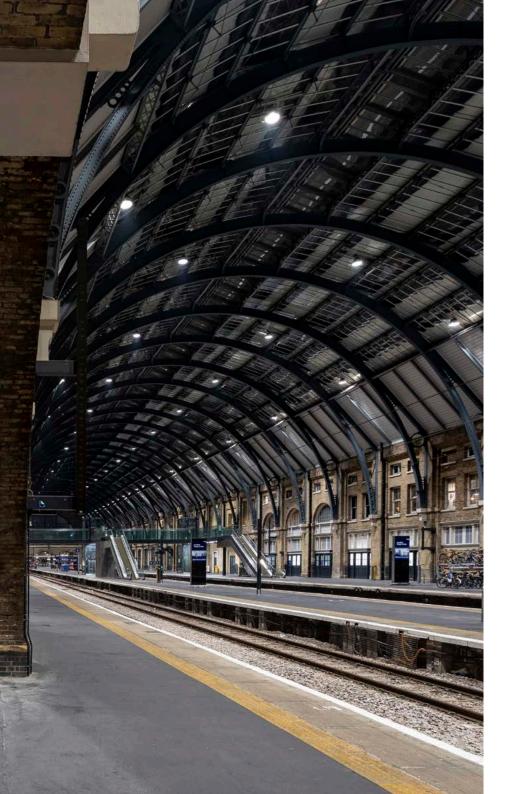






HIGH BAY DALI HIGH BAY REFLECTOR











#### ANY QUESTIONS? TALK TO US.

Would you like to know how we can support your projects? Feel free to ask; we look forward to hearing from you! contact@ledvance.com +49 89 780673-600

All project information and other cases can be

ledvance.com/projects







# LIGHT FOR MAXIMUM PERFORMANCE SPORTS LIGHTING WITH LEDVANCE

Whether it's football, handball or athletics – in order for a sporting event to be a complete success for athletes, referees and spectators, you also need lighting at champion level. Because the light does not only have to be camera-compatible for photos and TV broadcasts to meet different stringent requirements depending on the competition. An optimal lighting solution also needs to ensure sufficient illuminance levels, homogeneous light distribution and low-glare light to satisfy the needs of the participants and all those involved on site. LEDVANCE offers control systems such as DMX. Since many sports venues use not just white but also colored light, these allow the lighting to be perfectly controlled and turn the sporting event also into a highlight visually.

# **OUR SPORTS HIGHLIGHTS FOR YOU**

The right conditions are one of the keys to success in sport. That's why LEDVANCE also offers a wide selection of innovative solutions for the sports sector. For example FLOODLIGHT ARENA, a powerful, durable and extremely robust stadium floodlight. Or the LOW BAY FLEX DALI luminaire, which integrates perfectly into any sports hall thanks to its attractive design and optional ball-proof cover.



High-end COB-based sports lighting with light shaping via high grade metal reflector, free of color interference. Optional stainless steel reflector shield to minimize spill light and glare. Television Lighting Consistency Index (TLCI) > 90, 0 % Upward Light Output Ratio (ULOR), DMX, customized configurations for demanding sports lighting, including TV applications.







<sup>&</sup>lt;sup>1</sup>Compared to conventional discharge lamp



#### **FLOODLIGHT** MAX

High-power, extremely robust and durable floodlight for large area and sports lighting. IK08, IP66, remote driver box installation of up to 50 m possible, switching of module groups for easy dimming, no Upward Light Output Ratio (ULOR 0%) when mounted at 0° tilt.









no Upward Light Output Ratio

(ULOR 0%) when mounted at 0° tilt.



#### beam, asymmetric light distribution for multi purpose area lighting. IP66, DALI-2 interface for LMS integration, various light distributions, efficiency up to 140 lm/W. homogeneous luminance distribution and reduced glare,

**LOW BAY FLEX DALI with** optional ball-proof cover

Low-bay luminaires with attractive linear design, up to 160 lm/W with optional ball-proof cover for sports halls. High compatibility thanks to DALI-2, high luminous efficacy up to 160 lm/W. long lifetime (L80/B10): up to 100000h, easy and quick installation, modern and robust design.











**WOULD YOU LIKE TO KNOW MORE ABOUT OUR HIGHLIGHTS?** Contact us:





**FLOODLIGHT PERFORMANCE DALI ASYM** 

DALI-2 based floodlight with very wide



<sup>&</sup>lt;sup>2</sup>Annual average based on the energy savings indicated, see p. 59 for calculation details

<sup>&</sup>lt;sup>3</sup>Compared to halogen floodlights | <sup>4</sup>Compared to traditional lamps



## ULRICH-HABERLAND STADIUM, LEVERKUSEN, GERMANY FIRST CLASS ILLUMINATION

SPECIFY





#### THE CHALLENGE

The Ulrich-Haberland Stadium is the home stadium of Bayer 04 Leverkusen's women's Bundesliga team. In order to meet UEFA's Level-D requirements for hosting European Cup matches, the existing lighting of the stadium was to be modernized with LED technology and the illuminance level increased. Additionally, in the context of the modernization, considerations had to be made regarding the surrounding residential areas and the nearby highway in terms of glare and ambient light levels.

#### THE SOLUTION

As a consulting sustainability partner in the field of lighting, LEDVANCE developed and realized a new lighting concept for the Ulrich-Haberland Stadium, where the four existing floodlight towers were equipped with modern arena floodlights. For optimal light distribution and an illuminance level of 800 lux, additional floodlights were installed, including some on a specifically constructed 30-meter-high mast. The reduced glare of the floodlights also minimizes potential lighting disturbance on the adjacent highway and residential area.



#### **CUSTOMIZED LIGHTING WITH SPECIFY**

Every project is unique. In this regard, LEDVANCE develops solutions specifically tailored to customer needs based on the CCE principle (Configuration, Customization, Engineering) – from connection type and light output to light management functions.





#### **ANY QUESTIONS?** TALK TO US.

how we can support your projects? Feel free hearing from you! +49 89 780673-600

All project information and other cases can be ledvance.com/projects







# POINTING THE WAY IN ANY ENVIRONMENT – SUSTAINABLE IMPETUS FOR OUTDOOR LIGHTING

Whether in streets, squares, parks or underground garages – modern outdoor lighting is as varied as the environments it is used in. LEDVANCE helps you plan and implement your projects by offering you competent advice and a comprehensive range of robust, energy-efficient and durable LED lamps and luminaires for outdoor use. For example our STREETLIGHT FLEX portfolio, which combines optimal light quality and distribution with quick and convenient installation. That's just one of many examples of how LEDVANCE provides outdoor lighting solutions that point the way.

# **OUR OUTDOOR** HIGHLIGHTS FOR YOU

Outdoor lighting has to offer tailor-made solutions for a variety of conditions - just like the highlights from our current urban outdoor portfolio. The models in the STREETLIGHT FLEX series are suitable for many different applications and boast modern design, a long life and extremely high efficiency. And the robust and highly efficient BULKHEAD luminaires provide an excellent alternative for sensor-controlled lighting of entrance areas, outdoor stairs and corridors.



#### STREETLIGHT FLEX

Luminaire in durable design and highest quality components for long lasting performance for area lighting and M-, C- and P-class roads acc. to EN 13201, IP66, IK08, SK2, very long lifetime (L90/B10): up to 100000h. spigot for 42, 48-60 and 76 mm poles available, tool-free housing opening and pushbutton terminal, no Upward Light Output Ratio (ULOR 0%) when mounted at 0° tilt.





#### **FLOODLIGHT 100**

Highly efficient floodlight with long lifetime, Power Select and D-Mark certificate for general applications. Bright, robust (IK08) and durable, IP65, uniform light due to frosted glass diffuser, efficiency up to 150 lm/W, ULOR 0 % when mounted at 0° tilt.



**UP TO** -90 %<sup>3</sup> **ENERGY**  UP TO -633 KG<sup>2</sup> CO<sub>2</sub>

**POSTTOP** 

Decorative, elegant mast luminaire for efficient lighting of streets, paths, squares and parks. With easy maintenance via tool-free opening/ closing system and quick-change function. Power Select in 5 steps, two light distributions for paths (asym.) and squares (sym.), IP66, die-cast aluminum housing.



**UP TO** -40 %<sup>1</sup> ENERGY UP TO -23 KG<sup>2</sup> CO.



Robust and highly efficient outdoor luminaire with changeable light source and driver for corridors, stairways, entrance areas. IK10, IP65, very high efficiency 120 lm/W, protection class II, CCT (3000/4000K), 4-step Power Select, sensor, DALI and EM versions available, width 250 or 300 mm, white or black. trim included.



UP TO -65 %⁴ ENERGY UP TO -24 KG<sup>2</sup>



**WOULD YOU LIKE TO KNOW MORE ABOUT OUR HIGHLIGHTS?** Contact us:





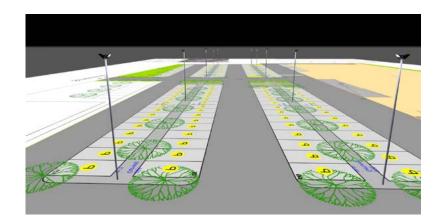
- <sup>1</sup>Compared to HQI lamps
- <sup>2</sup>Annual average based on the energy savings indica see p. 59 for calculation details
- <sup>3</sup> Compared to halogen floodlights
- <sup>4</sup>Compared to compact fluorescent lamps

# SUSTAINABLE LED SOLUTIONS FOR URBAN OUTDOOR PARKING



High-performance lighting ensures greater safety in public and private spaces outdoors – as well as in streets, car parks and multi-story car parks.

In combination with innovative LED technology it also provides significant savings in energy consumption and CO<sub>2</sub> emissions and is an important driving force for greater sustainability.



#### LED LUMINAIRES FOR OUTDOOR PARKING AREAS



#### FLOODLIGHT AREA ASYM

Highly versatile, asymmetric und robust floodlight with Power Select. For various outdoor applications and special tasks thanks to D-Mark certificate. Energy savings thanks to system efficacy of up to 130 lm/W, increased sea salt resistance with up to 480 h, IP65, IK07 or IK08 (>6000 lm), lifetime of 75000 h (L80/B10), 1 m cable for perfect and easy connection.





- ¹Compared to halogen lamp floodlights ²Compared to traditional HQI. With LMS via Zhaga interface additional 30 % savings possible.
- <sup>3</sup>Compared to traditional NAV lamps



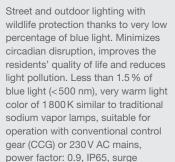
Modular lighting with ZHAGA interface in durable design and highest quality components for long lasting performance for future proof, SMART CITY area lighting and M-, C- and P-class roads acc. to EN 13201. IP66, IK08, SK2, very long lifetime (L90/B10): up to 100000 h, spigot for 42, 48–60 and 76 mm poles available, tool-free housing opening and pushbutton terminal, no Upward Light Output Ratio (ULOR 0 %) when mounted at 0° tilt.







#### NAV LED FILAMENT AMBER



protection: up to 2 kV (L-N).









## SUSTAINABLE LED SOLUTIONS URBAN BIKE PARKING

Cycling is booming – not least because it is so sustainable. But many bicycles also need many parking spaces.

LEDVANCE offers innovative lighting solutions for these, which, combined with motion or daylight sensors or DALI systems, make bicycle parking even more sustainable.



#### **LED LUMINAIRES FOR OUTDOOR PARKING AREAS**



#### DAMP PROOF ON/OFF



Damp proof in classic shape for car parks and underpasses. High luminous efficacy: up to 135 lm/W, beam angle: 110°, low flicker ≤ 10 %, IP65, IK08, energy savings of up to 60 % (compared to luminaires that use fluorescent lamps), evenly distributed light, easy installation, no tools required for connection.





<sup>1</sup>Compared to fluorescent lamps <sup>2</sup>Compared to fluorescent lamps incl. sensor/LMS

#### DAMP PROOF SENSOR



In addition to the ON/OFF version, the DAMP PROOF SENSOR has a high frequency sensor for daylight and motion detection. Installation of multiple sensor switched luminaires possible due to leaderfollower and leader-leader functionality. With multiple adjustments of sensor range, daylight detection and hold time.





#### DAMP PROOF DALI



The dimmable and highly compatible DALI-2 interface makes it possible to control the light as required, which saves additional energy and reduces CO<sub>2</sub>. Premium driver with up to 100000 h lifetime and suitable for emergency escape lighting systems acc. to EN 50172.











# DURABLE AND HIGH PERFORMING – SPECIAL LIGHTING FOR VERY SPECIAL CONDITIONS







#### THE CHALLENGE

NorSea Polarbase in the Barents Sea had up till recently only 1000 W discharge lamps in their light masts and had therefore started replacing them with LED products. However, there were quite a few problems regarding long response/complaint times as the luminaires were not working as they should have. During the Eliaden exhibition in Oslo 2022, representatives from NorSea Polarbase were able to take a closer look at the various luminaires of LEDVANCE.

#### THE SOLUTION

LEDVANCE proposed a solution combining FLOODLIGHT PERFORMANCE, FLOODLIGHT MAX and ECO CLASS HIGH PERFORMANCE luminaires that would suit the special conditions at the Polarbase and which also was a more affordable alternative. In addition, the luminaires were immediately available. The advantages of the LEDVANCE luminaires were price, delivery time as well as the friendly and competent LEDVANCE service. The new floodlights have been installed, are working properly and also use much less electricity, last far longer and provide a constant luminous flux.

#### **ECO HP FLOODLIGHT**



#### **ANY QUESTIONS?**

Would you like to know how we can support your projects? Feel free to ask; we look forward to hearing from you!

contact@ledvance.com +49 89 780673-600 All project information and other cases can be found here:

ledvance.com/ projects





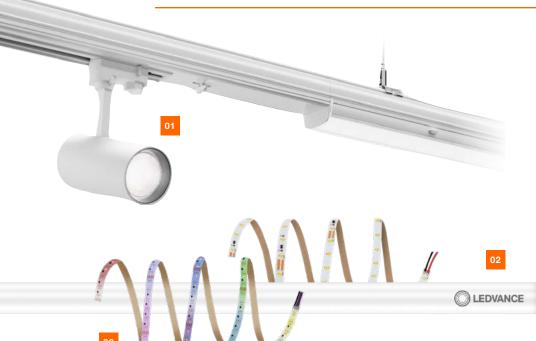


## GOOD LIGHT, GOOD BUSINESS – SHOP LIGHTING WITH LEDVANCE

A successful shop is also a question of light. Only the right lighting can place products in the spotlight, generate higher sales and create special shopping experiences.

But innovative shop lighting can do much more today – for example provide significant savings in energy and CO<sub>2</sub> consumption, making an important contribution to cost reductions and environmental protection.

With this in mind, LEDVANCE offers tailor-made lighting solutions for a wide range of shop types and areas – from large shopping centers to small boutiques, from illuminating showrooms to lighting facades. Because a successful shop is also a question of light.



# OUR SHOP HIGHLIGHTS FOR YOU

Only the right light turns shopping into an experience. And the LEDVANCE shop portfolio guarantees that. The versatile strip lighting system TRUSYS FLEX can replace conventional compact fluorescent lamps one-to-one and can be installed quite easily in supermarkets and department stores, for example. And with the LED Strip System, LEDVANCE offers a fascinatingly flexible solution that can be integrated into many different lighting scenarios in shops – as general, cove or accent lighting.



Versatile linear trunking system with fixed energy rail and flexible installation of linear light source with optional blind cover, spots, tubes or sensor inserts. For hardware stores, discounters and supermarkets. Directed light distribution for great heights, energy saving and cost-effective, various lumen packages and wide range of beam angles, multiple driver versions ON/OFF, DALI-2, emergency.









T8 LED tube for food to look fresh and appetizing without unduly "beautifying" it. Specially tailored spectral distribution, comparable to T8 FL NATURA 76. Tube with shatter protection. LED alternative for T8 fluorescent lamps in CCG luminaires or on AC mains, simple replacement without rewiring, special PET coating, no bending thanks to glass tube, also suitable for operation at low temperatures.







#### LED STRIPS FOR PROFESSIONAL APPLICATIONS

Used as general, cove or accent lighting, the LEDVANCE LED Strip System is a fascinatingly flexible solution that fits into many different lighting scenarios. The Tunable White LED Strip can be combined with VIVARES HCL. Large range of white light or colored light – RGBW/RGB – LED Strips, light colors from 2700 K to 6500 K, lumen outputs from 500–2000 lm/m, fitting LED driver and accessories available.









Adjustable and dimmable spotlight with Power Select for recessed ceilings. 4 W, 6 W, 8 W via dip switches on the driver, Scale design, die-cast aluminum housing, toolless installation, in white, black and silver.











- <sup>1</sup>Compared to traditional/fluorescent lamps
- <sup>2</sup>Annual average based on the energy savings indicated, see p. 59 for calculation details

<sup>&</sup>lt;sup>3</sup>Compared to halogen lamp spotlights

# BICYCLE PARKING GARAGE IJBOULEVARD, AMSTERDAM, NETHERLANDS HIGH-END LIGHTING UNDERGROUND

#### THE CHALLENGE

Bicycles shape everyday life in Amsterdam. To create more parking spaces in the city, a large underground parking garage was built under the IJ Canal, capable of accommodating 4000 bicycles. The parking garage required a modern lighting concept that would seamlessly integrate with the architectural design while combining energy efficiency and state-of-the-art technology with a high level of safety and comfort for the users.

#### THE SOLUTION

LEDVANCE has developed and implemented LED strips that are part of an innovative light management system, providing evenly distributed and flexible controllable lighting. Considering the specific requirements on-site, the concept primarily relied on more than 260 flexible 5-meter rolls of LEDVANCE IP67 LED strips, combining an individually controllable and pleasant lighting pattern with high energy efficiency. The LED strips actively support the sustainability concept of the parking garage thanks to their high energy efficiency and long lifespan.



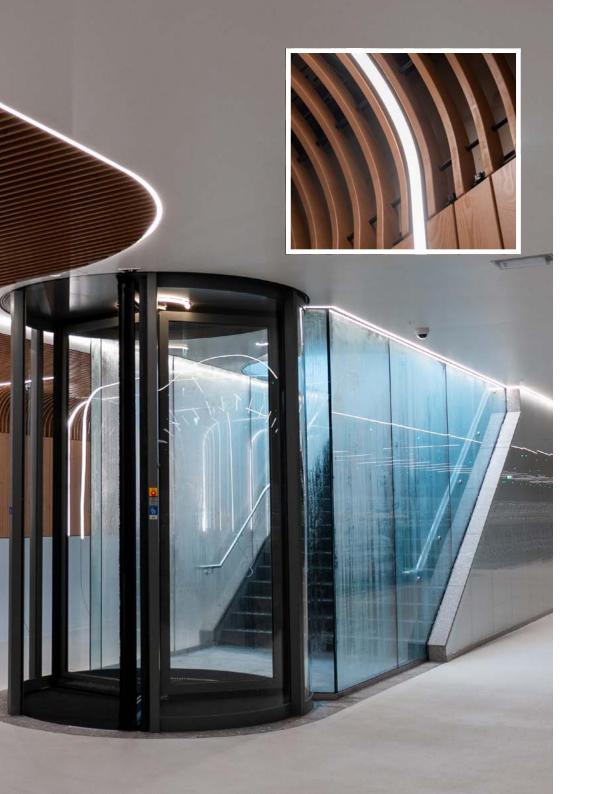
LED STRIP SUPERIOR 1200 PROTECTED



DR-PFM 250/220-240/24/P













#### **ANY QUESTIONS?**

Would you like to know how we can support your projects? Feel free to ask; we look forward to hearing from you! contact@ledvance.com +49 89 780673-600

ledvance.com/ projects

be found here:







## DECORATIVE, FUNCTIONAL AND EFFICIENT – HOSPITALITY SOLUTIONS FROM LEDVANCE

In hospitality, light creates the foundation for an ambience that meets the needs of guests and employees and promotes their well-being, helping to make an important contribution to the company's success.

Thanks to many years of experience in lighting hotels and restaurants, LEDVANCE offers a large portfolio of LED solutions and customized planning concepts, making it your ideal partner for bathing your rooms in inviting light using atmospheric spatial design and intelligent control options. And for achieving enormous savings in energy consumption and  $\text{CO}_2$  emissions at the same time. Because at LEDVANCE the perfect lighting solution for your hospitality project is always included.

# **OUR HOSPITALITY HIGHLIGHTS FOR YOU**

(m)

Light is a success factor in hospitality – and you can always count on the LEDVANCE portfolio. The flexible LED STRIP PERFORMANCE COB strips ensure excellent homogeneous light with no visible light points. And the luminaires in the SURFACE FLAT series can be integrated into the VIVARES light management system and can be used to directly replace standard ceiling luminaires with incandescent lamps or compact fluorescent lamps, making them an energyefficient and sustainable LED alternative from the EVERLOOP program for lighting corridors, stairwells and fovers.



#### SPOT DARKLIGHT

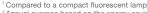
Dimmable, recessed mounted spotlight with improved anti-glare lightcomfort UGR < 19, fixed. CRI 90, 4W, 6W, 8W via dip switches on the driver, Scale design, die-cast aluminum housing, toolless installation. Fire rated spot versions available.











<sup>&</sup>lt;sup>2</sup> Annual average based on the energy savings indicated, see p. 59 for calculation details



#### **BOLLARD**

Bollard luminaires for marking and guidance. They pave the way for pedestrians and enhance the surroundings. Durable design and highest quality components for long lasting performance, IP65. die-cast aluminum housing.













**LED STRIP** 

**PERFORMANCE COB** 

Excellent homogenous light, without

visible light points thanks to COB

especially in the hospitality and

retail sectors. CRI>90, dimmable.

1 000 lm/m, beam angle 140°, large

range of color temperatures, smallest

cuttable unit: 62.5 mm, great design

technology. This makes them ideal

for modern, exclusive lighting design,





**WOULD YOU LIKE TO KNOW MORE ABOUT OUR HIGHLIGHTS?** Contact us:







#### **SURFACE FLAT**



Highly versatile surface and wall mount luminaire with selectable CCT. Power Select and efficacy of up to 130 lm/W. Following the EVERLOOP concept with replaceable components CCT (3000 K/ 4000 K), 2 step Power Select, lumen levels up to 3500 lm, round or square shapes in two sizes 330/500 mm. versions with DALI-2 or enhanced Leader/Follower sensor available, for indoor applications.







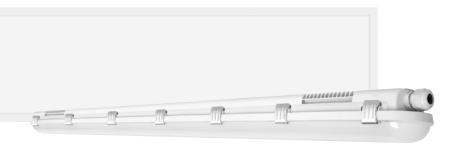
<sup>&</sup>lt;sup>3</sup>Compared to halogen lamp spotlights | <sup>4</sup>Compared to traditional NAV or HCI lamps







#### PANEL CMFT 1200 P 33 W 830 DALI



DAMP PROOF 1500 46W 830 IP65 GY





# EDUARDO TORROJA INSTITUTE OF CONSTRUCTION SCIENCES, MADRID, SPAIN TRADITION AND INNOVATION

#### THE CHALLENGE

The Eduardo Torroja Institute of Construction Sciences is dedicated to scientific research and technological development in the field of construction and its materials. Located in a 1934 building in Madrid, the institute sought a renovation of its original lighting to adapt to modern times. The goal was to equip the historic luminaires with efficient LED technology and integrate them into the building's control system while preserving the original design.

#### THE SOLUTION

From the impressive facade and to the entrance hall to the office space – similar to a hotel, the different rooms of the Eduardo Torroja Institute also require a wide range of lighting solutions tailored precisely to the respective application. Accordingly, LEDVANCE developed a lighting concept that included among others more than 600 PANEL PFM DALI luminaires and more than 200 DAMP PROOF luminaires. Not only was the original design preserved in the selection of luminaires and lamps, the lighting now complies with current regulations and is much more energy-efficient.

# RESIDENTIAL Light gives our lives an abundance of color - especially in our own home. That's where lighting solutions have to be as varied as the rooms we live in. Modern residential lighting in kitchens, living rooms, bathrooms, children's rooms or studies has to meet different requirements and find the right balance between functionality, flexibility and emotion in every environment. And always be as efficient and sustainable as possible in terms of energy costs and environmental protection. How do you add the right color to every room? We're here to inspire you.



### **FUNCTION MEETS EMOTION EXPERIENCE** WORLDS OF LIGHT IN A NEW WAY

Hardly any other space allows light to shine in as many ways as our own four walls. Immerse the dining room in tastefully relaxing light? Create radiant moments in the children's room from a dim night light to a bright ceiling light? Boost concentration and comfort in the home office with innovative LED concepts? Always create the right mood in the bathroom with lighting designed for different situations? Or perfectly illuminate laundry rooms, basements and garages with functional LED luminaires and lamps? Light can do all that if you bring out its full potential. That's why LEDVANCE combines high-quality lighting technology with long lifetimes and excellent energy efficiency in its comprehensive residential range, allowing you to experience new worlds of light at home in a truly sustainable way.

# **OUR RESIDENTIAL HIGLIGHTS FOR YOU**

The ideal light whatever the situation, LEDVANCE offers tailor-made LED solutions to ensure that every corner of your home is illuminated in line with your wishes, creating a perfect synergy of emotion and function. Our current highlight products including decorative LED solutions such as the MAGNETIC **BULBS** or the highly efficient **ENERGY CLASS** A LAMPS set high standards in terms of design and sustainability.







The luminaire turns heads with its floating filament design and can be used in various interior spaces thanks to its portability. Using touch technology, it's easy to dim by 25 %, 50 % or 100 %. The built-in lithium battery is rechargeable via USB cable. The carry strap (only for floor versions) makes transporting the light particularly easy.









**ENERGY CLASS A LAMPS** 

New additions: The twelve different types (40 W to 100 W replacements) in Energy Efficiency Class A enable average power savings of up to 60 % compared to standard LED lamps. And they last up to 50 years! The best response to the sharp rise in electricity prices and one of our many solutions for sustainable energy saving.







#### **MAGNETIC BULBS**

Lamps with innovative LED filament magnet technology without filament holders, perfect for decorative installations in homes and in general lighting. The warm white light effect and good quality of light provide a cozy atmosphere. The magnetic filament doesn't need any warm-up time and has a lifetime of up to 15000 hours.



€

#### **DECOR FILAMENT DOWNLIGHT**

Conceived in a minimalist floating filament design, the downlight features a light ring and spot that can be controlled independently from each other. The housing is made of silver aluminum. The energy-efficient LED downlight with IP20 protection offers a life of up to 25000 hours and very quick and easy installation. Suitable for living and dining rooms, studies or for decorative illumination of hallways.













# LIGHT UP YOUR EXPERTISE, ANYTIME, ANYWHERE!

#### WHAT SETS US APART

At LEDVANCE, we leverage scientific expertise and your invaluable feedback to create trainings that work for you. Here's what makes us unique:

- ► Comprehensive Content: From in-depth product training covering lamps, luminaires, LMS and PV products, to enlightening lessons on the fundamentals of light and sustainability, we've got it all under one digital roof.
- ► Versatile Learning: We understand that everyone learns differently. That's why we serve up bite-sized content in various formats: engaging videos, enlightening webinars, interactive eLearning modules, and informative documents.

#### **LET'S WIN TOGETHER!**

Join us at the LEDVANCE Training Center and take your learning to new heights! Whether you're a lighting designer, electrical installer, wholesaler or a student, there's something here for you.

Ready to shine a light on your knowledge? Click the link below to begin your illuminating journey!

**LEDVANCE Training Center:** training.ledvance.com

**Empower yourself with** knowledge, and let's harness the power of light together at the **LEDVANCE Training Center!** 



#### LEDVANCE TRAINING CENTER







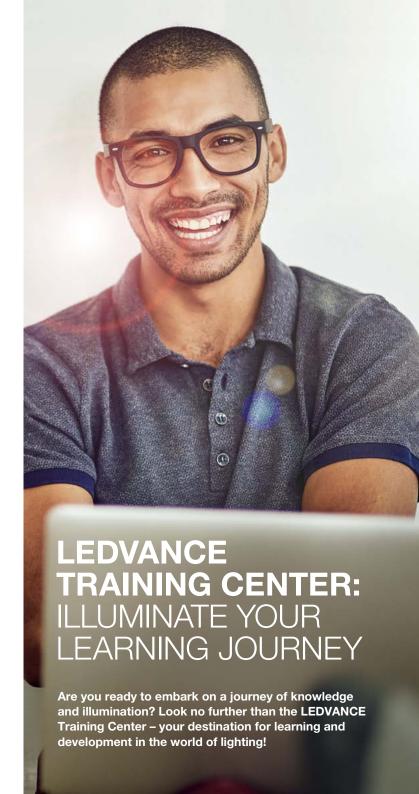








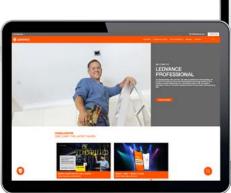


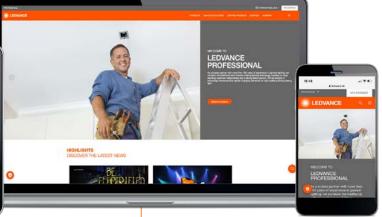


# **ALWAYS UP TO DATE**OUR INFORMATION SERVICES FOR YOU

LEDVANCE is delighted to provide you with further information on our products and services – either at PoS in wholesalers, from our LEDVANCE sales staff or through our Customer Service Center (email: contact@ledvance.com). And of course all the information can also be

found on our website: www.ledvance.com







#### **BEST REFERENCES**

A selection of some top lighting projects can be found at: ledvance.com/projects



#### SERVICES AND TOOLS

We have compiled our service offerings for you at ledvance.com/services



#### DOWNLOAD CENTER

Catalogs, brochures and much more are available in our Download Center ledvance.com/download





#### LAMP FINDER

Find an alternative LED lamp solution for your traditional lamp ledvance.com/lampfinder

### CHECK OUT OUR YOUTUBE CHANNEL

The LEDVANCE YouTube channel also features a host of tutorials, product information and other exciting content.

It's well worth taking a look: youtube.com/ledvance



### HOW DO WE DETERMINE OUR REPRESENTATIVE CO<sub>2</sub> SAVINGS?

The energy and  $\mathrm{CO_2}$  savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual  $\mathrm{CO_2}$  savings are based on a system's average annual operating time of 3500 hours and the greenhouse gas emission intensity of the power generated for 2022 (251 g of  $\mathrm{CO_2}$ /kWh according to the European Environment Agency www.eea.europa.eu). Please note that the total annual  $\mathrm{CO_2}$  savings may vary due to the specific national greenhouse gas emission intensity of the power generated and the actual annual operating hours of a system.

#### PERFECTLY CONFIGURED

Configuring lighting systems with flexible LED strips:

ledvance.com/led-strip-configurator

#### ABOUT LEDVANCE

With subsidiaries in more than 50 countries and business activities in over 140 countries, LEDVANCE is one of the world's leading companies in the field of general lighting for professional customers and end users. Emerging from OSRAM's general lighting division, LEDVANCE's portfolio includes a wide range of LED luminaires for a variety of applications, intelligent lighting products for smart homes and smart buildings, one of the most comprehensive offerings of advanced LED lamps in the lighting industry, and traditional lamps. Beyond lighting, LEDVANCE offers vertically integrated, renewable energy solutions for the building sector. Together, the lighting division and the renewable energy division form a comprehensive ecosystem for residential, commercial, and industrial buildings.



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