

**ALWAYS ONE
STEP AHEAD!**
CONNECTED AND
ENERGY EFFICIENT
LIGHTING SOLUTIONS
FROM LEDVANCE





Erol Kirilmaz,
Chief Sales and Marketing Officer (CSMO)

Dear readers,

after a (too) long wait, I am pleased to welcome you again at Light + Building.

A lot has happened in the meantime, both in the world and at LEDVANCE. Climate change, COVID-19 and geopolitical conflicts are accelerating sustainable and innovative action. LEDVANCE is actively shaping this change as one of the leading suppliers in the lighting industry.

Having established LEDVANCE as a reliable and well-distributed brand for modern luminaires, energy-efficient light management systems and flexible strips in Europe in recent years, we are now taking the next step. In the summer of 2023 we will also switch our OSRAM LED lamps to the LEDVANCE brand. The reason for this is not least the forthcoming ban on fluorescent lamps which is complex and challenging for the lighting industry.

With this changeover we offer a full range of sustainable and innovative LED solutions for almost every application under the LEDVANCE brand – in keeping with our brand core “Advancing Light”. Because when developing products and services, we focus on energy efficiency, space economy and human well-being.

We can only change successfully together. That’s why, for us, not just future-oriented lighting solutions are important – but above all our partnership with you. Showing team spirit, innovation and courage, we are always one step ahead of the challenges of the future.

Come join us. Travel with us into the future of light.

Your Erol Kirilmaz

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WHETHER IT’S A LAMP OR A LUMINAIRE, THE KEY IS THAT IT SHOULD BE THE RIGHT SOLUTION FOR THE END USER

The lighting industry can only have one response to climate change and the energy crisis and that is to save energy and reduce CO₂ emissions. Both will be boosted by the EU-wide ban on the production of conventional fluorescent lamps (T5, T8 and CFLni) and halogen pin lamps in the course of 2023. LEDVANCE’s extensive range of products makes it uniquely positioned for this upcoming ban on fluorescent lamps.

READY FOR CHANGE

LEDVANCE offers the widest range of products and solutions, from LED lamps as simple retrofit replacements to complete LED lighting systems as new installations, ideally including sensor technology – and all from a single source. With tools such as the “Light Efficiency Consulting (LEC)” configurator, LEDVANCE makes it easy to plan replacement projects and renovations based on specific customer requirements.

FOCUS ON SUSTAINABILITY

Sustainability is a priority for LEDVANCE even beyond the 2023 lamp ban. The focus will be not only on efficient, future-proof LED lamps and luminaires but also on smart connected light management systems. As the current White Paper on the Global Warming Potential (GWP) of Luminaires shows (ledvance.com/gwp), this is where the greatest potential for genuine efficiency gains lies. Additional savings of up to 45% can be made with a sensor-controlled lighting solution. LEDVANCE already has a very attractive and easy-to-install system on the

market by the name of VIVARES. Smart solutions like VIVARES not only help to protect the climate, they also directly benefit end users because they reduce electricity costs, improve the use of space and boost productivity.

THE CIRCULAR ECONOMY

LEDVANCE stands for advancing lighting. Its objectives include focusing on the benefits of sustainable, dynamic and modern lighting and expanding the circular economy. The new EVERLOOP luminaires with their interchangeable LED modules and drivers are excellent examples of the circular economy operating at product level. At the same time, LEDVANCE and its experts are actively involved in various industry associations such as the ZVEI, Lighting Europe, Zhaga, the IEC and the Global Lighting Association.

HUMAN CENTRIC LIGHTING

LEDVANCE is also setting standards in sustainable lighting that will benefit the health, well-being and productivity of everyone. Health and ergonomic working conditions are important for everyone – and so too is human centric lighting (HCL). The VDE-certified BIOLUX HCL system from LEDVANCE is a product at the very forefront of technology.



The lighting industry is at the crossroads. LEDVANCE is meeting the challenges with sustainable and efficient LED products, intelligent light management systems and an expansion of the circular economy. The key here is to focus at all times on the needs of the end user.

TAKE OFF INTO A SUSTAINABLE FUTURE WITH LIGHTING SOLUTIONS FROM LEDVANCE

Having emerged from traditional company OSRAM, LEDVANCE has established itself as a global player in the lighting market in just six years. We will continue along this path – toward becoming the leading supplier of both sustainable and holistic lighting solutions, true to the motto: everything under one brand from one source.

With this in mind and along with LED luminaires, lamps and strips we focus on innovative light management systems in particular. They make it possible to combine the completion of the most demanding lighting tasks with outstanding efficiency and user-friendliness.

An excellent example is BIOLUX HCL. The human centric lighting system, which won several technology awards and was awarded the VDE HCL quality certificate, mimics the natural changes in daylight almost identically – with positive effects on people's productivity, concentration and well-being.

The convenient VIVARES IoT light management system controls the lighting in open-plan offices, entire floors and complete buildings efficiently and based on demand – in wireless Zigbee 3.0 or DALI-2 technology. And with HCL function or cloud connection on request.

Part of our sustainability philosophy is that we offer lighting solutions for almost any application that meet all the legal requirements. This allows you as a wholesaler, installer, facility manager or electrical planner to look at coming regulations with confidence and take off into a successful future with LEDVANCE.

GOOD REASONS FOR LEDVANCE



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



INDIVIDUAL SOLUTIONS
LIGHTING SOLUTIONS TAILORED
TO YOUR PROJECTS



PROFESSIONAL TRAINING
FIT FOR THE PROJECT AND MARKET
REQUIREMENTS OF THE FUTURE



VARIOUS TOOLS
FOR EFFICIENT,
CUSTOMER-ORIENTED WORK

LEDVANCE IN FIGURES

WITH OFFICES
IN MORE THAN

50

COUNTRIES

ACTIVE IN MORE THAN

140

COUNTRIES

WE MANUFACTURE

WORLDWIDE

TO THE HIGHEST STANDARDS

OUR DNA: THE BASIS FOR A SUCCESSFUL PARTNERSHIP



Innovation from tradition

We stand for progress and the ambition to play a pioneering role in the future of light. We combine our 100 years of lighting expertise with the courage to break new ground.

#BreakingNewGround



Everything from a single source

You can get all the components for your lighting projects at LEDVANCE - from individual products to lighting systems. This allows you to offer a holistic solution for your lighting projects and different requirements - in the latest LED technology and first-class quality.

#StrivingForExcellence



Partner of choice

With our broad portfolio, powerful sales network and outstanding global access to markets we are the strategic partner for achieving your goals.

#WinningTogether



Focus on sustainability

Energy and resource efficiency as well as the circular economy are very important to us. We are convinced that sustainability is the only possible way to a successful future. Come with us!

#AdvancingLight



SCALE – EXCELLENT LUMINAIRE DESIGN

Always individual, always aesthetic, always functional – SCALE translates our brand identity into a modern design language. This creates unique luminaires for a wide range of applications. They all offer a fascinating combination of form and function as well as visual and tangible value. It is no coincidence that SCALE picked up the 2019 German Design Award.



FULL SERVICE, FULL RANGE LEDVANCE – THE PARTNER FOR YOUR LIGHTING PROJECTS

FOCUS ON YOUR SUCCESS

If you want to offer your customers perfect lighting solutions, LEDVANCE is the right partner. For us your success takes center stage. We are constantly working on tailoring our products and services to your needs as a wholesaler, installer, facility manager or electrical planner. Not only do we want to meet your expectations, we want to exceed them in every respect – with customer-oriented support and a comprehensive and future-oriented range that contributes to greater well-being, health and performance with sustainable lighting solutions.

EVERYTHING FROM A SINGLE SOURCE

LEDVANCE offers you lamps, luminaires, LED strips and light management systems as well as matching accessories from a single source. The benefits are obvious. Installing the individual components is simple and time-saving, and they work perfectly in combination with each other. At the same time, you can rely on state-of-the-art LED technology when it comes to our lighting solutions: functional, reliable, future-proof and with a guarantee of up to 5 years.

FUTURE-PROOF LIGHTING TECHNOLOGY

Whether it's BIOLUX HCL, the convenient VIVARES IoT light management system or our residential portfolio with SMART+ and SUN@HOME – using sustainable products and system solutions, LEDVANCE meets all the legal requirements, contributes to energy and CO₂ savings and increases everyone's well-being, health and performance. All content that helps LEDVANCE make your lighting business future-proof.

SERVICES FOR YOUR BUSINESS – WORLDWIDE

As experts we offer individual advice from initial consultation to technical after-sales support – whether it's on standards and regulations, efficiency and lighting quality, or installation, configuration and maintenance. We take care of all the lighting planning and offer you solutions that meet your requirements for all lighting needs. That means that you can successfully implement lighting projects together with us. And all this thanks to our global distribution network all across the world.



SPECIFY

NEW: SPECIFY – OUR LIGHT FOR YOUR PROJECT

Do you have a special project that calls for a special solution? Whether it's a customized installation method, type of connection, light output, light management functions or even a completely individual luminaire – we also implement tailor-made products for you. Just ask us!



EXPERTISE OF A GLOBAL PLAYER PROJECTS IN MORE THAN 140 COUNTRIES

Are you interested in our services for your projects? Our experts are happy to advise you. You can reach us at:
contact@ledvance.com
+49 89 780673-600



PANAMERICANO STADIUM, MEXICO



STREETLIGHT GUAYAQUIL, ECUADOR



UNIVERSIDAD EUROPEA DEL ATLÁNTICO, SPAIN



CORPORATE HEADQUARTERS MOLSHEIM, FRANCE



CONNOLLY HOSPITAL, IRELAND



VALDA + PARTNERS, SWITZERLAND



CHOPIN AIRPORT, POLAND



PROLOGIS WAREHOUSES, BRAZIL



AUBRICK BILINGUAL SCHOOL, BRAZIL



CAMPO DE FÚTBOL LA DEHESA, SPAIN



ENSEGID SCHOOL, FRANCE



HUIS & WONEN, NETHERLANDS



TIROL KLINIKEN, AUSTRIA



RIXOS BEACH RESORT, QATAR



DEFENSA Y JUSTICIA STADIUM, ARGENTINA



BZA RED MEGATONE WAREHOUSE, ARGENTINA



E.LECLERC SUPERMARKET, PORTUGAL



BUSINESS CAMPUS, GERMANY



MYSUN, NETHERLANDS



INDUSTRY LIGHTING, GRIESHEIM, FRANCE



SONEE HARDWARE, MALEDIVES

SUSTAINABILITY AS A WIN-WIN STRATEGY

THE GREEN AGENDA FROM LEDVANCE

Whether we’re talking about resource scarcity or energy or climate crisis, sustainable action is the only sensible response to the challenges we face today and tomorrow – and therefore a decisive success factor for lighting business. That’s why LEDVANCE has signed the UN Global Compact and has also incorporated sustainability into its corporate philosophy through its Green Agenda.

LEDVANCE's sustainability strategy covers three areas:

- The company's commitment to sustainable development
- Pursuit maximum efficiency in lighting
- Promoting the circular economy

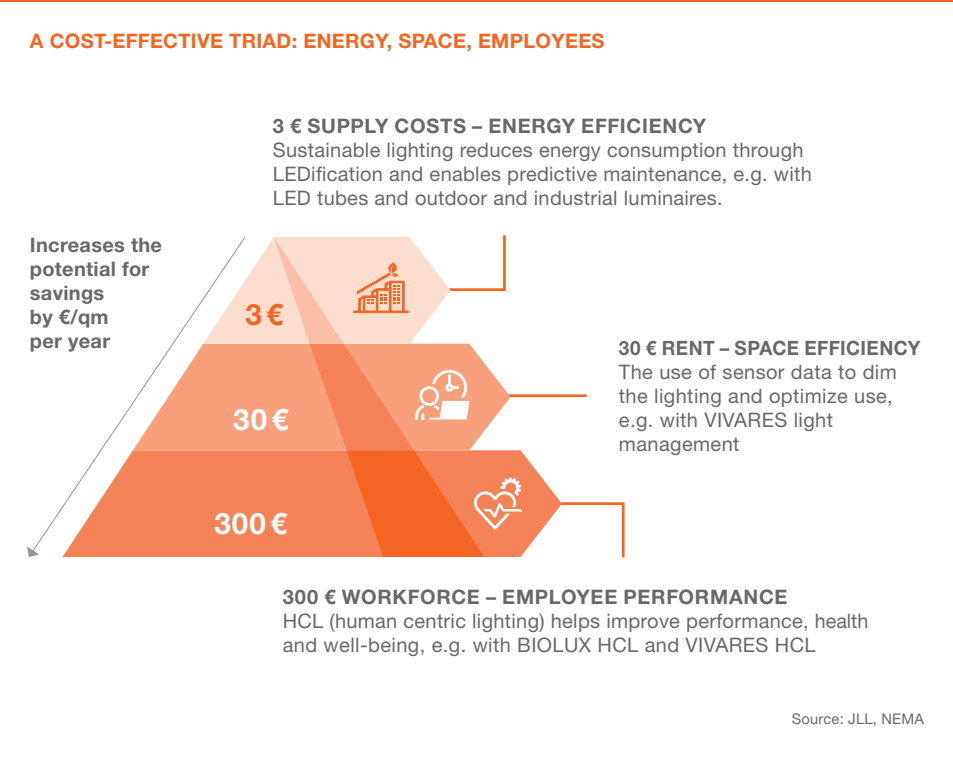


SUSTAINABLE WITH OUR SEAL OF APPROVAL
LEDVANCE is aware of its responsibility as a global company. Just how serious we take our commitment is demonstrated by the silver medal awarded by EcoVadis, one of the world’s most renowned providers of sustainability assessments. The ambitious EcoVadis rating comprises 21 sustainability criteria in these four areas:
• Environment • Labor and human rights • Ethics • Sustainable procurement



AN EFFICIENT THREESOME: ENERGY, BUILDINGS, EMPLOYEES

LEDVANCE achieves maximum lighting efficiency in office buildings on three levels. The first relates to the energy efficiency of the lighting technology installed. The second level, known as space efficiency, optimizes the use of light in keeping with our motto: the right light in the right place at the right time. The third level focuses on the performance of the office employees. The following pyramid illustrates the potential savings of the three levels according to the 3-30-300 rule. It is based on the average costs incurred in an office building per cost driver.



ON OUR WAY TO A CIRCULAR ECONOMY

LEDVANCE is also committed to sustainability when it comes to the life cycle of its products. Modular lighting systems for professional and private users and new LED luminaires with replaceable light sources allow individual components to be substituted. This means that LEDVANCE stands for further developing innovative lighting solutions in the interests of circular economy. LEDVANCE also offers various solutions for replacing conventional T5/T8 fluorescent tubes in connection with their EU-wide ban in 2023, so existing luminaires and control lines can still be used.



EVERLOOP LAMPS WITH INTERCHANGEABLE LED MODULES

Luminaires with interchangeable LED modules and control gear – that’s what’s behind the innovative EVERLOOP concept from LEDVANCE. In line with the Ecodesign Regulation (EU) 2019/2020 (Single Lighting Regulation SLR) it promotes circular economy and sustainability and also makes upgrades without replacing luminaires possible. An excellent example is our new LINEAR INDIVILED GEN 2 with a light source that is easy to replace by plug & play.



LED TUBE EXTERNAL SYSTEM: THE SWITCH TO LED TECHNOLOGY

The LEDVANCE LED Tube External System is an optimized system comprising LED tube and external driver that supports the circular economy approach to interchangeable components. It is the perfect solution if existing fluorescent lamp installations with dimmable DALI control gear need to be upgraded to efficient, dimmable LED technology – and it is also suitable for emergency lighting.

Ban on T5/T8 fluorescent tubes August 2023
First LED tube solution for dimmable applications
– Energy saving and CO₂ reduction
– Reduction of energy costs

Interchangeable lighting components
– LED tube and driver are interchangeable
– LED tube can be replaced by the facility manager

Waste avoidance
Reducing electronic and plastic waste by keeping the existing luminaire

Replacing conventional fluorescent technology with LED technology

A little more detail please
Would you like to find out more about where and how our energy-efficient LED alternatives are already being used? You can find more detailed best practice examples on these pages where we present our special solutions for specific applications.



THE BEST TIME TO CHANGE IS NOW!

EU-COMPLIANT LED SOLUTIONS FROM LEDVANCE

THE SITUATION: MORE EFFICIENCY FOR OUR CLIMATE

As a measure against climate change, the EU aims to reduce CO₂ emissions in buildings by 30% by 2030. What’s more, the EU RoHS Directive is further restricting exceptions for mercury in light sources. As a result, inefficient lamps containing mercury may gradually no longer be placed on the market during 2023.

THE CHALLENGE: SWITCHING TO LED

LED technology is efficient, versatile and future-proof. However, the switch from outdated T5/T8 fluorescent tubes and CFLni compact fluorescent lamps to innovative LED alternatives in existing lighting systems does not always work as a straightforward retrofit – local conditions differ too much.

PHASE-OUT AND LEDVANCE REPLACEMENT PRODUCTS			
PRODUCTS AFFECTED		BANNED FROM ¹	LED REPLACEMENT PRODUCTS
CIRCULAR FLUORESCENT LAMPS T5 and T9 ²		25.02.2023	
COMPACT FLUORESCENT LAMPS with plug-in bases (CFLni – 2pin/4pin)		25.02.2023	
LINEAR FLUORESCENT LAMPS T5 and T8		25.08.2023	
HALOGEN PINS G4, GY6.35, G9		01.09.2023	

¹ Products that are already on the market may still be sold after this date, but may not be placed on the market again.
² T9 phase-out by LEDVANCE



THE SOLUTION: 4 OPTIONS FOR AN EASY SWITCH

In LEDVANCE, you have a lighting partner at your side who offers you a convincing alternative for your situation and supports you in finding solutions – from direct replacement and rewiring to upgrades and new installations. This gives you peace of mind for always having the right answer to lamp bans, climate change and energy shortages – and at the same time allows you to successfully participate in the market. By the way, from summer 2023 you will also receive all LED lamps under the LEDVANCE brand.



A detailed overview of the LAMP BAN 2023 can be found at: ledvance.com/lampban2023

LAMP REPLACEMENT OR NEW LUMINAIRE

LEDVANCE offers compelling solutions that make the switch easier and more profitable than ever.



RETROFIT



CONVERSION



UPGRADE



NEW INSTALLATION

4 OPTIONS FOR ALL SITUATIONS

HOW TO SWITCH

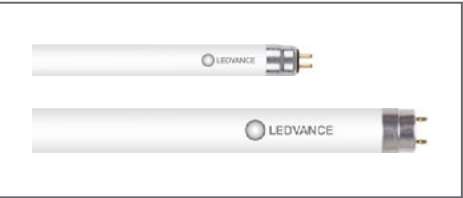
LED TUBE BASED SOLUTION

1

RETROFIT

Simple direct replacement:

- Wide range of LED tubes for easy, quick and safe lamp replacement
- No rewiring necessary
- As a replacement for fluorescent tubes operated on CCG or compatible ECG
- Find the right LED tube in just a few steps with the handy Tube Finder



2

CONVERSION

If there is no retrofit alternative or if the customer values maximum energy savings and low maintenance, rewiring is the solution.

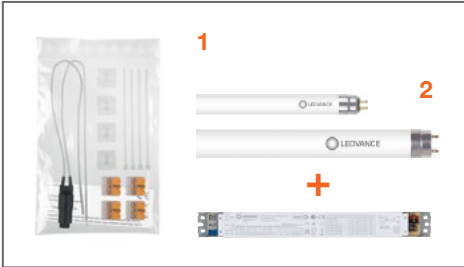
1. LED tube on mains voltage:

Particularly quick and application-oriented with the conversion kit and the matching range of T5 and T8 LED tubes

2. LED Tube External System: T5/T8

LED tube and external driver:

The perfect solution for switching from old fluorescent lamps and dimmable DALI control gear to efficient and dimmable LED technology



LUMINAIRE BASED SOLUTION

3

UPGRADE

Upgrade using the luminaire-in-luminaire principle:

- LINEAR MAGNETIC BATTEN T5 upgrade kit for existing T5 and T8 metal louver luminaires
- Positioning and mounting using adjustable magnets
- Quick, tool-free rewiring thanks to connector box
- Designed for use with T5 AC LED tubes
- Available in three different lengths



4

NEW INSTALLATION

Complete replacement with modern LED luminaires:

- Large range of innovative luminaires for new construction or renovation projects
- Attractive design and high quality
- High functionality for intelligent lighting control
- Long life and maximum potential for energy savings



Go directly to the Tube Finder: ledvance.com/tubefinder

BIOLUX HCL

HUMAN CENTRIC LIGHTING
SO CLOSE TO DAYLIGHT

Light is essential for our well-being and performance. But the situation in workplaces very often does not meet these requirements. There's too little natural daylight and work until late into the night. BIOLUX HCL is a convincing solution for all these cases.

The award-winning human centric lighting system from LEDVANCE takes into account the biological effect of light on people and mimics the natural changes in daylight up to 95% – almost as if you were working outdoors. The positive impact on the company and employees is measurable. Employees call in sick less often and their satisfaction, performance and work results improve.

AWARD-WINNING AND MARKET-LEADING

BIOLUX HCL won several awards and was one of the first systems to receive the VDE HCL quality certificate (best mark) for a true-to-life simulation of daylight. No surprise that it is one of the leading HCL systems on the market.



BIOLUX HCL – THE COMPONENTS OF YOUR SUCCESS

The LEDVANCE HCL system consists of two components: the BIOLUX control unit and the BIOLUX luminaires. Since the control unit and luminaires communicate wirelessly via a Zigbee mesh network, no additional wiring is required for installation. The new BIOLUX HCL app keeps configuration to a minimum.

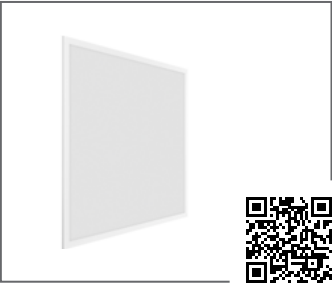
Operation is also intuitive. Using the rotary switch of the recently improved control unit, users can select four light profiles – RELAX, CREATE, FOCUS and BOOST – in addition to the standard NATURAL setting to adapt the lighting to their individual requirements. The new on/off function eliminates the need for a separate light switch.



SUPERIOR CLASS

BIOLUX HCL CONTROL UNIT

- Easy and quick installation of the BIOLUX HCL lighting system (BIOLUX HCL CONTROL UNIT in combination with BIOLUX HCL luminaire(s) – BIOLUX HCL LED strips) thanks to wireless technology
- Automated commissioning and setup by LEDVANCE BIOLUX app, no programming, registration required



SUPERIOR CLASS
UP TO -45 %¹ ENERGY
UP TO -28 KG² CO₂

BIOLUX HCL PANEL ZIGBEE

- Suitable luminaire for BIOLUX, VIVARES and other Zigbee 3.0 Light Management Systems
- Compatible with VIVARES CLOUD SERVICES
- Through-wiring possible with included connector box



SUPERIOR CLASS

BIOLUX HCL LED STRIP KIT

- LED Strips TW for implementing effective HCL in combination with HCL Luminaires
- Set products: 1x LED Strip Superior 2000 lm/m TW, OTi Dali driver 160W/220-240/242CHDT6; Zigbee Dali converter with strain relief ECO CI KIT
- Adjustable color temperature: 2,700...6,500 K



VIVARES ZB O SENSOR

- Wireless Zigbee 3.0 presence sensor for ceiling integration
- Perfect fit for office application
- AC mains powered 220-240 V
- Presence detection via passive IR element
- Mounting height: 2...5 m



GOOD REASONS FOR CHOOSING BIOLUX HCL

- Location and season-specific orientation of the lighting to the changes in daylight with optimal biological effect
- Up to 48 BIOLUX HCL components per control unit (luminaires, LED strips, sensors)
- Ideal for single-room solutions such as meeting rooms or offices with little or no natural light
- NEW! Even easier commissioning and more functionality thanks to BIOLUX HCL app including sensor configuration mode, HCL demo mode, troubleshooting support, schedule function

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

REFERENCE
PROJECTS
THAT’S HOW
NATURAL LIGHT
IS TODAY WITH
BIOLUX HCL



**BUSINESS
CAMPUS HUB –
GARCHING, DE**



**KREISHAND-
WERKERSCHAFT –
SCHLESWIG, DE**



**HARALD MEYER
GMBH –
SITTENSEN, DE**



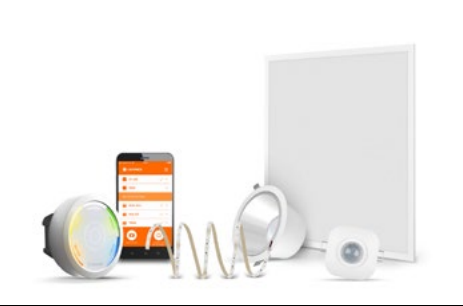
**MANAGEMENT
CONSULTANCY –
MUNICH, DE**



**LEDVANCE
HEADQUARTERS –
GARCHING, DE**



**HANDBALLVEREIN
THW KIEL –
KIEL, DE**



BIOLUX HCL

Business Campus GmbH in Garching set up the leasable Business Campus Hub as a future office on a floor area of around 500 m². Based on state-of-the-art lighting technology, LEDVANCE implemented lighting solutions that are precisely tailored to the different areas. In addition to improved energy efficiency and reduced maintenance, the main focus was on making the workplaces much more attractive. Two office and meeting rooms were equipped with BIOLUX HCL CONTROL UNITS, BIOLUX HCL PANELS and BIOLUX HCL DOWNLIGHTS to boost concentration, motivation and well-being – with significant added value for companies and their employees.

To significantly improve concentration and performance of its trainees, Kreis-handwerkerschaft Schleswig equipped three classrooms with state-of-the-art BIOLUX HCL lighting technology. The apprentices of the electrical engineering department disassembled the existing T8 fluorescent lamps and installed the new BIOLUX HCL system under the supervision of their foreman, which was easy thanks to wireless operation via Zigbee 3.0. A total of 90 BIOLUX HCL PANELS were installed in the classrooms. The luminaires proved to be the ideal solution with their uniform light distribution, reduced glare and high color rendering.

Harald Meyer Installationen GmbH wanted to replace the entire lighting system in its office with a contemporary solution. For implementing the project, it was necessary to take into account the outdated electrical system and the criteria of state-funded programs. To meet all the requirements, LEDVANCE consistently relied on sensor-controlled light management systems with wireless Zigbee transmission standard. While VIVARES ZIGBEE was the ideal solution for the open-plan offices, BIOLUX HCL was chosen for the meeting rooms and individual offices. The system has since been boosting well-being and performance with its dynamic light that simulates daylight.

In the office of a management consultancy, the lighting needed to be modernized to meet current standards and to create an ergonomic environment that could be adapted to changing work situations. No suspended ceilings were available for the new installation. What’s more, existing recessed ceilings had to be used for the installation of new luminaires. The company chose the wireless BIOLUX HCL in combination with BIOLUX HCL PANELS. The powerful ceiling luminaires with reduced glare and high color rendering were installed in installation frames with side power supply. Since then, employees have benefited from daylight-quality lighting and individually selectable light scenes.

LEDVANCE also relies on BIOLUX HCL at its own headquarters – and therefore on intelligent lighting that takes into consideration the needs of people, promoting concentration as well as creative thinking during meetings. As part of a modernization, LEDVANCE has replaced outdated fluorescent technology in meeting rooms, open-plan and individual offices with BIOLUX HCL CONTROL UNITS, BIOLUX HCL PANELS and BIOLUX HCL DOWNLIGHTS. Five light profiles for different requirements can be selected using intuitive control units. The well-being and performance of the employees increased noticeably, and maintenance of the new system decreased significantly.

In sport, concentration, vitality and performance are also a question of the right lighting. For the handball professionals at THW Kiel, LEDVANCE installed BIOLUX HCL, which won several awards and was awarded the VDE HCL quality certificate, in the video room of the training center and in the meeting room of the administrative building. In the standard NATURAL profile, the system automatically adjusts the lighting to the changes in daylight. The coach and players can also use a control unit to select the FOCUS and RELAX light profiles and dynamically adjust the lighting to their respective needs. This is how innovative LEDVANCE lighting technology helps boost the handball stars’ performance.

Would you like to know how we can support your projects with BIOLUX HCL? Ask us – 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

VIVARES



**IOT LIGHT
MANAGEMENT
COMFORTABLE
AND EFFICIENT**



16

VIVARES is a great solution for energy-saving, climate-friendly and future-oriented office lighting – as an addition, for maintenance, and for renovations and new buildings. LEDVANCE's convenient IoT light management system for installers and users creates optimum lighting conditions for all defined requirements and also offers potential for energy and CO₂ savings of up to 80%.

At LEDVANCE you'll get everything from one source – all LMS components as well as matching LED luminaires. In addition to luminaires, the flexible LED strips can now also be combined with VIVARES. Optional connection to the cloud also allows for maintenance assistance and energy monitoring. That's what economy means today.

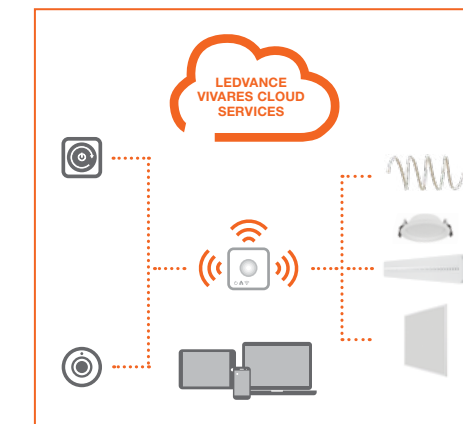
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VIVARES DALI AND VIVARES ZIGBEE TWO TECHNOLOGIES, INFINITE POSSIBILITIES

With VIVARES, you can choose from two different technologies to control the lighting.

VIVARES Zigbee communicates wirelessly using the highly reliable Zigbee 3.0 standard. This makes VIVARES Zigbee the first choice when rewiring is not an option, for example because a building is listed, has no suspended ceilings or modernization has to be cost-effective without any structural changes. VIVARES Zigbee is also ideal for flexible room situations because the system is easy to adapt.

VIVARES DALI is the ideal solution if additional control lines can be laid without any problems, for example in suspended ceilings, when retrofitting existing DALI installations or equipping new buildings. VIVARES DALI also has an optional KNX interface with which it can be integrated into the building control system. Both systems work with a maximum stability. This means that you always have an ideal solution at hand for a wide range of projects.



VIVARES services for professionals

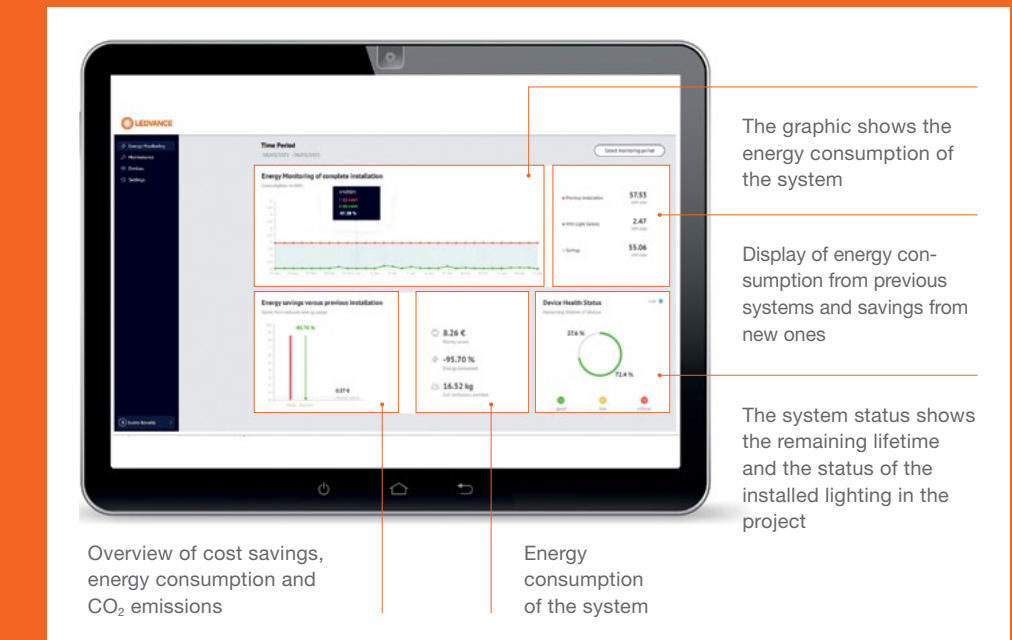
Our experts are happy to support you in planning and implementing your light management system. Just get in touch at: vivares-support@ledvance.com



Visit us at:
youtube.com/ledvance

KEEP AN EYE ON EVERYTHING VIVARES CLOUD SERVICES

Thanks to the optional VIVARES cloud services, you can access the lighting system data from anywhere, making operation even more efficient, reliable, energy-saving and cost-effective. With the intuitive dashboard you can monitor energy consumption, the operating hours of the drivers and the relevant lighting data, among other things. Various filter functions give you the option of analyzing the data according to your needs.



You can find more information online and in our LEDVANCE VIVARES light management brochure: ledvance.com/vivares



VIVARES ZIGBEE

WIRELESS, MODERN, FLEXIBLE

The great advantage of VIVARES Zigbee is that no new control lines need to be laid during installation. The controller wirelessly communicates with up to 200 Zigbee-capable devices such as VIVARES Zigbee luminaires, sensors and pushbutton couplers. A Zigbee DALI converter is also available to integrate DALI-2 luminaires. Potential applications range from small lighting projects

to complete floor solutions. Even after commissioning, expanding the system with additional components is no problem at all. The system and its components are very easy to configure and commission via the VIVARES portal. And it can also be maintained remotely using the VIVARES portal or the mobile app.



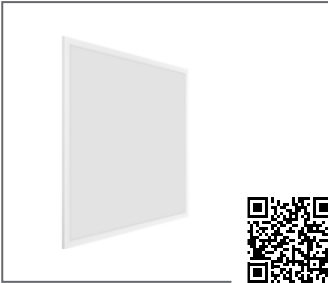
VIVARES ZB CONTROL

- Lighting control unit based on wireless Zigbee 3.0 technology
- IoT ready thanks to built-in gateway
- Remote access functionality saves time for post-installation adjustments
- Connect up to 200 endpoints in one network
- Built-in Human Centric Lighting control



VIVARES ZB L/O SENSOR

- Wireless Zigbee 3.0 light and presence sensor for ceiling integration
- Perfect fit for office application
- Presence detection via passive IR element
- AC mains powered 220–240 V
- Mounting height: 2...5 m



PANEL PERFORMANCE UGR < 19 ZIGBEE

- Energy savings thanks to high system efficacy: up to 120 lm/W
- Good glare reduction (UGR < 19)
- Tool-free electrical connection due to push button connector
- Through-wiring possible with included connector box



SMART+ ZIGBEE CLASSIC DIMMABLE

- LED Classic A lamp with wireless smart lighting function
- Up to 80 % less energy consumption compared to halogen lamps
- Dimmable
- Network protocol: Zigbee
- Lifetime: up to 20,000 h

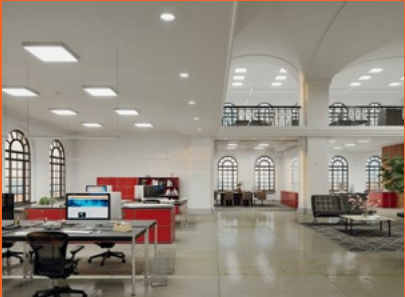
PERFORM-
MANCE
CLASS

UP TO
~50 %¹
ENERGY

UP TO
~ 29 KG²
CO₂

UP TO
~80 %¹
ENERGY

UP TO
~ 29 KG²
CO₂



GOOD REASONS FOR CHOOSING VIVARES ZIGBEE

- Ideal for modernizing existing buildings where no rewiring is needed or possible
- Based on the international Zigbee 3.0 standard
- Quick and easy installation and QR code-based commissioning
- Simple reconfiguration of the components when the use of rooms changes
- Maintenance and energy consumption reports from anywhere

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

VIVARES DALI

WIRED, POWERFUL, COMPATIBLE

As an open standard, the system is compatible with a wide range of DALI-2-ready luminaires and components. A total of up to 128 luminaires and 126 input devices can be individually addressed via two channels. Installation, configuration and commissioning are particularly simple and user-friendly thanks to the browser-based graphical user interface.

In the DALI PC tool, up to 8 DALI PRO 2 IoT controllers can be connected in one network via LAN Interconnect, so up to 1024 luminaires and 1008 input devices in total. Predefined templates and drag & drop enable time-saving and intuitive commissioning. The DALI PC tool can also be used to maintain the system remotely.



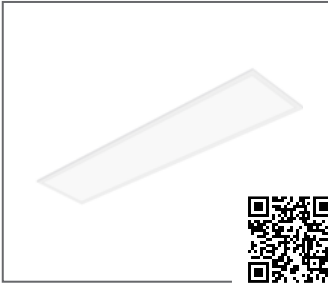
DALI PRO 2 IOT

- DALI-2 certified
- Remote access for changes in the installation from every location
- LAN Interconnect to connect up-to 8 Controller into one network
- Suitable for BIOLUX Human Centric Lighting for high quality daylight course in office spaces
- Ready for optional VIVARES Cloud Services



DALI SENSOR LS/PD CI G2

- Flat design, very small structural height
- Simple and fast installation via wire springs
- DALI-2 certified
- DALI Bus powered (No mains connection necessary)
- Multiple sensors connectable to the same DALI line
- Presence detection angle adjustable between 40...90° via integrated shutters



PANEL PERFORMANCE 1200 x 300 UGR < 19DALI

- Energy savings thanks to high system efficacy: up to 120 lm/W
- Good glare reduction (UGR < 19)
- Tool-free electrical connection due to push button connector
- Through-wiring possible with included connector box

PERFORM-
MANCE
CLASS

UP TO
~50 %¹
ENERGY

UP TO
~ 24 KG²
CO₂



LED STRIPS

- Great scope of design options due to long and flexible LED strips
- Smallest cuttable unit: 55.56 mm
- Lifetime (L70/B50): up to 50,000 h at Tc max.: 80°C
- Very good color rendering index CRI > 90
- Maximum flexibility due to large range of accessories

PERFORM-
MANCE
CLASS



GOOD REASONS FOR CHOOSING VIVARES DALI

- Tailor-made for new buildings and renovations with the option of additional control lines
- Products certified according to DALI-2 standard
- Extensive product portfolio for office applications
- Project creation and commissioning with self-explanatory software
- Integrated IoT gateway for maintenance and energy consumption reports
- Automated tests on emergency lighting system including reports

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

VIVARES HCL FOR EFFECTIVE WORKPLACE CONCEPTS

Little daylight, dark floors and artificial light? These are working conditions that are quite common in office buildings. But no more because VIVARES HCL is the future. The system combines VIVARES DALI or VIVARES Zigbee with BIOLUX HCL light sources and adapts the lighting in open-plan offices or entire floors to the natural changes in daylight: automatically, intelligently and easily controllable.



CONTROLLER WITH BIOLUX HCL CURVE

- Controller with embedded BIOLUX HCL curve in DALI or Zigbee technology
- Suitable for BIOLUX Human Centric Lighting for high quality daylight course in office spaces
- Ready for optional VIVARES Cloud Services



BIOLUX HCL PANEL

- Suitable luminaire for VIVARES, VIVARES HCL and other Light Management Systems
- Product available as DALI or Zigbee version
- Compatible with VIVARES CLOUD SERVICES
- Through-wiring possible with included connector box
- Adjustable color temperature: 2,700...6,500K

SUPERIOR CLASS

UP TO -45 %¹ ENERGY

UP TO -28 KG² CO₂



BIOLUX HCL DOWNLIGHT

- Suitable luminaire for VIVARES, VIVARES HCL and other Light Management Systems
- Product available as DALI or Zigbee version
- Compatible with VIVARES CLOUD SERVICES
- Through-wiring possible with included connector box
- Adjustable color temperature: 2,700...6,500K

SUPERIOR CLASS

UP TO -61 %¹ ENERGY

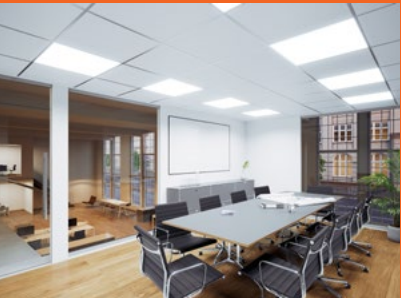
UP TO -25 KG² CO₂



BIOLUX HCL LED STRIP KIT

- LED Strips TW for implementing effective HCL in combination with HCL Luminaires
- Set products: 1 x LED Strip Superior 2000 lm/m TW, OTi Dali driver 160W/220-240/242CHDT6; Zigbee Dali converter with strain relief ECO CI KIT
- Adjustable color temperature: 2,700...6,500K
- CRI > 90

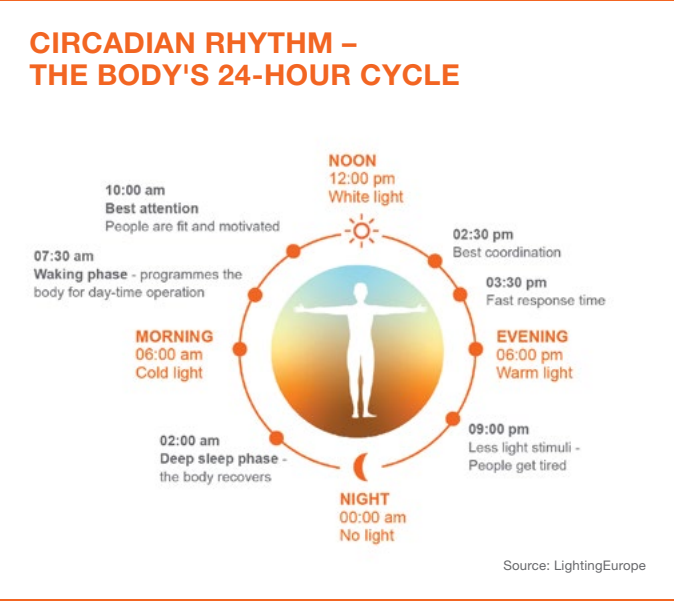
SUPERIOR CLASS



GOOD REASONS FOR CHOOSING VIVARES HCL

- Biologically optimized lighting for different work situations
- Certified LEDVANCE HCL curves for very accurate simulation of natural daylight
- Increases well-being and performance
- Luminaire specification adapted to HCL requirements
- Easy integration and use with the VIVARES light management system

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.



VIVARES HCL OR BIOLUX HCL? TWO SYSTEMS, DIFFERENT APPLICATIONS

In the professional range, LEDVANCE offers you two innovative solutions for human centric lighting. BIOLUX HCL is your gateway to the HCL world. In its minimum configuration, it only consists of a control unit and a luminaire. VIVARES HCL, on the other hand, combines a complex light management system with HCL and is also suitable as an open-plan or floor solution thanks to the connection of a large number of devices per controller.

COMPARISON OF LEDVANCE HCL SYSTEMS

	BIOLUX HCL (single room office/conference room)	VIVARES HCL Zigbee (Open-plan offices/floors)	VIVARES HCL DALI (Open-plan offices/floors)
Number of controller devices in a network	1	1	max 8
Number of devices	max. 48	max. 200	Luminaires: max. 1 024 (8 × 128) Components: max. 1 008 (8 × 126)
Mode	5 light profiles	1 light profile (NATURAL)	5 light profiles
Adjustment with the BIOLUX HCL control unit	Yes	No	No
Commissioning	BIOLUX HCL App	VIVARES Portal	VIVARES DALI commissioning app
Cloud services	No	Yes	Yes
Presence sensor combinable	Yes	Yes	Yes
Technology	Zigbee 3.0	Zigbee 3.0	DALI-2



FIND OUT MORE NOW!
You can find more information about VIVARES HCL at:
ledvance.com/vivares



REFERENCE
PROJECTS
THAT’S HOW
CONVENIENT
LIGHT IS TODAY
WITH VIVARES



**CORPORATE HEADQUARTERS –
MOLSHEIM, FR**



**BUSINESS CAMPUS HUB –
GARCHING, DE**



VIVARES

The office building needed to be upgraded with state-of-the-art LED lighting technology as easily as possible. The objectives were clear: Greater efficiency while maintaining high illuminance and compliance with government regulations on energy consumption and light pollution. The solution was VIVARES ZIGBEE. The wireless light management system made it possible to replace the luminaires without any structural changes or rewiring. Commissioning was done quickly and intuitively via QR codes using the VIVARES app. Presence and light sensors reduce the energy consumption of the efficient LED luminaires even further. Pushbutton couplers allow users to dim the lighting as required and select predefined scenes. Maintenance and consumption reports through the VIVARES Cloud contribute to even greater economy.

In Garching the aim was to implement nothing less than the office of the future: a collaborative, social meeting place that offers functional workplaces and an environment that positively influences the motivation, well-being and productivity of the employees. It was obvious that the convenient VIVARES IoT light management system with its versatile control options and predefinable light scenes would be at the center. Depending on the requirements in the individual rooms, either the wireless VIVARES ZIGBEE, which is particularly easy to install and commission, or the highly compatible DALI version is used. Combined with daylight/presence sensors, both technologies enable individual lighting solutions that combine high efficiency with high user-friendliness.



**VALDA + PARTNER GMBH –
WINTERTHUR, CH**

More efficiency, more brightness and a pleasant atmosphere for employees and visitors in any situation. These were the plans for an efficient, flexible and interactive lighting system in the historic office building with low ceiling heights. LEDVANCE had the ideal solution: BIOLUX HCL PANEL ZIGBEE luminaires in combination with the VIVARES ZIGBEE light management. The wireless system was easy to install without any structural changes following the requirements of listed buildings and was also easy to commission. It offers convenient handling and efficient energy use as well as automatic adjustment of the lights to daylight and individually adjustable light profiles. Since the modernization, the quality of light has improved noticeably and the offices have become much more versatile.



**HARALD MEYER GMBH –
SITTENSEN, DE**

Installation of intelligent lighting throughout the entire office building taking advantage of the KfW 276 energy efficiency program and federal funding for efficient buildings (BEG) – that’s what Harald Meyer Installationen GmbH commissioned LEDVANCE to do. In view of structural conditions and the outdated electrical system on site, LEDVANCE used the wireless VIVARES ZIGBEE IoT light management system in combination with LED panels as well as daylight and presence sensors in the open-plan offices. Installation was quick without any structural changes and complex cabling. Since then, the company and its employees have benefited from a lighting system that can be adapted to different work situations and that offers significantly higher lighting quality and noticeably lower energy costs.

Would you like to know how we can support your projects with VIVARES?
Ask us – we look forward to hearing from you!
contact@ledvance.com
+49 89 780673-600

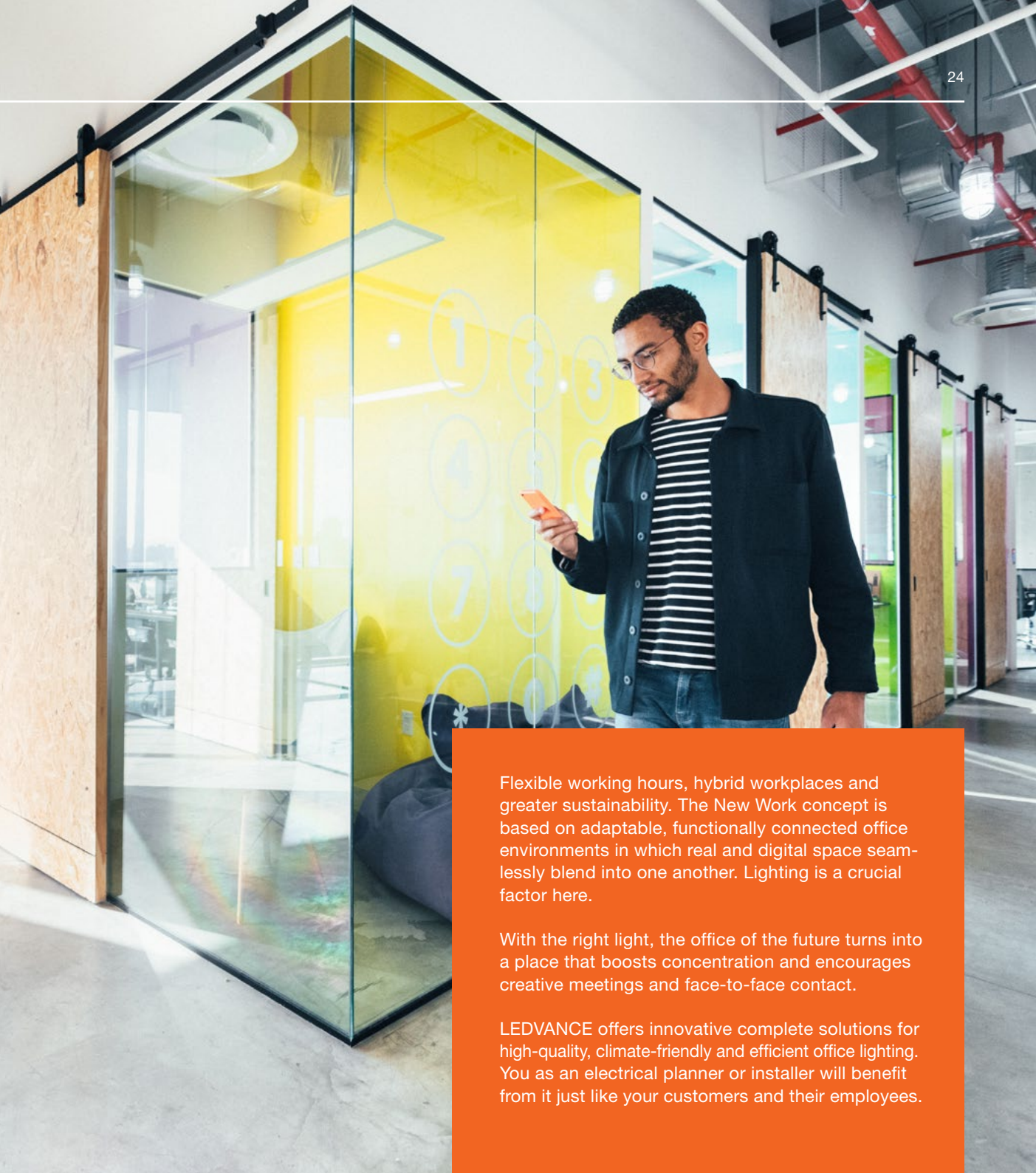
All project information and other cases can be found here:



ledvance.com/projects

OFFICE

THE OFFICE OF
THE FUTURE –
FAR MORE THAN
A WORKPLACE



Flexible working hours, hybrid workplaces and greater sustainability. The New Work concept is based on adaptable, functionally connected office environments in which real and digital space seamlessly blend into one another. Lighting is a crucial factor here.

With the right light, the office of the future turns into a place that boosts concentration and encourages creative meetings and face-to-face contact.

LEDVANCE offers innovative complete solutions for high-quality, climate-friendly and efficient office lighting. You as an electrical planner or installer will benefit from it just like your customers and their employees.

OFFICE – OUR HIGHLIGHTS FOR YOUR SUCCESS

The LEDVANCE portfolio provides the ideal LED lamps, luminaires and systems for every office project – with great lighting comfort, DALI or Zigbee connectivity, efficiency and easy installation. This allows you to offer your customers attractive office lighting that

enhances employee performance and sets you apart in competing for the best employees. And what you can always expect is that our products very quickly pay for themselves thanks to quick installation, low operating costs and minimal maintenance.



PERFORMANCE CLASS	UP TO -50% ¹ ENERGY	UP TO -116 KG ² CO ₂
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PERFORMANCE CLASS	UP TO -60% ¹ ENERGY	UP TO -56 KG ² CO ₂
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PERFORMANCE CLASS	UP TO -60% ¹ ENERGY	UP TO -17 KG ² CO ₂
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UP TO -50% ¹ ENERGY	UP TO -10 KG ² CO ₂
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PANEL COMFORT UGR < 19

- Highly versatile luminaire due to selectable CCT and Power (CCT and Power Select – CPS)
- High performance with CRI 90 and up to 122 lm/W
- Antiglare Luminaire with UGR < 19
- Versions for VIVARES DALI available with extended services like energy monitoring and remote maintenance

LINEAR INDIVIDUAL GEN2 / EVERLOOP

- Illumination of applications with high light quality requirements
- Evolution of SCALE product design with focus on flexibility and sustainability
- Easy upgrade and service thanks to EVERLOOP components
- Recessed, surface, suspended and continuous line installations

DOWNLIGHT UGR19

- Good glare reduction (UGR < 19) and cut off angle up to 30° for comfortable indoor lighting
- Easy and quick installation thanks to connector box with 5-pole toolless terminal
- Low flicker light
- Suitable for use in dusty and damp locations thanks to high IP rating

OSRAM DULUX L LED HF & AC MAINS

- Quick, simple and safe replacement
- Simple replacement thanks to similar design as conventional compact fluorescent lamps
- Low energy consumption
- Operation directly on 230 V AC mains possible



YOUR EXPECTATIONS

Modern office lighting has to meet many requirements: provide high-quality light for all situations, protect the climate with high efficiency, contribute to a positive balance with low maintenance costs and, last but not least, create a pleasant working environment. You can rely on LEDVANCE in every way – today and tomorrow.

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

FLUORESCENT LAMP BAN 2023:

ALTERNATIVE LIGHTING FOR OPEN-PLAN OFFICES

YOUR CHALLENGE

Open-plan offices are about performance, creativity, and efficiency. The lighting must be ergonomic, comfortable and activating, but also economical and flexible enough to allow the furniture to be rearranged at any time. When replacing T5 fluorescent lamps, LED ceiling lighting is needed that combines high lighting quality with enormous energy and CO₂ savings and short payback.

TOTAL COST SAVINGS UP TO

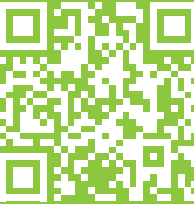
32 %

TOTAL CO₂ SAVINGS UP TO

67 %

PAYBACK TIME FROM

19 MONTHS



A detailed overview of the LAMP BAN 2023 can be found at: ledvance.com/lampban2023

ENERGY SAVINGS UP TO

50 960 KWH

COST SAVINGS FOR ELECTRICITY UP TO

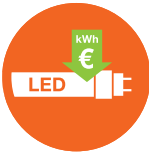
67 %



SWITCH TO LED – THE POTENTIAL SAVINGS ARE ENORMOUS

YOUR SOLUTION

LEDVANCE offers you a convincing LED alternative for your situation. Our SubstiTUBE T5 LED tubes and our LINEAR INDIVILED ceiling luminaires combine a high luminous efficacy (lm/W) with an impressive lifetime. There is also a clever upgrade for existing metal louver luminaires: the particularly easy-to-install LINEAR MAGNETIC BATTEN T5 luminaire-in-luminaire solution.



RETROFIT

SubstiTUBE T5 HF HO49
26W/4000K 1449mm
4058075**543089** EAN (GTIN)



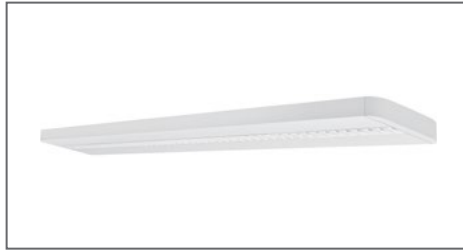
CONVERSION

SubstiTUBE T5 AC HO49
26W/4000K 1449mm
4058075**543447** EAN (GTIN)



NEW INSTALLATION

LINEAR INDIVIDUAL DIRECT
1 200 34 W 4 000 K
4058075**109629** EAN (GTIN)



	OLD : Traditional T5 HO49 W
Guarantee	
Efficiency	97 lm/W
System wattage	52 W (incl. losses on ECG) ²
Average lifetime	20 000 h
Energy consumption of project	4.2 kW
Energy consumption over period of operation	75 712 kWh
CO ₂ Emissions (231 g/kWh) ⁴	17 489 kg
Total cost savings up to	
Payback time from	

NEW: SubstiTUBE T5 HF HO49 26W	Savings
5 years ¹	
154 lm/W	
28 W (incl. losses on ECG) ²	
50 000 h	
2.2 kW	
40 768 kWh	34 944 kWh
9 417 kg	8 072 kg
29 %	
21 months	

NEW: SubstiTUBE T5 AC HO49 26W	Savings
5 years ¹	
153 lm/W	
26 W (on AC)	
50 000 h	
2.1 kW	
37 856 kWh	37 856 kWh
8 745 kg	8 744 kg
32 %	
19 months	

NEW: LN INDV D 1200 34W	Savings
5 years ¹	
120 lm/W	
34 W	
60 000 h ³	
1.4 kW	
24 752 kWh	50 960 kWh
5 718 kg	11 771 kg
13 %	
45 months	

GLOBAL PARAMETERS⁵: Period of operation: 60 months, 5 years, 18 200 operating hours
Operating times: 5 days a week, 52 weeks a year, 14 hours a day | Number of light points:
80 lamps, 40 luminaires

¹ Refer to www.ledvance.com/guarantee for precise conditions. | ² ECG losses depend on ECG type, check ECG compatibility before installation | ³ t_h: L70/B50 at 25 °C (T_A) | ⁴ 2020 European level of GHG emission intensity of electricity generation (www.eea.europa.eu) | ⁵ Calculation parameters: Replacement costs: Traditional T5 HO 49 W €3.55*/piece, SubstiTUBE T5 HF HO49 26 W €34.05*/piece, SubstiTUBE T5 AC HO49 26 W €33.25*/piece, LN INDV D 1200 34 W €199.50*/piece, costs for exchanging: retrofit €10.00*/housing, conversion €15.00*/housing, new installation €20.00*/luminaire, electricity costs: €0.20*/kWh. *Illustrative prices. Prices may vary in your country.

SIMPLE AND COST-EFFECTIVE: LINEAR MAGENTIC BATTEN T5

The batten light for LED TUBE T5 AC can be used to refurbish old T8 and T5 luminaires with an open steel housing (louver). It is easy to position and mount using magnets. Tool-free connection via a piano key terminal is just as quick and convenient. A certified “luminaire in a luminaire” that gives the installer peace of mind as no recertification is required.



REFERENCE PROJECTS THAT’S HOW EFFICIENT LIGHT IS TODAY FOR OFFICES



BUSINESS CAMPUS HUB – GARCHING, DE



SIEMENS CAMPUS – ERLANGEN, DE



HANDBALLVEREIN THW KIEL – KIEL, DE



T-CENTER LANDMARX – VIENNA, AT



KREISHAND- WERKERSCHAFT – SCHLESWIG, DE



VISIO SCHOOL – BREDA, NL



PANEL DIRECT/INDIRECT
PANEL AND PANEL INDIVILED
LINEAR INDIVILED DIRECT/INDIRECT
LINEAR SURFACE
DOWNLIGHT
BIOLUX HCL
VIVARES

The Business Campus Hub combines several state-of-the-art lighting solutions. Both as a wireless Zigbee and a DALI version, the VIVARES IoT light management system provides efficient, on-demand lighting with a wide range of control options and predefined scenes. In individual offices and meeting rooms, BIOLUX HCL increases health, well-being and performance by simulating daylight. In Relax offices, SMART+ creates a customizable atmosphere. The systems are completed by functional and aesthetic lamps and luminaires as well as sensors and components from LEDVANCE – lighting technology from a single source for the office of the future.

The aim was for uniform illumination to make room usage more flexible. The existing suspended ceiling had to be taken into account when it came to integrating new luminaires. A solution was found in the combination of two DALI-controlled LEDVANCE luminaires. LINEAR INDIVILED DIRECT/INDIRECT are equipped with daylight and presence sensors. They control the light as required independently of the building technology and maintain the brightness at a constant 500 lux. PANEL DIRECT/INDIRECT offer a low-profile design and homogeneous light. Together they not only meet the requirements of the Workplace Ordinance but also the customer's desire for efficiency and flexibility.

As part of its partnership with THW Kiel, LEDVANCE installed the BIOLUX HCL system, which won several technical awards, in combination with LED PANEL and LED DOWNLIGHT luminaires in the video room of the training center and in the meeting room of the administrative building. Using the preset NATURAL profile, the system automatically adjusts the lighting to the natural changes in daylight and ensures greater concentration, vitality and performance. The coach and players can use a rotary switch to select the FOCUS and RELAX light profiles and dynamically adjust the lighting to their respective needs. This is how innovative LEDVANCE lighting technology helps boost the handball stars' performance.

LEDVANCE provided an innovative lighting concept for a show office that serves as a best practice example for potential tenants of a newly renovated office complex. The main building blocks are customized TRACKLIGHTS SPOT COMPACT with yellow housings, indirect lighting by LED STRIPS in the reception area and BIOLUX HCL for the meeting room. Attractive VINTAGE 1906 BUBBLE PENDANT pendant luminaires, DOWNLIGHTS and other LEDVANCE LED luminaires complete the lighting concept. This is how the customer benefited from a complete solution with first-class products from a single source, implemented with professional expertise and high service quality.

More concentration and more performance. These are the advantages of BIOLUX HCL for trainees which Kreishandwerkerschaft Schleswig recognized, so it equipped three of its classrooms with the biologically effective system that simulates the natural changes in daylight. Thanks to wireless Zigbee technology and plug & play, it is easy to install and meets all the training requirements with its intuitive control. A rotary switch can be used to select the five light profiles RELAX, CREATE, NATURAL, FOCUS and BOOST for different situations. The BIOLUX HCL PANELS used offer uniform light distribution, reduced glare and high color rendering.

As a facility for children with multiple disabilities, the Visio School places high demands on lighting. Above all, the glare angle and the uniformity of the light distribution have to be taken into account. For the classrooms, the LEDVANCE LINEAR INDIVILED DALI proved to be the ideal luminaire. Thanks to its IndiviLED® optics, it offers a uniform light distribution and low glare (UGR < 16). The luminaire also achieves maximum energy savings of 50% compared to conventional luminaires with T5 fluorescent lamps. The LEDVANCE portfolio also provided ideal solutions for corridors, changing rooms, shower rooms, toilets and walls.

Would you like to know how we can support you with your office projects?
Ask us - we look forward to hearing from you!
contact@ledvance.com
+49 89 780673-600

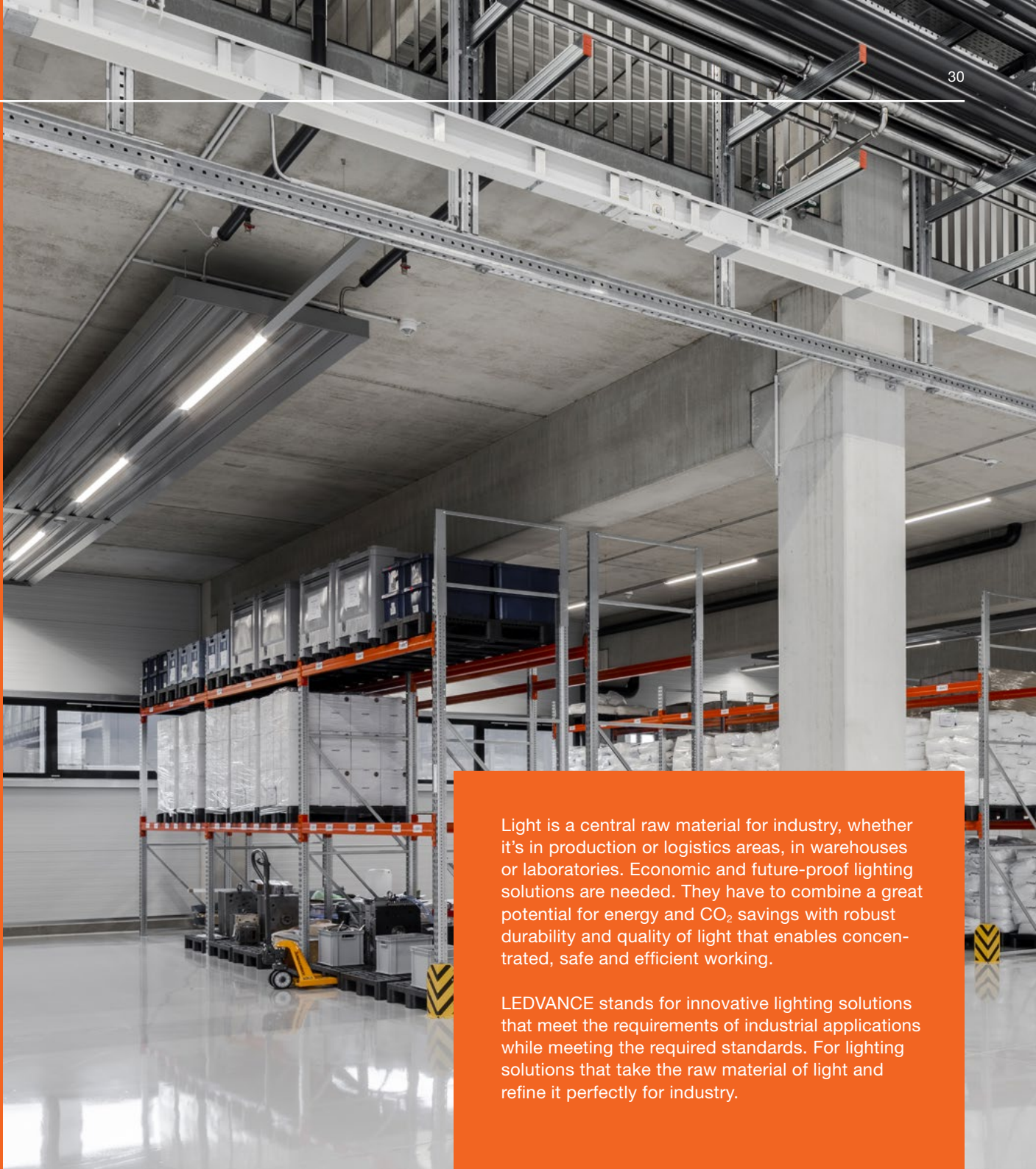
All project information and other cases can be found here:



ledvance.com/projects

INDUSTRY

OUR RAW MATERIAL
FOR YOUR SUCCESS
INNOVATIVE LIGHTING
SOLUTIONS RIGHT
DOWN THE LINE



Light is a central raw material for industry, whether it's in production or logistics areas, in warehouses or laboratories. Economic and future-proof lighting solutions are needed. They have to combine a great potential for energy and CO₂ savings with robust durability and quality of light that enables concentrated, safe and efficient working.

LEDVANCE stands for innovative lighting solutions that meet the requirements of industrial applications while meeting the required standards. For lighting solutions that take the raw material of light and refine it perfectly for industry.

INDUSTRY – OUR HIGHLIGHTS FOR YOUR SUCCESS

Designed specifically for use in harsh environments, LEDVANCE LED lighting solutions for industry are extremely robust, functional, powerful, reliable and safe. Equipped with DALI or Zigbee connectivity, they can be coupled with sensors and integrated into intelligent light management systems to increase their high efficiency even

further. And in terms of economy, our industrial products meet the highest demands. Significant energy savings, easy assembly and very low maintenance mean they soon pay for themselves.



PERFORMANCE CLASS

UP TO -65 %¹ ENERGY

UP TO -43 KG² CO₂

LOW BAY FLEX 1200

- A new product in addition to our Highbay range
- Economical thanks to high luminous efficacy up to 160 lm/W
- Long Lifetime of up to 100 000 h L80
- Easy and quick installation thanks to integrated tool-free connector box
- Through-wiring already pre-installed



UP TO -90 %¹ ENERGY

UP TO -189 KG² CO₂

LED TUBE EXTERNAL SYSTEM

- Optimized LED tube and DALI-2 driver system enable conversion to dimmable LED tube solution
- High system efficiency, guaranteed excellent performance during operation
- No compatibility problems, due to tailor made LED tube and driver system
- Replaceable lighting components



UP TO -60 %¹ ENERGY

UP TO -40 KG² CO₂

DAMP PROOF COMPACT

- Multi-lm versions to increase flexibility in applications
- Easy installation as mounting brackets can be positioned freely on the luminaire
- Easy access to electrical terminal with screwless connector
- Versions with through-wiring available



PERFORMANCE CLASS

UP TO -70 %¹ ENERGY

UP TO -94 KG² CO₂

TRUSYS FLEX

- High system performance of up to 175 lm/W with up to 80 000 h L80
- Quick and easy installation with high comfort due to smart click buttons
- Available in 5 beam angles, 3 lumen packages, DALI and Emergency
- Well prepared for individual lighting solutions



YOUR EXPECTATIONS

Industrial lighting must comply with existing guidelines and work reliably, economically and, ideally, automatically even in dusty, damp, hot or vibrating environments. In light of climate change and the energy crisis, the efficiency of the lighting system is also becoming a decisive factor. Our industry portfolio provides a convincing response to every challenge.

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

FLUORESCENT LAMP BAN 2023:

ALTERNATIVE LIGHTING FOR INDUSTRY

YOUR CHALLENGE

As the RoHS Directive prohibits the use of mercury in lighting products, fluorescent lamps may no longer be placed on the market across the EU after August 25, 2023. This is not only a challenge but also a unique opportunity to upgrade warehouses and other industrial areas to energy- and CO₂-saving LED technology. LEDVANCE is the ideal partner for this.

TOTAL COST SAVINGS UP TO

62 %

TOTAL CO₂ SAVINGS UP TO

66 %

PAYBACK TIME FROM

3 MONTHS

ENERGY SAVINGS UP TO

168 106 kWh

COST SAVINGS FOR ELECTRICITY UP TO

66 %

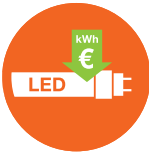
A detailed overview of the LAMP BAN 2023 can be found at: ledvance.com/lampban2023



SWITCH TO LED – THE POTENTIAL SAVINGS ARE ENORMOUS

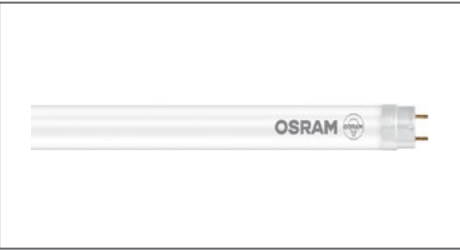
YOUR SOLUTION

High ceilings, narrow aisles, little daylight and often harsh environments. These are ideal conditions for LEDVANCE’s range of industrial products. LEDVANCE LED solutions are particularly efficient and have an extremely long life and a guarantee of up to 5 years – whether it’s SubstiTUBE T8 EM Ultra Output LED tubes with a particularly high light output or the easy-to-install TRUSYS FLEX LED luminaire.



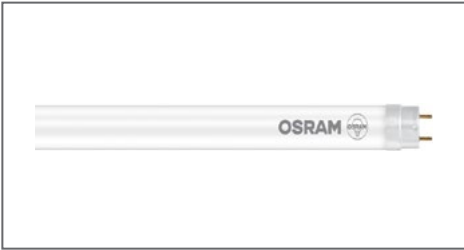
RETROFIT¹

SubstiTUBE T8 EM Advanced Ultra Output 23.1 W/4000 K 1500 mm 4058075611993 EAN (GTIN)



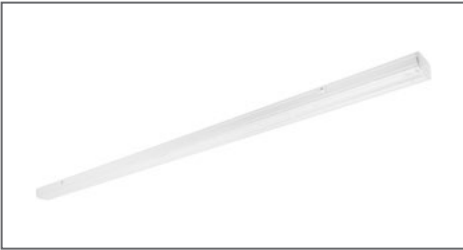
CONVERSION¹

SubstiTUBE T8 EM Advanced Ultra Output 23.1 W/4000 K 1500 mm 4058075611993 EAN (GTIN)



NEW INSTALLATION

TRUSYS FLEX P 50 W 840 VN CL WT 4058075771604 EAN (GTIN)



	OLD: Traditional T8 58W
Guarantee	
Efficiency	90 lm/W
System wattage	68 W (incl. losses on CCG)
Average lifetime	15 000 h
Energy consumption of project	6.8 kW
Energy consumption over period of operation	254 592 kWh
CO ₂ Emissions (231 g/kWh) ⁴	58 811 kg
Total cost savings up to	
Payback time from	

NEW: SubstiTUBE T8 EM Advanced Ultra Output 23.1W	Savings
5 years ²	
160 lm/W	
24.1 W (incl. losses on CCG)	
50 000 h	
2.4 kW	
90 230 kWh	164 362 kWh
20 843 kg	37 968 kg
62 %	
3 months	

NEW: SubstiTUBE T8 EM Advanced Ultra Output 23.1W	Savings
5 years ²	
160 lm/W	
23.1 W (on AC)	
50 000 h	
2.3 kW	
86 486 kWh	168 106 kWh
19 978 kg	38 833 kg
62 %	
3 months	

NEW: TRUSYS FLEX P 50W	Savings
5 years ²	
175 lm/W	
50 W	
80 000 h ³	
2.5 kW	
93 600 kWh	160 992 kWh
21 622 kg	37 189 kg
38 %	
9 months	

GLOBAL PARAMETERS²: Period of operation: 60 months, 5 years, 37 440 operating hours | Operating times: 6 days a week, 52 weeks a year, 24 hours a day | Number of light points: 100 lamps, 50 luminaires

¹ Product can be operated on traditional CCG (Retrofit) or AC Mains (Conversion). | ² Refer to www.ledvance.com/guarantee for precise conditions | ³ t [h]: L70/B50 at 25 °C (T_a) | ⁴ 2020 European level of GHG emission intensity of electricity generation (www.eea.europa.eu) | ⁵ Calculation parameters: Replacement costs: Traditional T8 58 W €3.00/piece, SubstiTUBE T8 EM Advanced Ultra Output 23.1 W €19.80/piece, TRUSYS FLEX P 50 W incl. mounting accessories €268.50/1,5 m piece, costs for exchanging: retrofit €10.00/housing, conversion €15.00/housing, new installation €15.00/luminaire, electricity costs: €0.20/kWh. *Illustrative prices. Prices may vary in your country.

LEDVANCE LED TUBE EXTERNAL SYSTEM

The optimized system comprising LED tube and external driver is the perfect solution for upgrading existing fluorescent lighting systems with DALI-2 control gear to dimmable LED technology. Find out more now at ledvance.com/tubes



REFERENCE PROJECTS THAT'S HOW PRODUCTIVE LIGHT IS TODAY IN INDUSTRY



HARALD MEYER – GMBH – SITTENSEN, DE

A former industrial building was to be used as a warehouse and workshop in the future. New lighting needed to meet new requirements and also improve illuminance and energy efficiency. LEDVANCE developed and implemented a lighting concept perfectly adapted to the lighting requirements of the various areas. HIGH BAY LED luminaires with reflectors were used in the high-bay warehouse, while efficient and robust DAMP PROOF luminaires were chosen for the small parts warehouse and workshop. The covered loading area is illuminated by FLOODLIGHT PERFORMANCE. With SURFACE CIRCULAR and downlights, LEDVANCE also had the right LED solution for shower rooms and changing rooms.



GOAT FARM – GRIESHEIM, FR

High temperature fluctuations, dust, ammonia and humidity. The stables for rearing and milking in the Alsatian goat farm requires robust lighting. When switching from conventional fluorescent to efficient LED technology, the operator therefore relied on DAMP PROOF SPECIAL from LEDVANCE – the ideal LED luminaire for this application thanks to its high resistance to demanding environments. Its pleasantly uniform light, very low flicker and high light output also contributes to the welfare of the animals, better working conditions and greater energy efficiency. The LED luminaire meets all the important standards for food processing which is just as important.



MYSUN – GOUDA, NL

To increase efficiency and performance, the company for sun protection products wanted to upgrade its lighting system equipped with T8 fluorescent tubes to modern LED technology. On site, LEDVANCE experts found that the outdated CCGs had to be dismantled. The SubstiTUBE T8 EM PRO ULTRA OUTPUT, which can be operated directly on mains voltage without CCG, proved to be the best replacement solution. The result of the upgrade is impressive: a flicker-free, climate-friendly and future-proof solution with an extremely long life, up to 60% lower energy consumption, short payback time and significantly better quality of light – backed by a 5-year guarantee.



FUJIFILM MEDWORK GMBH – HÖCHSTADT, DE

The company was looking for intelligent lighting for the new construction of a production hall for medical devices. High-quality LED industrial luminaires needed to be integrated into the company's KNX system, blend harmoniously into the architecture of the hall and also offer an affordable price. TRUSYS LED DALI luminaires from LEDVANCE were chosen. The reasons for this were, on the one hand, the ideal interaction of the DALI luminaires with the existing KNX building management system, and on the other hand their particularly innovative design and excellent energy efficiency as well as low maintenance. The integrated daylight control also enables flexible use of the luminaires and therefore potential for additional savings.



ENTERPRISE SPIESS – BENFELD, FR

Everything new. Those were the instructions for upgrading the lighting system of the industrial buildings to LED lighting. LEDVANCE equipped the halls and maintenance workshops, which are up to 10 meters high, with HIGH BAY LED luminaires. Waterproof DAMP PROOF luminaires were used in the spare parts warehouse, and DAMP PROOF SPECIAL in the machine pit. The car park and facade have been illuminated by FLOODLIGHT PERFORMANCE ASYM since the upgrade. The very quick and easy installation of the new LEDVANCE luminaires impressed the management and employees of Enterprise Spiess. Comfort, safety and energy efficiency have been significantly improved on the factory premises where several thousand trucks and machinery operate every year.



DAMP PROOF SPECIAL AND DAMP PROOF
FLOODLIGHT PERFORMANCE
HIGH BAY
SUBSTITUBE T8 EM
TRUSYS

Would you like to know how we can support your industry projects?
Ask us – 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

URBAN OUTDOOR/ PARKING

MORE LIGHT, LOWER ELECTRICITY COSTS LEADING LIGHTING FOR OUTDOOR AREAS AND CAR PARKS



In outdoor areas, underground garages, underpasses and tunnels, modern lighting significantly increases the level of safety and also achieves considerable energy and CO₂ savings.

A holistic lighting system manages to balance all requirements. The right light distribution, long lifetimes and the robustness of the products come first in outdoor lighting. With a comprehensive portfolio of luminaires and lamps as well as in-depth consulting expertise, you can count on LEDVANCE as a strong, reliable partner in this area too.

URBAN OUTDOORS & PARKING – OUR HIGHLIGHTS FOR YOUR SUCCESS

LEDVANCE LED luminaires and lamps offer a combination of reliability, economy and functional design in the lighting of car parks, underground car parks, outdoor areas, roads, underpasses and tunnels. As a replacement for traditional lighting technologies, they stand

out particularly for their high energy efficiency, luminous intensity and excellent durability. These properties are particularly useful if maintenance can only be carried out under difficult conditions.



PERFOR-
MANCE
CLASS

UP TO
-55 %¹
ENERGY

UP TO
-57 KG²
CO₂

STREETLIGHT FLEX

- Durable design and highest quality component selection for long lasting performance
- 3 light colors and multiple optics available, perfectly suited to illuminate highly diverse surroundings
- Quick and easy wiring, due to tool-free housing opening and push button terminal
- High light uniformity



UP TO
-78 %¹
ENERGY

UP TO
-83 KG²
CO₂

OSRAM HQL LED PRO

- Direct replacement for traditional HQL lamps thanks to CCG compatibility
- Suitable for operation on 230V direct mains increased L70B50 lifetime of 60,000h
- ENEC certification for E27 types
- Available in two light colors: 4000K und 2700K
- Suitable for outdoor use: protection class IP65 and 6kV surge protection
- Efficiency of up to 146lm/W



PERFOR-
MANCE
CLASS

UP TO
-45 %¹
ENERGY

UP TO
-132 KG²
CO₂

FLOODLIGHT PERFORMANCE DALI

- Floodlight with DALI-2 interface for light management system integration
- High efficiency, up to 140 lm/W
- Replacement of halogen lamps up to 2 kW and discharge lamps up to 2x250 W
- Light distribution based on LED lens platform, optimized for parking/area lighting



PERFOR-
MANCE
CLASS

UP TO
-55 %¹
ENERGY

UP TO
-30 KG²
CO₂

DAMP PROOF SPECIAL GEN 2

- Completely sealed for usage in farming applications, Ammonium test passed by DLG
- Ideal for food processing applications
- Easy installation, no tools required for connection
- Suitable for use in very dusty und humid environments thanks to IP67/IP69K



YOUR EXPECTATIONS

For outdoor areas and in public or private spaces, the lamps have to offer high luminosity and, in most cases, wide beam angles. They also have to cope with enormous fluctuations in temperature, dirt and water – reliably and with minimal maintenance. Fueled by climate change and the energy crisis, the demand for very efficient solutions is increasing here too. LEDVANCE offers them to you.

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

FLUORESCENT LAMP BAN 2023:

ALTERNATIVE LIGHTING FOR CAR PARKS

YOUR CHALLENGE

When it comes to car park lighting, safety and economy are paramount. Low ceilings require wide-angle lighting. What's more, since entrances and exits act as transitions between changing lighting conditions they should be illuminated more brightly. Innovative LED technology is an efficient and future-proof alternative to conventional fluorescent lamps which may no longer be placed on the market from August 25, 2023.

TOTAL COST SAVINGS UP TO 72 %

TOTAL CO₂ SAVINGS UP TO 82 %

PAYBACK TIME FROM 3 MONTHS

ENERGY SAVINGS UP TO 244 608 KWH

COST SAVINGS FOR ELECTRICITY UP TO 82 %

A detailed overview of the LAMP BAN 2023 can be found at: ledvance.com/lampban2023



SWITCH TO LED – THE POTENTIAL SAVINGS ARE ENORMOUS

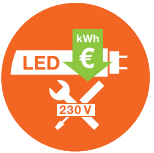
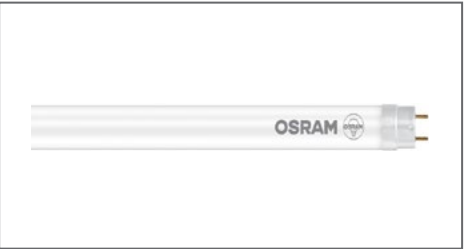
YOUR SOLUTION

With SubstiTUBE T8 EM Advanced Ultra Output, LEDVANCE offers you an excellent solution for direct replacement on CCG. Thanks to its sensor and wireless Zigbee control, SubstiTUBE T8 EM CONNECTED provides even greater savings and easy installation. The ideal luminaire for car parks is the robust and versatile DAMP PROOF GEN 2. Switch over to LED solutions from LEDVANCE.



RETROFIT¹

Substitutube T8 EM Advanced Ultra Output 23.1W/4000K 1500mm 4058075611993 EAN (GTIN)



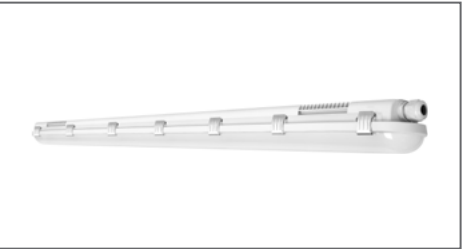
CONVERSION¹

SubstiTUBE T8 EM CONNECTED 24W/4000K 1500mm 4058075187634 EAN (GTIN) with connected sensor



NEW INSTALLATION

DAMP PROOF GEN 2 DP 1500 26W 840 IP65 GY 4058075541146 EAN (GTIN)



	OLD: Traditional T8 58W
Guarantee	
Efficiency	90 lm/W
System wattage	68 W (incl. losses on CCG)
Average lifetime	15 000 h
Energy consumption of project	6.8 kW
Energy consumption over period of operation	297 024 kWh
CO ₂ Emissions (231 g/kWh) ⁴	68 613 kg
Total cost savings up to	
Payback time from	

NEW: SubstiTUBE T8 EM Advanced Ultra Output 23.1W	Savings
5 years ²	
160 lm/W	
24.1W (incl. losses on CCG)	
50 000 h	
2.4 kW	
105 269 kWh	191 755 kWh
24 317 kg	44 296 kg
62 %	
3 months	

NEW: T8 EM Connected 24W with sensor	Savings
5 years ²	
150 lm/W	
24 W (on AC)	
50 000 h	
2.4 kW	
52 416 kWh	244 608 kWh
12 108kg	56 505 kg
72 %	
16 months	

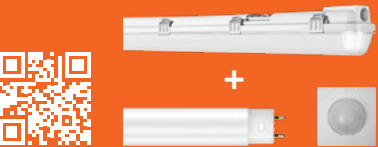
NEW: Damp Proof Gen 2 DP 1500 26W	Savings
5 years ²	
135 lm/W	
26 W	
70 000 h ³	
2.6 kW	
113 568 kWh	183 456 kWh
26 234 kg	42 379 kg
49 %	
12 months	

GLOBAL PARAMETERS⁵: Period of operation: 60 months, 5 years, 43,680 hours, with sensor 21,840 hours
Operating times: 7 days a week, 52 weeks a year, 24 hours a day | Number of light points: 100

¹ Product can be operated on traditional CCG (Retrofit) or AC Mains (Conversion) | ² Refer to www.ledvance.com/ guarantee for precise conditions | ³ t [h]: L70/B50 at 25°C (T_A) | ⁴ 2020 European Level of GHG emission intensity of electricity generation (www.eea.europa.eu) | ⁵ Calculation parameters: Replacement costs: Traditional T8 58 W €3.00/piece, SubstiTUBE T8 EM Advanced Ultra Output 23.1 W €19.60/piece, SubstiTUBE T8 EM CON Advanced Ultra Ouput 24 W €48.00/piece , sensor costs: 129.00/piece, DP 1500 26 W 840 IP65 GY 77.90 €/piece, costs for exchanging: retrofit 10.00 €/housing, conversion 15.00 €/housing, reinstallation €20.00/ luminaire, Electricity costs: €0.20/kWh. *Illustrative prices. Prices may vary in your country.

STRONG COMBINATION FOR LARGE CAR PARKS

SubstiTUBE T8 CONNECTED LED tubes, built in a robust DAMP PROOF HOUSING (IP65), communicate wirelessly with the LEDVANCE Connected Sensor ST8 Low Bay. The two-stage circuit (0% ⇌ 100% and 20% ⇌ 100%) provides even greater efficiency. Find out more now at: ledvance.com/tubes



REFERENCE PROJECTS THAT'S HOW GREAT LIGHT IS TODAY IN PUBLIC PLACES



**PARK 4 GMBH –
HÖCHSTADT, DE**



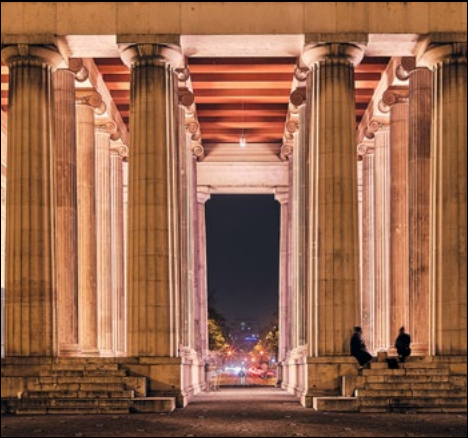
**ARABELLAPARK –
MUNICH, DE**



**HOOG CATHARIJNE –
UTRECHT, NL**



**HUIS & WONEN –
GORINCHEM, NL**



**PROPYLAEA –
MUNICH, DE**



**HIGH BAY
FLOODLIGHT
SUBSTITUBE T8 AND T5, CONNECTED SENSOR
LED STRIPS**

Park 4 GmbH was looking for both economical and innovative lighting for the new construction of a premium car park which would be designed for a room height of 9 meters and adaptable to changing usage. The luminaire design also needed to blend into the design of the car park. LEDVANCE had the perfect solution with HIGH BAY DALI CLO. The innovative LED luminaires ensure perfect illumination in high halls, can be easily moved thanks to push-button terminals and provide energy savings of up to 90% through daylight control. Their extremely long life of up to 85,000 hours increases economy even further.

How do you design car park lighting as efficiently as possible but also user-friendly? LEDVANCE was able to give the operator of Arabellapark car park a convincing answer. The lighting experts replaced the conventional fluorescent lamps used up until then with highly efficient, dimmable SubstiTUBE T8 EM CONNECTED LED tubes in combination with SubstiTUBE CONNECTED sensors. Wireless communication between sensors and LED tubes via the Zigbee transmission standard made installation easy. The result: smart lighting that adjusts the light as needed, significantly reduces energy consumption and meets all legal requirements.

A connected, dimmable lighting system was needed that would upgrade a car park to efficient, future-proof LED technology without great effort. The solution was once again SubstiTUBE T8 Connected in combination with SubstiTUBE CONNECTED daylight and presence sensors and robust DAMP PROOF HOUSING luminaires. Thanks to wireless Zigbee control, installation was carried out without complicated programming or rewiring. For the upgrade only the existing tubes and starters had to be replaced by new LED tubes and starters, and the sensors had to be installed and supplied with power. High energy savings and low maintenance costs ensure quick payback.

Powerful facade lighting is necessary to make a shop building an inviting attraction from far away. This makes efficient lighting technology all the more important. Interior specialist Huis & Wonen chose FLOODLIGHT LED luminaires for the renovation of its building in Gorinchem. With their precise light distribution, they perfectly illuminate the exterior of the building, including the logo. And thanks to their excellent efficiency, they achieve energy, CO₂ and cost savings of up to 90% compared to conventional halogen technology. In the adjacent car park, OUTDOOR BOLLARD LANTERN luminaires complete the exterior appearance.

The symbolic Propylaea in the Bavarian capital was to shine in a new light. A lighting system was needed that would meet the stringent requirements of urban development and take into account the architecture's enormous dimensions. The city of Munich opted for ECO HIGH POWER FLOODLIGHT 500 W and LED STRIP VALUE-500 RGB PROTECTED. Thanks to IP65 certification and a very long lifetime, LEDVANCE light sources are able to cope with the difficult conditions caused by continuous operation and outdoor use in winter and low temperatures. Their constant color temperature helps produce uniform lighting. And the lighting system's high efficiency with an output of more than 1 million lumens keeps energy consumption within bounds.

Would you like to know how we can support your urban outdoor and parking projects? Ask us – 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

SPORTS

FIT FOR ALL
VISUAL TASKS
SPORTS FACILITY
LIGHTING
FOR WINNERS



For the events on the pitch to be a positive experience for everyone, the lighting of sports facilities has to take into account the diverse visual tasks of athletes, referees and spectators. Camera-compatible light for photos and filming also needs to be considered.

An optimal lighting solution ensures sufficient illuminance levels, homogeneous light distribution and low-glare light. The lighting quality characteristics depend on the level of competition and the distance the spectators are watching from. The experts at LEDVANCE will be happy to advise you.

SPORTS – OUR HIGHLIGHTS FOR YOUR SUCCESS

Boasting years of experience and know-how as well as an innovative product range, LEDVANCE is your strong partner for sports lighting. Our efficient LED floodlights meet all the requirements thanks to a luminous intensity distribution that is adapted to the application

and the installation location and are the ideal solution for outdoor sports venues. In residential areas, optional shielding can also reduce disturbances. Our robust special luminaire for sports halls is the LOW BAY BALL PROOF.



PERFOR-
MANCE
CLASS

UP TO
–65 %¹
ENERGY

UP TO
– 158 KG²
CO₂

LOW BAY FLEX BALL PROOF

- Ball proof according to DIN 57710-13
- Economical thanks to high luminous efficacy up to 160 lm/W
- Long Lifetime of up to 100,000 h L80
- Easy and quick installation thanks to integrated tool-free connector box
- Through-wiring already pre-installed



PERFOR-
MANCE
CLASS

UP TO
–45 %¹
ENERGY

UP TO
– 595 KG²
CO₂

FLOODLIGHT MAX

- Very bright, robust and durable
- Energy savings of up to 45 % compared to luminaires that use conventional discharge lamps
- Easy dimming to 33 % by wiring
- No upper light output ratio (ULOR 0 %) when mounted at 0° tilt



PERFOR-
MANCE
CLASS

UP TO
–90 %¹
ENERGY

UP TO
– 1091 KG²
CO₂

FLOODLIGHT PERFORMANCE

- High efficiency with up to 140 lm/W
- Energy savings of up to 45 % compared to luminaires that use conventional discharge lamps
- Light distribution optimized for tennis, padel and other small, medium field sports
- Very robust and durable: IP66, IK08, -30° to 50°C, up to 10kV surge protection



VALUE
CLASS

UP TO
–90 %¹
ENERGY

UP TO
– 764 KG²
CO₂

FLOODLIGHT AREA

- High efficiency with up to 140 lm/w
- Energy savings of up to 90 % compared to halogen lamp floodlights
- Asymetric light distribution for various application areas
- High light uniformity
- No upper light output ratio (ULOR 0 %) when mounted at 0° tilt



YOUR EXPECTATIONS

The DIN EN 12193 European standard determines categories for the lighting of sports venues and defines minimum values for illuminance, uniformity, glare restriction and color rendering. Depending on the level of competition, for example, the illuminance level needs to be at least 75 lux for simple competitions and school and leisure sport, at least 200 lux for medium competitions and performance training, and at least 500 lux for high-performance sport.

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

REFERENCE PROJECTS THAT’S HOW DYNAMIC LIGHT IS TODAY AT SPORTS FACILITIES



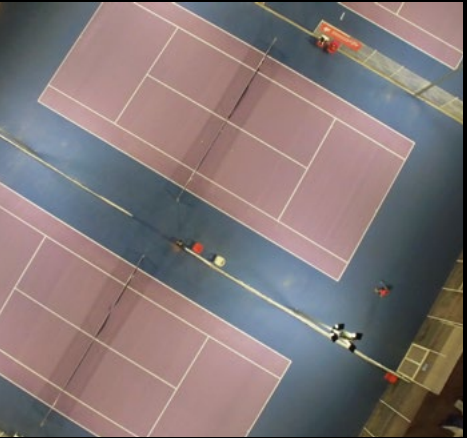
PHOENIX GYMNASTICS ACADEMY PETERBOROUGH, UK

The modernization of the Peterborough gym lighting followed two main objectives: power consumption down, illuminance up. To achieve this, the outdated fluorescent lamp technology was replaced by LEDVANCE HIGH BAY LED luminaires. Their high luminous flux leads to a significant increase in illuminance in the 6-meter-high gym. The efficient luminaires also considerably reduce energy consumption. The latest microwave motion sensors automatically switch off the light after 12 minutes of inactivity. The result: 50% lower power costs and illumination that boosts the athletes’ performance with bright, cool light. Another bonus is the 5-year guarantee.



UNIVERSIDAD EUROPEA DEL ATLÁNTICO – SANTANDER, ES

The university needed modern lighting for its new sports facilities – three outdoor facilities and an indoor one. Requirements were clear: uniform, low-glare light, robustness and protection against water and dust. LEDVANCE FLOODLIGHT was the perfect choice. With a wide beam angle of 100° and opal single-pane safety glass, the LED floodlights offer extremely uniform illumination and reduced glare. Other advantages include high luminous flux and high luminous efficacy, suitability for ambient temperatures from –20 to +50 °C, IP65 protection and IK08 shock resistance as well as a 5-year guarantee. The modern LED spotlights save up to 55% energy compared to conventional luminaires.



CIUDAD DE LA RAQUETA – MADRID, ES

A modern lighting system for 38 tennis courts was needed for both outdoors and indoors. To provide a homogeneous, glare-free light according to the DIN EN 12193 standard for the illumination of sports facilities and to meet the high requirements in terms of efficiency, robustness and weather resistance, it was decided – based on a detailed lighting study – to use LEDVANCE FLOODLIGHT PERFORMANCE ASYM with 150 W and 200 W. With a total of 540 luminaires installed, the light output was increased by 48% and energy consumption was reduced by 40%. Low maintenance costs thanks to a long lifetime and a 5-year guarantee further increase economy.



FOOTBALL COBEÑA – MADRID, ES

The main objective of the project was to adapt the football pitch lighting to the requirements of DIN EN 12193 for class II pitches. The focus was also on reducing energy consumption and maintenance costs. Thanks to LEDVANCE, the pitch now has a floodlight system with ECO HIGH POWER FLOODLIGHT 500 W luminaires. To ensure uniform illumination, 20 floodlights with a beam angle of 30° and 28 floodlights with a beam angle of 60° were installed. The efficient LED floodlights provide enormous energy savings compared to conventional floodlights and improve the view of athletes, referees and spectators with their high luminous flux.



RACE HALL – COPENHAGEN, DK

The lighting of the world’s largest indoor karting track is also provided by LEDVANCE. High lighting quality and compliance with DIN EN 12193 for sports facility lighting were the top priority. Too little brightness, glare, flicker or stroboscopic effects can have serious consequences in motor racing. That’s why high-performance HIGH BAY LED luminaires with 13,000 lumens and a beam angle of 90° were chosen to evenly illuminate the 1,200-meter track with its 22 curves. In addition, LEDVANCE equipped the restaurant, meeting and information rooms, toilets, paths, karting garage and facade with modern LED solutions. True to the motto: everything from a single source.



FLOODLIGHT
HIGH BAY

Would you like to know how we can support your sports facility projects?
Ask us – 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](https://www.ledvance.com/projects)

SHOP

FOR BRILLIANT
BUSINESS
OUR SHOP LIGHTING
MAKES SHOPPING
AN EXPERIENCE



The right light turns a product into an attraction – and shopping into an experience.

But innovative, visionary shop lighting can do even more. It attracts customers to the sales rooms and generates higher sales. At the same time, it achieves enormous energy and CO₂ savings and therefore cost savings.

LEDVANCE offers a wide variety of lighting solutions for all areas of a shop – the facade, the shop window and the interior, from small shops to large supermarkets. Solutions with vibrant colors and clear design that translate into radiant sales.

SHOP – OUR HIGHLIGHTS FOR YOUR SUCCESS

Our shop solutions can transform sales rooms into appealing worlds of experience thanks to excellent color rendering and high light output. They direct the attention of customers to the illuminated products and aesthetically integrate them into the

ambience of the room. Thanks to our track systems, the lighting can be tailored to your needs with great flexibility. High energy savings, easy installation and low maintenance ensure particularly economical use.



PERFOR-
MANCE
CLASS

TRACKLIGHT SPOT/ ZOOM DIM

- Tracklight Spot Zoom: Mechanical zoom lens with a beam angle of 15° to 55°, (7%-100%) via slider potentiometer directly on each luminaire, CRI 97
- Tracklight Spot: 3-phase tracklight spot with integrated control gear and changeable reflector and antiglare ring



PERFOR-
MANCE
CLASS

UP TO
– 70 %¹
ENERGY

UP TO
– 94 KG²
CO₂

TRUSYS FLEX

- Versatile trunking system with extremely high efficiency of up to 175 lm/W
- Quick and easy installation through snap into place connection
- 5 beam angles with 3 lumen packages – well prepared for different lighting solutions
- DALI and Emergency lighting option for central or decentral based systems



PERFOR-
MANCE
CLASS

LED STRIPS, WHITE/RGBW

- Great scope of design options due to long and flexible LED strips in white or RGBW
- Easy installation, no tools required for connection
- Maximum flexibility due to large range of accessories
- Simple connection thanks to integrated cables on both sides



UP TO
– 60 %¹
ENERGY

UP TO
– 14 KG²
CO₂

OSRAM SUBSTITUTE FOOD

- Replacement for traditional T8 fluorescent lamps with G13 socket for use in CCG luminaire or on AC mains
- Similar spectrum as classic NATURA (76)
- Full glass tube with PET protection sleeve (shatter protection)
- Application: food presentation in supermarkets, meat processing facilities, butchers



YOUR EXPECTATIONS

Every shop needs a tailor-made lighting concept to present its offering in the best possible way. Also, it is at least as important to choose a luminaire design that underlines the aesthetics of the merchandise on display. And, of course, the lighting system needs to pay for itself quickly – through quick installation, low operating costs and and low maintenance.

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

FLUORESCENT LAMP BAN 2023:

ALTERNATIVE LIGHTING FOR SMALL SHOPS

YOUR CHALLENGE

Whether it's bakeries or butchers, downlights are very popular with smaller food retailers because they combine high function with aesthetics. LEDVANCE offers both LED lamps and LED luminaires with considerable potential for savings in terms of energy consumption and CO2 emissions as a future-proof alternative to compact fluorescent lamps with plug-in bases (CFLni) which have come to the end of the road.

TOTAL COST SAVINGS UP TO 64 %

CO₂ SAVINGS UP TO 72 %

PAYBACK TIME FROM 5 MONTHS

ENERGY SAVINGS UP TO 14 196 KWH

COST SAVINGS FOR ELECTRICITY UP TO 72 %

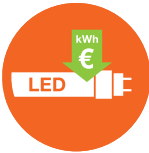
A detailed overview of the LAMP BAN 2023 can be found at: ledvance.com/lampban2023



SWITCH TO LED – THE POTENTIAL SAVINGS ARE ENORMOUS

YOUR SOLUTION

Whether it's as a simple direct replacement on CCG or – even more economical – rewiring, the innovative DULUX D LED plug-in lamps are superior to conventional CFLni lamps in every respect. They will repay the replacement costs in as few as 5 months. And then it's savings, savings, savings. LEDVANCE offers equally efficient and highly functional, aesthetic solutions for new luminaire installation.



RETROFIT¹

OSRAM DULUX D LED EM & AC Mains 10 W/4000 K
4058075**558601** EAN (GTIN)



CONVERSION¹

OSRAM DULUX D LED EM & AC Mains 10 W/4000 K
4058075**558601** EAN (GTIN)



NEW INSTALLATION

DOWNLIGHT ALU DN 150 14 W 4000 K IP44/IP20WT
4058075**091450** EAN (GTIN)



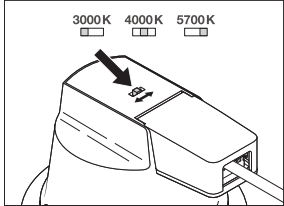
	OLD: Traditional DULUX D 26 W
Guarantee	
Efficiency	90 lm/W
System wattage	36 W
Average lifetime	10 000 h
Energy consumption of project	0.7 kW
Energy consumption over period of operation	19 656 kWh
CO ₂ Emissions (231 g/kWh) ⁴	4 541 kg
Total cost savings up to	
Payback time from	

NEW: DULUX D LED EM & AC Mains 10 W	Savings
3 years ²	
100 lm/W	
11 W (incl. losses on CCG)	
30 000 h	
0.2 kW	
6 006 kWh	13 650 kWh
1 387 kg	3 154kg
64 %	
5 months	

NEW: DULUX D LED EM & AC Mains 10 W	Savings
3 years ²	
100 lm/W	
10 W (on AC)	
30 000 h	
0.2 kW	
5 460 kWh	14 196 kWh
1 261 kg	3 280 kg
64 %	
5 months	

NEW: DL ALU DN 150 14 W	Savings
5 years ²	
90 lm/W	
14 W	
50 000 h ³	
0.3 kW	
7 644 kWh	12 012 kWh
1 766 kg	2 775 kg
46 %	
19 months	

GLOBAL PARAMETERS⁵: Period of operation: 60 months, 5 years, 27 300 operating hours
Operating times: 7 days a week, 52 weeks a year, 15 hours a day | Number of light points: 20



DOWNLIGHT COMFORT: ONE LUMINAIRE, THREE OPTIONS

With the Downlight Comfort, you can choose between three light colors on a slide switch: warm white 3,000 K, daylight white 4,000 K, cold white 5,700 K. It can be used as a direct replacement for luminaires with compact fluorescent lamps and is suitable for use in dusty and humid environments thanks to its high IP rating. Another benefit is that wholesalers and installers can minimize their stock risks because they always have a luminaire with the right light color in stock.

¹ Product can be operated on traditional CCG (Retrofit) or AC Mains (Conversion)
² Refer to www.ledvance.com/guarantee for precise conditions | ³ t [h]: L70/B50 at 25°C (T_a) | ⁴ 2020 European Level of GHG emission intensity of electricity generation (www.eea.europa.eu) | ⁵ Calculation parameters: Replacement costs: Traditional DULUX D 26 W €3.78*/piece, DULUX D LED EM & AC Netz 10 W €15.75*/piece, DL ALU DN 150 14 W €41.00*/piece, costs for the exchanging: retrofit €10.00*/piece, conversion €15.00*/piece, new installation €12.00*/ luminaire, Electricity costs: €0.20*/kWh.
⁶ Illustrative prices. Prices may vary in your country.

REFERENCE PROJECTS THAT’S HOW SUCCESSFUL LIGHT IS TODAY IN SHOPS



TRACKLIGHT SPOT
TRUSYS
DOWNLIGHT COMFORT



E.LECLERC – LOUSADA, PT

New lighting was needed to improve the quality of light in the supermarket, direct the attention of customers to specific areas through a clever combination of general and effect lighting and, last but not least, reduce energy consumption and maintenance. With its high luminous flux and uniform light distribution, the TRUSYS PERFORMANCE lighting system from LEDVANCE proved to be an ideal option for background lighting. The project solution developed by the LEDVANCE experts also relies on TRACKLIGHT SPOT LED luminaires to highlight individual product areas. They come with excellent color rendering and can be rotated and swiveled depending on the arrangement of the shelves.



HUIS & WONEN – GORINCHEM, NL

When a home and living specialist renovates his shop, the new shop lighting must also do justice to his expertise. That is why the people in charge of Huis & Wonen turned to LEDVANCE. They received not only first-class advice but in TRACKLIGHT SPOT LED luminaires also a high-quality lighting solution that is 100% suitable for the requirements in the sales room. The highly functional spotlights illuminate large areas evenly and efficiently. Thanks to their excellent color rendering index, they ensure that the products on display are highlighted to best effect. Last but not least, their modern, reduced design blends aesthetically into the interior of the shop.



NOLEGGIO BY MAESTRI – PASSO DEL TONALE, IT

Good orientation, atmospheric product staging, flexibility and low operating costs – these were the requirements for the new shop lighting at the ski rental. The solution: In the showroom and shop windows, rotating and swiveling TRACKLIGHT SPOT power rail spotlights with exchangeable reflectors immerse the merchandise in brilliant light. DOWNLIGHT COMFORT lights provide bright general lighting and easy orientation for sales areas, lockers and changing rooms. Both luminaires offer high energy efficiency and excellent color rendering. Combined they achieve a pleasant atmosphere with an ideal mix of general, accent and effect lighting.

Would you like to know how we can support you with your shop projects?
Ask us – 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

HOSPITALITY

HOSPITALITY IN A NEW DIMENSION EFFICIENT LIGHT IN ITS MOST INVITING FORM



In hospitality, light as a design element is an important foundation for the well-being of guests and employees – and therefore for a company's success.

The hospitality portfolio of LEDVANCE shows you how you can create an inviting feel-good atmosphere while simultaneously realizing contemporary energy and CO₂ savings. Thanks to a wide range of LED lighting solutions for atmospheric and energy-efficient room design as well as intelligent light management systems for a wide range of requirements, all your hospitality projects will always appear in the best light.

HOSPITALITY – OUR HIGHLIGHTS FOR YOUR SUCCESS

Better light welcomes people and invites them to linger. Our wide range of lighting solutions help hoteliers and caterers to adapt perfectly to the needs of their guests. Elegant and representative with our LED strips, stylishly accentuated with various LED spotlights – LEDVANCE lighting solutions create a pleasant atmosphere for

every hotel and catering area, from bright to atmospheric and discreet. Best of all, apart from the guests they also impress controlling – with high energy efficiency, simple installation and low maintenance.



PERFORMANCE CLASS
UP TO -90 %¹ ENERGY
UP TO -58 KG² CO₂

SPOT FIX / ADJUST

- Universal Spot in great built-quality
- Energy saving up to 90 %
- Powerselect – adjust brightness via dip-switches on driver
- Dimable – on common phase-cut dimmers
- Toolless – electrical connection with fast terminals, through-wiring possible



PERFORMANCE CLASS
UP TO -90 %¹ ENERGY
UP TO -58 KG² CO₂

SPOT DARKLIGHT

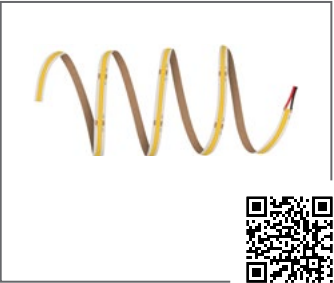
- Special construction for enhanced low-glare light-comfort
- CRI 90 – for great color rendering
- IP44 – rating from room side
- SCALE Design – great appearance, valuable materials and small size fits into every surrounding



PERFORMANCE CLASS
UP TO -90 %¹ ENERGY
UP TO -44 KG² CO₂

SPOT AIR FIX / AIR ADJUST

- Recessed SPOT for low Energy- and narrow ceilings
- Airtight – for reduced energy loss
- Coverable – by many types of thermal insulation material
- Low profile – fit into shallow ceiling voids
- Adjustable +/- 25° swiveling, to direct light wherever you want



PERFORMANCE CLASS

LED STRIPS COB

- Homogenous light, without visible light points thanks to COB technology
- Great design freedom thanks to flexibility and cuttability of module
- Smallest cuttable unit: 62.5 mm
- Very good color rendering index CRI > 90
- Simple connection thanks to integrated cables on both sides



YOUR EXPECTATIONS

In hotels and restaurants, light has to meet many requirements at the same time: create a pleasant atmosphere, and save energy, CO₂ and costs; integrate into light management systems or innovative lighting control concepts as required; and last but not least, perform safety and emergency functions.

HOW DO WE DETERMINE OUR REPRESENTATIVE CO₂ SAVINGS?
The energy and CO₂ savings are calculated in comparison to installations with similar lumen-per-watt outputs and conventional lamps. The annual CO₂ savings are based on a system's average annual operating time of 3,500 hours and the greenhouse gas emission intensity of the power generated for 2020 (231g of CO₂/TWh according to the European Environment Agency www.ea.europa.eu). Please note that the total annual CO₂ 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.
¹ Compared to luminaires that use fluorescent lamps.
² Annual average based on the energy savings indicated, see above for calculation details.

FLUORESCENT LAMP BAN 2023:

ALTERNATIVE LIGHTING FOR CAFÉS AND SNACK BARS

YOUR CHALLENGE

A good mix of light is particularly important in the serving area of cafés and snack bars. The products can be illuminated atmospherically, but the working area needs to have sufficient functional lighting. LEDVANCE's future-proof LED tubes are ideal for replacing the fluorescent tubes that will be banned soon.

TOTAL COST SAVINGS UP TO

68 %

CO₂ SAVINGS UP TO

74 %

PAYBACK TIME FROM

2 MONTHS



A detailed overview of the LAMP BAN 2023 can be found at: ledvance.com/lampban2023

ENERGY SAVINGS UP TO

16 380 KWH

COST SAVINGS FOR ELECTRICITY UP TO

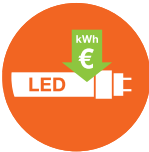
74 %



SWITCH TO LED – THE POTENTIAL SAVINGS ARE ENORMOUS

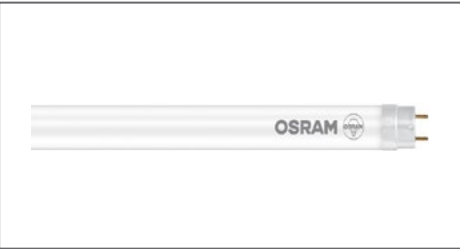
YOUR SOLUTION

LED solutions for cafés and snack bars enable energy, CO₂ and cost savings, are economical thanks to their long life and pay for themselves after a short time. While SubstiTUBE T8 EM Value is the low-cost direct replacement solution for basic CCG applications, SubstiTUBE T8 EM Advanced offers even more efficiency, quality of light and durability. LINEAR SURFACE is recommended as a functional luminaire.



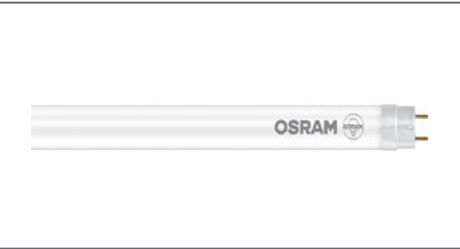
RETROFIT¹

SubstiTUBE T8 EM Value
18.3W/4000K 1500mm
4058075**611757** EAN (GTIN)



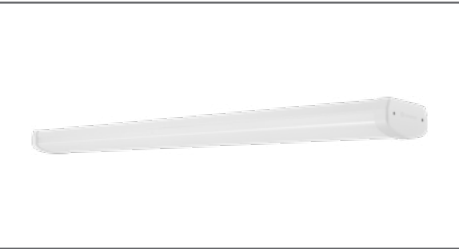
CONVERSION¹

SubstiTUBE T8 EM Advanced
20.6W/4000K 1500mm
4058075**611870** EAN (GTIN)



NEW INSTALLATION

LINEAR SURFACE IP44
1200 36W 4000KWT
4058075**352896** EAN (GTIN)



	OLD: Traditional T8 58W
Guarantee	
Efficiency	90 lm/W
System wattage	68 W (incl. losses on CCG)
Average lifetime	15 000 h
Energy consumption of project	1 kW
Energy consumption over period of operation	22 277 kWh
CO ₂ Emissions (231 g/kWh) ⁴	5 146 kg
Total cost savings up to	
Payback time from	

NEW: SubstiTUBE T8 EM Value 18.3W	Savings
3 years ²	
120 lm/W	
19.3 W (incl. losses on CCG)	
30 000 h	
0.3 kW	
6 323 kWh	15 954 kWh
1 461 kg	3 685 kg
68 %	
2 months	

NEW: SubstiTUBE T8 EM Advanced 20.6W	Savings
5 years ²	
150 lm/W	
20.6 W (on AC)	
50 000 h	
0.3 kW	
6 749 kWh	15 528 kWh
1 559 kg	3 587 kg
64 %	
3 months	

NEW: LN SF IP44 1200 36W	Savings
5 years ²	
110 lm/W	
36 W	
60 000 h ³	
0.3 kW	
5 897 kWh	16 380 kWh
1 362 kg	3 784 kg
56 %	
13 months	

GLOBAL PARAMETERS⁵: Period of operation: 60 months, 5 years, 23 400 operating hours
Operating times: 6 days a week, 52 weeks a year, 15 hours a day
Number of light points : 14 lamps, 7 luminaires



¹ Product can be operated on traditional CCG (Retrofit) or AC Mains (Conversion) | ² Refer to www.ledvance.com/guarantee for precise conditions. | ³ t [h]: L70/B50 at 25 °C (T_a) | ⁴ 2020 European level of GHG emission intensity of electricity generation (www.eea.europa.eu)
⁵ Calculation parameters: Replacement costs: Traditional T8 58 W €3.00*/piece, SubstiTUBE T8 EM Value 18.3 W €11.00*/piece, SubstiTUBE T8 EM Advanced 20.6 W €15.90*/piece, LN SF IP44 1200 36 W €104.30*/piece, costs for exchanging: retrofit €10.00*/housing, conversion €15.00*/housing, new installation €20.00*/luminaire, electricity costs: €0.20*/kWh.
*Illustrative prices. Prices may vary in your country.

GOOD LIGHT ALL ROUND

LEDVANCE is leading the fight against bad light in all areas. That's good news for you because when it comes to future-proof solutions for luminaires and lamps, HCL systems, electronic components, light management and intelligent home products, LEDVANCE is a competent partner for your lighting projects at your side. You can always rely on LEDVANCE for excellent brand quality, professional service and a good price/performance ratio.

RESIDENTIAL

**BETTER LIVING WITH
INTELLIGENT LIGHT**
SMART⁺
AND SUN@HOME



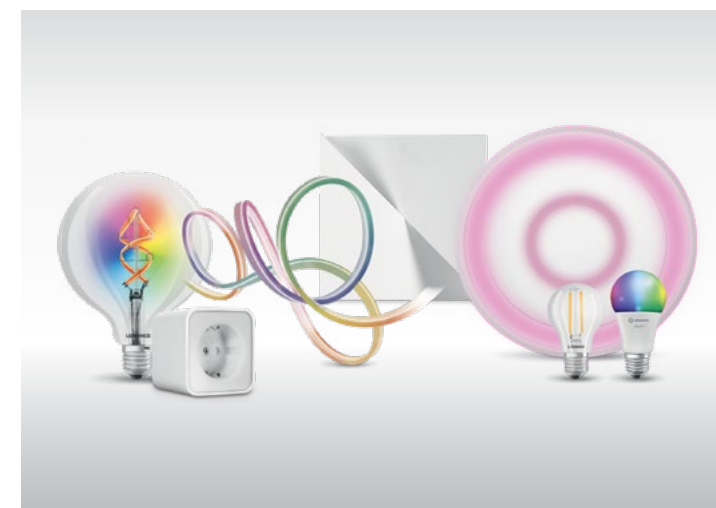
56

It simulates natural daylight or is digitally connected and can be controlled by app or voice command – intelligent light is also finding its way into residential areas. And no wonder. More convenience, more efficiency and more safety from the living room to the garden are compelling arguments.

With SMART⁺ and SUN@HOME, LEDVANCE has two pioneering product ranges in its portfolio that cater to this megatrend. Tailored to the needs of private households and smaller guesthouses, they combine innovative technology with simple installation and excellent value for money.

SMART⁺ – SO SIMPLE, SO VERSATILE

Whether it's one or 250 light sources, SMART⁺ makes it easier than ever to get started with smart lighting. SMART⁺ products are quick to connect to the smart home systems from Google, Amazon, Samsung and HomeConnect Plus. Control via SMART⁺ app or remote control is just as simple. And of course the good old light switch is still available.



* Featured Products



SUN@HOME – GUIDED THROUGH THE DAY

Thanks to its full-spectrum SunLike LEDs, SUN@HOME lamps and luminaires can simulate the natural changes in daylight: from sunrise with warm 2,200 K up to 5,000 K at midday. This is how they support the human biorhythm and boost concentration and well-being. At the same time, they provide excellent visual comfort with a color rendering of CRI > 95. SUN@HOME = better light.

THIS IS WHAT MAKES SUNLIKE LEDS SO UNIQUE:

- Light spectrum and effect like natural sunlight
- Smaller blue component for more visual comfort and well-being
- Natural color rendering for brilliant, high-contrast illumination

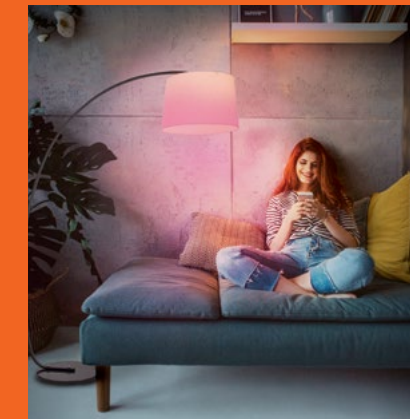


SUN@HOME

SunLike



57



YOUR EXPECTATIONS

The demand for intelligent lighting solutions is also growing inexorably in residential applications. The expectations range from increased convenience, enjoyment of lighting design and the use of additional functions to increased safety. However, the technology always has to be easy to install, easy to use and above all affordable.



TAKE ADVANTAGE OF THE SERVICE FOR TAILOR-MADE LIGHTING DESIGN

PROFESSIONAL LIGHTING DESIGN

DIALUX AND RELUX

LEDVANCE is collaborating with the developers of DIALux and RELUX software. So you can now easily integrate LEDVANCE products in your lighting plans. Our luminaire data is also BIM-compatible.

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.

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.

YOUR BENEFITS AT A GLANCE

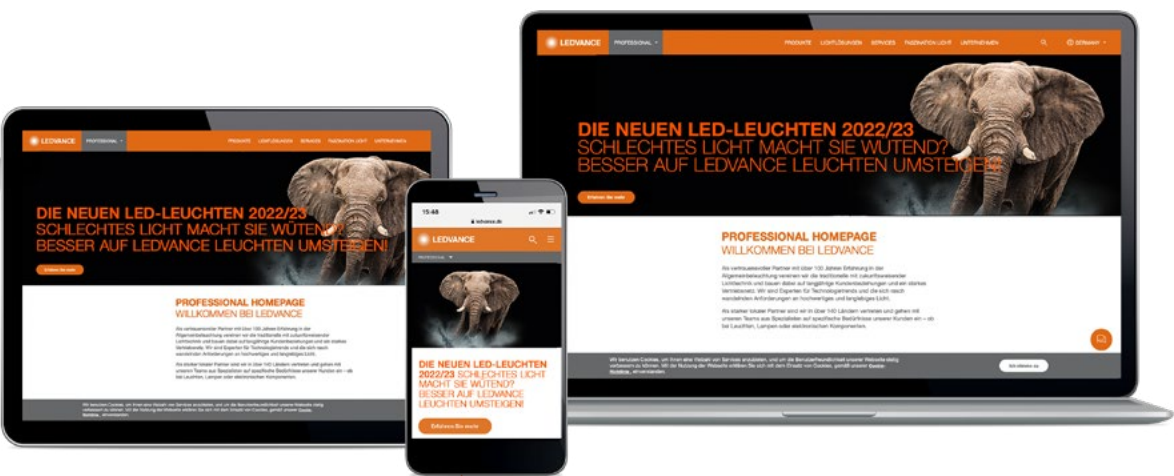
- Uniformly good light distribution
- Precise wattage per m²
- Maximum efficient calculation of required light sources

→ Are you interested in our special services for your project requirements? Then please get in touch. We look forward to hearing from you.

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

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



LEDVANCE TRAINING CENTER: DEEPER KNOWLEDGE MADE EASY

Learn all you need to know about technology, products and applications. And discover the world of light in an interactive and interesting way. Simply register at training.ledvance.com

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

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

TUBE FINDER

Which SubstiTUBE LED tube is the right one? Our Tube Finder tells you: ledvance.com/tubefinder

PERFECTLY CONFIGURED

Configuring lighting systems with flexible LED strips: ledvance.com/led-strip-configurator

FAST LIGHT CALCULATION TOOL

Quick and easy lighting design ledvance.com/flct

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 OSRAM's general lighting division, LEDVANCE offers a wide-ranging portfolio of LED luminaires for a broad spectrum of applications, intelligent lighting products for Smart Home and Smart Building solutions, one of the most comprehensive ranges of advanced LED lamps in the lighting industry, traditional light sources, an LED Strip System and light management systems.



LEDVANCE

LEDVANCE GmbH
Parkring 29 – 33
85748 Garching
Germany
LEDVANCE.COM

Partner:



LEDVANCE.COM

LEDVANCE is licensee of product trademark
OSRAM for lamps products in general lighting.

