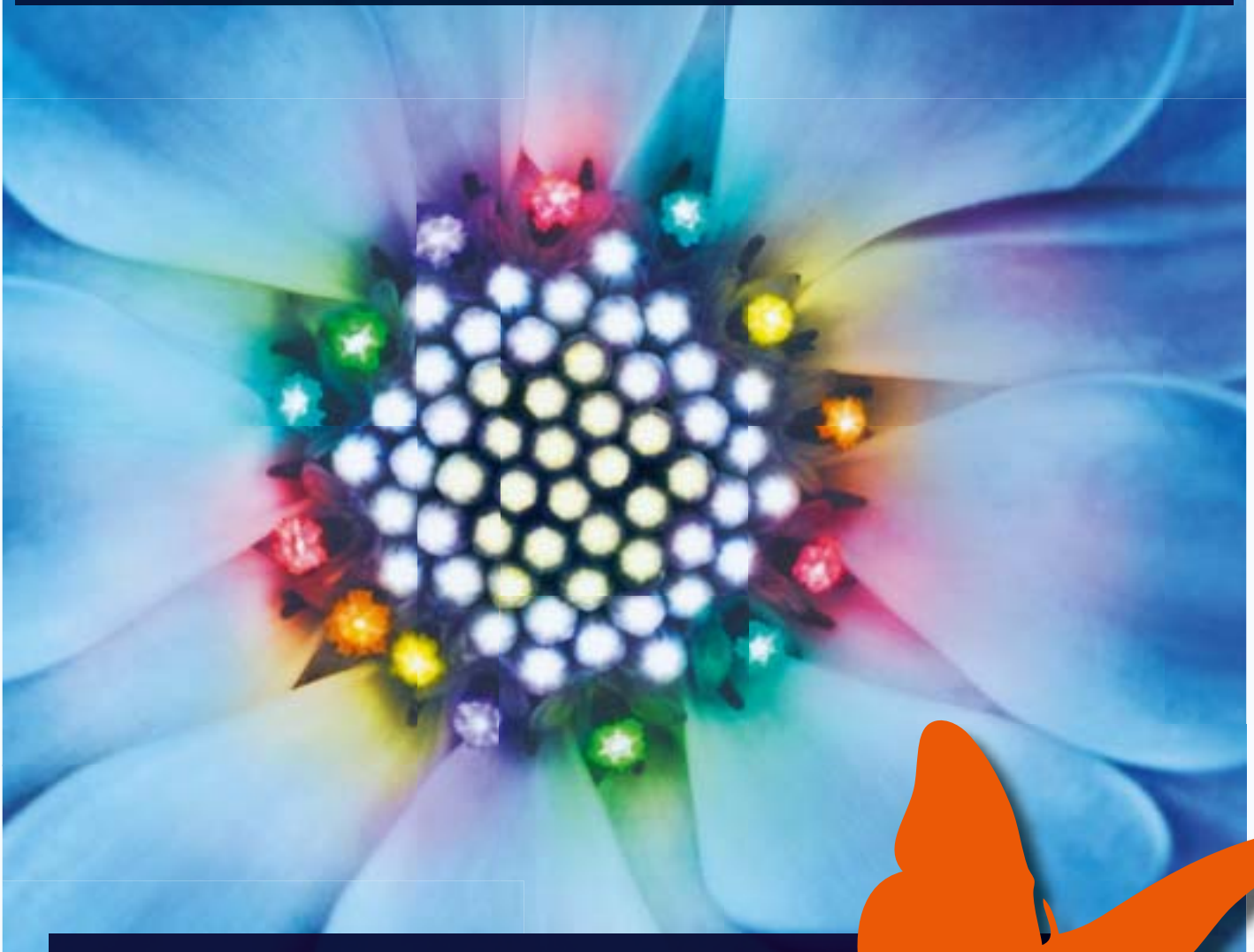


# spot

SEE THE WORLD IN A NEW LIGHT

**OSRAM**



**The future comes from  
innovation and sustainability.**

Innovative products, LEDs, the latest trends and pioneering visions.

**NEW LED HIGHLIGHTS**

*LED lighting solutions for all areas*

**MANY APPLICATIONS**

*Lighting solutions for Home, Office, Shop and City*

**HUGE RESPONSIBILITY**

*Sustainable products pave the way*

# Come with us into the future of light.



Dear Readers,

The lighting market is now at the crossroads. LEDs and OLEDs are rapidly replacing classic lighting technologies in the residential and professional sectors. We therefore rightly talk about the future of light. A future that we, as innovation drivers for our customers, are committed to bring about as quickly as possible. Our aim is to offer the most efficient and powerful lighting solutions for every possible application.

### **Sustainable LED light for all.**

Innovative solutions are always needed, and not just in times of economic difficulty – so companies are needed that think and act responsibly with the focus on the future. Like OSRAM. For many years we have been a pioneer and trendsetter in sustainable lighting.

Our solutions enable anyone to use energy economically and enjoy high levels of comfort and convenience in terms of the quality of light, functionality and handling. In addition to the conventional lighting technologies, which we are constantly improving, we are committed to the light of the future. LEDs and LED modules from OSRAM are now so bright and powerful that we can already offer real alternatives to the classic light sources in many sectors including residential, commercial, street lighting and city lighting.

We are also shaping the future with ground-breaking developments such as OLED panels which are opening up entirely new lighting applications. We are confident that OLEDs will revolutionize the way in which light is used in all aspects of our daily lives.

Join us on this journey and see for yourself what is already possible today.

We look forward to seeing you.

*Best regards,  
Martin Goetzeler*

**Martin Goetzeler**  
CEO of OSRAM



**A Spectacular product presentation – and innovative information medium.**

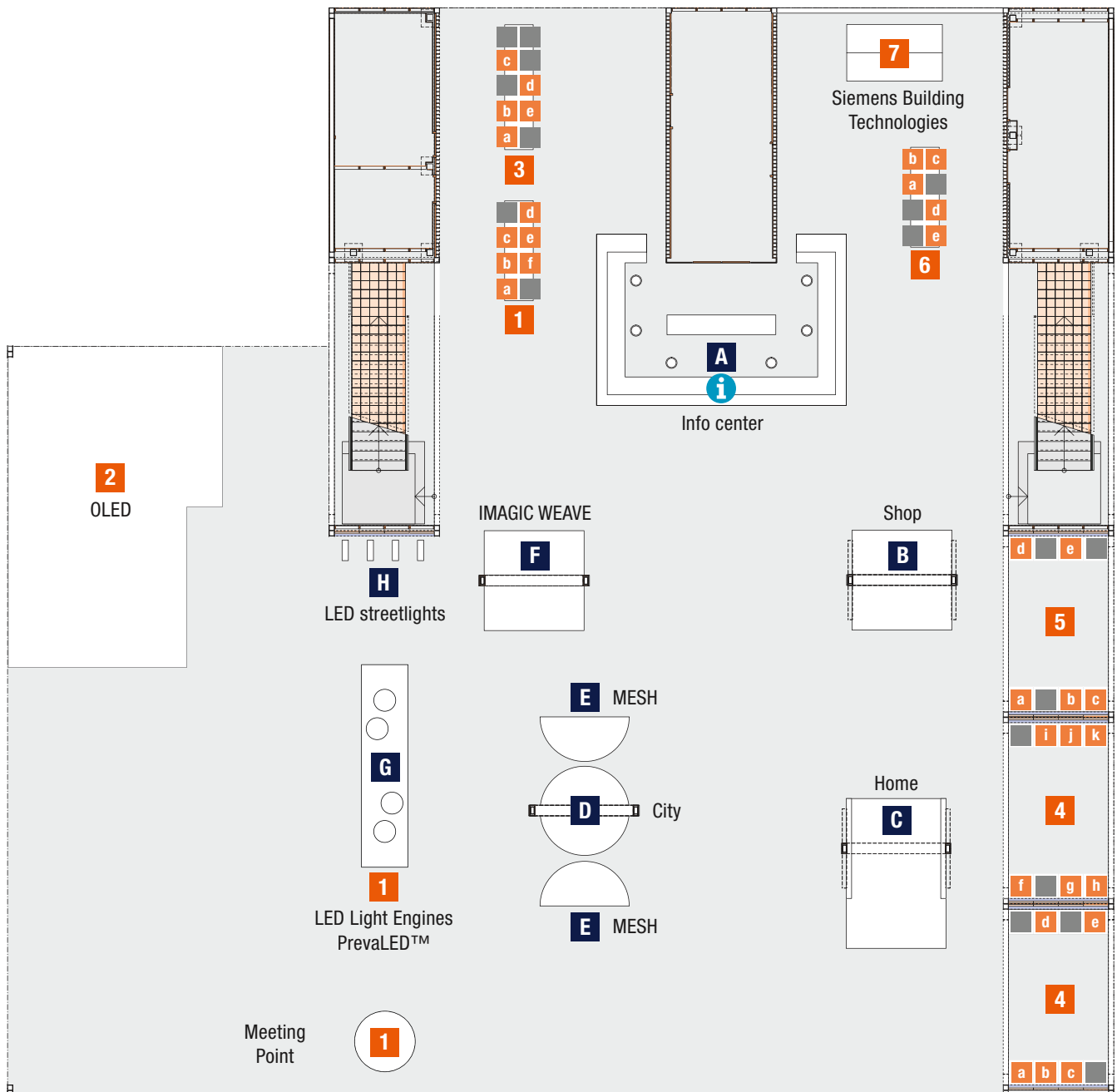
Without a doubt one of the highlights at Light+Building 2010 is the 18 m<sup>2</sup> LED screen in the Info Center on OSRAM's stand. 825,000 black MultiLEDs produce an extremely brilliant high-contrast picture, demonstrating the superb quality and size now possible with color television. The huge screen can be seen from far away and is also the ideal source of information for all visitors to the OSRAM booth. A short repeating film conveys the central themes for this year's appearance at the fair – innovative, sustainable, application-oriented products and system solutions for all sectors with special focus on LEDs, the light of the future.

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# Application-oriented, clearly arranged and comprehensive: state-of-the-art light.

At the center of OSRAM's elaborate stand there are artistic and informative installations that present different areas of application for sustainable light. Product pillars provide a clear and comprehensive overview of the entire OSRAM range. A huge LED wall uses impressive facts and images to promote the subject of light and climate protection and shows the contribution that each and every one of us can make.

## **B Shop installation:**

### **Selling through seduction.**

Shop lighting taps into our curiosity, creates desire and conveys a positive attitude to life – and in all this, energy efficiency is a major consideration. Merchandise can be presented in the best possible light that is non-aggressive and offers authentic attractive color rendering for a wide variety of products and shop zones thanks to the right combination of innovative, efficient and powerful LED reflector lamps, LED modules, ECO halogen lamps and HCl<sup>®</sup> ceramic lamps. Come and be seduced.

## **C Home installation:**

### **A homely atmosphere.**

Innovative economical light sources in all colors, shapes and wattages create a feel-good atmosphere in the home and express individuality and lifestyle. Like new LED, halogen and compact fluorescent lamps that look like incandescent lamps and emit a similar light. Or LED modules in all RGB and white light colors from warm to cold. And all easy to control and change with intelligent practical control elements. Enjoy the comfort.

## **D City installation:**

### **Bright city lights.**

What is needed here is the best combination of functionality, aesthetics and efficiency. OSRAM shows the path to the future with new innovative products such as LED modules that meet all the relevant standards and can be dimmed up to 100%. Or dimmable HCl<sup>®</sup> lamps that are ideal for prestige outdoor lighting and city lighting. And with appropriate 3DIM electronic control gear that can be controlled and dimmed in three ways. Take a new route.

## **E LED special facade lighting:**

### **LED screen MESH RGB.**

The transparent RGB LED plastic grid with flexible units enables wall and facade screens to be installed – even on curved surfaces. Weatherproof outdoor application with IP67 protection. DMX and DVI compatibility and auto addressing. Clever product design means that both sides can be used individually with back-to-back mounting.

## **F LED special facade lighting:**

### **LED screen IMAGIC WEAVE.**

Brilliant fusion of fine wire mesh and tiny LED lines. Thanks to the transparent, UV-resistant LED “skin” in type of protection IP67, IMAGIC WEAVE is ideal for permanent installations of outdoor and facade screens. DMX and DVI compatibility provides the basis for individually programmable lighting scenarios for text, graphics and images, right up to medium and high-resolution video with stunning lighting effects in up to 16 million colors.

## **G LED Light Engines installation:**

### **Flexible system platform for sustainable luminaire development.**

High performance, great flexibility and defined interfaces make PrevaLED™ Core Light Engines the ideal LED light source for general illumination. The PrevaLED™ pillar provides an impressive demonstration of its brilliance and uniform distribution of light. Further PrevaLED™ installations demonstrate the strengths of the new Light Engines: excellent color rendering, outstanding faithfulness, high performance and exceptional system efficiency.

# LEDs create the future now!

With its innovative and ever more powerful LEDs and LED modules OSRAM has made a significant contribution to making LEDs the number one choice in many archtainment and effect lighting applications – and helping it conquer functional applications in the general illumination sector.

We have now added yet another milestone: PrevaLED™ Core Light Engines. These new LED modules are available with a fixed form factor in different lumen packages and light colors and offer very high system efficiency with excellent color rendering.

Our pioneering system design platform is giving manufacturers and designers incredible freedom to develop particularly efficient, compact and powerful luminaires. The enormous power and potential of these wonderful tiny LED packages are impressively conveyed by the “Textile Pillar” and other spectacular PrevaLED™ installations on our stand.

**New platform for sustainable light by OSRAM.**



LED



## **New freedom of design thanks to maximum optical performance and flexibility.**

PrevaLED™ Core Light Engines from OSRAM are new and innovative LED modules that are characterized by their high quality of light with a color rendering index  $R_a$  of  $>90$  with impressive system efficiency of up to 75 lm/W. The tiny power packs are available in eight versions from 800 to 3,000 lumen in light colors of 3,000K and 4,000K, all with the same dimensions irrespective of the lumen value, namely a diameter of 50 mm and a height of about 9 mm.

## **Future-proof system design platform for bright and efficient LED lighting.**

With identical form factors and fixed interfaces this clever system design platform from OSRAM provides the basis for future-proof designs with reduced luminaire development costs, particularly as the modules can be easily replaced at a later date. In terms of the mechanics, electrics, optics, control and thermal behavior.

## **System solution with dedicated ECGs for reliable and efficient operation.**

OSRAM offers suitable electronic control gear for optimum operation of PrevaLED™ Core Light Engines with 800, 2,100 and 3,000 lumen. The OPTOTRONIC® OTp family is offered in different performance classes appropriate to the Light Engines. Devices with integrated DALI® interfaces are already in preparation and enable even more efficient lighting to be created in combination with LMS components.



*Extreme range: high-rise towers, stadiums, shopping centers – IMAGIC WEAVE is the perfect medium for successful sustainable outdoor advertising.*

### Intelligent modular principle for sustainable luminaire design.

PrevaLED™ Core Light Engines offer new opportunities and greater freedom in the design and specification of LED luminaires. The modular principle means that different modules and ECGs can be easily selected depending on the necessary or desired light output, system performance, light color, color rendering and type of control. The manufacturer has every opportunity to design the luminaire, reflector and cooling – and thanks to the compact dimensions and fixed module parameters this succeeds perfectly – simple, economical and future-proof.

### Unique quality of light for so many applications.

In addition to high system efficiency and very good color rendering index, PrevaLED™ Core Light Engines are impressive for their minimal color temperature deviations (<3 SDCM), very long average life of 50,000 hours and a very wide beam angle of 140°. Light Engines are ideal for use with reflectors. Depending on the design, they can be installed either inside or outside the module. The integrated reflector fastening makes this a quick and simple operation. The reflector is simply inserted in the guide ring and rotated to lock it in position.

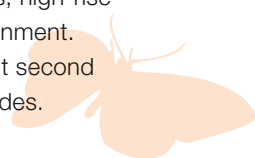
**The unique benefits of PrevaLED™ Core Light Engines from OSRAM make them the first choice for a large number of applications. Their particular strengths are perfect for downlights and spotlights for efficient lighting in shops, halls and corridors – for example as replacements for 2 x 26 W compact fluorescent lamps, 50 W halogen lamps and 20 W/35 W HCl® lamps.**



### Long-life LED facade solution for effective messages.

Spectacular fusion of the finest stainless steel mesh and state-of-the-art LED technology. Weatherproof UV-resistant RGB LED lines in type of protection IP67 make IMAGIC WEAVE ideal for architectural integrated media facade systems in stadiums, shopping centers, car parks, high-rise buildings and other major structures in any environment. The mesh protects buildings with a unique brilliant second skin and is perfect for shading buildings and facades.

At the back of the mesh are narrow ultra-modern LED profiles that can provide a smooth surface and high transparency at the front. Thanks to DMX and DVI compatibility, IMAGIC WEAVE provides the basis for individually programmable lighting scenarios for text, graphics and images, right up to medium and high-resolution videos with stunning lighting effects in up to 16 million colors. As an advertising surface IMAGIC WEAVE communicates sales messages in a unique eye-catching and unforgettable manner and is perfect for implementing effective media concepts that are kind to the budget.



*The bright compact PrevaLED™ Core Light Engines open up so many design options for installation in downlights and spotlights.*



*A vision of the future: state-of-the-art LED technology and high-quality materials make IMAGIC WEAVE the ideal advertising medium and spectacular communication tool on any building facade.*

## 1 LED



High LED art: the slim linear NANO LINER XB indoor lamp is ideal for intensive, uniform yet extremely discreet illumination for example in museums, art galleries and restaurants.



Modern presence: colored or white accent and spotlighting from SPOT XB steals the show from conventional downlights and spotlights.

## LED



**TRAXON NANO LINER XB –  
linear high-power LED lamp**

## LED



**TRAXON SPOT XB –  
round high-power LED spotlight**

### 1 a/c/d Extremely compact, very bright, highly varied.

NANO LINER XB is an extremely powerful indoor spotlight with a slim profile equipped with 9, 18, 27 or 36 high-power LEDs (350 mA). It is ideal for installations in small spaces and provides intense and uniform illumination for different surfaces, for example coving, shop windows and display cabinets for restaurants, shops and museums. The high-quality casing made of anodized aluminum allows it to be used discreetly in a large number of applications. The spotlight is equipped with high-precision UV-resistant plastic lenses and is particularly easy to install thanks to the TX CONNECT® system.

NANO LINER XB are available in Cold White, Warm White, DYNAMICWHITE®, Red, Green, Blue, Amber, RGB and various beam angles of 6°, 15°, 25°, 40°, 25° x 6° and Open Beam.

### 1 a/d Extremely powerful, very compact, high-quality aluminum casing.

SPOT XB with standard MR16 dimensions is a first-class alternative to conventional downlights and spotlights, for example for point-source illumination of display cabinets and sculptures and for accentuating niches and walls. This high-performance indoor spotlight is equipped with three Premium LEDs (350 mA) and consists of an extruded aluminum profile with an anodized surface which acts as an efficient heat sink. SPOT XB is controlled via user-friendly LED Engine XB-SD and is available in Cold White, Warm White, DYNAMICWHITE®, Red, Green, Blue, Amber and RGB with various beam angles of 6°, 15° and 25°.



**TRAXON WALL WASHER XB – high-power LED lamp**



**TRAXON 1PXL COVE LIGHT XR – narrow-profile cove lighting**

**1c/f Focused accent lighting and wide-angle floodlighting.**

Powerful WALL WASHER XB outdoor spotlights are available with 18 or 36 high-power LEDs (700mA) in Cold White, Warm White, DYNAMICWHITE®, Red, Green, Blue, Amber and RGB with beam angles of 6°, 15°, 25°, 25° x 6° and Open Beam. It has an extruded anodized aluminum casing that also acts as a heat sink. The luminaire head (110°) and foot (170°), are adjustable. WALL WASHER XB are ideal for accent lighting or floodlighting facades and can be easily combined with linear outdoor LINER XB spotlights, which are available in the same light colors and beam angles.

**1b/e Strong uniform shadow-free light in a variety of colors.**

With its colored or white atmospheric light and functional compact design, 1PXL COVE LIGHT XR is perfect for drawing attention to architectural highlights, for example for decorative lighting of coving or ornamentation in hotels, reception rooms, shops and boutiques. 12 LEDs (24 for DYNAMICWHITE®) with a wide beam angle of 120° provide uniform shadow-free light. The head can swivel through 180° and be locked in any position for flexible installation and precise alignment of the light beam. 1PXL COVE LIGHT XR is available in Cold White, Warm White and DYNAMICWHITE® and has a simple on/off function without the need for additional controllers. The RGB and DYNAMICWHITE® versions enable the lighting mood to be changed to suit specific requirements.



*WALL WASHER XB provides dynamic accent lighting for walls or objects in Warm White to Cold White light colors.*



*1PXL COVE LIGHT XR provides atmospheric colored and white light to display modern interiors and architectural details to their best advantage.*



# Discover pure light!

OSRAM was recently the first company in the world to launch an OLED product on the market – the ORBEOS™.

With their unique properties, organic light emitting diodes are a completely new and exciting addition to existing lighting options. Although these wafer-thin light sources are still in their infancy, one thing is certain – there will be luminous walls, windows and furniture in the future.

Come to our stand and be inspired by spectacular installations and concrete sample applications, including a display cabinet with integrated colored and transparent ORBEOS™ panels, an ORBEOS™ room divider and a designer luminaire that makes use of two-dimensional and point light sources by the intelligent combination of LEDs and OLEDs.

**First certified OLED product by OSRAM.**



**ORBEOS™ for OLED lighting – less is more.**

**Innovative two-dimensional light source made from organic semiconducting materials.**

Compared with LEDs, which are point light sources, organic light emitting diodes have a lower current density and lower luminance. OLEDs now consist mainly of a (glass) substrate, a transparent electrode, one or more layers in the form of thin films, and a counter-electrode which can also be transparent. To protect the OLEDs against oxidation and moisture the component is encapsulated.

One of the outstanding properties of OLEDs is their potential for flexibility. Since the active organic layers are extremely thin, less than 500 nm, the entire OLED can be made extremely flat and lightweight. At present, they cannot be made flexible because of the rigid glass substrate and the encapsulation. But soon even thinner and flexible substrates, transparent electrode material, more advanced electrode materials and encapsulation based on thin-film technology will give OLEDs flexibility.

OLEDs open up completely new design options for rooms and buildings. In principle, these flat light sources will allow any object, piece of furniture, wall, ceiling or window to become a light source. In the general illumination sector, transparent OLED windows are a possible application. By day the windows would allow natural light through into the room, and by night they would provide light themselves.

**The first commercially available light source based on organic light emitting diodes.**

Up to now OLEDs have been manufactured in limited numbers, such as the “Early Future” table light by the light artist Ingo Maurer. This design piece, equipped with wafer-thin OLED tiles, was conceived purely as a work of art. Widespread applications will now follow with ORBEOS™. ORBEOS™ is the first OLED light source on the market for use in the high-end general illumination sector, for example in hotels, restaurants, offices, museums and shops.

The warm color temperature of 2,800 K corresponds to that of an incandescent lamp and is therefore suitable for atmospheric yet functional illumination of rooms. With an average of 25 lm/W the innovative light tile is already more efficient than conventional incandescent or halogen lamps.

ORBEOS™ enables architects and designers to create new individual, extremely thin and flat lighting solutions. The panel is available with a diffuse surface like frosted glass, comes on and goes off instantly, can be smoothly dimmed and is absolutely glare-free. The panels can be easily mounted with the aid of spring contacts. Unlike LEDs, OLEDs do not need a heat sink so thermal management is simpler.

**OLEDs at the OSRAM booth.**

At the heart of the booth is a three-dimensional installation conceived by the renowned lighting designer Prof. Schulz. Reflector panels with ORBEOS™ float almost freely in space, form walls, sometimes ceilings, sometimes floors.

In a sample application around 90 ORBEOS™ OLEDs are used to decorate objects in light. The soft glare-free light ensures uniform illumination and is therefore ideal for use in shop lighting.

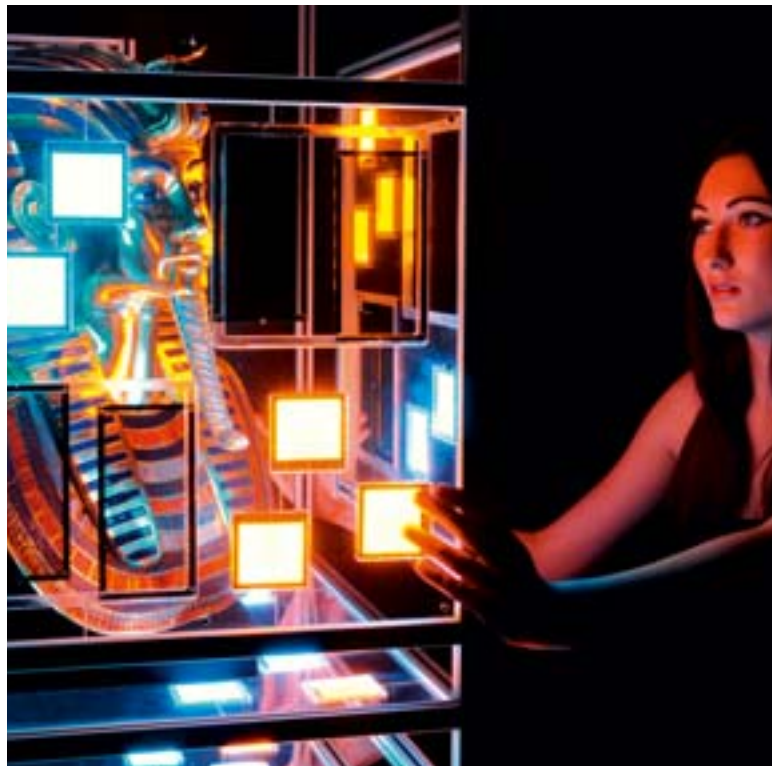
A different exhibition is designed to meet the requirements of museum or art gallery lighting. A cabinet with integrated ORBEOS™ panels demonstrates the possibilities of colored and transparent light sources.

An ORBEOS™ room divider adds to the many possible applications of this wafer-thin light source in offices and also in the home. The light installation displays graphic effect on an area of 1 × 1 m<sup>2</sup> and a wide range of colors and shapes.

A designer luminaire shows the link between LEDs and OLEDs. The intelligent combination of point and flat light sources allows the benefits of both technologies to be fully exploited.



*Substantial luminaires and installations: ORBEOS™ – a new architectural design element.*



*Tutankhamun: Object lighting with OLEDs for use in museums and high-class retail outlets.*

# Optimize performance!

OSRAM is also showing the way in street lighting with new standard-compliant LED modules and dimmable HID systems. Minimal energy consumption thanks to more economical components, such as innovative controllable lamps and electronic control gear, is a pointer to the future.

Safe, economical and attractive street lighting has to meet stringent requirements. What is needed is the best combination of functionality, efficiency and aesthetics.

Our high-quality products in combination with innovative luminaires meet all the requirements. They consume less energy, offer excellent luminous efficacy, provide outstanding lumen maintenance with exceptionally long life and enable particularly aesthetic lighting solutions to be created.

**Leading light by OSRAM.**



LED



**STREETlight Advanced – the future-proof LED module.**

**3a Standardized dimensions and tool-free maintenance for exceptional efficiency and maximum freedom of design.**

The optical concept of STREETlight Advanced, comprising LED, lens and reflector, offers exceptional optical efficiency and a pool of light that is uniform, sharply defined and compliant with the relevant street lighting standards. This compact LED module can be replaced without the need for tools, which makes maintenance quick and easy. Upgrades to more efficient generations of LEDs without changing the system interfaces or dimensions are now possible for the first time in a modular concept thanks to OSRAM. Available in three color temperatures. Operation: up to 2 modules on one OPTOTRONIC® OT 75 E and OT 65 3DIM E.

LED



**STREETlight Protect – complete energy-efficient LED module.**

**3b Quick and easy upgrades.**

STREETlight Protect is ideal for instant energy-efficient street lighting and offers attractive payback times. Type of protection IP66 sets new standards in outdoor applications. The necessary cooling is achieved by the integrated heat sink. Operation: up to 3 modules on one OPTOTRONIC® OT 75 E and OT 65 3DIM E.



**OSRAM DULUX® XT and QUICKTRONIC®  
PROFESSIONAL QTP-DL 55 GII**

**3c XT – a sign of quality for an average life of up to 36,000 hours.**

OSRAM DULUX® D/E XT, T/E XT and L XT are the new sustainable alternatives for street lighting, tunnels, car parks and public facilities. Thanks to their extremely long life they extend the maintenance cycle and ensure much lower total lighting costs, particularly for luminaires that are difficult to access. QTP-DL 55 GII has been specially developed for operating OSRAM DULUX® L XT 55 W lamps. This new ECG has an impressively long life of up to 100,000 hours (at T = 65 °C at the T<sub>r</sub> point), a shorter casing and improved electromagnetic compatibility.



*Total freedom: innovative dimmable lamps and control gear from OSRAM open up a new dimension in attractive and economical city lighting.*



**POWERBALL HCI®-TT and HQI®-TM**

**3e New high-intensity discharge lamps for enclosed luminaires.**

POWERBALL HCI®-TT lamps with screw bases provide brilliant white light with special flair. They are ideal for prestige outdoor lighting and also for indoor applications where relamping is difficult. They can be used as simple replacement upgrades in existing NAV® fittings with appropriate igniters. The ceramic lamps offer all the POWERBALL® benefits and a long average life of up to 18,000 hours. When operated on POWERTRONIC® PTo they can be dimmed to 60 % of their maximum output.

POWERSTAR HQI®-TM 1000 W/D adds a G22 base version to the TM range (hot restrike version with GY22). Compared with other lamps of the same output, these lamps are more compact and have a higher efficiency. Precise secure positioning in the luminaire together with a short arc enables reflector design to be optimized and luminaire efficiency to be improved.



**POWERTRONIC® PTo 3DIM –  
The ECG of the future**

**3d 3DIM – dimmable outdoor HID ECG.**

POWERTRONIC® PTo 3DIM is a new multifunctional family of ECGs for HCI®, NAV® and HQI® lamps in a robust and durable design for harsh outdoor conditions. It can be dimmed to 60 % of maximum output. 3DIM stands for three control options in an ECG: DALI® for telemanagement systems, the two-stage StepDIM circuit as a replacement for the familiar CCG reduced-load circuit and AstroDIM for timed auto dimming without any external control infrastructure.

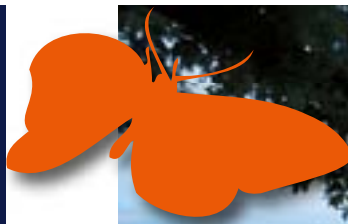
## Enrich your life!

Innovative contemporary products from OSRAM ensure that the future is also coming into the home.

Good examples are the powerful LED modules that produce uniform colored and white light in all its nuances. Or modern electronic control gear and controllers that enable lighting to be adjusted to suit individual tastes in the various areas of the home. Or attractive LED, halogen and energy-saving lamps that look like incandescent lamps and are just as bright. And thanks to the new Warm Comfort Light color (2,500 K) OSRAM is now the first company to offer energy-saving lamps that really do emit a warm light that is similar to that of incandescent lamps.

It is not just the ErP directive that has signaled the end of the incandescent lamp. There is a very definite trend toward new innovative and efficient light sources and lighting solutions, and this is also true of the residential sector. In addition to functional and economic aspects, increasing importance is being attached to lighting that creates moods and expresses individual lifestyles.

**New quality of light by OSRAM.**



*A bright future in the home: a new age is dawning with energy-efficient lamps, luminaires and control gear from OSRAM for every taste and every application.*



### 4d Powerful extra low-profile LED luminaire in a unique design.

OSRAM LUMINESTRA® LED is a batten luminaire that is just 10 mm high and is ready to use. It comes complete with a 1.6 meter power cable, plug and integrated on/off switch. It has a high-quality polished aluminum casing and a prismatic cover for glare-free light. The luminaire is available with a light color of 3,000 K or 4,000 K, has an average life of 30,000 hours and can also be operated with separate control gear. The modern OSRAM ECG in a gleaming white plastic casing (RAL 9016) is perfectly matched to the high-power Golden DRAGON® Plus LED. OSRAM LUMINESTRA® LED is ideal for example for high-level cupboards, shelving and display cabinets.

According to the European Commission, if every household in Europe switched to energy-efficient light sources the energy consumption for lighting would be reduced by 30 %.



*A brilliantly simple modular system for modern individual lighting: POWERstixx™ provides subtle yet strikingly attractive LED lighting.*

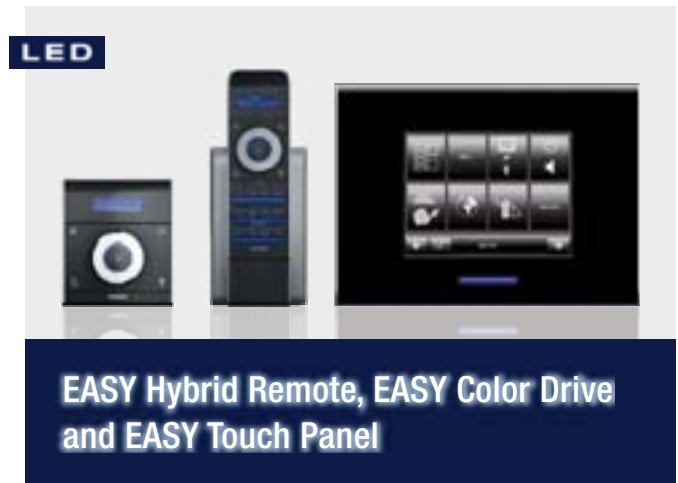


*Individual atmospheric lighting – and impressive energy savings: even at home there is no need to keep using old-fashioned inefficient lighting technologies.*



#### **4k LED luminaires for lighting structures.**

The new OSRAM POWERstixx™ made of anodized aluminum can be individually tailored in no time at all thanks to its modular design. An extensive set of modules means that luminaires can be created for almost any lighting task. The clear styling and high-quality design of the luminaire and the bright energy-saving Golden DRAGON® plus LEDs make a brilliant combination. The set comprises 3 x POWERstixx™ that can be expanded with the Add-on Kit. The Connector Set is the key to even more flexible forms, and the Pendant Kit converts the POWERstixx™ into an attractive pendant luminaire. POWERstixx™ provides a high level of versatility wherever an attractive luminaire needs to be installed quickly and easily either in full view or in tight spaces, whether in furniture, kitchens, bathrooms, living rooms, bedrooms, small offices or shops.



#### **4i High-end elements for EASY Color Control.**

EASY Hybrid Remote, EASY Color Drive and EASY Touch Panel are new components of the simple but ingenious EASY Color Control lighting management system. The EASY Hybrid Remote is a radio remote control equipped with hybrid technology for digital infrared or 868 MHz radio control. The EASY Color Drive wall control element is equipped with dual technology for connecting a 4-wire signal cable or for linking to an integrated 868 MHz radio transmitter. A large color touch display, simple startup and freedom to label all the elements makes EASY Touch Panel a multitasking system with a high degree of flexibility. With customizable functions all three offer simple control of brightness, color and dynamic lighting. They can call up user-definable lighting scenes and sequences either directly on the device or via a PC interface and software. The remote control and wall transmitter have a colored LCD display with adjustable background lighting and an intuitive jogwheel.



**4j Robust high-power LED module for outdoor and wet applications.**

LINEARlight Flex® LED modules will be available from fall 2010 also as “Protect” versions – the lengths, electrical and optical parameters remain unchanged. The modules are equipped with high-quality LEDs and high-performance silicon. They offer very high luminous intensity and extremely long life – and thanks to their IP67 design they are ideally protected against contact, dust and moisture. The use of high-quality silicon with long-term stability means that the modules hardly lose any luminous flux even after intense use. LINEARlight Flex® Protect can therefore be used in many applications outdoors and in wet environments.



**4a PARATHOM® CLASSIC LED lamps as genuine replacements for incandescent lamps.**

PARATHOM® CLASSIC lamps are ideal direct replacements for conventional incandescent lamps. With comparable luminous efficacy, attractive, futuristic, elegant designs and E27 and E14 screw bases they can be used in any appropriate existing luminaire. The mercury-free LED lamps are available in Warm White and Daylight and offer many benefits over standard incandescent lamps, including energy savings of up to 85 %, long average life of up to 25,000 hours, no UV or NIR radiation and high resistance

to switching transients. The highlight of the series is the dimmable PARATHOM® CLASSIC A 60 in Warm White as a genuine replacement for 60 W incandescent lamps.



**4e Line voltage LED reflector lamp as a genuine replacement for R50/R63 lamps.**

PARATHOM® R50 40 with an E14 or E27 screw base has the same shape and light output as a 40 W R50 incandescent reflector lamp. The lamp with a beam angle of 30° is available in Warm White (3,000 K) and Daylight (6,500 K) and will fit in existing R50 (E14) and R63 (E27) luminaires in homes, shops, restaurants and offices. Other strengths include energy savings of up to 90 % compared with conventional incandescent lamps, long average life of up to 25,000 hours, mercury-free design and no UV or NIR radiation.



**4b HIGH EFFICIENCY compact fluorescent lamps as genuine replacements for incandescent lamps.**

OSRAM DULUX® Intelligent HE Mini Ball and OSRAM DULUX® INTELLIGENT HE Micro Twist with E27 screw bases achieve a luminous efficacy of up to 75 lm/W. Thanks to their Warm Comfort Light (2,500 K) they are the first energy-saving lamps to produce a warm light similar to that from an incandescent lamp. They are therefore ideal as direct replacements for

corresponding 60, 75 and 100 W incandescent lamps in all high-end professional indoor applications in the residential and commercial sectors. The lamps also have a long average life of up to 15 years<sup>2</sup> and are capable of withstanding up to 50,000 switching operations<sup>4</sup>.

**4g OSRAM DULUXSTAR® Mini Bullet P and T and Mini Candle.**

These lamps in Warm Comfort Light (2,500K) are ideal as free-burning replacements for incandescent lamps in all residential and commercial applications where decorative design is important, such as living room lighting. Compared with conventional incandescent lamps they offer energy savings of up to 80 %, reduce CO<sub>2</sub> emissions by a corresponding amount and therefore help protect our climate. They also benefit from an average life of up to 10 years<sup>1</sup> and the ability to withstand up to 20,000 switching operations<sup>4</sup>.



**4c/h Impressive comprehensive ECO range of HALOGEN line voltage and low-voltage lamps.**

OSRAM offers probably the largest range of energy-efficient halogen lamps for line voltage and low voltage applications. Reflector lamps and pin-base lamps offer brilliant light, high energy efficiency and up to twice the life of corresponding standard halogen lamps.

HALOGEN ECO Classic lamps are classic substitutes for incandescent lamps because of their excellent color rendering and light color. They are not only 100 % dimmable they also last twice as long, which means they are an eco-friendly alternative.



**4f OSRAM DULUX® INTELLIGENT DIGITAL DIM Globe and Stick.**

Innovative OSRAM DULUX® INTELLIGENT DIGITAL DIM Globe and DIM Stick are digital dimmable compact fluorescent lamps with digital control. They are the new energy-saving lamps for all high-end, professional and semi-professional indoor applications in the residential and commercial sectors. The lamps are impressive for their Warm Comfort Light (2,500K) and average life of up to 20 years<sup>3</sup>. They are ready for operation without the need for addressing on the new system for controlling energy-savings and LED lamps.

<sup>1</sup> Average life is 15,000 hours, corresponding to around 15 years at about 2.7 hours per day  
<sup>2</sup> Average life is 10,000 hours, corresponding to around 10 years at about 2.7 hours per day  
<sup>3</sup> Average life is 20,000 hours, corresponding to around 20 years at about 2.7 hours per day  
<sup>4</sup> Switching cycle: 60s on, 180s off



*Pioneering technology, a relaxing atmosphere and tangible energy savings: in your own four walls LEDs are now more than just an alternative.*

For information on the EU directive and its implementation measures go to [www.osram.com/change-now](http://www.osram.com/change-now)

# Inspire your customers!

If you haven't seen the new LED collection from OSRAM then it is high time you did. In the retail sector in particular it is fundamentally important to have the right modern lighting. Retailers who present their shops, their products and their services in the right light can expect more customers and higher sales.

Shop lighting must be both effective and economical. It must be functional and flexible to perform a wide variety of tasks successfully and be adaptable to changing requirements. It must be efficient and energy-saving to achieve the best possible quality of light for the lowest possible cost. And above all it must be inspirational – with spectacular effects and perfect color rendering.

It is our business to inspire you – with innovative sustainable luminaires, lamps and control gear that are getting smaller and smaller and more and more efficient.

**Appealing light by OSRAM.**



LED



LEDVANCE POLYBAR™

## 5e Narrow LED luminaire for strip lighting.

LEDVANCE POLYBAR™ is the ideal solution for all applications in which linear light is needed. This line-voltage batten luminaire with on/off switch is available in three different lengths, each with a different wattage (250 mm/6W, 500 mm/12W, 750 mm/18W) and three light colors (3,000 K, 4,000 K, 5,400 K). The luminaires are equipped with nine OSRAM OSOLON® 80° LEDs, provide efficient directional light and can be connected seamlessly in a run of up to 20 meters.

LED

PARATHOM® MR16 advanced and  
PARATHOM® PAR 16

## 5d Dimmable LED reflector lamps for low voltage and line voltage as replacements for halogen lamps.

Low-voltage PARATHOM® MR16 advanced lamps and line-voltage PARATHOM® PAR 16 lamps are direct replacements for corresponding halogen reflector lamps of the same output level.

The LED lamps with their elegant futuristic reflector design are genuine halogen replacements for existing downlights or other spotlights, for example in the home, in restaurants, in shops or in museums. With a beam angle of about 36° they achieve a luminous efficacy similar to that achieved by corresponding 20, 35 and 50 W halogen lamps. The lamps are

available in Warm White and Daylight and offer a high level of color homogeneity. The color deviation between individual lamps of the same color temperature is only (+/- 100 K) for Warm White. Compared with corresponding halogen lamps, PARATHOM® MR16 advanced and PARATHOM® PAR 16 achieve energy savings of up to 80 % – with many times higher average life of 25,000 hours and more. All the lamps are mercury-free and emit no UV or NIR radiation.



**5b Plug & play ECG with strain relief for 35 W and 70 W HID lamps.**

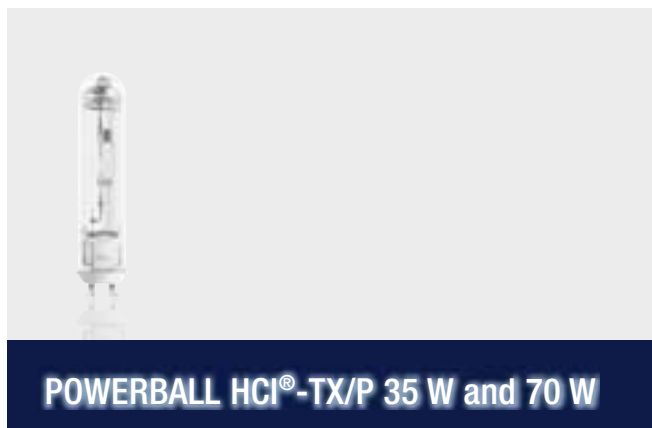
The PTi SNAP family of ECGs offers maximum convenience in terms of installing the ECGs away from the luminaires. Integrated plug/socket arrangements based on the established Wieland ST 18/GST 18 connector system enable the power and luminaire connections to be installed quickly and reliably. The casing-side interlocks ensure correct strain relief. Long ECG life and high thermal quality make the device the number one choice for professional applications.



**5c The smallest light source in HCl® quality.**

The most compact HCl® lamp is now available in a 15 W version – geometrically identical to POWERBALL HCl®-TF

20 W and 35 W and with a GU6.5 “twist & lock” base for simple handling and precise positioning in the reflector. POWERBALL HCl®-TF 15 W is perfect for accent lighting and decorative lighting in retail outlets, shop windows, shopping malls, hotels and restaurants. It is the ideal replacement for 35 W halogen lamps. For the same light output the POWERBALL HCl®-TF 15 W needs around 60 % less energy. It also generates less heat so it protects the items it illuminates and reduces the energy requirements for air conditioning. If the POWERBALL HCl®-TF 20 W is too bright for certain applications, the 15 W version provides the answer. It achieves energy savings of 25 % and can be operated with a suitable ECG even in existing luminaires.



**5a The smallest HCl® lamps in “Protected” versions from OSRAM.**

POWERBALL HCl®-TX/P 35 and 70 W are extremely compact ceramic lamps approved for use in open luminaires. The new GU8.5 base with the successful “twist & lock” design ensures precise stable positioning of the lamp in the reflector and excellent distribution of light. The lamps were developed for operation on standard ECGs; the best results are achieved with POWERTRONIC® PTi from OSRAM. HCl®-TX/P lamps are impressive for their excellent color rendering, constant color location and high efficiency of up to 100 lm/W. POWERBALL HCl®-TX/P lamps are the ideal choice for decorative open luminaires in indoor and outdoor locations, such as downlights and spotlights in boutiques, department stores, office buildings and exhibition centers.



*Good light is always in season: innovative lamps and luminaires play a major role in presenting merchandise in the best way possible and therefore in achieving sales success.*

# Maximize Efficiency!

LED's work: innovative LED systems and other intelligent lighting solutions from OSRAM make many things much easier.

Modern work lighting should be efficient, energy-saving and ergonomic; it should create a pleasant environment for effective work and be tailored to the various functional areas and room zones.

We need good quality light in order to see well. Without our being aware of it, light also controls biological processes in our bodies and therefore our internal clock. Light also dictates whether we are active or tired, whether we can concentrate or not and whether we feel good or not.

The innovative lamps, control gear, controllers and complete lighting management systems from OSRAM are characterized by particularly high quality of light and economy – and also support the natural biological rhythms of our bodies, for example with daylight simulation.

**Intelligent light by OSRAM.**



## 6d Extremely efficient LED recessed ceiling luminaires for high lighting demands.

LEDVANCE™ Downlight M and L are extremely bright energy-saving LED luminaires for entrance halls, corridors, hotels, shops and offices. Equipped with new OSOLON® LEDs they achieve energy savings of up to 70%. LEDVANCE™ Downlight M is the first full replacement for 50 W MR16 halogen downlights. With its outstanding system efficiency and glare-free optical system, LEDVANCE™ Downlight L is ideal for office lighting (UGR19) and replaces 1x26 W compact fluorescent lamps or 75 W halogen downlights.



## 6e Reliable energy-saving alternative to T8 36W fluorescent lamps.

SubstiTUBE™, the innovative high-power LED lamp with integrated ECG, is easy to install and will save up to 24W in existing CCG installations. High levels of reliability and safety during installation and operation demonstrate our understanding of and commitment to quality and responsibility. SubstiTUBE™ meets all the relevant standards, including the latest. There is no need for rewiring after relamping. The beam angles and illuminance are comparable with those of reflector luminaires.

### Biologically active light in harmony with the inner clock:

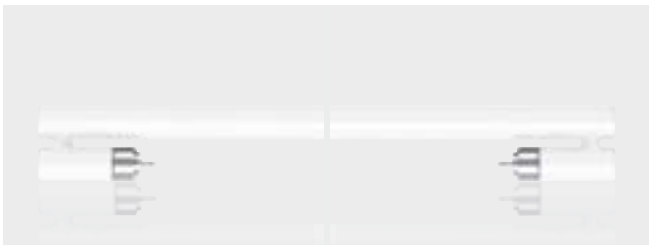
Cold white daylight-quality light during the day, and warm white light with a low blue component in the evening and at night.



**OSRAM DULUX® L HIGH EFFICIENCY and OSRAM DULUX® T/E HIGH EFFICIENCY**

**6b High Efficiency – getting as much light as possible.**

With a luminous efficacy of up to 100 lm/W and an average life of up to 20,000 hours, OSRAM DULUX® L HE 16, 22 and 26 are extremely efficient and economical. OSRAM DULUX® L HE compact fluorescent lamps with the 2GX11 base are best operated with QUICKTRONIC® for T5. OSRAM DULUX® T/E HE, now also in an 11 W version, have a long average life of up to 20,000 hours and a luminous efficacy that is up to 32% greater than that of conventional OSRAM DULUX® D/E lamps. The new GR14q-1 base simplifies handling and reduces the risk of damaging the luminaire reflector.



**T5 SEAMLESS HIGH EFFICIENCY**

**6a New design for illumination without shadows.**

Thanks to their new lamp geometry, T5 SEAMLESS HE lamps give designers greater freedom to provide continuous light without any annoying shadows. Different wattages (14, 21 and 28 W, available in 830, 840 and 865 light colors) can be used in the same installation. All SEAMLESS HE lamps have identical luminance. Ideal applications include airports, shopping centers, hotels, restaurants and any locations where design plays an important role. The SEAMLESS system with QT*i* (DALI®) DIM is available for unrestricted dimming.



**QUICKTRONIC® INTELLIGENT QT*i* GII**

**6a Improved efficiency, electromagnetic compatibility and resistance to switching transients.**

The QT*i* GII ECG family has been developed specifically for the high-efficiency operation of T5 HE and T5 HO lamps of the same length and different wattages. Thanks to optimized EMC behavior it is now possible for the first time to provide protection class II luminaires for T5 lamps without a ground connection. And because QT*i* GII devices are virtually totally resistant to switching transients and have a life of up to 100,000 hours (at T = 65 °C at the T<sub>2</sub> point) they are suitable for use with presence and motion sensors, for example in offices, factories and restaurants.



**DALI® PROFESSIONAL**

**6c Lighting management system for the highest demands.**

DALI® PROFESSIONAL consists of a multi-room controller for 4 DALI® lines, sensor couplers for integrating light/presence sensors and pushbutton couplers for use with standard switch ranges. The controller enables up to 256 ECGs and 50 couplers to be connected and is preconfigured for immediate use. Groups, scenes and the associated parameters can be individually configured on a PC with the aid of a USB port and simple user interface. Ideal applications include offices and industry, for example for room and floor control, corridor and stairwell lighting. Daylight-dependent control in combination with presence detection offers considerable potential for energy savings. Extensive sequence control allows for programmed schedules, even including presence-dependent operation of fans, via four built-in relays.

# Profit from synergies!

Sustainable building is very much in fashion. Not only does the environment benefit from the careful use of natural resources but operators of buildings can also enjoy greatly reduced energy costs, which often account for more than 40 % of the operating costs.

A combination of building automation and lighting technology ensures that energy savings of up to 50 % can be achieved and buildings can be made more efficient. With turnkey-solutions from OSRAM and Siemens BT, customers get seamless integration of all technical disciplines based on high quality standards into one homogeneous system platform. The reduced installation costs and improved building operation efficiency lead to a considerable reduction in building life cycle costs and make Siemens solutions more reliable. At our stand you can see some brilliant examples of intelligent cross-discipline energy-saving applications. Further information is available directly from Siemens, Stand B55, Hall 11.0.

## Integrated solutions by OSRAM and Siemens Building Technologies.



## Integrated solutions by OSRAM and Siemens Building Technologies (SBT).

The energy savings that can be made in commercial properties and public buildings by integrating the lighting, heating, ventilation, air-conditioning and building automation systems are considerable. By networking these individual systems it is possible to provide additional functionality and synergies. For example, a shared sensor system can be used to control both the illuminance in a room and the louver blinds, or by interlinking the alarm and lighting systems it is possible to make the lighting flash in the event of an emergency and indicate the route to the emergency exits.

## Exceptionally efficient: highlight on projects.

OSRAM and SBT have already completed numerous projects in which it has been possible to improve the energy efficiency of buildings considerably. In the 500 meter high Taipei 101 tower in Taiwan the installed power for the lighting system was reduced by two million watts. For the Las Vegas City Center with more than 4,000 hotel rooms, 1,650 luxury apartments, shops and restaurants, which was completed in 2011, an integrated energy-efficient solution was developed that combined a number of services including lighting, building automation and fire protection. The Siemens office at Lindenplatz in Hamburg shows that an integrated approach can achieve much greater efficiency than if each of the services is treated as a separate entity. An advanced heating system with thermal recovery and intelligent lighting technology helped reduce water consumption by 71 %, which corresponds to 10,000 m<sup>3</sup> less water per year. Power consumption was cut by an average of 18 %, saving 420 tonnes of CO<sub>2</sub> emissions in the process.

LED

**PrevaLED™ Core**

Product name	W	lm	lm/W	K	Ra
LEP-3000-930-HD-C, LEP-3000-840-HD-C	43	3000	70	3000/4000	>90/>85
LEP-2100-930-HD-C, LEP-2100-840-HD-C	28	2100	75	3000/4000	>90/>85
LEP-2100-830-C, LEP-2100-840-C	38/35	2100	55/60	3000/4000	80
LEP-800-930-HD-C, LEP-800-840-HD-C	11	800	75	3000/4000	>90/>85


HOME

**OSRAM DULUXSTAR® Mini Bullet P, T, Mini Candle**

Product name	W	t [h]	$\frac{l}{d}$ [mm]	$\frac{d}{d}$ [mm]	lm
DULUXSTAR MINI BULLET P/T 5 W/825 E27/E14	5	10000	84/87	45	210
DULUXSTAR MINI BULLET P/T 7 W/825 E27/E14	7	10000	84/87	45	300
DULUXSTAR MINI CANDLE 5 W/825 E27/E14	5	10000	102/107	39	240
DULUXSTAR MINI CANDLE 7 W/825 E27/E14	7	10000	102/107	39	300
DULUXSTAR MINI CANDLE 10 W/825 E27/E14	10	10000	121/124	39	445

**HALOGEN ECO CLASSIC A, DECOSTAR® ECO and HALOPIN® ECO**

Product name	W	t [h]	$\frac{l}{d}$ [mm]	$\frac{d}{d}$ [mm]	lm
HALOGEN ECO CLASSIC A	18/28/42	2000	94	55	170/345/630
HALOGEN ECO CLASSIC A	52/70/105	2000	94	55	820/1200/1900

Product name	W	t [h]	$\frac{l}{d}$ [mm]		cd or lm
DECOSTAR ECO	14/20/35/50	5000	46	GU5.3	450–15000 cd
HALOPIN ECO	20/33/48/60	2000	51	G9	200–980 lm

**OSRAM DULUX® INTELLIGENT DIGITAL DIM GLOBE and DIM STICK**

DULUX INTELLIGENT DIGITAL DIM GLOBE 15 W/825 E27	15	20000	170	120	840
DULUX INTELLIGENT DIGITAL DIM STICK 18 W/825 E27	18	20000	161	52	1050

**EASY HYBRID REMOTE, COLOR DRIVE and TOUCH PANEL**

Product name	Description	Interface	COLOR	Transmitter range [m]	$\frac{l}{d}$ [mm]	$\frac{b}{b}$ [mm]	$\frac{h}{h}$ [mm]
EASY Hybrid Remote	IR/RF remote control	EASY	Black	30	187	57	23
EASY Color Drive	Wall controller	EASY	Black	max. 30	103	89	34

Product name	Description	Interface	Type of installation	$\frac{l}{d}$ [mm]	$\frac{b}{b}$ [mm]
EASY Touch Panel	Touch Panel	EASY/DALI	Wall installation	220	160

**LINEARlight Flex® Protect with IP 67**

LINEARlight Flex Protect Width: 11 mm, length & performance as for unprotected LINEARlight Flex LFix; splittable & incl. Connect System

**OSRAM DULUX® INTELLIGENT HE Mini Ball and Micro Twist**


Product name	W	t [h]	$\frac{l}{d}$ [mm]	$\frac{d}{d}$ [mm]	lm
DULUX INTELLIGENT HIGH EFFICIENCY MINI BALL 11 W/E27	11	15000	114	60	770
DULUX INTELLIGENT HIGH EFFICIENCY MINI BALL 15 W/E27	15	15000	124	60	1050
DULUX INTELLIGENT HIGH EFFICIENCY MICRO TWIST 10 W/E27	10	15000	101	42	770
DULUX INTELLIGENT HIGH EFFICIENCY MICRO TWIST 14 W/E27	14	15000	104	42	1050
DULUX INTELLIGENT HIGH EFFICIENCY MICRO TWIST 20 W/E27	20	15000	116	42	1500

<sup>1</sup> Average life.

## TECHNICAL DATA

### HOME

#### PARATHOM® CLASSIC A 25, 40, 60 and 80 W

Product name	W	t [h]	$I_{max}$ [mm]	Im	
PARATHOM CLASSIC A 25	6.5	25000	101	320/380	WW/D
PARATHOM CLASSIC A 40	8	25000	113	345/450	WW/D
PARATHOM CLASSIC A 60	12	25000	126	640	WW
PARATHOM CLASSIC A 80	12	25000	126	806	WW

#### PARATHOM® R50 25 and 40

Product name	W	t [h]	$d_{max}$ [mm]	cd (@ 30°)	Im (@ 90°)
R50 25 WW/D	3	25000	50	250/350	100/140
R50 40 WW/D	6	25000	50	410/590	170/240

#### LUMINESTRAS® LED

Product name		t [h]	R <sub>a</sub>	cd	Im
LUMINESTRAS LED 3000K	6 Golden DRAGON plus	30000	> 80	160	402
LUMINESTRAS LED 4000K	6 Golden DRAGON plus	30000	> 80	160	402

#### POWERstixx™

Product name	W	t [h]	$I_{max}$ [mm]	l [mm]	b [mm]	h [mm]	Im per module
POWERstixx Set	3x4.7	30000	250	250	250	16	200
POWERstixx Add-on	1x4.7	30000	250	250	250	16	200
POWERstixx Pendant Kit	2x adjustable cable holders						
POWERstixx Connector Set	3x 90°-connector, 1x T-connector						

### CITY

#### STREETlight Advanced


Product name	W	t [h] <sup>1</sup>	l [mm]	b [mm]	h [mm]	Im min.
SLA1-(S)L-143-760-L80x140	29	<50000	98	72	50.8	1430
SLA1-(S)L-123-742-L80x140	29	<50000	98	72	50.8	1230
SLA1-(S)L-105-830-L80x140	29	<50000	98	72	50.8	1050
SLA1-Socket	—	—	96.7	72	20.3	—

#### STREETlight Protect

Product name	W	t [h] <sup>1</sup>	l [mm]	b [mm]	h [mm]	Im min.
SLP1-W4F-765-L75x130	23	< 50000	249	70	74	1190
SLP1-W4F-854-L75x130	23	< 50000	249	70	74	880
SLP1-W4F-840-L75x130	23	< 50000	249	70	74	880
SLP1-W4F-830-L75x130	23	< 50000	249	70	74	880

#### OSRAM DULUX® XT and QUICKTRONIC® PROFESSIONAL QTP-DL55 GII

Product name	W	t [h]	l <sub>1</sub> max. [mm]	l <sub>2</sub> max. [mm]	Im
DULUX D/E 18 W/830 XT, DULUX D/E 18 W/840 XT	18	36000	130	146	1200
DULUX D/E 26 W/830 XT, DULUX D/E 26 W/840 XT	26	36000	149	165	1800


Product name	l [mm]	b [mm]	h [mm]		Lamps with ENEC
QTP-DL 1x55/220-240 GII	280	30	21	270	T5 HE 14/21/28/35 W DL 28 HE
QTP-DL 2x55/220-240 GII	360	30	21	350	T5 HE 14/21/28/35 W DL 28 HE

<sup>1</sup> T<sub>c</sub> = 40 °C

## TECHNICAL DATA

### CITY

#### POWERTRONIC® PTo 3DIM

Product name	W		$t$ [h] EDG @ T <sub>c</sub> max.	T <sub>a</sub> <sup>1</sup>	T <sub>c</sub> <sup>1</sup>
PTo 35/220-240	35	HCl, NAV	60000	-25 °C...+60 °C	+75 °C
PTo 50/220-240 3DIM	50	HCl, NAV	60000	-25 °C...+55 °C	+75 °C
PTo 70/220-240 3DIM	70	HCl, HQI, NAV	60000	-25 °C...+55 °C	+75 °C
PTo 100/220-240 3DIM	100	HCl, HQI, NAV	60000	-25 °C...+55 °C	+80 °C
PTo 150/220-240 3DIM	150	HCl, HQI, NAV	60000	-25 °C...+55 °C	+80 °C

#### POWERBALL HCl®-TT and POWERSTAR HQI®-TM

Product name	W	$t$ [h]	I <sub>max</sub> [mm]	d <sub>max</sub> [mm]	Im
HCl-TT 35 W/830 WDL PB	35	18000	155	32	3400
HCl-TT 50 W/830 WDL PB	50	18000	155	32	5000
HQI-TM 1000 W/D	1000	10000	188	38	97000
HQI-TM 600 W/D (in preparation)	600	10000	188	34	58000
HCl-TM 400 W/NDL	400	12000	175	34	41000
HCl-TM 250 W/NDL	250	12000	175	28	26000

<sup>1</sup> In preparation.

### SHOP

#### POWERTRONIC® PTi 35/70 SNAP

Product name	W		$t$ [h] EDG @ T <sub>c</sub> max.	T <sub>a</sub>	T <sub>c</sub>
PTi 35/220-240 SNAP	35	HCl	40000	-25 °C...+65 °C	+80 °C
PTi 70/220-240 SNAP	70	HCl, HQI	40000	-25 °C...+50 °C	+80 °C

#### POWERBALL HCl®-TF 15 W

Product name	W	$t$ [h]	I <sub>max</sub> [mm]	d <sub>max</sub> [mm]	Im
HCl-TF 15 W/830 WDL	15	12000	57	13.2	1200
HCl-TF 20 W/830 WDL	20	12000	57	13.2	1700
HCl-TF 35 W/930 WDL	35	12000	57	13.2	3400

#### POWERBALL HCl®-TX/P 35 and 70 W

Product name	W	$t$ [h]	K	d <sub>max</sub> [mm]	Im
HCl-TX/P 35 W/930 PB, HCl-TX/P 35 W/942 PB	35	12000	3000/4200	22	3300
HCl-TX/P 70 W/930 PB, HCl-TX/P 70 W/942 PB	70	12000	3000/4200	22	7300

#### PARATHOM® MR16 advanced and PARATHOM® PAR 16

Product name	W	$t$ [h]	d <sub>max</sub> [mm]	cd (@ 36°)	Im (@ 90°)
MR16 20 Advanced WW	5.5	25000	50	500	200
MR16 35 Advanced WW/D	10	25000	50	950/>950	350/>350
PAR16 20 WW/D	4.5	35000	50	450/>600	170/>220
PAR16 35 WW/D	8	25000	50	600/>600	220/>220
PAR16 50 WW/D	10	25000	50	950/>950	350/>350

#### LEDVANCE POLYBAR™

Product name	Type of connection	Type of installation	Protection class/type	A	Im/W
LEDVANCE POLYBAR	Power supply plug	Attachment	II/IP21	80	50

OFFICE

**OSRAM DULUX® L HE and OSRAM DULUX® T/E HE**


Product name	W	t [h]	l max. [mm]	lm
DULUX L 16 W/830 HE, DULUX L 16 W/840 HE	16	20000	317	1600
DULUX L 22 W/830 HE, DULUX L 22 W/840 HE	22	20000	411	2200
DULUX L 26 W/830 HE, DULUX L 26 W/840 HE	26	20000	533	2600
DULUX L 28 W/830 HE, DULUX L 28 W/840 HE	28	20000	565	2800

Product name	W	t [h]	l1 max. [mm]	l2 max. [mm]	lm
DULUX T/E 11 W/830 HE, DULUX T/E 11 W/840 HE	11	20000	105	112	900
DULUX T/E 14 W/830 HE, DULUX T/E 14 W/840 HE	14	20000	122	129	1200
DULUX T/E 17 W/830 HE, DULUX T/E 17 W/840 HE	17	20000	141	146	1500

**T5 SEAMLESS HE**

Product name	W	t [h]	l3 max. [mm]	l2 [mm]	lm @ 35 °C
HE 14 W/840 SLS	14	18000	582	475.1	1350
HE 21 W/840 SLS	21	18000	882	775.1	2100
HE 28 W/840 SLS	28	18000	1182	1075.1	2900


**QUICKTRONIC® INTELLIGENT QTii GII**

Product name	l [mm]	b [mm]	h [mm]		Lamps with ENEC
QTii 1x14/21/24/39 GII	360	30	21	350	T5 HE 14, 21, HO 24, 39W
QTii 2x14/21/24/39 GII	360	30	21	350	T5 HE 14, 21, HO 24, 39W
QTii 1x28/54/35/49 GII	360	30	21	350	T5 HE 28, 35, HO 49, 54W DL 28 HE
QTii 2x28/54/35/49 GII	360	30	21	350	T5 HE 28, 35, HO 49, 54W DL 28 HE
QTii 1x35/49/80 GII	360	30	21	350	T5 HE 35, HO 49, 80W


**DALI® PROFESSIONAL**

Product name	Description	l [mm]	b [mm]	h [mm]
DALI Professional Controller	for 4 DALI lines	160	90	63
DALI Pushbutton Coupler	for 4 standard switches	42	42	17
DALI Sensorcoupler	for MULTI3 sensors	120	30	21
MULTI3 Sensor	Light and presence sensors	35	21	21

**LEDVANCE™ Downlight M and L**

Product name	W	lm		h [mm]	t [h]
LEDVANCE Downlight M	13,5	700	68	99	50000
LEDVANCE Downlight L	18	1000	120	102	50000

**T8 Retrofit SubstiTUBE™**

Product name	K	W	t [h]	V min.-max.		lm
ST8-SD4-765	6500	24	50000	200...240 <sup>1</sup>	80x70	1550
ST8-SD4-840	4000	24	50000	200...240 <sup>1</sup>	80x70	1200
ST8-SD4-830	3000	24	50000	200...240 <sup>1</sup>	80x70	1200

<sup>1</sup> CCG with special starter.

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Company

First name

Surname\*

Number and street\*

City, zip code\*

Country\*

Email

## Branch\*

- Electrical wholesaler
- Electrical installer
- Electrical planner
- Lighting planner
- Architect
- Retail

- Manufacturer (OEM)
- Facility Management
- Institute/association
- Public facility
- Other \_\_\_\_\_

## Function

- Managing Director
- Purchasing
- Sales
- Technology
- Marketing
- Other

## Material requests (please mark by the information you require)

### General information

- Indoor and Outdoor Lighting
- Spot (trade fair highlights)
- Retail catalog
- Phase-out
- Company Report 2009

### Product information

- Fluorescent lamps (FL)
- Compact fluorescent lamps with pin bases
- HCI®/HQI® high-intensity discharge lamps
- LED modules and systems
- Lighting management systems (LMS)
- Halogen lamps

- Energy-saving lamps
- Luminaires/LED luminaires

### Newsletter

- Trade (Profispot)
- Retail (watt's new)

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