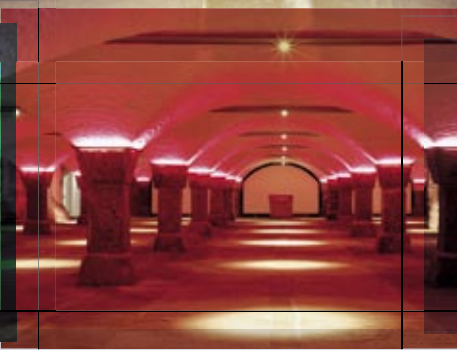
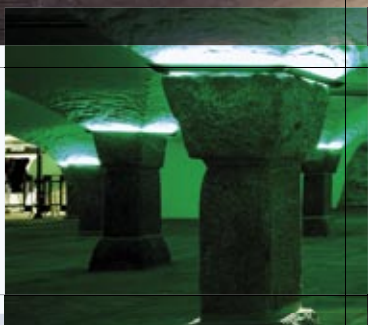
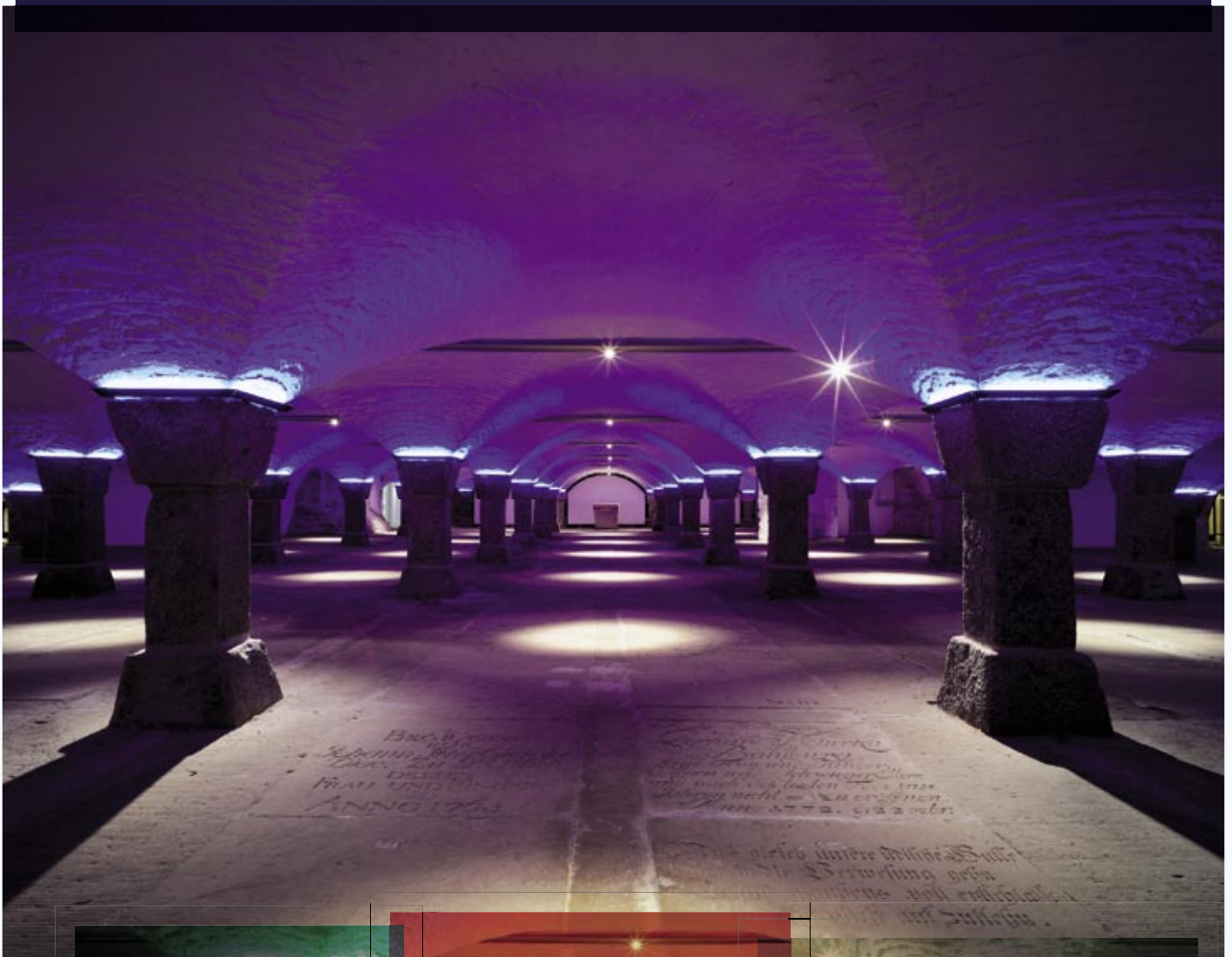


ecg-spot

SEE THE WORLD IN A NEW LIGHT

OSRAM



Information for our partners in the lighting industry



Hans-Peter Birkhofer

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- QTP for compact lamps

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Cover photo: Crypt of St. Michael's Church, Hamburg

Dear Reader,

The lighting electronics sector is once again expected to experience excellent growth in 2008. This is attributable not only to the current business climate in the building industry, but also with the demand for high-quality solutions through the use of innovative products. Energy efficiency, light quality and dynamic light are proving to be the main drivers in this area.

LED solutions are increasingly being used as an alternative to conventional light sources, including general lighting. It goes without saying that the necessary control gear has to comply with the relevant standards regarding safety, electromagnetic compatibility (EMC) and operating mode. OPTOTRONIC control gear from OSRAM sets the standard in this respect.

Nowadays, retail and shop display lighting would be almost inconceivable without metal halide lamps that have a ceramic burner, such as the HCI POWERBALL from OSRAM, that can be operated on POWERTRONIC electronic control gear. The arguments in their favour include excellent light quality, energy efficiency and low thermal load.

Energy-efficient solutions are also in demand in offices and industry. T5 fluorescent tubes, ECG and light control systems reduce operating costs, and CO₂ emissions by up to 60%.

DALI has established itself as the interface standard for digital control, which OSRAM's QT_i DALI ECG operates on. It is characterised by its functionality. Another cutting edge feature is the intelligent, detection of the correct lamp wattage using a microprocessor.

For instance, a QT_i DALI 1x18-57 device detects all DULUX T/E 18 W, 26 W, 32 W, 42 W and 57 W compact fluorescent lamps. This means that the number of ECG types is greatly reduced. At the same time, greater flexibility is possible when it comes to operating different lamps. An additional benefit of QT_i DALI is operation of "Constant/IN" lamps based on amalgam technology. These innovative products are, of course, included in the range of exhibits to be presented by OSRAM at Light+Building, which will be held in Frankfurt. It runs from 6th to 11th April 2008, OSRAM can be found on Stand B 50 in the Festhalle. We are looking forward to having some informative discussions concerning lighting electronics.

Until then, I hope you enjoy reading this latest issue of our ECG SPOT!
Regards

Hans-Peter Birkhofer – Manager Marketing and Product Management, Electronics & Controls

More colour in the new year

High-flux RGB systems with Golden DRAGON LEDs are a winner



Fig 1. Installed in the floor, the DRAGONchain Colormix guarantees perfect backlighting. (Photo: Casino Lisboa)

controller, 4-channel LED dimmer and 60 W power supply, up to façade lighting systems with connected loads in the kW range. All these installations can be extended, hassle free at any time.

Simple handling guaranteed

LED solutions employing LINEARlight DRAGON Colormix and DRAGONchain Colormix LED modules set new standards when using the modular EASY Color Control system. They make it really easy to configure static or dynamic RGB applications. The well designed system concept guarantees trouble-free handling,

New tasks for LEDs

Lighting large areas with, intensive colours and dynamic effects demand new LED solutions that have a high luminous flux. OSRAM is now launching two new high-flux systems for 24-V-supply voltage on the market:

LINEARlight DRAGON Colormix and DRAGONchain Colormix LED modules. LINEARlight Dragon is suitable for wallwashing, as well as for ceiling and indirect lighting. Depending on the job, either the complete solution together with heat sink and lens system can be used, or just the module on its own.

The DRAGONchain module can also be used for outdoor applications and is available with or without a primary heat sink. Due to its reduced dimensions and lens system, DRAGONchain is ideal for use in large-areas, homogeneous back-lighting in shops, on exhibition stands or in health and fitness venues. (Fig. 1).

Added-value modules

The EASY Color Control system from OSRAM allows installations to

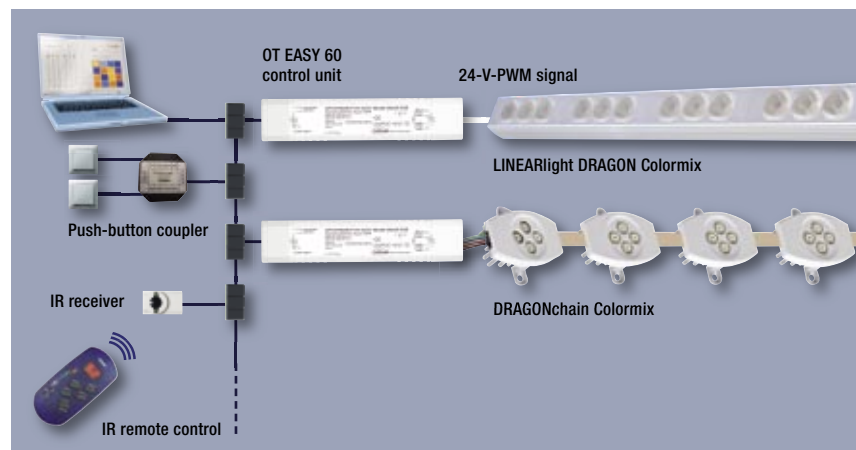


Fig. 2. System overview - EASY light control with DRAGON RGB LED modules
More details at: www.osram.com/ecg-lms





be controlled with an with infrared remote control as well as the retrieval of lighting effects and dynamic sequences at the push of a button. Motion detection and control via PC software is designed for intuitive operation (Fig. 2). The use of highly reliable components from a single source is a pre-requisite for many installations. They can range from small installations with the “all-in-one” OT EASY 60 unit, comprising of a

thanks to the simple connector system and the Plug&Control function for commissioning.

Axel Pilz,
OSRAM Munich

Overview of new products at Light+Building

Electronic control gear for innovative applications

Product Types		
Lamps	OSRAM DULUX D/E, T/E and D/E IN, T/E IN compact fluorescent lamps	OSRAM DULUX S/E, D/E, T/E and D/E IN, T/E IN compact fluorescent lamps
Properties	Operation of up to 12 lamp types on the one-lamp unit; Dimming of DULUX T/E IN amalgam lamps; Dimming range 100% ... 3%; TouchDIM or TouchDIM Sensor function; Optional cable clamp	Operation of up to 5 lamp types; Perfect lamp hot-start; Temperature range -20 °C to +50 °C; For Safety Class I and II luminaires; For emergency lighting; Optional cable clamp
Applications	Compact luminaires for foyers, multi-purpose rooms, offices, retail outlets and showrooms	Compact luminaires for corridors and high usage areas, emergency luminaires, applications with motion detectors
Product Types		
Lamps	Metal halide lamps, 100 W or 150 W	Low-voltage halogen lamps
Properties	Optimised balance of size, temperature and service life; Two versions: S for installation in luminaires, I with cable clamp; High max. permissible temperatures t_c and t_a ; 40,000 h service life at maximum temperatures	Redesigned with more compact dimensions; Suitable for emergency lighting installations; Phase cut dimming; Connection of up to six luminaires
Applications	Spot and downlights, e.g. for shops, galleries	Downlights for shops, hotels and offices

Product Types



OPTOTRONIC with DMX interface
 OT DMX RGB DIM
 OT DMX 3x1 RGB DIM

Lamps

10 V or 24 V LED modules

Properties

3-channel DMX dimmer;
 3 separate PWM outputs;
 Addressing via DIP switch
 or rotary switch

Applications

For colour mixing of RGB LED
 modules in combination with
 OPTOTRONIC control gear

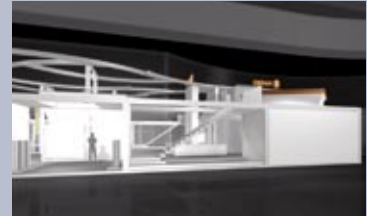


OT EASY for SIRIUS-Tunable white
 OT EASY 60/220-240/24

SIRIUS-Tunable white
 24 V LED modules

All-in-one device with integrated
 control unit, 4-channel dimmer
 and 60 W power supply

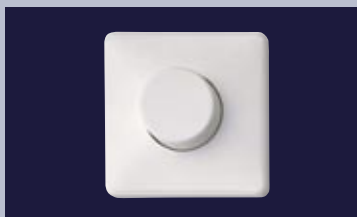
Light sources with adjustable colour
 temperature for general lighting,
 offices and retail applications



**Visit our new exhibition stand
 at the Light+Building in
 the Festhalle, Stand B 50**



Product



DALI MCU
 Digital rotary dimmer

Control output

Control of up to 50 DALI ECG
 units via 2 DALI MCU units

Properties

Up to 4 operation points;
 Can be integrated in standard
 switch ranges

Applications

Multi-purpose rooms

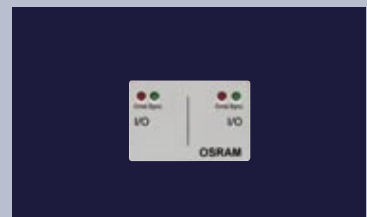


DALI MULTleco/MULTleco
 Controller for daylight-dependent
 control with occupancy detection
 for individual luminaires

DALI MULTleco: up to
 4 DALI ECG units
 MULTleco: 4 non-dimmable ECG
 units or 1,000 W ohmic load

Maximum CO₂ savings;
 Minimised stand-by power;
 Optional, snap-on cable clamp

Individual workplaces



EASY System Coupler
 Coupling element for connecting
 several EASY Color Control light
 control systems

Connection of up to 64 DALI EASY II
 or OT EASY control units

Plug & Control function;
 Integrated signal amplifier;
 Two-way communication

Dynamic or static control of
 up to 256 channels

LED systems fit for installation in luminaires

ENEC mark for quick and simple luminaire approval

Luminaire approval now easier

The award of the ENEC mark to OPTOTRONIC control gear from OSRAM by an independent certification body is having far-reaching effects. The European conformity mark for electrotechnical products documents the consistent quality and safety of the LED control gear. It also helps when manufacturers have their LED luminaires approved by test institutes. Moreover, the amount of time and money spent on approval can be significantly reduced as a result. For example, ENEC-certified OPTOTRONIC control gear is a perfect match for high-flux LEDs or LED modules from OSRAM.

For general lighting tasks

Due to its high luminous efficacy, an LED system of this kind is perfectly suited to being integrated into luminaires for general lighting purposes (Fig. 1).

The high-flux LED modules from the DRAGON and OSTAR-Lighting families are destined for such applications because of their extremely high luminous efficacy due to the thin film technology used. When integrated in appropriate luminaires, they provide a highly efficient source of illumination.

Perfect, round light sources

The COINlight-OSTAR LED module is a round, high-flux spot light with an integrated primary heat sink. This spotlight, with just one OSTAR light-emitting diode, is suitable for a diverse range of lighting tasks. Colour temperatures of 3,000 K, 4,700 K and 5,400 K can be used to suit the specific application. The 38° beam angle of the COINlight OSTAR means that a luminous intensity of up to 450 cd can be achieved.

The heat sink – integrated in a housing with a height of just 28 mm and a diameter of 51 mm – offers optimised primary thermal management. A long service life is achieved when mounted on an additional heat sink – such as a luminaire housing.

The COINlight-OSTAR spotlight with high luminous intensity is preassembled ready for connection and delivered for Plug&Play installation – making life much easier for the luminaire manufacturer.



Fig 1. The ENEC mark guarantees optimum interplay of COINlight OSTAR and OT 75 unit

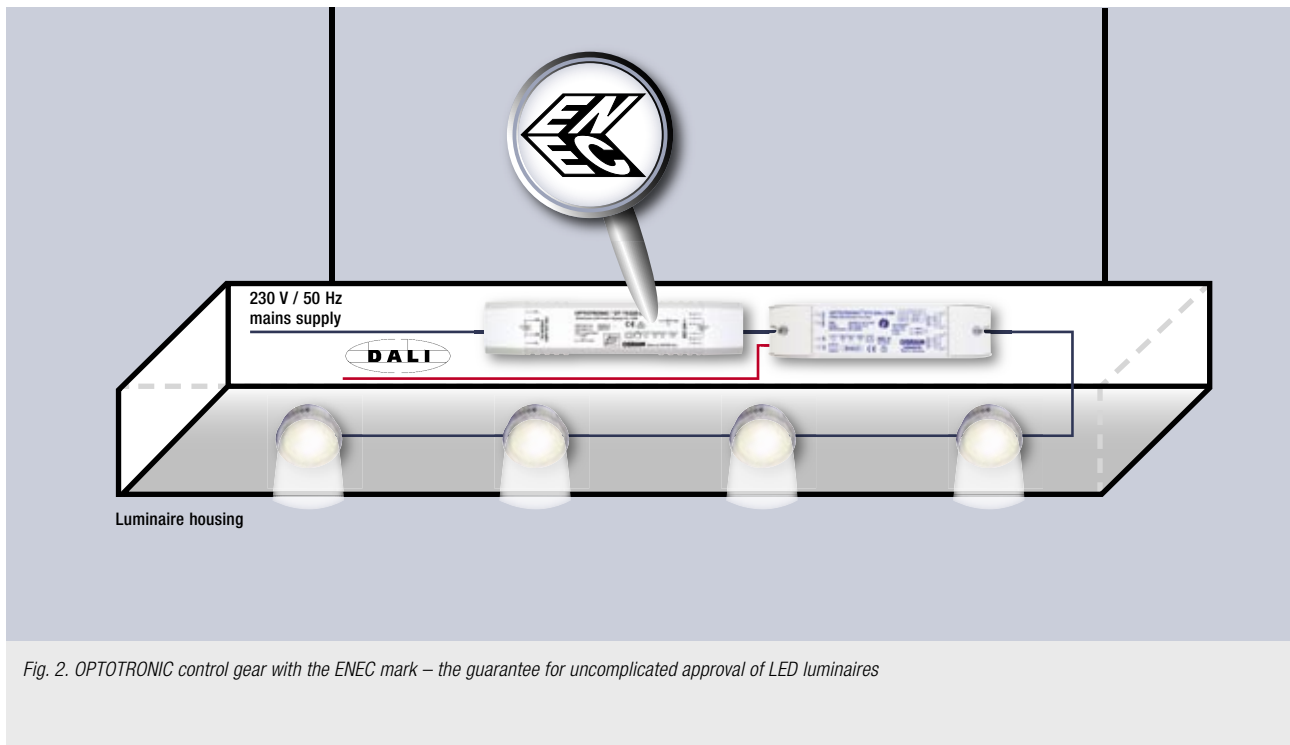


Fig. 2. OPTOTRONIC control gear with the ENEC mark – the guarantee for uncomplicated approval of LED luminaires

Different versions of linear light

The LINEARlight DRAGON high-flux LED module is available with colour temperatures of 2,700 K and 5,400 K. It offers maximum colour homogeneity in the FineWHITE version. The connectors permit simple Plug&Play installation. It is characterised by a dual module concept:

- Version 1 is a printed-circuit version with six Golden DRAGON LEDs;
- Version 2 is a highly integrated LED module with a designer heat sink for thermal management and a lens holder with six lenses having a reflected beam angle of 30°.

Luminous efficacy optimised

The combination of low power consumption and high luminous flux make COINlight-OSTAR and LINEARlight DRAGON high-flux LED modules an attractive and energy-efficient alternative to incandescent lamps or low-voltage halogen lamps.

LED system optimised

The LED system, comprising of an LED module and OPTOTRONIC control gear unit, guarantees electrical isolation and is operated on safety extra-low voltage (SELV). This design permits simple, uncomplicated

integration in luminaires. The safety extra-low voltage and the high-flux module can be connected to the luminaire body without additional insulation. The body itself acts as an additional cooling surface, simplifying thermal management and increasing the service life of the LED luminaire. The OPTOTRONIC control gear guarantees the safety and optimum functioning of the LED luminaire. All OSRAM control gear comply with the safety standard, IEC 61347-2-13, and feature reversible measures for protection against short-circuits, overheating and overloading. Compliance with the operating mode standard, IEC 62384, is the basis for the award of the ENEC mark for LED converters by an independent adjudicator. OPTOTRONIC control gear has this certification, meaning that the luminaire approval procedure is simplified, i.e. the amount of time and money spent on testing and certification is reduced (Fig. 2).

The ENEC mark is recognised throughout Europe and reassures luminaire manufacturers that they are using top-quality products that meet the highest safety standards. COINlight-OSTAR and LINEARlight DRAGON high flux LEDs, in combi-

nation with the OPTOTRONIC control gear devices bearing the ENEC mark result in LED systems that simplify luminaire design and make for a quick, inexpensive luminaire approval process.

Diana Tolksdorf,
OSRAM Munich

Northern Europe's largest crypt radiates colour

Dramatic RGB lighting with Multi-LEDs from OSRAM



Figs. 1 to 4. The lighting concept devised by Lichtspiel GmbH gives the crypt under Hamburg's St. Michael's Church a new radiance

Venerable framework

St. Michael's Church – commonly known as “Michel” and Hamburg's most familiar landmark – was completed in 1762 (Fig. 5). With an area of roughly 1,200 m², the crypt underneath the church is the largest in Northern Europe and used extensively for church services, exhibitions, concerts and lectures. The vault has no source of daylight and its white-painted ceiling rests on pillars with a grid spacing of 3.6 m x 4.5 m. The maximum room height is about 1.90 m and has a stone floor. The framework structure created a challenge to provide a lighting solution.

On top of this, the protection of monuments, had to be considered, this meant that all construction had to be performed as inconspicuously as possible. For example, no cables

were allowed to be laid in the walls, ceiling or floor.

Flexibility is key

In line with the variety of events taking place in the crypt, the lighting has to be flexible in order to be able to create an appropriate atmosphere for each situation.

This challenge was taken up by the Hamburg-based planning office Lichtspiel Lichtprojekte und Design GmbH (www.lichtspiel.de). The lighting concept provides a combination of direct and indirect light that is both unobtrusive and flexible. According to the architect and light planner Henriette Weiss, the direct lighting provided by spotlights is meant to offer orientation, as well as highlighting effects on the floor and certain features in the crypt.



Bild 5. The “Michel” is the most familiar landmark of the Hanseatic City of Hamburg

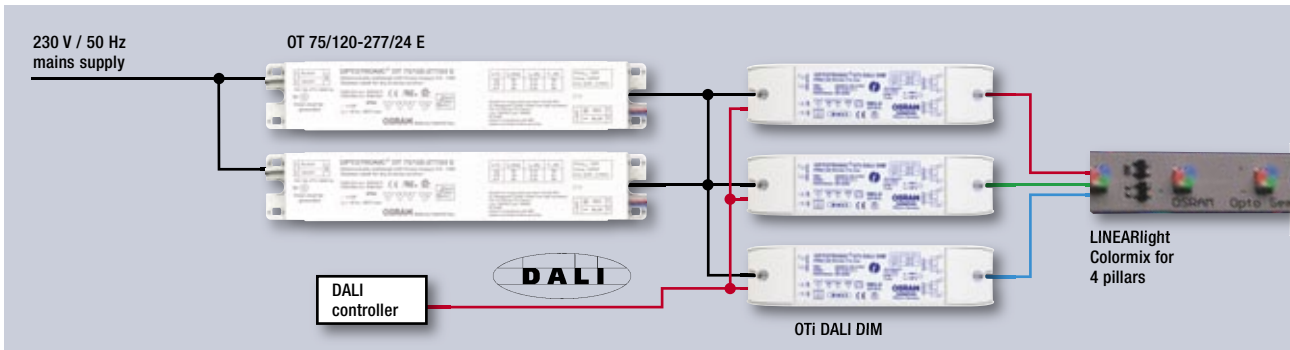


Fig. 8. Wiring diagram of the individual LED power supply packages

In contrast, the indirect light generated by RGB LED modules from OSRAM is intended to enhance the effect of the room, i.e. create an impression of height and emphasise the vault and masonry structures. Special colour effects can generate the right atmosphere for every event (Figs. 1 to 4).

Incredibly discreet

Given the limited space available and the need for a discreet design, LINEARlight Colormix LED modules from OSRAM are used for the indirect and coloured lighting. The LED modules are equipped with Multi-LEDs – i.e. one chip each for red, green and blue in a common housing. This is a solution with minimised dimensions of just 11.5 mm width and a height of less than 4 mm (Fig. 6). Consequently, there is no need for a protruding support structure, such as required when using coloured fluorescent tubes. Instead, slender L-sections running around of the pillars

are sufficient for the LED modules (Fig. 7). Each of the 60 pillars is fitted with four LINEARlight Colormix LED modules, corresponding to 120 Multi-LEDs – i.e. a total of 7,200 Multi-LEDs in the crypt.

The total wattage of the LED modules of each column is roughly 32 W. This means that up to four pillars can be controlled via one LED power supply, comprising of two OT 75/120-277/24 E converters and three OTi DALI DIM units (Fig. 8).

All of the control gear is concealed within low-profile sections on the ceiling, arranged along the crowns of the vault. From there, the supply lines were routed to the LED modules in the wall joints. This made it possible to comply with the demand for very discreet installation. The sections made of extruded aluminium have a total length of 130 m and an oval cross-section of roughly 6 cm x 16 cm. They accommodate not only the control gear and controllers for

the indirect LED lighting, but also the downlights with low-voltage halogen lamps for highlighting the floor, as well as socket-outlets.

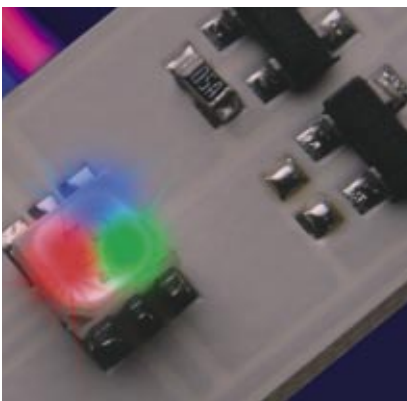
Event-oriented zoning

The lighting is spatially divided into zones that can be dimmed and illuminated in different colours accordingly. As a result, lighting scenes can be configured and retrieved to suit the individual events. All LED controllers are integrated in a DALI system (Digital Addressable Lighting Interface) and connected to the building management systems equipment via a gateway. This permits retrieval of all lighting effects from one central point.

Attractive added value

The system guarantee offered by OSRAM is a very attractive feature for the owners. The OSRAM LED modules, OPTOTRONIC control gear and controllers are all guaranteed for 3 years against defects. Innovative LED components give the crypt of Hamburg's St Michael's Church a venerable, accentuated aura.

Holger Kraus,
OSRAM Munich



Figs. 6 and 7. The LINEARlight Colormix LED modules are discreetly positioned on the pillars

Modern light in the land of the morning sun

HID systems illuminate furniture store in Saudi Arabia

Emerging and discriminating

Alongside the emerging nations in Asia, the countries of the Persian Gulf are currently witnessing a great economic boom. Substantial portions of these countries' income primarily originates from petroleum exports and this is being invested in local infrastructure projects.

One such example is to be seen in the Saudi Arabian capital of Riyadh. The "Riyadh Galleria Shopping Mall" opened its doors to the public in autumn 2007. Located in the upper-class district of Olaya, the 150,000 m² mall is home to some of the world's premium brands.

Amongst others, the first non-European branch of one of Europe's leading furniture companies is to be found here (Fig. 1). The world of



Fig. 1. HID systems from OSRAM guarantee attractive general lighting and spotlighting in the kika furniture store at the Riyadh Galleria Shopping Mall

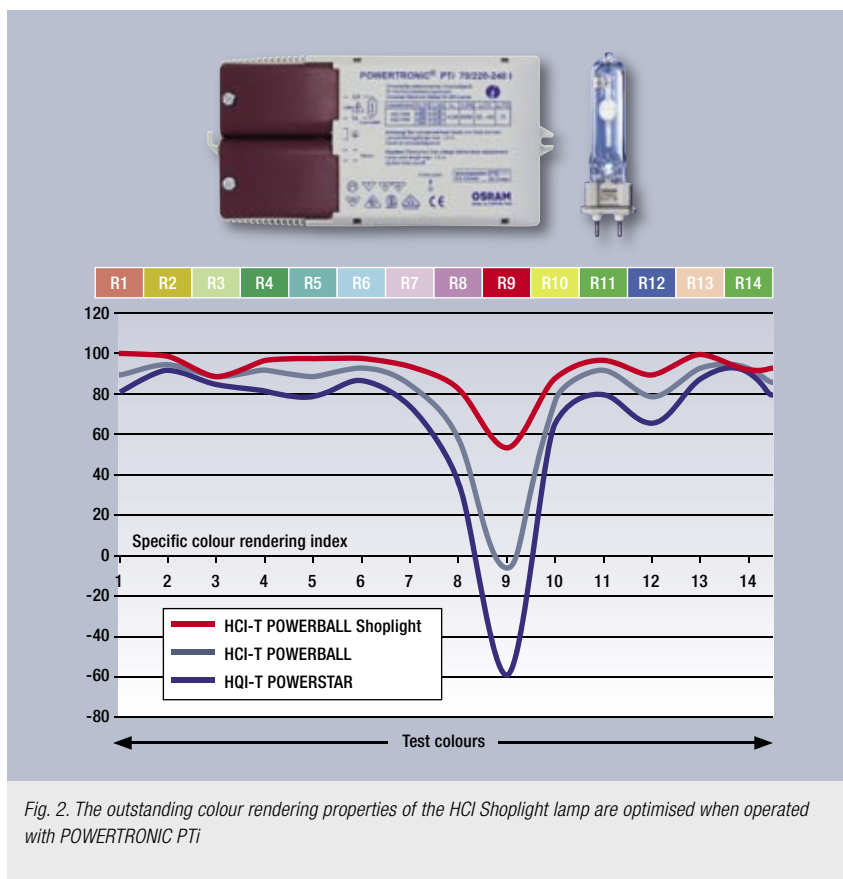


Fig. 2. The outstanding colour rendering properties of the HCl Shoplight lamp are optimised when operated with POWERTRONIC PTI

modern home furnishings is housed on 25,000 m² of sales floor, together with a comprehensive range of accessories in the boutique.

Light adds emphasis

The state of the of the art goods on offer are illuminated using the latest lighting technology. In the kika furniture store over 2,500 complete systems are used. This comprises of HCl 70 W Shoplight ceramic metal halide lamps from OSRAM and POWERTRONIC PTI 70 electronic control gear. This ensures brilliant, highly efficient and thus extremely economical light is produced. (Fig. 2).

The lighting concept is primarily intended to set the scene and portray a homely atmosphere. The concept was devised and realised by Augsburg-based luminaire manufacturer RUCO LICHT.

For example, the spotlights from the Piccos line make for an extremely



Figs. 3 and 4. Spot and downlights – equipped with POWERTRONIC PTi – synonymous for brilliant light

attractive presentation of the items on display in the boutique (Figs. 3 and 4). The same luminaires also provide general lighting, meaning that fluorescent tubes are used only in a few areas. Vision downlights based on four-mirror technology are used to illuminate the exhibition rooms for furniture and beds. The four rotating and pivoting mirrors means light can be directed at up to four objects at once. In combination with the basic lighting of the general areas, this unique spotlighting creates a very cosy atmosphere – this replicates the lighting that customers prefer in their own homes. With the POWERTRONIC PTi ECG family, OSRAM offers the right control gear for every application – be it for spotlights or built-in luminaires. It is the optimum light source when used in conjunction with the corresponding HCl metal halide lamp.

This view is also confirmed by Markus Weindl, Managing Director of RUCO LICHT GmbH, in the following interview:

OSRAM: Mr. Weindl, what were the particular challenges when planning the light for this project?

Markus Weindl: Compared to Europe, a 20% higher lighting level was required for this mall, as well as an annual operating time of 5,500 hours. At the same time, very good colour rendering properties and maximum efficiency were also required.

OSRAM: Was that why you decided on HCl 70 W Shoplight ceramic metal halide lamps from OSRAM?

Markus Weindl: Exactly. One impressive feature of the HCl Shoplight lamp is its extremely good colour rendering properties, which are especially apparent in the red range. On top of that is criteria like high efficiency and a long service life, which is a particularly important quality when it comes to lighting furniture stores.

OSRAM: And what are the reasons for using POWERTRONIC PTi electronic control gear?

Markus Weindl: Above all, the balanced thermal profile of this ECG is the major argument for using

POWERTRONIC. The combination of a sensible t_c value with a very high permissible ambient temperature and a compact form offers the necessary freedom in luminaire design.

OSRAM: Does the PTi range have other advantages from your point of view?

Markus Weindl: As a luminaire manufacturer, the reliability of lamp operation is a decisive criterion for us when it comes to selecting components. PTi control gear meets these demands exceedingly well.

OSRAM: How would you rate the quality of OSRAM products?

Markus Weindl: The quality of the components used has top priority for us. This is particularly the case in connection with projects in distant countries, where our own staff can't "just drop in and have a look". In addition to that, we naturally make use of the OSRAM System+ Guarantee and the extended guarantee services it offers on lamps and ECG.

OSRAM: Were there other reasons for choosing OSRAM as your partner?

Markus Weindl: First of all, one very important thing for us is the local approval of the two components – HCl 70 W Shoplight lamp and POWERTRONIC PTi ECG. With that in mind the approval of the luminaires is a basic prerequisite when importing products into Saudi Arabia. Moreover, it is important to us that our partner already has a presence in the region and can therefore provide local support on a long-term basis.

OSRAM: Mr. Weindl, thank you for talking to us, and all the best for the future!

Wolfgang Mayershofer,
OSRAM Munich

Innovative combination in the SAS Radisson

DALI and building automation for flexibility and lower costs

A disk with flair

With its unusual silhouette, the SAS Radisson Hotel is a real eye-catcher in the European financial centre of Frankfurt (Fig. 1). The 428 rooms and suites of Europe's only round hotel set new heights in terms of styling and comfort. The design of which having been coordinated by Matteo Thun. Guests have a choice of four furnishing styles by the names of "At home", "Chic", "Fashion" and "Fresh", i.e. from warm, modern and classical to daring and unconventional. Each type offers a magnificent view of the Taunus hills or the skyline of the Rhine-Main metropolis.

Culinary needs are catered to in the "Coast Brasserie & Oyster Bar", the Gaia Restaurant and the WunderBar. The event area covers 1,000 m² and comprises nine rooms with floor-to-ceiling windows for plenty of daylight that are available for conferences, meetings and celebrations.

Automation ensures flexibility

A well thought-out concept for building automation is a "must" for a hotel complex of this kind with its different uses – particularly in the events area. The solution selected

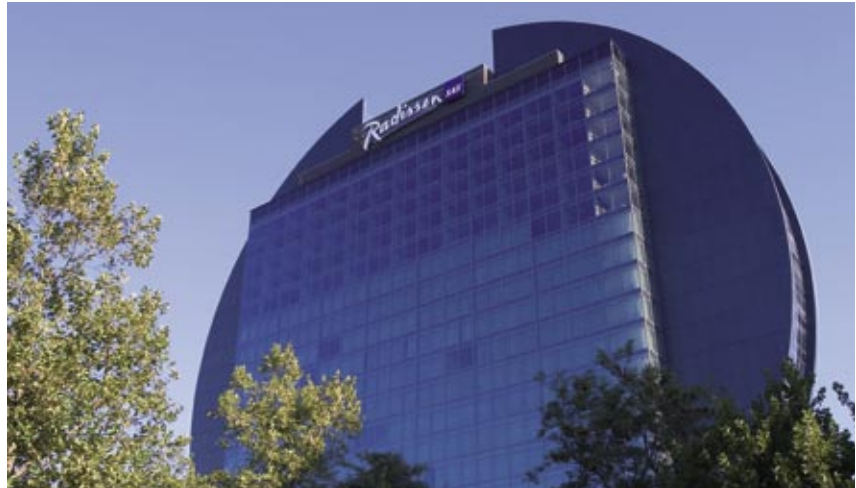


Fig. 1. The SAS Radisson Hotel in Frankfurt am Main is visible far and wide

here is based on the Lonworks standard and the Wago I/O system. Equally important is the subordinate light control system that creates the right atmosphere for the individual events. DALI has established itself as the interface standard in this sector. Its connection options offer an excellent basis for light management solutions in combination with building automation.

The advantages of DALI speak for themselves, such as simple planning and installation, flexible definition of

light groups after installation, uncomplicated programming of light scenes. Supplementary functions like status reports are also available. In addition, DALI-based solutions prove to be more cost-effective than comparable systems with a 1...10 V interface, not only in terms of the wiring effort, but also in operation.

Project-specific selection

MCE Stangl GmbH from Deggendorf – the company responsible for the planning and execution of the building systems at the SAS Radisson Hotel – opted for DALI for light control because of its wide range of features. The standard procedure for large-scale projects, is that the required functions are only defined in a piecemeal fashion as work progresses. As a result a flexible system that can be expanded without any major effort is required.

One example of this is the lighting of the lifts. On each of the 19 floors, the lighting level is increased from 30% luminous flux to 100% when anyone enters the lift. Five minutes

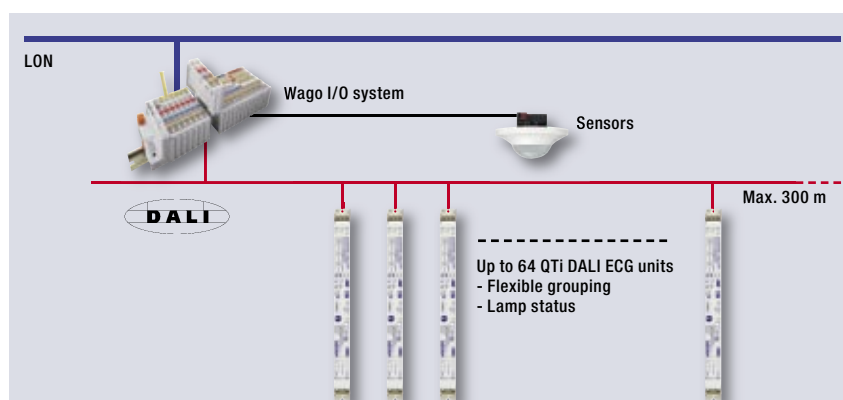


Fig. 2. At the SAS Radisson, the optimum interplay between the Wago I/O system and the DALI ECG from OSRAM guarantees flexible, inexpensive light management

after the motion sensor in this area ceases to detect the presence of any persons, the light is again dimmed to the basic level of 30% luminous flux. If using 1...10 V technology, implementing this complex scenario would be almost impossible, or at the very least be a very involved process.

In this context, every floor was planned to be autonomous, but linked to the building control system via the Wago I/O system. This would have meant an analogue output and additional relay outputs on each floor, as well as a substantial amount of extra wiring. Due to its programmability, DALI offers an inexpensive alternative, as highlighted by Uwe Herold, Project Manager responsible at Stangl. The cost of controlling the light in the lifts is roughly half of what 1...10 V technology costs as well as offering greater functionality.

Focus on the ambience

In hotels, particular attention is paid to the room atmosphere, therefore lighting design is crucial in creating the right ambience in restaurant, lobby and event areas. The aim is to create an ambience in which the guests feel comfortable. Emphasis is also placed on energy efficiency. By using 5,000 Halogen Energy Saver lamps, 88 t CO₂ per year is saved. In addition, different event lighting scenarios are needed, e.g. the ability to change the lighting for a conference where a video projector is used in the ballroom, or equally for a party. It is in such circumstances that DALI light control comes out on top, partly because light groups do not have to be specified until after installation. At the same time, all lighting effects are easy to configure. Effects can be easily altered, including RGB colour mixing, as in the lobby and the ballroom (Fig. 3).

Technology in the background

To be able to exploit the flexibility of DALI, all luminaires have control gear with DALI interfaces, such as the OSRAM QT_i DALI electronic control gear. These devices fulfil the prerequisites for switching, dimming and scene control. The link to the Lon-works building automation system is established via the DALI gateways of the Wago I/O system and the Wago controllers (Fig. 2). This hierarchy has proven to be extremely successful. This was especially the case during the commissioning phase of the project as the QT_i DALI worked well with the Wago I/O system. The interplay between the QT_i DALI electronic control gear from OSRAM and the DALI master terminals of the Wago I/O system worked without a hitch from the outset.

Highly atmospheric

The great benefit of DALI became clear when it came to implementing the tight schedule for completion of the project. The light scenes were not fixed until shortly before the official opening in summer 2005. Numerous factors played a role when defining the light groups. Amongst other things, attention was paid to furnishings, room colour and daylight level in order to create the exact atmosphere that was demanded. DALI has demonstrated its potential in the SAS Radisson Hotel in Frankfurt. Above all, this uncomplicated light control system and QT_i DALI control gear make it possible to successively incorporate new ideas easily and inexpensively.

Rainer Wrenger,
OSRAM Munich



Fig. 3. DALI is used as the basis for flexible light groups and simple configuration of light scenes for an optimum room effect

Focus on compact fluorescent lamps

Flexible planning with one luminaire type

Consistently setting milestones

OSRAM is yet again setting a technological milestone with its new multi-lamp ECG for compact fluorescent lamps. This now extends the family of QUICKTRONIC INTELLIGENT dimmable intelligent control gear still further. With the intelligent lamp detection function, it is now possible for the first time to use a single ECG device – the QT_i DALI-T/E 1x18-57 DIM – to operate the entire range of DULUX T/E 18 W to T/E 57 W lamps, including the amalgam version DULUX T/E IN (Fig. 1). Moreover this control gear is suitable for operating FC 22 W and FC 40 W ring lamps. The two-lamp version, QT_i DALI-T/E 2x18-42 DIM, permits optimum operation of two 18 W to 42 W compact fluorescent lamps.

Luminaire design consistently simplified

The two-lamp version also offers added value with a sleek exterior and dimensions of 123 mm x 79 mm x 33 mm, it is the same size as its one-lamp counterpart. This means that, instead of the previous four devices, just two versions now cover the full range of the most important compact fluorescent lamps. This fact is greatly welcomed by luminaire manufacturers, in particular. This meets the requirements for being able to fit the 2x18W and 2x26-42W downlight versions with a single QT_i DALI-T/E 2x18-42 DIM two-lamp control gear unit (Figs. 2 and 4). The amalgam version DULUX T/E IN for luminaires is designed to handle high internal temperatures.

Moreover, an optional cable clamp is available that snaps onto the ECG housing. This proves to be ideal for designer low-profile, luminaires with high-wattage compact fluorescent lamps and where the ECG is installed in a false ceiling.

Varied dimming

Depending on the application, a choice between a DALI or Touch DIM interface and 1...10 V technology is available for dimming. The DALI and Touch DIM interface in a single device mean that QT_i DALI-T/E can be combined with a DALI dimmer or a Touch DIM sensor (Fig. 3). A dimming range from 100% to 3% luminous flux is covered in this system. One important note is the extremely short lamp start time of just 0.6 s.

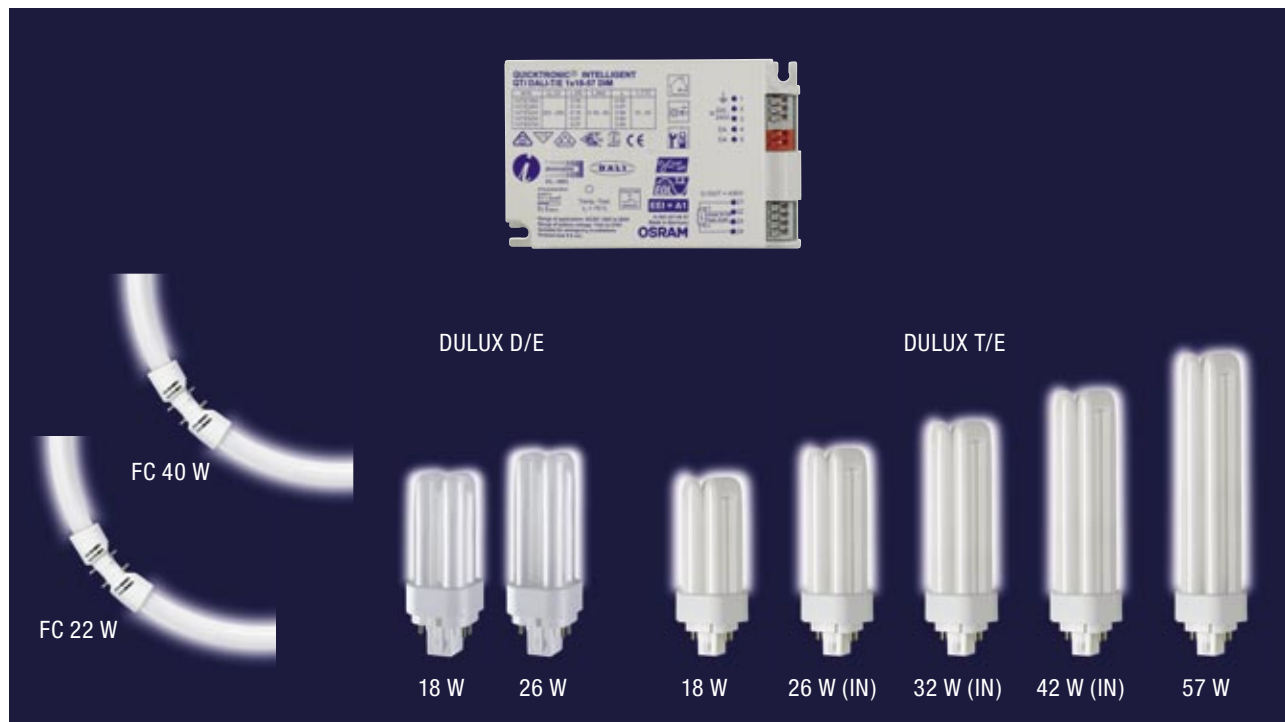


Fig. 1. One ECG unit for a variety of lamps: the QT_i (DALI)-T/E sets standards. Details at: www.osram.com/ecg

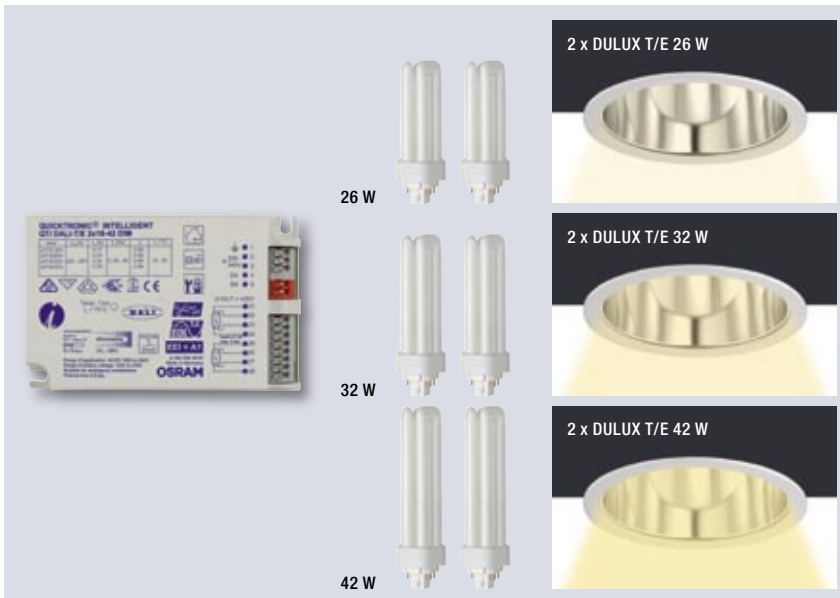


Fig. 2. One luminaire, many applications: that is the advantage of QTi DALI-T/E control gear

tically adapt preheating to very low temperatures. In the event of excessively low luminous flux values and temperatures, the lamp is also automatically dimmed up so that stable lamp operation is guaranteed.

Integrated service life guarantee

Due to its design, extremely high temperatures occur on QTi electronic control gear in downlights and in certain false-ceiling designs. To achieve a long device service life, the QTi versions for compact fluorescent lamps have an intelligent power reduction feature. This monitoring function steps in when necessary, thus improving the reliability of QUICKTRONIC INTELLIGENT. The sophisticated concept of the

Long standing benefits

Needless to say, the multi-lamp ECG for compact fluorescent lamps has all of the long standing benefits of the QTi family. These include cut-off technology for maximum energy efficiency, as well as the automatic safety shut-down of lamps in the event of faults or at the end of their service life (EOL T2).

Unrestricted operation of amalgam lamps

The new QTi devices are also suitable for unrestricted dimming of DULUX T/E IN amalgam lamps. In this case, the device intelligence is used to automa-



Fig. 4. Different use of QTi DALI-T/E in lamps for the food counter and the seating area of a canteen

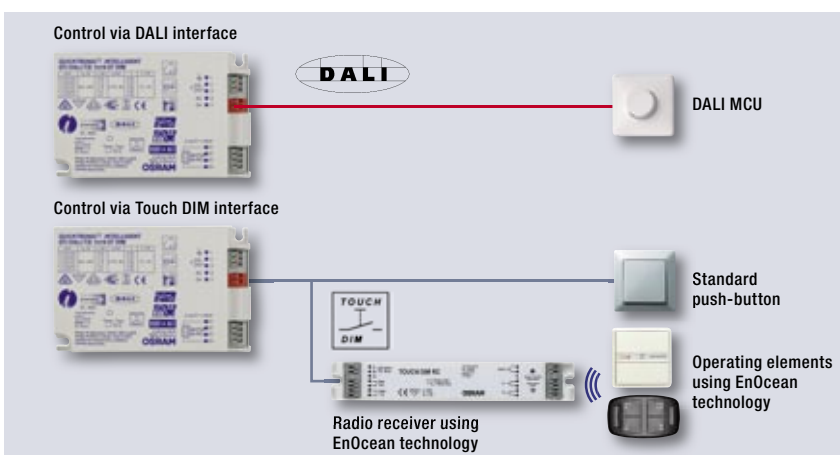
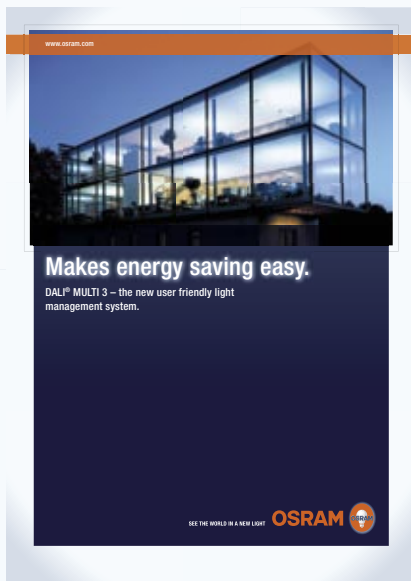


Fig. 3. QTi-T/E control gear for compact fluorescent lamps offer a diverse range of options for control. Details at: www.osram.com/ecg-lms

intelligent QTi DALI-T/E devices, with multi-lamp function, DALI and Touch DIM interface offers major benefits for luminaire manufacturers and users alike.

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News in brief



Energy-saving made easy with DALI MULTI 3

The new "Makes energy saving easy" brochure provides an impressive summary of the diverse potential applications of the DALI MULTI 3 system.

Its host of functions make the DALI MULTI 3 light control system a versatile "energy-saver" due to daylight-dependent lighting control combined with occupancy function. Multi-sensors are available for installation in luminaires or ceilings. The ceiling-mounted version is one of the smallest multi-sensor solutions on the market. In the event of retrofitting, the DALI MULTI 3 system can be conveniently operated via a radio receiver for systems without batteries using EnOcean technology. The system is easy to install and does not require DALI addressing of the connected luminaires. Download at: www.osram.com/ecg-lms

POWERTRONIC ECG now for 20 W

The POWERTRONIC PT 20/220-240 S, OSRAM is a very compact electronic control gear device for installation in luminaires.

It is predestined for operating 20 W lamps with a ceramic burner, such as the HCI-TC 20/830 with G8.5 Secure-Fix base or the new HCI-TF 20/830 mini-lamp with Gu6.5 "Twist and Lock" base.

In addition to its small dimensions, another particularly impressive feature of the new digital device is that it ensures safe and reliable lamp operation. And with a power loss of only about 2.5 W, it is one of the most efficient devices in its class. With a system efficiency of up to 80 lm/W, the new system constitutes a highly economical and attractive

alternative to classical halogen lighting, particularly for retail accent lighting. The standardised dimensions permit rapid replacement in many existing 20 W luminaires. More information on the Internet at: www.osram.com/ecg



QTP now also for compact fluorescent lamps

QUICKTRONIC PROFESSIONAL QTP-D/E 1x10-13 and 2x10-13 electronic control gear, as well as QTP-T/E 1x18 and 2x18 units, contain tried-and-tested OSRAM Pro3 technology. Compared to their predecessors, this ECG possesses a number of additional, innovative features that ensure specification-compliant operation and a long service life of compact fluorescent lamps from

9 W to 18 W. Amongst other things, they include improved thermal management for even more compact luminaires with $t_c = 75^\circ\text{C}$, i.e. 5 K higher compared to the QT-D/E and QT-T/E versions.

All QTP versions are ENEC-certified and, thanks to the optional cable clamp for K2 and K3 housings, offer simple installation, even in suspended ceilings. Radioshielding (EMC) has been improved by an additional terminal for functional earthing.

