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OSRAM



Information for our partners in the lighting industry



Hans-Peter Birkhofer

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Dear Reader,

The year 2006 is drawing to a close. Looking back, we can see that the past months were characterised by a pleasing economic turnabout and sustained recovery.

Both the realisation of deferred lighting projects and an improvement in the investment climate have helped the lighting industry achieve growth – despite the fact that higher costs for raw materials and energy are increasing the price of components for lighting solutions. Fortunately, there is a growing trend towards judging lighting concepts not only on the basis of the best price, but also according to quality criteria, such as aesthetics, energy efficiency, lighting quality and convenience. Precisely these criteria are the focus of lighting electronics.

This is demonstrated by the growth impulses, which are primarily based on the three trends of dynamic light, electronics for the operation of high-pressure discharge lamps, and use of light-emitting diodes.

Thus, dynamic light equally improves energy efficiency and convenience through intelligent light control. DALI has established itself as the global standard for communication. As intelligent components, the QTi DALI electronic control gear units from OSRAM demonstrate their extremely innovative properties.

Metal halide lamps are becoming increasingly popular owing to the brilliant quality of their light. Electronic operation is handled by intelligent PTi control gear – as the ideal complement to the POWERBALL HCI lamps.

Light-emitting diodes are now also finding their way into general lighting, whereas they are already state of the art today in architectural lighting solutions with dynamic colours or for adaptive lighting effects. Innovative colour control systems, such as EASY Color Control, are characterised not only by functional RGB colour mixing, but also by simple commissioning. Together, let us seize the opportunities for designing modern lighting with even better quality, functionality and energy efficiency. OSRAM makes an important contribution to achieving this goal, primarily with innovative and intelligent lighting electronics.

I wish you not only an enjoyable time reading this issue of the ECG SPOT, but also a Merry Christmas and all the best for a successful year in 2007.

Yours,

Hans-Peter Birkhofer – Manager Marketing and Product Management, Electronic Control Gear

LED module for a variety of uses

The high-end LED module is called LINEARlight-DRAGON



Fig. 1. Six Golden-DRAGON LEDs make the LINEARlight-DRAGON high-flux LED modules shine out – the perfect system with OPTOTRONIC control gear from OSRAM

One for all

Thanks to its dual module concept, LINEARlight-DRAGON is the first high-flux LED module (Fig. 2) to offer a variety of advantages not only for electrical fitters, but also for luminaire manufacturers and OEMs. Connectors ensure simple „plug-and-play“ installation. A feeder with a 500 mm cable and two connectors with 40 mm and 100 mm are available.

In addition, the safety extra-low voltage of 24 V DC facilitates electrical installation. The LINEARlight-DRAGON modules stand for versatility in use owing to their dimmability and the simplicity of integrating them in DALI light control systems. The different colour temperatures of 6,500 K, 5,400 K, 4,700 K and 3,300 K also illustrate this versatility.

The new high-flux LED modules particularly demonstrate their strengths in linear lighting applications for direct and indirect interior lighting. Examples include the illumination of shelves, furniture, workplaces or kitchens.

However, LINEARlight-DRAGON can also be used to produce wall-washing effects.

Two expressive versions

The two versions each have a length of 300 mm and show off their specific properties. As a PCB model, Version 1 is fitted with six Golden-DRAGON LEDs from OSRAM in thin-film technology.



Fig. 2. A lens holder with six lenses and a stylish heat sink complete the LINEARlight-DRAGON LED module

Version 2 is a highly integrated LED module with heat sink that – like Version 1 – consists of a printed circuit board with six Golden-DRAGON LEDs in thin-film technology. The system is completed by a lens holder with six lenses having a 30° angle of radiation, as well as a stylish heat sink for optimum thermal management.

Focus on optimum operation

Optimum operation of the LINEARlight-DRAGON LED modules is ensured by an OPTOTRONIC control gear unit that is exactly tailored to the required characteristics. This is the prerequisite for the high light quality and great dependability of the modules.

24 V operation has established itself as the standard in the LED sector today. The OPTOTRONIC range offers the right solution for every application, with total wattages of 20 W, 25 W, 60 W and 75 W. In this way, OSRAM covers all requirements for fitting in luminaires or stand-alone installation, both indoors and outdoors (Fig. 1). For example, up to six LINEARlight-DRAGON modules can be operated on an OPTOTRONIC OT 75/220-240/24 control gear unit, this corresponding to 1.8 m LED light with a luminous flux of 2,250 lm. This high luminous efficacy represents a milestone in the use of LEDs in general lighting.

Dr. Thomas Dreier and Peter Spiel,
OSRAM Munich



Simple, functional, flexible: light control with EASY Color Control

Dynamic light presents its stimulating effect in a wide variety of applications. Different and highly specific demands are imposed on the light management system in each case. The examples illustrated range from RGB effect light with coloured fluorescent lamps or light-emitting diodes, to daylight simulation with white fluorescent lamps and dynamic lighting solutions for sales areas with low-voltage halogen lamps, all the way to the control of static light scenes for conference and training rooms.

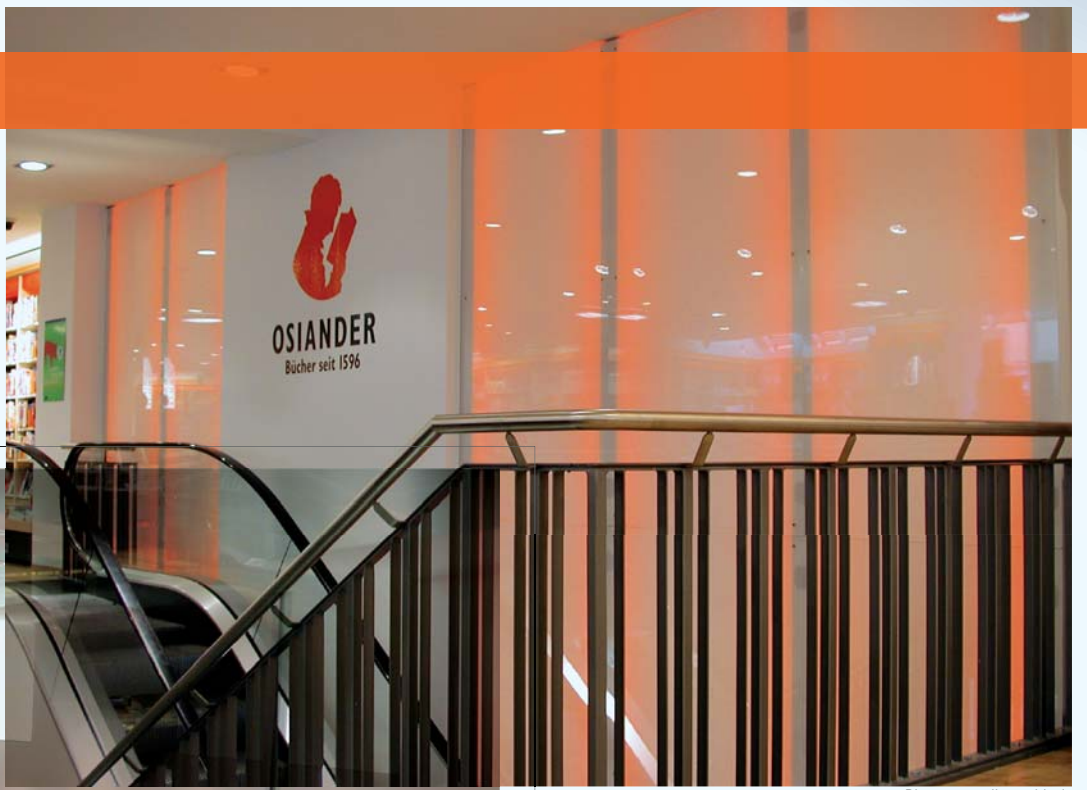
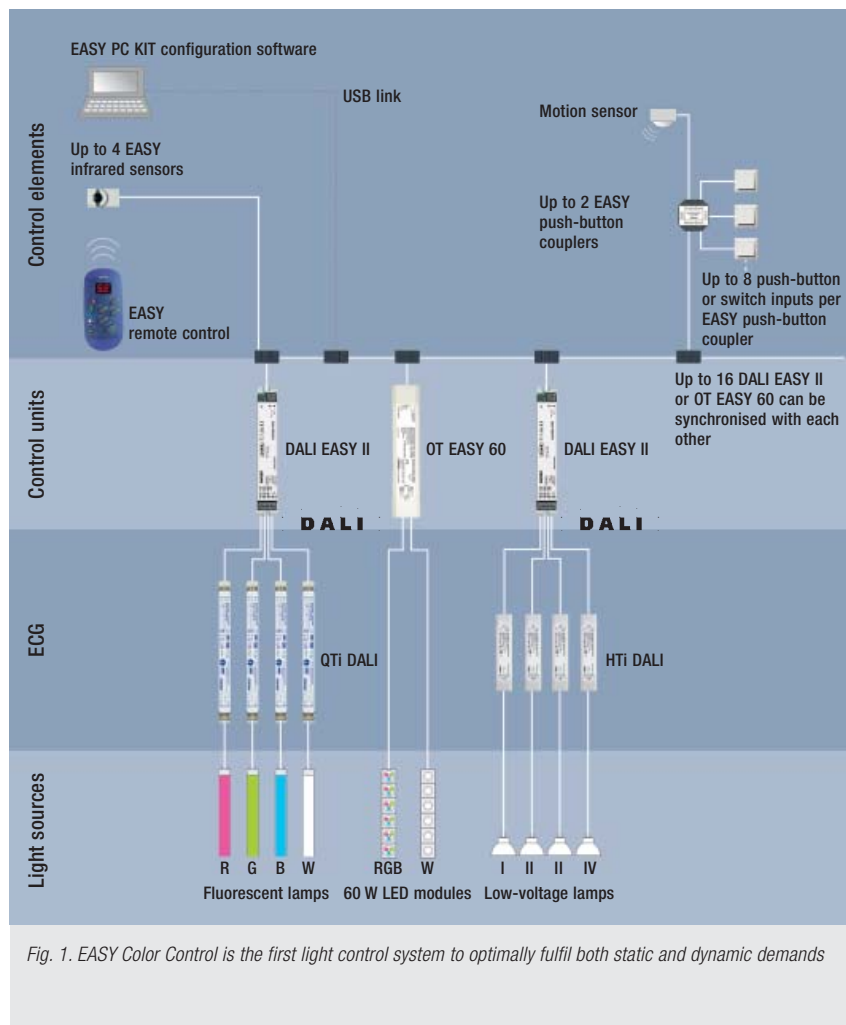


Photo: www.lic-gmbh.de



As diverse as the demands on light

Light control with EASY Color Control – Simple and functional



lighting installation, or whether it has to be completely replaced.

Simple, functional solution

The answer to these questions is now easier. After all, the EASY Color Control light control system (Fig. 1) can be used to implement both static and dynamic lighting concepts. The main focus in this context is quite clearly on functionality, but with easy installation and configuration at the same time. The „EASY“ principle, which has already proven its worth on many occasions in the DALI EASY light control system, has consistently been retained: the DALI EASY control unit is even the core element of the new system.

A single control unit permits control of 32 DALI control gear units – distributed over up to four DALI outputs. An integrated sequencer with four individual sequences is available in this context, as are 16 freely definable, static light scenes. As a result, light sculptures are just as easy to realise as light control in classrooms or conference rooms.

Focus on demands

The demands on modern lighting have changed radically in recent years. While the criteria of light distribution, colour rendering properties and illuminance used to suffice to define a lighting solution, today there is also a call for situation-oriented and, where appropriate, dynamic light. The foundations for needs-based lighting are laid by dimmable electronic control gear using digital technology. The efficiency with which the capabilities of control gear of this kind are exploited is determined solely by the choice of a suitable control system. However, a common,

standardised form of digital communication is the prerequisite for the control gear and the control system optimally understanding each other.

The demands must, however, be clarified beforehand, e.g. whether a static lighting solution is later to be supplemented by dynamic elements. Attention also focuses on handling, e.g. whether it takes a specialist to put the control system into service, or whether the user can individually adjust it himself. Another important question is whether the control system can be expanded in the event of changing demands on the

Flexible expansion

If 32 ECG units are not enough for a lighting task, EASY Color Control can be expanded to as many as 16 control units in modular fashion owing to the keyed connector system. With 64 DALI channels and up to 512 control gear units, even luminous ceilings with daylight simulation or dynamic façade illumination can be realised in this way.

Light-emitting diodes can doubtless be regarded as the light source of tomorrow. A particularly elegant and simple solution for this purpose is

offered by EASY Color Control with OPTOTRONIC OT EASY 60 control gear, where control gear unit, 60 W power supply, sequencer and LED dimmer are combined in a single device. This „all-in-one“ component can be used, for example, to operate 4 m coloured Colormix Flex LED modules without any major wiring complexity. Regardless of whether the lighting solution is based on OT EASY or DALI EASY, this control system can always be expanded to up to 16 EASY units in modular fashion.

Simple operation guaranteed

OSRAM sees the uncomplicated handling of EASY Color Control as an obligation. Both infrared remote

socket. DIP switches permit individual selection of the push-button functions.

Combination of the coupler with a motion detector makes it very easy to call up scenes or sequences as needed. The possibilities range from increasing the illuminance in areas only used at times, or designing shop window and object illumination more attractively, to the enhancement of entrance areas.

Scene design made easy

If the control units are connected to the USB port of a personal computer via an adapter cable, it is particularly easy to create, save and duplicate scenes and sequences via a graphic software interface (Fig. 2). Colours

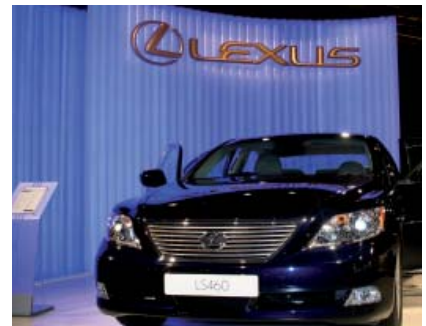


Fig. 3. Practical example of a dynamic RGB effect lighting solution with LED modules

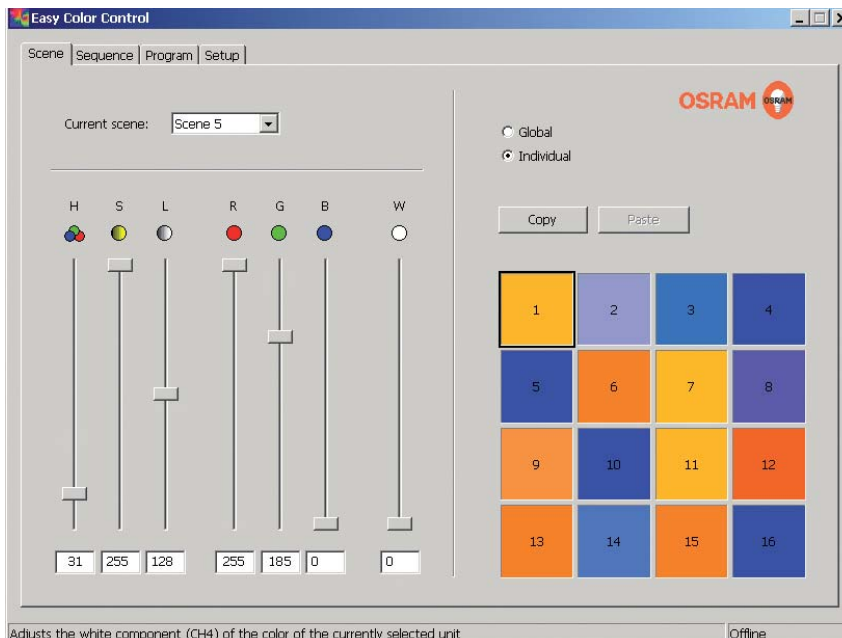


Fig. 2. Scenes and sequences are easily created, saved and duplicated on the Windows graphic user interface

controls and standard push-buttons from the switch ranges of any manufacturer can be integrated with the greatest of ease. IR sensors for installation in luminaires or ceilings offer the possibility of conveniently using all key functions by remote control. Eight push-buttons or switches can be connected via a push-button coupler, installed behind the control element in the flush-mounted

can be set, copied and varied by mouse click. The preview function is as easy way of getting an initial impression of the light sequence, „offline“ on the desktop. All settings are then automatically adopted by the control units. If the link to the computer is active, entire programs can be created from different sequences and, for example, run at precisely specified times of day. EASY Color Control offers the

functions and components for both static and dynamic light solutions. A wide variety of light sources can be integrated, and creative ideas realised with ease.

Axel Pilz,
OSRAM Munich

Mecca – Pilgrims give impetus

The „Abraj Al Bait Towers“ shine out in innovative OSRAM light

Superlatives en masse

The „Abraj Al Bait Towers“ in Mecca are in a class of their own. When finally completed in 2009, the 485 m tall building complex will not only be the highest skyscraper in Saudi Arabia, but also the most expansive complex in the world in terms of area (Fig. 1). Just as impressive is the location of the „Towers“, opposite the entrance to the Masjid al-Haram,

Mecca's largest mosque.

Among other things, the „Abraj Al Bait Towers“ accommodate a large prayer hall, where roughly 4,000 worshippers can congregate. Furthermore, the building will have a four-storey shopping centre, a car park with 800 spaces, and two small helicopter landing pads. In addition, the integrated conference centre is intended to attract business travellers

to Mecca, which lies in the middle west of Saudi Arabia.

The opening of the Mövenpick Hotel & Residence Hajar Tower Makkah is already planned for late 2007. The most fastidious demands will be catered to in the 410 luxurious rooms and suites of the five-star hotel, which offers a fascinating view of the „Al Kaabah al Musharafah“, a holy shrine. The 882 furnished one, two and three-room apartments likewise included in this impressive complex will be sold to individual investors and then run and let by Mövenpick Hotels & Resorts.

Modernisation brings growth

The construction of the „Abraj Al Bait Towers“ will also make it easier to accommodate the large numbers of pilgrims. After all, Mecca's population of 1.3 million can easily triple briefly during the „hajj“.

Above all, increasing industrialisation and the growth of the Islamic population worldwide have led to more and more people setting out on the hajj, the great pilgrimage. Modern jumbo aircraft have also contributed to increasing the number of pilgrimages, the result being that Mecca has grown enormously in recent years and that old, historic buildings are being joined, and often also ousted, by motorways, shopping centres and skyscrapers like the „Abraj Al Bait Towers“.

Absolutely innovative lighting technology

Modern lighting technology from OSRAM makes for a pleasant atmosphere in the impressive building complex, which was designed by „Dar Al Handasah Architects“ and is being built by the „Saudi Bin Laden



Fig. 1. When finally completed, the „Abraj Al Bait Towers“ in Mecca will be the most expansive building complex in the world in terms of area



Fig. 2. Over 6,000 POWERTRONIC PTU and PTi electronic control gear units give a brilliant shine to the metal halide lamps in the „Abraj Al Bait Towers“



Fig. 3. More than 2,000 HTM 70/230-240 electronic transformers guarantee optimum operation of the low-voltage halogen lamps

Group“. More than 10,000 OSRAM electronic control gear units have been installed in total, such as:

- 6,000 POWERTRONIC control gear units (**Fig. 2**), i.e. PTU 35/220-240V, PTi 70/220-240 S and PTU 150/220-240, for operating POWERBALL HCI-T 35 W, 70 W and 150 W metal halide lamps, as well as POWERBALL HCI-TC 35 W and 70 W,
- 2,000 HALOTRONIC Mouse HTM 70/230-240 electronic transformers (**Fig. 3**) for optimum operation of HALOSTAR IRC 20 W low-voltage halogen lamps.

The decisive reasons for using OSRAM lighting solutions were their outstanding quality and the system guarantee given on lamps and ECG (www.osram.com/system-guarantee).

Unparalleled success

In the year 2000, roughly 5,000 electronic control gear units were sold in this region from Dubai – the headquarters of OSRAM Middle East. Just six years later, the figure had already risen to over 200,000 OSRAM ECG units and, in addition, numerous innovative lamps that ensure a good atmosphere and effective lighting in all prestigious

projects in this growth region.

Examples include:

- The Palm Jumeirah in Dubai/United Arab Emirates,
- Kempinski Emirates Palace Hotel in Abu Dhabi/United Arab Emirates,
- King Saud University in Riyadh/ Saudi Arabia,
- Dubai International Airport,
- Kuwait Petroleum Headquarters,
- Grand Hyatt Hotel Qatar.

Competent support is what counts

„The close customer ties we’ve built up since we launched our activities in the Middle East are responsible for our success,“ says Banan Al Kahlaf, Sales Manager at OSRAM Middle East, explaining the strategy. That also includes regular seminars, where interested customers can get information about OSRAM’s innovative lighting solutions. Since there is enormous competition for the prestigious projects, good contacts are extremely important, particularly in this region.

This strategy, which also includes a complete after-sales service, has already enabled OSRAM to achieve a market share in excess of 20% for electronic control gear in 2006 – and there are prospects for further growth

in the future. After all, new, major construction projects are being announced all the time in the Gulf Region. „And OSRAM Middle East is equipped to deal with any challenge, meaning the demands of this attractive growth market and equally the battle to survive in the face of tough competition,“ says Rami Obeid, OSRAM Middle East Sales Manager for Kuwait, Qatar and Bahrain. Both our high-end electronic control gear and the excellent service provided by the motivated team will contribute to continuing our success.

Peter Rothnie,
OSRAM Middle East



Fig. 1. The new PTi 2x70 particularly demonstrates its qualities in applications where numerous lamps are accommodated in a small space

Even simpler, even better

POWERTRONIC PTi 2x70 – The dual ECG for the highest demands

First choice: electronic

Electronic control gear has established itself in modern lighting engineering. This also applies to metal halide lamps, for whose operation electronic control gear proves to be the equipment of choice, particularly for new installations.

In addition to having a compact design, ECG is characterised by outstanding economy and high lighting comfort (Fig. 1). Moreover, the integrated, intelligent cut-off mechanisms guarantee safe and dependable lamp operation.

The two-lamp alternative

Following the successful launch of PTi 2x35 control gear for operating two 35 W metal halide lamps, OSRAM is now presenting a two-lamp PTi for two 70 W HID lamps. This highly user-friendly alternative is based on exactly the same platform as its one-lamp counterpart. Thus, its special strengths are likewise the long service life of the units and the high maximum permissible temperatures. However, the PTi 2x70 also sets standards as regards economy, lighting comfort and system safety.

Fitting in luminaires or stand-alone installation

As with the PTi family, the PTi 2x70 also comes in two models:

The PTi 2x70 S version (Fig. 3) is designed for fitting in luminaires. The high-quality metal housing ensures good heat dissipation in this context.

The PTi 2x70 I (Fig. 2) with plastic housing was developed for stand-alone installation. Its extremely practical, split cable clamp ensures reliable relief of cable strain.

Optimum thermal properties and a compact design

Extremely compact dimensions are an impressive feature of both the build-in version and the model with cable clamp. It was nevertheless possible to avoid making compromises as regards the maximum permissible temperatures and the service life. Rather, with an identical service life, the two-lamp units display the same maximum permissible temperature values t_a and t_c as the one-lamp 70 W units, thanks to their high thermal quality. It therefore makes no difference whether one or two-lamp ECG units are used, since both versions can be operated safely and reliably at the same ambient temperatures.

Two lamps – One unit

The two-lamp PTi 2x70 units are designed for operating two 70 W metal halide lamps. The two lamp circuits in the ECG itself are separated from each other, meaning that if one lamp goes out as a result of ageing or a fault, the other can continue to be operated. This one-circuit operation can continue without difficulty until the faulty lamp is replaced.

New protective-conductor terminal

The use of a new type of terminal for connecting the protective-earth conductor offers the user additional benefits. After all, this terminal makes it possible for the first time to earth a luminaire safely and in compliance with the relevant standards via the ECG. The protective

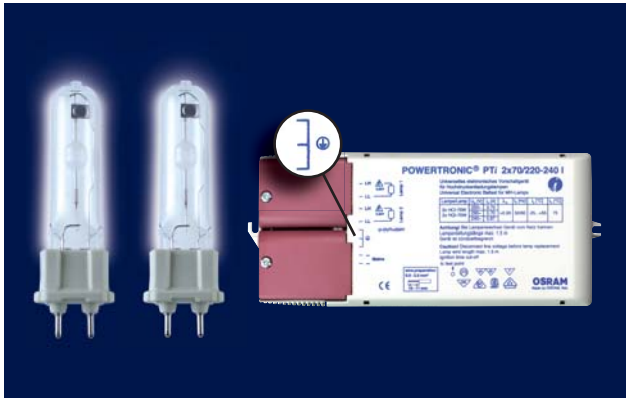


Fig. 2. Thanks to its innovative cable clamp, the new PTi 2x70 I is particularly easy to install

conductors of the supply line and the luminaire are permanently and safely connected by a bridge in the PE terminal of the control gear unit in this context. In contrast, the VDE still takes a very critical view of connecting the protective conductor solely via the printed conductor on the printed circuit board.

All OSRAM ECG for metal halide lamps that is equipped with the new terminal technology can be identified by a line connecting the respective PE terminal symbols. This applies to all units for stand-alone installation (Fig. 2).

Perfect in the system

The new PTi 2x70 can be used to operate either two HCl 70 W metal halide lamps or, alternatively, two HQI 70 W lamps.



Fig. 3. Compact dimensions and yet outstanding thermal properties: those are the key features of the PTi 2x70 S for fitting in luminaires

Properties of the PTi 2x70 at a glance

- Excellent thermal properties – identical to those of the one-lamp versions
- At least 40,000 h service life at maximum permissible temperatures
- Two separate ECG lamp circuits: if one lamp goes out, the other continues to burn
- Limited ignition time and reversible overtemperature protection of the ECG
- Microcontroller for digital lamp control, intelligent ignition management and dependable shut-down at the end of the lamp service life

Benefits

- The temperature ranges familiar from the one-lamp devices also apply identically to the new PTi 2x70 units – t_a : -25 °C to +55 °C
- Greatly reduced wiring complexity compared to two, one-lamp units
- Roughly 15% reduction in volume compared to two, one-lamp ECG units: allows even more compact luminaires
- Bridged PE terminal permits safe earthing of the luminaire via the ECG

Particularly in combination with the new HCl 70 W Shoplight lamp, salesrooms can now be experienced in a completely new light.

Innovative lamps and sophisticated ECG technology together form a system that lastingly meets even the highest demands on colour brilliance, economy and system reliability.

Doubly good

The new, two-lamp PTi 2x70 electronic control gear units are the perfect complement to the one-lamp 70 W PTi versions. After all, a reduced wiring complexity – only one unit to be connected on the mains side, looping-through to the second unit is eliminated – and a substantially smaller volume, which nonetheless offers very good thermal properties, make the two-lamp ECG units a highly attractive alternative to two, one-lamp units. With the new PTi 2x70, the PTi family is once again setting the standard in innovative ECG for metal halide lamps.

Wolfgang Mayershofer,
OSRAM Munich

A closer look at dimming

QTi dimmable – More than just electronic control gear

Unique ECG intelligence

QUICKTRONIC INTELLIGENT dimmable electronic control gear has been state of the art at OSRAM for years – and there is still no other comparable equipment on the market. It is not individual properties that guarantee the functionality of this „intelligent“ equipment family, but their combined total. These properties include automatic lamp detection, the quality of dimming, the new type of filament preheating, the low power loss, the dimming range of 1% to 100% over a very wide temperature range, lamp starting at down to -25 °C and suitability for very rapid dimming operations. In addition, the DALI version of the QUICKTRONIC INTELLIGENT has an intelligent interface for simple push-button operation and sensor connection (Fig. 1).

Simplification for the luminaire manufacturer

By launching the QUICKTRONIC INTELLIGENT, OSRAM for the first time offered luminaire manufacturers an ECG family that enabled them to simplify production and reduce the variety of luminaire types. The uniform wiring and geometry, together with the possibility of reducing the number of models to one luminaire per lamp length due to T5 lamp detection, were convincing arguments for luminaire manufacturers and specialist electrical retailers.

Intelligent dimming interface

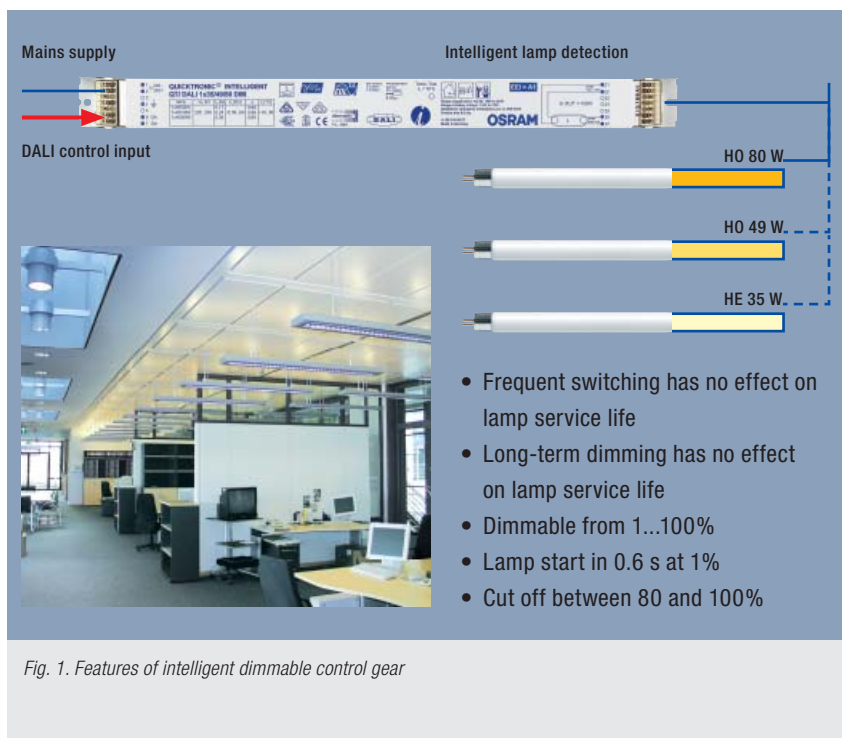
The dimmable QTi control gear units are available with the time-proven 1...10 V interface and also with a digital DALI interface. This makes it possible to use all standard controllers with the corresponding

interfaces. Moreover, the QTi units with DALI interface have additional intelligence – namely, via Touch DIM. Touch DIM is a meaningful extension of the digital interface for simple applications.

With Touch DIM, a simple push-button can be used for dimming and memory functions. When the button is held down, the ECG recognises that mains voltage is applied and switches over to Touch DIM. The function of the push-button is almost self-explanatory: it is pressed briefly for switching on and off, while holding it down stands for dimming, and a double-click memorises the power-on level. Switching between DALI and Touch DIM is fully automatic.

Touch DIM sensor as an intelligent accessory

More and more lighting installations are being equipped with dimmable ECG. The purpose of this is not only to realise flexible scene control, but also to exploit the available daylight in order to achieve greater energy efficiency. Up to 80% energy can be saved in applications of this kind – depending on the position of the luminaire relative to the window and on the intelligence of the control system. The Touch DIM sensor – used as a light and/or motion sensor – particularly demonstrates its strengths in simple solutions, e.g. standing luminaires for flexible use. The sensor is combined with the Touch DIM function, i.e. connected directly to the ECG. Light control is handled by the „intelligence“ of the QTi DALI ... DIM, meaning that there is no need for an additional controller.



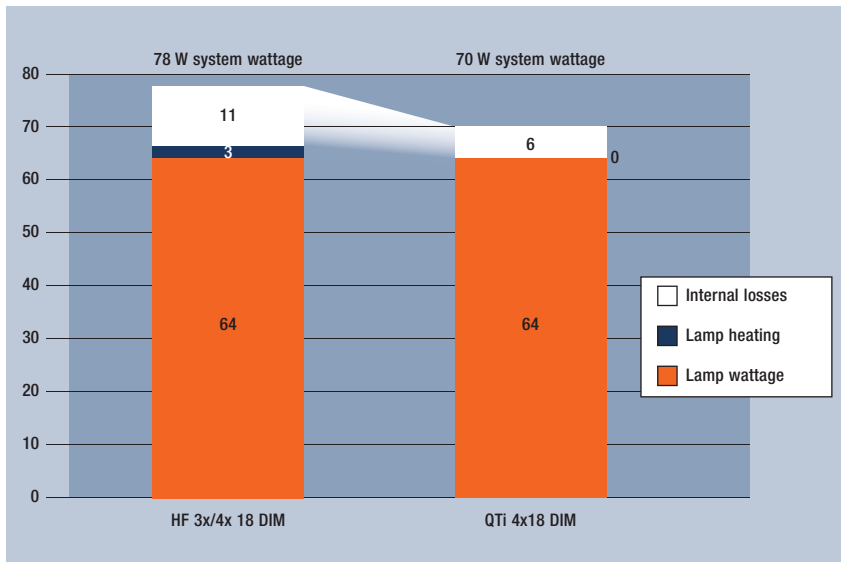


Fig. 2. Comparison of the power consumption of the old DIM series (HF 3x/4x18 DIM) with that of the new QT i 4x18 DIM at 100% luminous flux

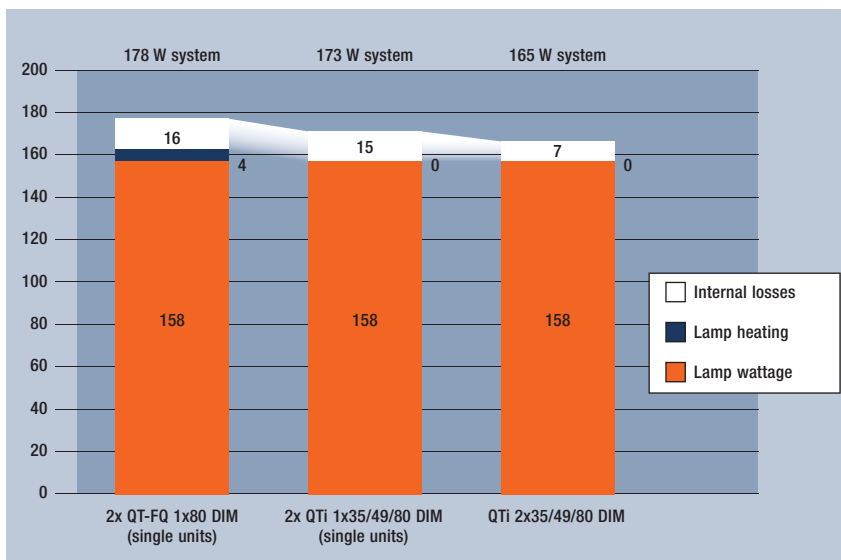


Fig. 3. Comparison of the power consumption of the new QT i DALI 2x35/49/80 DIM for operation of two HO 80 W T5 lamps with that of single units of the QT and QT i series at 100% luminous flux

Longer maintenance intervals save costs

When examining the costs of lighting installations, not only the direct operating costs are of great importance, but also the maintenance intervals of the lamps throughout the service life of a luminaire. To extend these maintenance intervals and thereby save costs, the dimmable QT i family has a completely new preheating concept for starting and dimming the lamps (for details, see ECG SPOT 3/2005, Page 10).

This preheating is the prerequisite for the system guarantee on lamp + ECG for dimming applications. Further information can be found on the Internet at www.osram.com/system-guarantee.

Compact power for 2 x 80 W

Two new, powerful members of the dimmable QT i family are available for T5 fluorescent lamps. The QT i DALI 2x35/49/80 DIM electronic control gear unit for 2 x 80 W lamp wattage is accommodated in the two-lamp standard housing.

This version needs a maximum system wattage of just 165 W. The new, three and four-lamp dimmable QT i units with a lamp wattage of up to 4 x 24 W, such as the QT i DALI 4x14/24 DIM, come in a new housing with dimensions of 360 mm x 40 mm x 21 mm. Here, too, users are naturally offered the time-proven properties of the dimmable QT i series.

Saving energy with QT i

When developing the dimmable QT i family, OSRAM focused on more than just the filament preheating cut off function. The internal power loss of the units was also reduced as a further improvement. This can be illustrated by two examples. First, the new dimmable, four-lamp QT i control gear unit for 18 W lamps was compared with the predecessor model (Fig. 2). Second, the power consumption of the two-lamp QT i DIM for 2 x 80 W, which is available on the market for this wattage for the first time, was compared with that of two single units (Fig. 3) – as hitherto required in corresponding applications. The reduction of the power loss leads to a lower temperature in the luminaire. This, in turn, has a positive influence on the ECG service life and simultaneously increases the luminous flux of the lamps in many cases. Among other things, that results in additional economic benefits for users.

Michael Hani,
OSRAM Munich

Spotlight on long service life

QTP8 electronic control gear on the advance

Directive boosts ECG

Electronic control gear is on the advance. After all, based on EU Directive 2000/55, Class D and C conventional control gear was completely banned from the European market in two stages between 2003 and the end of 2005. This has opened up additional fields of application for ECG. However, it has also resulted in constantly growing demands and expectations as regards the service life and reliability of the electronic equipment. For instance, many uses call for particular

one example of components optimised for a specific task. The QTP version for operating T8 fluorescent lamps with 26 mm diameter has been in successful use for more than ten years.

Further development – a successful policy

The key features of the QUICKTRONIC PROFESSIONAL T8 successor generation were further improved for an even longer equipment service life: the thermal loading capacity of the QTP8 is up to 5 K higher,

meaning that a service life of 50,000 hours with a maximum failure rate of 10% is achieved even at ambient temperatures of +55 °C. The higher loading capacity is also reflected in the maximum temperature at the t_c measuring point of the unit: 75 °C is now permissible, instead of 70 °C for the QTP predecessors (**Fig. 1**). With the QTP8, the user thus has a robust, universal ECG unit at his disposal. Owing to its service life of up to 100,000 hours, the QTP8 is also optimally suited to industrial applications, often making the need for expensive special components questionable. OSRAM's many years of experience with lighting installations clearly illustrate that their durability and reliability is dependent not only on the right ECG, but equally on selecting a luminaire with good thermal properties. A QTP8 can achieve a service life of up to 100,000 hours in a thermally optimised luminaire. This presupposes that the temperature at the t_c measuring point does not exceed

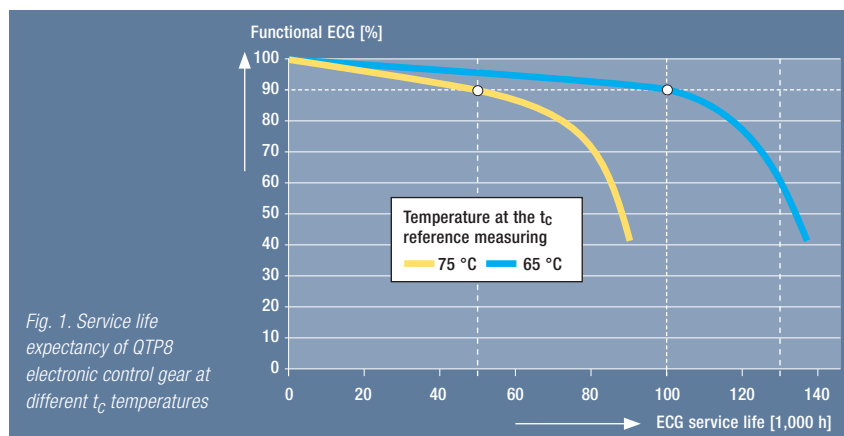


Fig. 1. Service life expectancy of QTP8 electronic control gear at different t_c temperatures

robustness, a long service life and great reliability of electronic lighting installations.

The criterion of cost optimisation

Energy efficiency and reduced maintenance costs are today more than ever important decision-making criteria when selecting lighting installations. However, these demands can only be met by components that are accurately coordinated and, moreover, sufficiently qualified by overvoltage and overtemperature tests under severe conditions, among other things. The QUICKTRONIC PROFESSIONAL control gear family from OSRAM is

Properties of QUICKTRONIC PROFESSIONAL QTP8

- 50,000 h service life for operation at $t_c = 75$ °C and max. 10% failure rate
- Up to 100,000 h service life at $t = 65$ °C at the t_c measuring point
- Dependable lamp starting at -25 °C to +55 °C
- Nominal voltage 230 V to 240 V
- Mains frequency: 0 Hz, 50 Hz to 60 Hz
- Constant luminous flux at UN = 198 V to 264 V (no brightness differences as a function of input voltage)
- Safety cut-off at the end of the lamp service life or in the event of a fault
- Automatic restart following lamp replacement (relamping)
- Low power loss
- Suitable for operation on emergency power (DC operation, 0 Hz)
- ENEC and VDE EMC test marks
- Product range:
 - One-lamp (360 mm x 30 mm x 30 mm): QTP8 1x18, 36, 58
 - Two-lamp (423 mm x 30 mm x 30 mm): QTP8 2x18, 36, 58
 - Three/four-lamp (423 mm x 40 mm x 30 mm): QTP8 3x18, 4x18

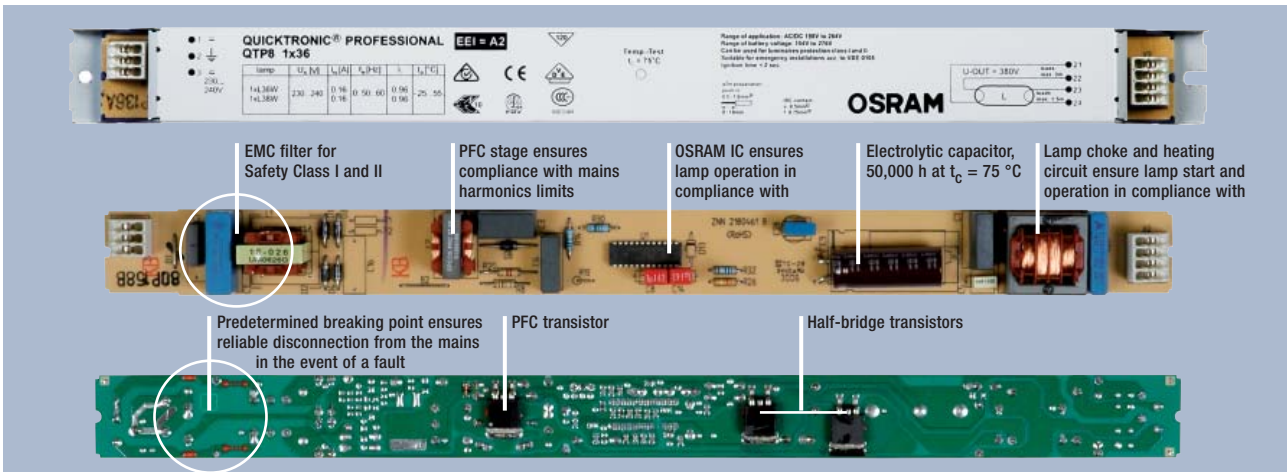


Fig. 2. QUICKTRONIC PROFESSIONAL QTP8 units feature a well-conceived design and high-quality components



Fig. 3. The round-the-clock operation of airports imposes tough requirements on the control gear used – QTP8 units are ideally suited to such demanding applications

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65 °C – the typical value for a luminaire with two 58 W lamps – during operation.

Absolutely top-quality components

The individual components of the QTP8 were selected carefully (Fig. 2) to ensure that their electrical load is well below the permissible limits in any operating state that could conceivably occur. Moreover, appropriate arrangement of the power components prevents mutual thermal influences.

Optimum heat dissipation is provided by the painted metal housing, which is characterised by far better thermal properties than a galvanised design. A long service life and great reliability are of major importance in applications with many burning hours per year, such as lighting installations in industry, at airports (Fig. 3 Airport Düsseldorf, lighting solution SITECO Limited) or in railway stations. After all, low maintenance and repair costs are likewise among the criteria for problem-free electronic operation, which QTP8 control gear guarantees on the basis of its outstanding

properties. Among other things, these include compliance with all the relevant standards, such as

- EN 61347-2-3 (safety),
- EN 60929 (performance),
- EN 55015 (radioshielding),
- EN 61000-3-2 (mains harmonics), and
- EN 61547 (immunity).

As a result, the QUICKTRONIC PROFESSIONAL T8 meets all the quality criteria for reliable electronic control gear.

Cornelia Fürst,
OSRAM Munich

News in brief



Entering the DMX world with the OT RGB DMX DIM

With the new, stand-alone 3-channel DMX dimmer for LED modules, OSRAM has taken the first step towards accessing the world of DMX-controlled LED light. The OT RGB DMX DIM permits individual colour mixing of LED modules with pulse width modulation (PWM), meaning that they can be integrated in DMX systems for dynamic LED effect lighting. Typical applications in this context include the design-oriented lighting of discotheques, theatres or

concert halls, as well as the large-area illumination of façades. The 3-channel DMX dimmer is supplied via an OPTOTRONIC control gear unit connected on the primary side. The controllable power range is up to 2 A per channel, i.e. 3x20 W for 10 V LED modules or 3x48 W for 24 V modules. Consequently, one OT RGB DMX DIM can, for example, control up to 8 m LINEARLight Colormix Flex – two modules à 4 m – at will. Control is accomplished by means of a commercially available DMX controller.



The new dimmer is addressed via three coding switches in a recess in the housing cover. The compact, functional housing design of the OT RGB DMX DIM permits stand-alone installation in rooms where space is critical.

Compact housing design comes out in a big way: the QT-M 2x26-42/220-240 S supplements the MULTIWATT family

OSRAM is expanding the time-proven QUICKTRONIC MULTIWATT family to include the new QT-M 2x26-42/220-240 S control gear unit. Two DULUX T/E 42 W and FC 40 W lamps can now be reliably operated in the extremely compact K3 housing measuring 123 mm x 79 mm x 33 mm. This compact housing has already proven successful in the MULTIWATT QT-M 2x26-32 unit. The QT-M 2x26-42/220-240 S is highly versatile: in addition to operating DULUX T/E 42 W lamps, it is also suitable for a further eleven lamp types, i.e. compact, ring and linear lamps of various wattages in numerous two-lamp combinations, e.g. DULUX FC 22 W + 40 W. Like all MULTIWATT units, the new member of the family

also features cut-off technology for shutting down permanent filament heating after ignition, and passes the OSRAM standard EoL Test T.2.

