LIGHTPOINT.

An ETAP publication | 2013

page 4

K4
EMERGENCY LIGHTING WITH OLED

K4:
perfection in signage

E7: LEDs now also
illuminate large spaces

K9: optimal safety,
pure design

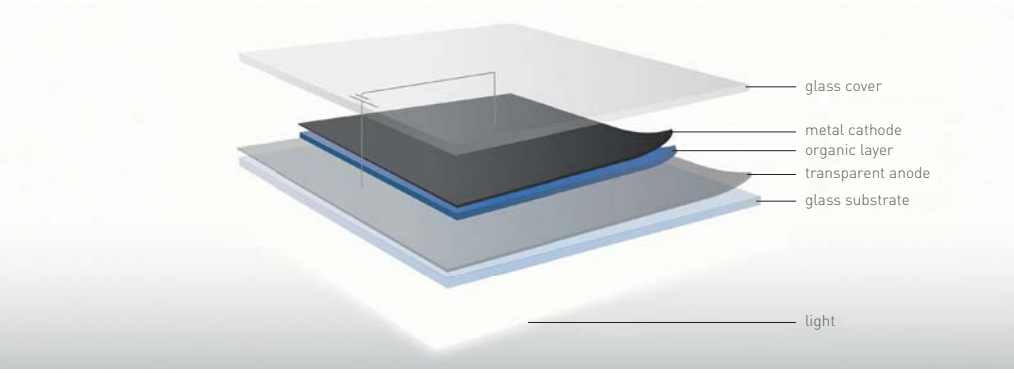
ETAP
EXCELLENT LIGHTING, SAVING ENERGY

↓ CONTENTS

This document has been compiled by ETAP with the greatest possible care. However, the information contained in this publication is not binding and may change due to technical development. ETAP is not liable for any damage whatsoever resulting from the use of this document.

OLED - one letter makes all the difference

A new kind of lighting



OLED structure

Now that LEDs are slowly becoming the norm in terms of lighting solutions, a new technology is being developed, i.e., OLEDs. "Today OLEDs are already used in TV screens and mobile phone displays, but they also represent a huge potential for lighting," according to Hüseyin Murat, Manager Product Development Emergency Lighting at ETAP. "Especially where a surface has to be evenly illuminated, OLEDs create greater added value."

OLED stands for organic light-emitting diode. As the name indicates, it involves a variant of the traditional LED. However, whilst LEDs are based on crystalline, inorganic material (e.g., gallium nitride), OLEDs use organic macromolecules based on hydrocarbon compounds to produce light.

Point vs. surface

The difference between OLEDs and LEDs not only lies in the material, but also in the mode of operation. Whilst an LED is a typical light point source, OLEDs are used to spread light over a specific surface. In practical terms, the organic light-emitting particles applied in a wafer thin layer onto a substrate made from glass or another transparent material and connected to a cathode and anode. The layer lights up whenever voltage is applied to the cathode and anode. By combining the correct materials, OLEDs are able to generate light in a specific colour.

Complementary to LEDs

"This fundamental difference between LEDs and OLEDs also instantly explains why both technologies will be complementary and will continue to exist side-by-side in the future," Hüseyin Murat stresses. "OLEDs produce a quiet, diffuse and non-blinding light across a specific surface, whilst LEDs lend themselves perfectly to creating light beams that can be aimed and spread. The fact that OLEDs are a surface light source with perfectly even illumination makes them highly suitable for applications such as emergency lighting. In addition, they also look very promising in general lighting applications, such as light-emitting panels."

Performance

Today OLED technology is still being developed. "In terms of performance and service life so far they are certainly not in the same league as LEDs," states Hüseyin Murat. "OLEDS achieve light efficiency of 60 lm/W compared to 140 lm/W for LEDs. For signage purposes they are just about as efficient as specific LED products, because by nature they are more suitable for those applications. Just as for

OLED

OLEDs in different shapes

LEDs it is expected that the performance of OLEDs will increase considerably due to new developments."

The surface that can be illuminated with a single OLED module is still in full development. "In televisions the screen consists of several OLED pixels, since there the screen resolution primarily plays a role," Hüseyin Murat clarifies. "In lighting applications, however, we strive to illuminate as large a surface as possible with a single module. The plus points are that we can easily control it and that it does not create a pixellation effect. These days light panels measuring 15 cm x 15 cm are available as standard, in the future sizes up to 1 m² certainly are among the possibilities."

The presence of organic materials – which age relatively fast and are quite sensitive to air and moisture – results in a fairly limited lifespan. Today 15,000 burning hours are assumed (with 30% decrease in light output, and a continuous control of 4,500 cd/m²). Further development of the materials used, protective layers and production techniques will lead to major improvements in this area.

OLED ROADMAP

Current and expected OLED performance (Source: Philips)

Year	2013	2015	2018
Luminous efficacy	60 lm/W	90 lm/W	130 lm/W
Life time (L70)	15,000 h	20,000 h	40,000 h
Brightness	4,500 cd/m²	5,000 cd/m²	> 5,000 cd/m²
Lumen output	12,000 lm/m²	15,000 lm/m²	> 15,000 lm/m²
Colour Rendering Index (CRI)	>90	>92	>95
Max. dimensions	120 x 120 mm	170 x 170 mm	400 x 400 mm

OLEDs as an interactive mirror

FLEXIBLE AND TRANSPARENT?

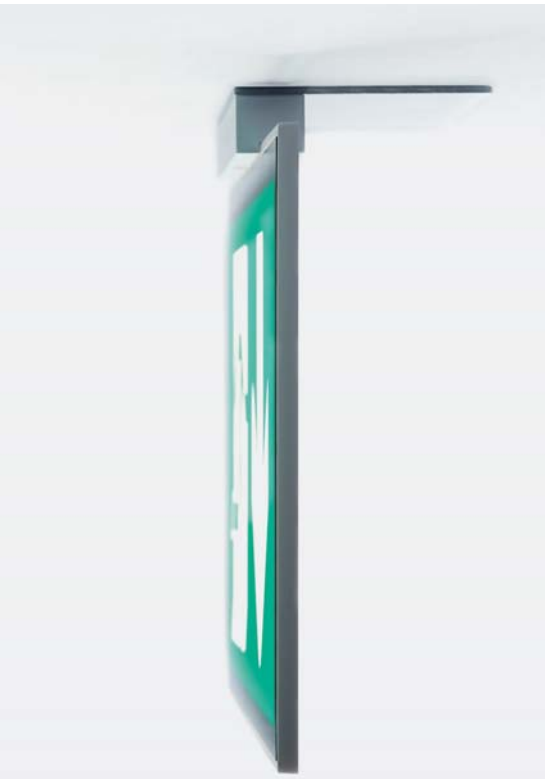
Today OLEDs are almost exclusively mounted onto glass. "Research currently focuses on the options to mount OLEDs onto more flexible materials and thus create mouldable lighting panels. Each surface – smooth, curved or even elastic – then becomes a potential light source. Just think of light-emitting walls, furniture, curtains or clothing."

Another area of research is the development of transparent OLED panels. Currently unlit OLEDs still form a reflective surface. "The transparent panels could, for example, act as windows during the day and when darkness falls provide pleasant mood lighting. This makes OLEDS a highly promising lighting technology with nearly endless new areas of application," Hüseyin Murat concludes.

[more info: www.etaplighting.com]
Brochure: downloads > brochures > Dossier: LED

Brand-new: ETAP launches emergency lighting with OLED technology

K4: perfection in signage



Slim and discreet – the signage plate is a mere 4 mm thick and seems to 'float' above the wall.

With K4, ETAP introduces an absolute first for emergency lighting. The new ETAP signage series uses OLED technology, a variation on LEDs based on organic materials. The result is perfectly illuminated signage in a super slim and discreet design.

The new K4 signage series uses OLED technology.

In terms of applications in the lighting world, OLED technology is still in its infancy. Yet it is obvious that it involves a particularly promising technology. OLEDs are the ideal light source for signage, among others, which is crucial in emergency lighting.

Perfect illumination

What is immediately striking in K4 is the perfectly homogeneous illumination of the pictogram. This obviously is due to the OLED technology used, whereby the organic, light-emitting materials are spread over the full surface of the sign (see p. 2-3). The pictogram is therefore no longer indirectly lit by a separate light source, but it becomes the light source itself. The result is a sign without equal with respect to recognition and safety.

Slim and discreet

ETAP emergency lighting is known for its minimalist design and discreet aspect. With K4, we go one step further in this process. Since light source and sign form a unit, the luminaire's dimensions can be substantially reduced, resulting in a mere 4 mm thick signage plate. K4 is available as a recessed luminaire, as well as for wall and ceiling mounting.

The K4 series always works in combination with the EBS Compact central battery system. Therefore not only keeping electronics and housing as small as possible, but also simplifying maintenance.

OLED

Product overview

ceiling, recessed

wall, recessed

No compromise when it comes to safety
No compromises were made in the area of safety and reliability. Each luminaire is fitted with patented light source monitoring, i.e. a sensor that constantly measures the effective clarity of the signage and issues a warning once it no longer satisfies the EN1838 standard. This way, ETAP provides a solution for decreasing clarity over time. The signage plate with the OLED can, if necessary, be replaced.

5 YEAR WARRANTY

K4 with OLED is an absolute first in emergency lighting.

The luminaires are fitted with a sensor that constantly measures the effective light output of the signage.

The K4 series always works in combination with the EBS Compact central battery system.

[more info: www.etaplighting.com]
Brochure: downloads > brochures > K4

Optimal safety, pure design

K9: eye for detail

With its minimalist design and compact execution, K9 can be perfectly integrated into any environment.

K9 proves that emergency lighting can be attractive and discreet. Ten years after the introduction of this top series, ETAP now launches its successor. More than ever, the updated K9 signage luminaires provide optimal safety in a pure, compact design.

Discreet design

The updated K9 is evidence of unique simplicity and purity. Minimalist design, compact execution and high-quality finish ensure that the signage luminaires can be perfectly integrated into any environment. Those with an eye for detail will notice that the luminaires are now even more compact. In addition, all seams were removed and screws are no longer visible. Lastly, the selftest-indicator LED is but a mere dot on the housing.

Perfectly even illumination

The uniform illumination of the pictogram also contributes to the K9's low-key appearance. The Plexiglas plate behind the pictogram is printed with a dot-matrix pattern, which ensures that the full surface of the pictogram is evenly illuminated. The result: optimal recognition and maximum safety.

The selftest LED indicator is but a mere dot on the housing.

The perfectly illuminated pictogram ensures optimal recognition and therefore maximum safety.

Light source monitoring

The K9 signage luminaires come with a light source monitoring system, whereby an invisible sensor measures the degeneration of the LEDs. Once the pictogram's illumination is no longer compliant, the indicator LED will show that the light source is to be replaced.

Maximum service life

Thanks to efficient management of the LEDs and well thought-out thermal design, signage luminaires have a useful service life of ten years. In emergency mode, the K9 will fully control the LEDs in order to maximise illumination of the pictogram. In standby mode the LEDs' light efficiency is reduced.

The K9's environmental performance is an excellent reference. The luminaires come with energy-efficient LEDs and ecological nickel metal hydride batteries (NiMH). Thanks to this combination your emergency lighting has up to 70% less environmental impact than with fluorescent lamps.

The updated K9 is evidence of unique simplicity and purity.

The K9 mini is the smallest standard-compliant solution for escape route and anti-panic lighting.

K9 MINI, EMERGENCY LIGHTING IN ITS MOST COMPACT FORM

With the K9 mini ETAP introduces the most compact solution for escape route and anti-panic lighting in suspended ceilings.

Thanks to the small housing, the lens, with or without trim, is directly and seamlessly mounted in the ceiling. Despite its small size, this new solution provides strong light performance:

- For escape routes, interdistances up to 18 m are possible, for a mounting height of 2.8 metres.
- The anti-panic lens has a nearly square light distribution thus preventing blind spots. A single lens illuminates a surface area of 148 m².

with trim

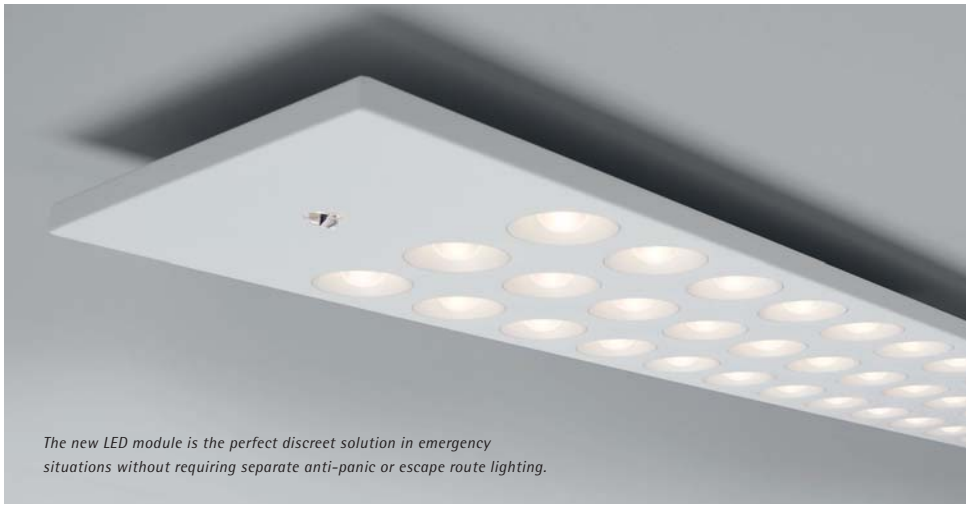
without trim

[more info: www.etaplighting.com]
Brochure: downloads > brochures > K9

New generation LED module

Emergency lighting reduced to its essence

ETAP developed a new, particularly compact LED module for escape route and anti-panic lighting, that can be seamlessly integrated into any luminaire. The new version is more compact, discreet and efficient than its predecessor and provides an excellent alternative for the traditional emergency power unit.



The new LED module is the perfect discreet solution in emergency situations without requiring separate anti-panic or escape route lighting.

Discreet integration

The new module can be easily and discreetly integrated into any type of luminaire, even from other manufacturers, due, among others, to its compact size. The new version has a diameter of barely 19 mm and is no less than 60% smaller than its predecessor. Furthermore the module's colour is also inconspicuous. The housing is transparent, the heat sink is anodised grey.

Impressive performance

Despite its compact size this new generation performs very well. For example, for escape routes, interdistances up to 18 m are possible, for a mounting height of 2.8 metres. Result: even fewer modules.

The anti-panic lens creates a nearly square light distribution, thus preventing blind spots and increasing safety.

Alternative for emergency power units

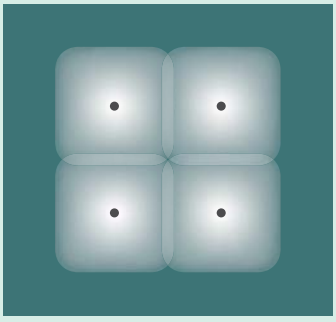
LED modules for emergency lighting provide an excellent alternative for the use of emergency power units, whereby general lighting is deployed as emergency lighting:

- Lower power consumption.
- Optimal light distribution and greater interdistances.
- Environmentally friendly, energy-efficient NiMH batteries, which are up to 13 times smaller than in emergency power units.
- Five year warranty, expected service life of ten years or more.
- No adverse effect on lifespan of general lighting.

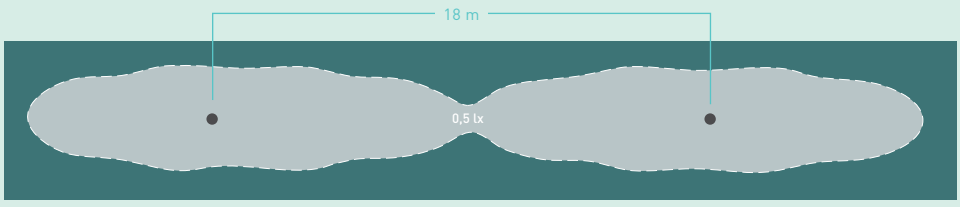
Reliable emergency module

The module is fitted with the EST+ selftest system. You can opt for autonomous versions (with batteries) or connect the module to the central ETAP battery system. Connection to the ETAP Safety Manager (ESM) central management system is possible.

Thanks to a small bracket, you can integrate the module in fluorescent luminaires as well.



The antipanic lens creates a nearly square light distribution.



For escape routes, interdistances up to 18 m are possible.

[more info: www.etaplighting.com]

EXCELLENT LIGHTING
SAVING ENERGY

U7/R7:
the same unique style throughout your building

In 2012 ETAP launched U7/R7, an updated LED series for general lighting in offices, public buildings and shopping centres. Today the range has been supplemented with two new products: a compact version for recessed and surface mounting and a square surface and suspension version. With these additions you can expand the U7/R7 series' unique look to cover all your building's spaces.

▲ *The compact U7/R7 version, ideal lighting for corridors and smaller spaces.*

◀ *The square R7 perfectly lends itself to the lighting of offices, stores and entrance halls.*

Compact version

The compact version of U7/R7, available in a surface mounted and recessed version, measures 180 x 180 mm and has a luminous flux up to 600 lumen. The luminaires are available with motion sensors, which is handy in corridors and sanitary facilities.

The compact version offers all of the LED+LENS™ technology features: optimal lighting comfort, high specific luminous flux and high maintenance factor. The luminaires come in grey or white textured paint.

Square

The slim R7 luminaires are now also available in a square version (600 x 600 mm). And this in various lumen packages and light distributions, enabling you to carefully adjust the number of luminaires and installed power to your lighting needs:

- You can choose from wide-angle and medium wide-angle light distribution.
- The lumen packages in the surface-mounted version range from 2,500 to 4,500 lumen. The suspended version is available from 3,500 to 4,500 lumen.

[more info: www.etaplighting.com]
Brochure: downloads > brochures > U7/R7

LED+LENS TECHNOLOGY

LED+LENS™ – ENERGY-EFFICIENT AND COMFORTABLE

The U7/R7 series uses LED+LENS™ technology, which combines high-power LEDs with individual lenses. The result is energy-efficient and comfortable lighting:

- LED+LENS™ guarantees high specific luminous flux (to 100 lm/W), without loss of energy due to scattering.
- The lenses ensure low average luminances. In addition, they are provided with a patented surface structure that softens the bright LED light with minimum light loss, which results in low UGR values, without losing efficiency.
- LED+LENS™ technology maximises the long service life of high-power LEDs. R7 and U7 luminaires retain more than 95% of their luminous flux after 50,000 burning hours (LLMF), which leads to high maintenance factors, up to 87% after 50,000 h.

LEDs now also illuminate large spaces

E7: flexible, energy-efficient light line systems

Optional cover plate for easy maintenance and protection against dirt and dust.

LEDs continue to advance. With the brand-new E7, ETAP launches a series of individual and in-line luminaires with LEDs to illuminate large spaces. The series uses ETAP's LED+LENS™ technology and provides modular solutions for the lighting of industrial halls, warehouses, sports centres, stores and public buildings.

E7 LED luminaires for the lighting of large spaces.

Advanced LED technology

With the E7, ETAP adds a new series to its LED range. This time the LED+LENS™ technology was fully geared to large spaces, which require a considerable amount of light. Once again the combination of high-power LEDs and advanced lenses provides sophisticated light distribution and optimal efficiency.

A sea of light from a compact luminaire

Thanks to high-power LEDs, E7 luminaires produce light output up to 7,750 lumen per metre. The lenses' patented surface structure softens the LED light with minimum loss. The result is a highly specific luminous flux (up to 100 lm/W) and maximum visual comfort – critical in workplaces, retail environments or busy public buildings (UGR < 19 or 22, depending on the type of lens).

E7 luminaires are compact: driver, wiring and optics form one integrated and minimalist unit. They are made from anodised aluminium, which contributes to optimal heat dissipation.

Flexible

The E7 series is highly flexible. The luminaires are available in several lengths: 1, 2 or 4 metres. They can be installed individually or inline and are available in surface-mounted or suspended version.

But there's more. One of the major advantages of LEDs is that the length of the luminaire no longer depends on the length of the lamp, as in fluorescent lighting. The amount of light can be perfectly geared to your lighting needs. You can choose from a single or double row of LEDs, the number of LEDs per metre is also flexible. In this way you can reduce the installed power and energy consumption to what you really need. No more no less.

The handy hook and click system allows for easy and exceptionally fast installation.

Thanks to the modular construction, the E7 can be fully geared to your lighting needs.

Energy-efficient

High quality LEDs and excellent thermal management result in high lumen retention. After 50,000 burning hours, LEDs retain a luminous flux of no less than 96%, which also contributes to reducing the number of luminaires and cutting installed power.

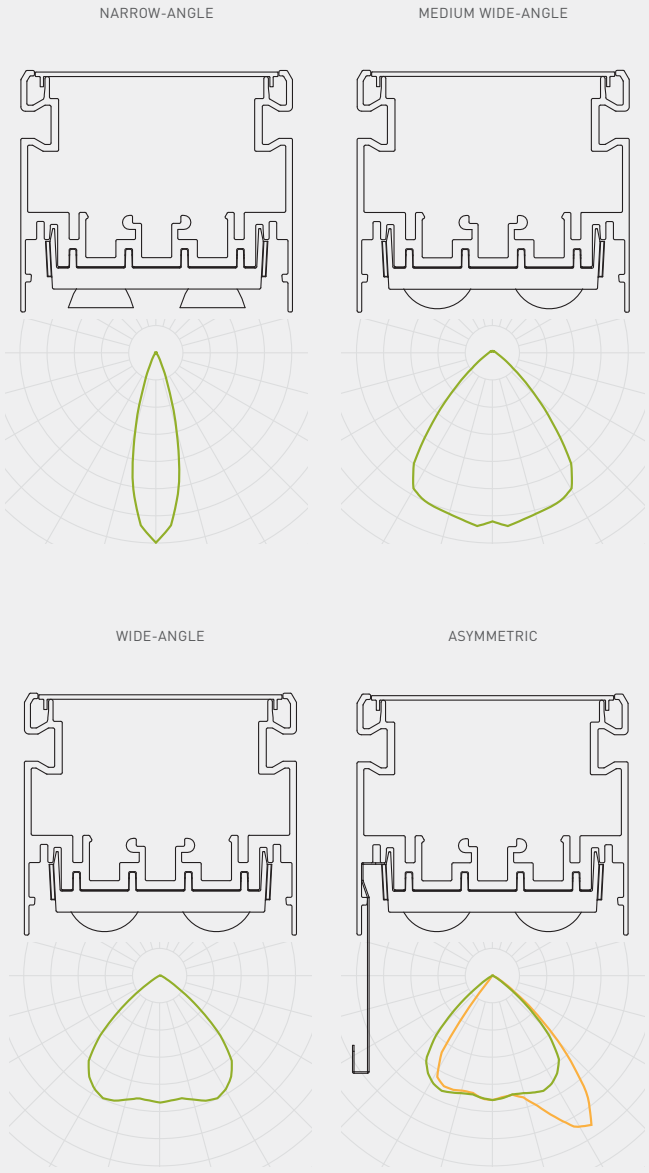
E7 is fitted with lenses which ensure that the light hits the correct target and no energy is wasted on the undesirable scattering of light. Depending on your application, they create a wide-angle, medium-angle and narrow angle light distribution. For asymmetric light distribution, we combine wide-angle lenses with a reflector.

Easy to use and maintain

Ease of installation was also taken on board. After installing the bracket, the E7 can be mounted in one step: hook the luminaires into the bracket and snap into place. Only two suspension points are needed per luminaire, even for the longest 4-metre version. For line systems one suspension point per luminaire is sufficient, plus another one at the beginning of each line.

The long service life of the LEDs makes lamp replacement redundant so that you won't have to worry about maintenance. An important advantage in the context of large spaces, where lamp replacement is not always easy. The E7 luminaires are equipped on top with a polycarbonate cover plate, which provides electrical safety and protects against dust. A cover plate is also available as an option for the bottom, which protects against dust and dirt and which is easy to clean. E7 luminaires are always IP40.

Four light distributions



LED+LENS TECHNOLOGY

[more info: www.etaplighting.com]
Brochure: downloads > brochures > E7

EXCELLENT LIGHTING
SAVING ENERGY

Flexibility with LED tubes

LEDA: be creative with light

LEDA luminaires lend themselves perfectly to the lighting of representative spaces.

LEDA-luminaires with LED tubes are the ideal solution for those in search of creative lighting. The series has been developed on the basis of a module with diffuser, which can be installed as surface-mounted, recessed or suspended luminaires. Individually or in line, tilted or linked under angles - the module lends itself perfectly to an original and flexible lighting design.

Sober and slim design

The basic module in the LEDA series has a slim, sober design and is available in three lengths: 850, 1450 and 1750 mm. The module comes in grey as standard, but is also available in other colours upon request.

Tailored configuration

The basic module can be mounted in several ways. If you use the module as an individual luminaire, you can opt for suspended, recessed or surface-mounted versions. The module is fully adjustable and can be positioned in 45° angle increments.

You can also connect several suspended modules and create light lines. The connectors between the modules allow to create (90°, 135° or 180°) angles. The modules can also be tilted at 45° angles. Thus creating an ingenious, flexible light line system tailored to your project. The modules are linked by a simple Plug&Play connection.

Decorative or accent lighting

Depending on the lumen package (600, 1200 or 1700 lumen) the luminaires can be used as accent or decorative lighting in showrooms, stores, entrance halls, conference rooms and corridors.

First series with LED tubes

With LEDA, ETAP launches for the first time a series with LED tubes, which due to their specific illumination pattern typically are not suitable for luminaires developed for fluorescent lamps. In LEDA luminaires, specifically designed for LED tubes, however, they fully come into their own. Thanks to an integrated driver they furthermore perfectly fit into the LEDA modules' slim housing. ETAP's choice of this LED tube is the result of a careful selection. The long service life (70% luminous flux after 50,000 burning hours) ensures minimum maintenance.

With LEDA, ETAP launches for the first time a series with LED tubes.

LEDA modules can be tilted at 45° angles (up). The connectors between suspended in-line modules allow to create angles (middle). The module can also be recessed (down).

[more info: www.etaplighting.com]
Brochure: downloads > brochures > LEDA

EXCELLENT LIGHTING SAVING ENERGY

Flexible building seeks flexible lighting

Do not call a LLEXX room a mere container classroom. These flexible modules are fully fledged rooms, which could provide a permanent solutions for the classroom shortage. High-quality materials and state-of-the art ETAP lighting complete the picture.

With the LLEXX project (Longlife, Luxurious, Ecological, fleXible and eXpress), timber specialist Hahbo from Wijnegem (Belgium) capitalises on the school building shortage. Each year, quite a few schools have to make do with tight and uncomfortable container classes. LLEXX rooms are erected almost as quickly as these container classes, but are a lot more sustainable and can easily be used over a longer period of time or even be permanently integrated into the school campus.

Hahbo called on the Belgian designer Axel Enthoven for the design of the LLEXX modules, who created a purified mould in a timber frame, with a uniquely flexible lining. The module can also be finished as an office building. The structure is the same – a room measuring 8 x 8 metres with a slanted ceiling - but due to the distinct finish the end result looks completely different.

"Sustainability, aesthetics, energy-efficiency and high-quality finish are the most important features of the LLEXX modules," according to Guy Somers, Hahbo CEO. "They were also our guides when we were in search of a partner for the lighting. In ETAP Hahbo found a partner who is a major and important player in that market. A partner who exudes trust, reliability and craftsmanship."

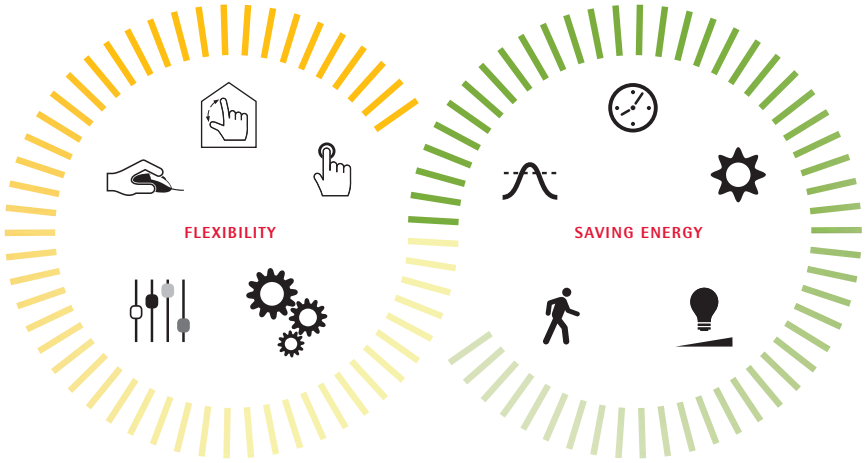
A flexible module obviously requires flexible lighting. "That is why we provide three versions for the classroom," states ETAP Senior Account Manager Yolande Spildooren. "The customer can choose between a module with E5 luminaires, one with R4 (both fluorescent luminaires with reflectors), or one with the R7 LED+LENS™ luminaires. Within these three versions we offer further options, such as mounting (surface-mounting or suspended), daylight-dependent control, etc." The classroom also comes with an entrance hall with R4 diffuser luminaires and a sanitary space with compact R7 LED luminaires. The office module is offered with R7 lighting, but here as well the customer can opt for alternatives.

"Also thanks to the high-quality lighting we are able to provide the comfort of a permanent building with our modular rooms, which furthermore creates aesthetic added value," concludes Guy Somers.

Increasing flexibility, saving energy

Ten strategies for sustainable lighting

In modern professional environments, it is impossible to imagine life without sustainable lighting. It not only results in low power consumption, but also improves working conditions and can be flexibly adjusted over time. By using ten strategies for light control, we help you to achieve such sustainable lighting. Light control makes your lighting installation flexible over time and in space and reduces power consumption to the bare minimum.



FLEXIBILITY

A system for light control gives you the option to adjust lighting in a building (or part thereof) simply and without costs: an undeniable asset in order to flexibly capitalise on internal and external changes.

1. *Evolving with the building*
You can adjust lighting quickly and easily when buildings or workstations are given a new purpose, e.g., converting an open-plan office into separate offices.

2. *Personal control*
Every employee can adjust the illuminance within their workstation to their own needs and preferences at any time, e.g., more light for detailed graphic work.

3. *Scenario setting*
By defining scenarios, the lighting easily adjusts to the various functions of the same room, e.g., auditorium with adjusted lighting for video presentations, group discussions, maintenance, etc.

4. *Integrating with other technologies*
By opting for a light control system that can be easily integrated into other systems (building management systems, alarm systems, etc.), using the motion sensors of the lighting system enables you to control at the same time heat, ventilation and air-conditioning. In addition, you make sure that your light control system is future proof and can evolve with technological developments.

5. *Ease of use and management*
A light control system that is easy to operate and user-friendly, ensures that the flexibility of the light control is also used efficiently.

SAVING ENERGY

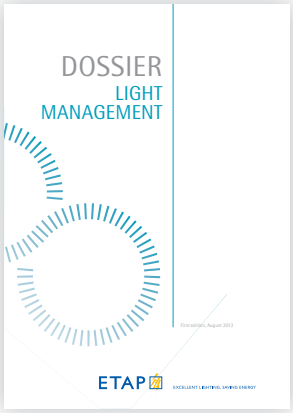
Energy saving is often still the most important argument for applying light control. Energy savings are therefore very high, especially when several strategies are combined.

6. *Intelligent time control*
The lighting adjusts automatically on the basis of set calendar schedules, e.g., switching on lights automatically in a school in the morning and switching them off in the evening.

7. *Daylight-dependent control*
With daylight sensors the intensity of artificial light changes depending on incident daylight.

For grammar school Het Vlier in Deventer (the Netherlands), a light control system was designed based on five strategies. Thanks to a.o. presence detection and adaption to the task, 70% energy is saved per year.

In the light management dossier, we show the broad range of options offered by light control. We also supply a plan of approach to install a light control system in accordance with your specific needs, from planning to completion to management. For a printed copy or for further information please contact your ETAP advisor.



8. Adjustment to the task
Setting standard lighting levels, in function of specific tasks or applications, so that no energy is lost due to over illumination, e.g., a lot of light on drawing tables, less light in photocopy rooms.

9. Presence detection
Sensors only switch on the lights once someone has entered the space and switch them off automatically after a long absence, e.g., corridors or sanitary facilities.

10. Limitation of peak loads
Depending on the power consumption of a building or floor, lighting can be dimmed in specific locations in order to limit total peek loads, e.g., lowering lighting level by 30% whenever machines are started up.

UPDATED MULTISENSOR

Should you opt for integrated light control, you can from now on use the ETAP Multidetector (EMD). The new sensor not only lowers the luminaire's power consumption, but parasitic power consumption, which is the consumption of the sensor itself – also drops by 50%.

The ETAP multidetector exists as an analog or a digital (DALI) sensor. Depending on the version, it has the following features:
- daylight sensor
- motion sensor
- dimming
- switching
- manual control
- remote control
- scenario setting

[more info: www.etaplighting.com]
Brochure: downloads > brochures > Dossier light management

LED+LENS™ luminaires illuminate hospital department

Maximum comfort, major energy saving

The department of neuro-, thorax and vascular surgery of the University Hospital Antwerp has since recently been fitted with LED+LENS™ luminaires.

The department of neuro-, thorax and vascular surgery of the University Hospital Antwerp has since recently been beaming under new LED lighting. "We were in search of attractive, energy-saving lighting that would at the same time provide the necessary comfort to patients and staff. Therefore we ended up with ETAP's LED+LENS™ luminaires," states Dirk De Man, head of department, Technical Service at the UZA. "We are very pleased with the results and have received numerous positive reactions."

The new lighting fits in with the department's general renovation. "Each year we renovate two departments in our hospital. This time we took the plunge and went for the most current LED lighting," says Dirk De Man. The new lighting obviously had to be standard-compliant and reliable. Furthermore it had to provide sufficient comfort to patients and staff. "On the one hand, doctors and nurses must be able to perform their job in the best possible conditions. On the other hand, we want patients to feel at ease with us and, for example, not be blinded by the lighting. This was also a factor in our decision."

Even the choice of colour temperature appeared relevant for a hospital environment. "We have consciously chosen cold-white LEDs, which ensure optimal colour rendering for observing patients," according to Dirk De Man.

Refined design

The design of the LED+LENS™ luminaires was an additional argument. "The fact that the luminaires have such a simple design and modern appearance is of course a welcome bonus. We get quite a few compliments about the new lighting, from both staff and patients," adds Dirk De Man.
The head nurse in the department, Vera Nauwelaers confirms: "We are very pleased

EXCELLENT LIGHTING SAVING ENERGY

The high light quality of the new LED lighting ensures optimal working conditions for nursing staff.

Both staff and patients are enthusiastic about the LED+LENS™ luminaires' simple design.

with the new luminaires. They bring a bit of design to the department and spread a pleasant light."

Dropping power consumption

LED+LENS™ luminaires stand out due to their high specific luminous flux and low power consumption. In addition, the luminaires are connected to the Excellum light control system, which provides suitable light control for every space. The luminaires in the corridor and staff rooms are controlled centrally and dimmable. Nurses' stations, offices and kitchen are fitted with motion sensors so that the light is only switched on when someone is present. Daylight sensors ensure that artificial light decreases as daylight increases. The luminaires in patient rooms are manually dimmable. Due to this combination of light control technologies the installation uses a whopping 62% less energy.

However, the lower energy bill is not the only advantage: "The fact that our patients can adjust their own lighting provides increased comfort and flexibility. The control knob is located near the bed so that they can choose the desired light level at any time. To read they need more light than to watch TV or to rest. When we come round for an examination, we can increase the light level. For emergencies there is a switch that turns the lighting level to full power," Vera Nauwelaers explains.

Safe environment

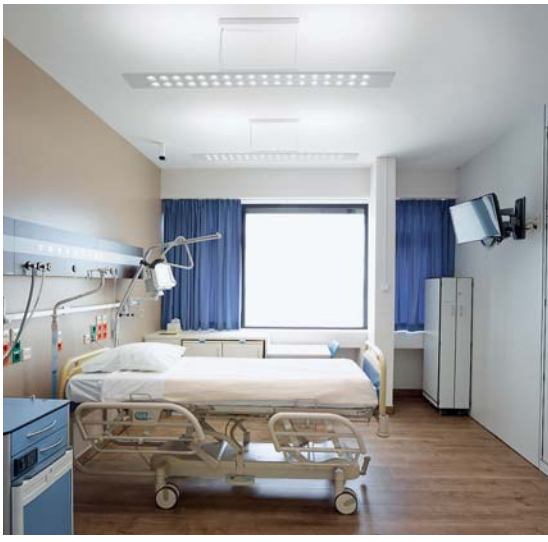
Needless to say that safety in a hospital is of the utmost importance. Therefore adequate emergency lighting was installed within the department. The hospital opted for K9 escape route luminaires with a clever optical design. Result: Long interdistances and the fewest possible luminaires. K9, fitted with LEDs, has a discreet, compact design. "In our choice of emergency lighting, design played an important part. The chosen luminaires are small and perfectly integrate into the environment," concludes Dirk De Man.

PROJECT SHEET

Lighting:
- 98 U7 & R7 luminaires (LED+LENS™)
- 22 D3 downlights with LED

Emergency lighting:
- 15 K9 luminaires for escape route lighting

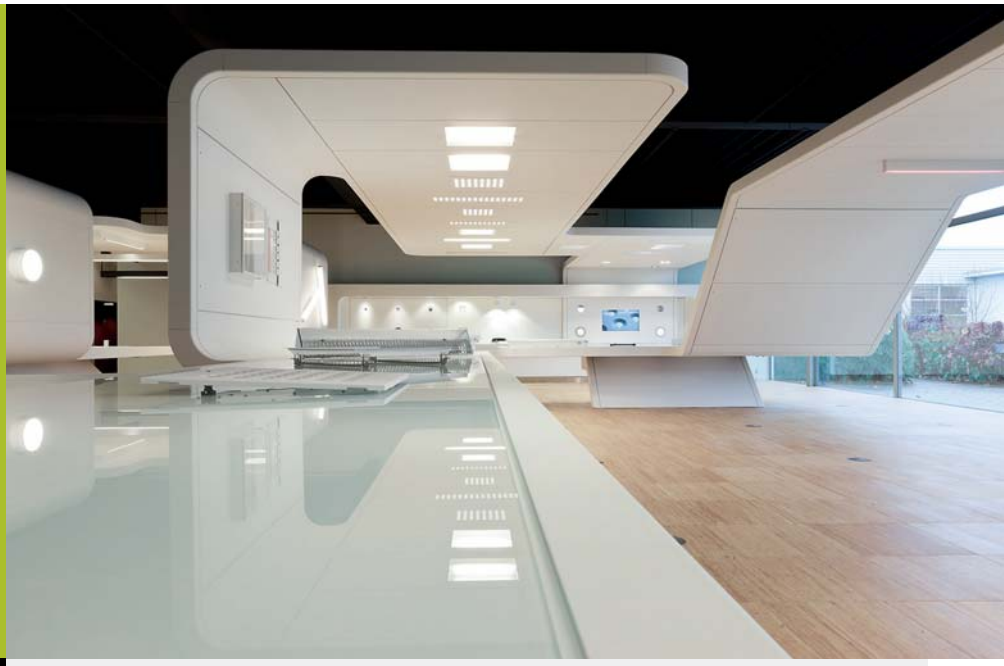
Excellum central light control system with motion detection, daylight control and manual dimming.



Thanks to a handy dimmer next to the bed, patients can adjust their own light level in their room.

A (show)room with a view

At the ETAP headquarters in Malle the new showroom for lighting and emergency lighting was opened in early 2013. Interaction, perception and the use of multimedia are the key concepts and this in a spectacularly designed interior.



The ETAP-head office in Malle boasts a brand-new showroom. In a spectacularly designed interior, you can discover our luminaires under ideal conditions.

"It was time to replace the previous showroom," explains Kris Beckstedde, ETAP marketing manager. "We were no longer able to show our innovative LED luminaires under ideal conditions. Furthermore, after ten years, the interior was up for a thorough make-over."

Spectacular interior

The result has become an example of bold interior design. Snow-white walls, ceilings and worktops merge and form a minimalist backdrop. The warm, sustainable bamboo parquet flooring provides an attractive contrast.

"Our task was to: develop something that people would not soon forget," states designer Erik van Kuijk (MMEK). "A lot of showrooms only display products. Obviously the luminaires must be displayed, but we wanted at the same time to make a 'grand gesture', give it the wow factor. That is how we eventually ended up with this design. It has a complex shape, but at the same time the space exudes peace and quiet and is at one with the surroundings."

Light perception

More than ever the showroom is also a perception space. On the demo tables and in the drawers luminaires and technical components can be found, enabling you to see, feel and experience exactly how the luminaires work. On the multimedia screens you can view production and realisation photos or search for further information. A large projection screen displays images of the most striking productions.

Energy-efficiency is in ETAP's genes and that is why the luminaires in the showroom are connected to our Excellum light control system. A sophisticated blend of motion detection and intelligent time control ensures that the lights are not switched on needlessly," concludes Kris Beckstedde.

Would you like to take a look for yourself?
Contact your ETAP advisor for an appointment.

More than ever the showroom is also a perception space.

ETAP informs

FIVE ETAP CUSTOMERS RECEIVE GREENLIGHT CERTIFICATE

In the past year, five ETAP customers have earned the Greenlight certificate, recognised by the European Commission for their energy-saving efforts in the area of lighting:

- Auchan Crangasi (Romania)
- Auchan Iasi (Romania)
- Kaufman & Broad, Bordeaux (France)
- STAS, Saint-Priest-en-Jarez (France)
- VINCI Park Services, Nanterre (France)

Three ETAP customers earn Greenlight Award

At the end of March 2013 nine European companies received prizes during the 2013 Greenlight Awards. They included three ETAP customers. Last year they saved no less than 61% (VINCI Park), 72% (Bayer) and 78% (Banque de France) energy.

Reaction by one of the winners:
"GreenLight is a fantastic aid to gain recognition for the efforts made by our teams. The award is a reward for our unrelenting commitment to opting for environmentally friendly technologies time and time again."
(Antoine Neri of VINCI Park).

From left to right: Antoine Neri of VINCI Park, Jacques Montibus of Banque de France, with Fabien Will of ETAP.

NEW PUBLICATIONS

All products in one well-organised catalogue

In search of further information on one of our products? You will find it all in our all-encompassing catalogue, illustrated with photos from practice. At the end of 2013 an addendum to our product catalogue will be published including all information on our new products.

New K9 brochure available

Since recently ETAP has had a fully updated K9-series (see also page 6-7). You will find all information in the new K9-brochure, including application images and a series overview. For all other new products as well, you can find the brochure on our website.

LED dossier update

LED technology constantly evolves. And therefore we regularly update our LED dossier. In the fourth edition you will find more about the maintenance factors for LED luminaires and the latest state of affairs for OLEDs and LED tubes.

Sustainable with conviction

At ETAP the focus is on sustainability. Both in our products and in our daily operations. Every two years we recap our most important efforts in a sustainability report. This year we will publish our third edition. The report has a new, fresh look, with striking photos and concrete examples that outline how sustainability lives within ETAP.

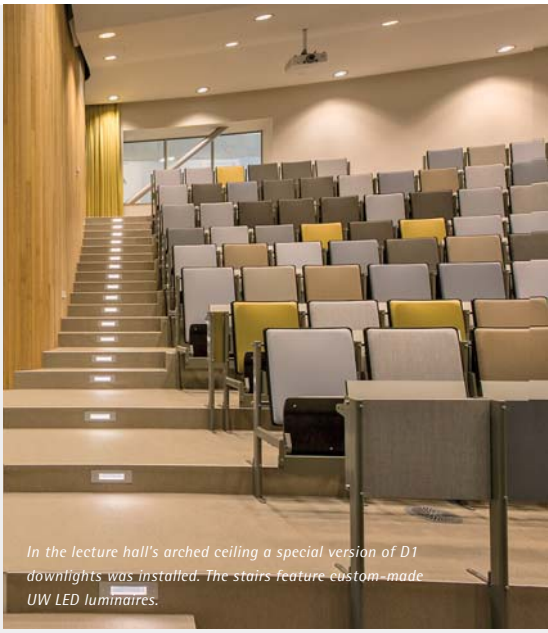
All publications are available on our website. For a printed copy please contact your ETAP advisor.

The Orion building is a true attention-getter on the Wageningen University and Research Centre campus.

Orion campus building: energy-efficient and custom-made

After ETAP provided lighting for the first building on the Wageningen UR campus, the university also opted for ETAP luminaires in the brand-new Orion building. The focus was on energy-efficiency and customisation.

The new educational building had to become a model of energy-efficiency in addition to its beautiful architecture.



In the lecture hall's arched ceiling a special version of D1 downlights was installed. The stairs feature custom-made UW LED luminaires.

The Orion building is a true attention-getter on the Wageningen University and Research Centre campus (Wageningen UR). The sober, pentagonal, 8-storey building, with its grey façade and green enamelled glass stands like a monolith in its green setting. Orion provides educational facilities to 2,600 students. Once inside the large lecture hall particularly stands out, which extends over two floors, like a spaceship. The hall accommodates 744 students, but can also be flexibly split into smaller spaces.

In the smooth ceilings in the labs, recessed luminaires were installed with a specially developed click system.

The building's unique design called for unique luminaires. ETAP installed a special version of D1 downlights in the hall's arched ceiling. Custom-made UW LED luminaires were incorporated in the stairs with an asymmetric reflector to prevent glare.

The smooth ceilings in the labs, designed by the architect in order to maximise insulation, represented a challenge. Recessed luminaires with a specially developed click system were incorporated. R6 luminaires with a milk glass cover plate and the emergency unit are located in the stairwell. ETAP also delivered the emergency lighting (K9 and K7).

The new educational building had to become a model of energy-efficiency in addition to its beautiful architecture. The building is provided with concrete core activation and is connected to a geothermal heat pump. The GreenCalc-score, an instrument that maps out a building's sustainability, is no less than 480 (standard is 100). ETAP contributed with energy-efficient and dimmable luminaires, combined with daylight-dependent light control within the luminaires on the window sides.

LUMINAIRES:

- 400 E1 & E6 luminaires
- 900 downlights
- 1200 recessed luminaires
- 100 special surface mounted luminaires
- 160 SKY-diffusor luminaires
- 50 golden Flare spots
- 220 UW luminaires
- 380 emergency lighting luminaires

"After prior positive experiences it was logical that this time, we once again took the plunge with ETAP," states Jan de Rooij of the Real Estate and Housing department of the Wageningen UR. "Reactions to the various lighting installations have been very positive".

CLIENT:
Wageningen University and Research Centre

ARCHITECT:
Ector Hoogstad Architects, Rotterdam

ARCHITECTURAL ADVISER:
ABT Bouwtechnisch Adviesbureau, Velp

INSTALLATION TECHNOLOGY ADVISER:
Valstar-Simonis, Apeldoorn

INSTALLER: Heijmans Utiliteit, Apeldoorn

ETAP
EXCELLENT LIGHTING, SAVING ENERGY

ETAP Lighting
Progress Business Centre, Whittle Park Way
Slough, Berkshire SL1 6DQ
U.K.
Tel. +44 (0)1628559650
Fax +44 (0)1628559012
enquiries@etaplighting.com
www.etaplighting.com

ETAP Export Department
Antwerpsesteenweg 130
B-2390 Malle
BELGIUM
Tel. +32 (0)3 310 02 11
Fax +32 (0)3 311 61 42
export@etaplighting.com
www.etaplighting.com

ETAP U.A.E.
Energy & Environment Park, Nucleotide Lab Complex
2nd floor, Office EO 01, PO BOX 345014, Al Barsha, Dubai
UAE
Tel. +971 (0)4 434 7364
Fax +971 (0)4 437 0378
export@etaplighting.com
www.etaplighting.com

8028757-20E/25