LIGHTPOINT.

An ETAP publication | 2015-1

E4-E5
LIGHT LINES WITH LEDs

E4-E5: flexible lighting for large spaces

Service life: how long will your LED lighting really last?

Excellum2: the ease of light control

ETAP
EXCELLENT LIGHTING, SAVING ENERGY

How long will your LED lighting really
In this way you will know your way around maintenance

The fact that LED lighting has a long service life is probably nothing new to you. There is nonetheless quite a bit of confusion about the exact lifetime: You should not only distinguish between parametric and catastrophic failure, but also between service life at the luminaire and component level. At the end of the day what is important to you is your investment's useful lifetime. By means of a lighting study you will be informed whether the required lighting level will still be achieved after a specific period.

MF = LSF X LMF X RMF X LLMF

Luminaire Survival Factor
LSF = 1 after immediate replacement of defective luminaire or driver

Luminaire Maintenance Factor
(drop in efficiency due to soiling of luminaire)
LMF = 0,95 ("clean" offices) or 0,89 (industry)

Room Maintenance Factor
(drop in efficiency due to space pollution)
RMF = 0,94 in "clean" offices subject to three-yearly cleaning

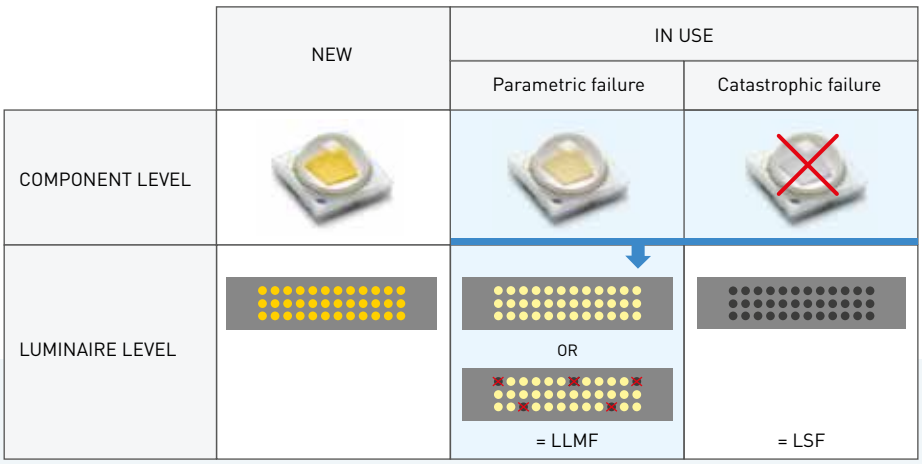
Lamp Lumen Maintenance Factor
(drop in luminous flux of light source)
LLMF = to be calculated by the manufacturer

It is all about... the maintenance factor MF

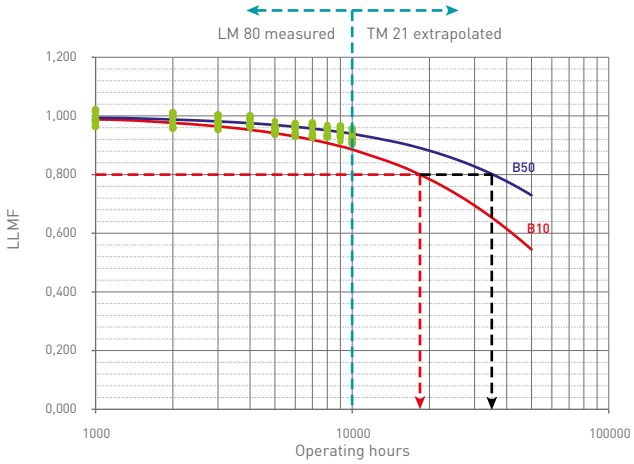
The useful lifetime of LED luminaires is no stand-alone datum, but is always combined with a concrete scenario or installation and consequently also with the maintenance factor. If we look at the maintenance factor formula (Maintenance Factor – MF), the lifetime element is in the last parameter, LLMF.

LLMF as point of departure

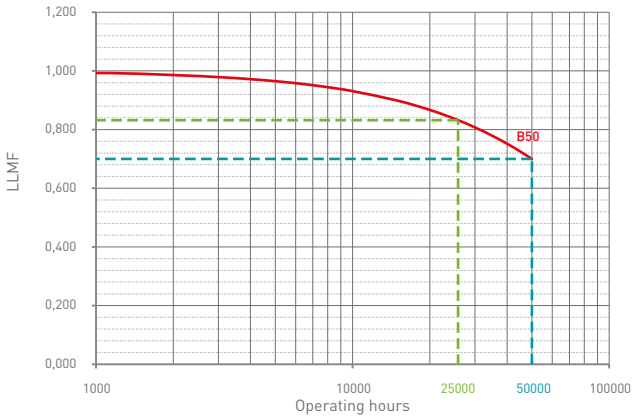
The figure that reflects the drop in luminous flux of the light source (LLMF) takes into account failing LEDs, and deterioration of the light output over time. How do we determine this LLMF? We distinguish between the service life of LEDs at the component level and at the luminaire level. At the component level we take into account the gradual deterioration of the luminous flux of the LEDs (parametric failure or B-lifetime), and the potential breakdown of LEDs (catastrophic failure or C-lifetime). At the luminaire level the complete failure of a luminaire is not relevant (see Luminaire



last?
factors and service life when it comes to LED luminaires



LLMF is determined in accordance to the LM80/TM21-method recommended by IES.



ETAP provides the LLMF after 25,000 and 50,000 burning hours for all its LED luminaires.

Survival Factor). The LLMF corresponds with the B-lifetime at the luminaire level and hence takes on board the parametric as well as catastrophic failure of the individual LEDs in the luminaires.

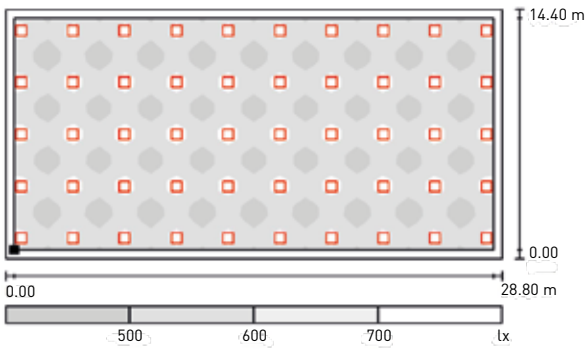
Relevant and reliable data

In order to achieve an accurate, reliable LLMF for our luminaires, we proceed as follows:

- We determine the parametric failure at the component level in accordance with objective LM80/TM21*.
- We are unable to calculate the catastrophic failure, but prefer to collaborate with manufacturers who make accurate data available.

Whenever no measurement data are offered, we depend on electronic reliability models (MIL-HBK-217F).

You will find both the LLMF and the maintenance factor for our LED luminaires on our website. We always publish both values for two periods: 25,000 or 50,000 burning hours. In this way you will know how much light your luminaires will give off after a period of use relevant to you.



Fifty luminaires (L98B50) are all it takes to illuminate an office space measuring 29 x 14 metres using U25 diffusors In the event that you illuminate the space with luminaires with L80B50, you will need more than 60 luminaires..

WHAT IS THE CORRECT INTERPRETATION OF THE LxBy FORMULA?

Example: the service life of U25 luminaires is provided as L98B50 after 50,000 burning hours:

- Where L is the percentage of original luminous flux still achieved after a given period (= LLMF). The U25 luminaires quoted in the example still achieve 98% of their original luminous flux (L98) after 50,000 burning hours (L98).
- Where B is the B-lifetime at the luminaire level. The resulting figure reflects the likelihood that the provided L value is not achieved. Typically the value B50 is used: an average of 50% of the luminaires achieve the provided L-value at the postulated time.
- As standard, ETAP provides the value after 25,000 and 50,000 burning hours, two periods that are representative of your installation's service life.

** The American LM80 standard describes how a test population of LEDs at minimum 3 temperatures (55°C, 85°C and a random temperature) are to be measured. Luminous flux and colour coordinates are measured every 1,000 burning hours. The test takes at least 6,000 hours, but is typically extended to 10,000 hours. The measurement results are further processed in accordance with the TM21 method of analysis.*

[Further information at www.etaplighting.com]
You will find both the LLMF and the maintenance factor for our LED luminaires on our website.

Lightline systems with LEDs

E4 and E5: flexible lighting for large spaces

The E4-E5 with wide-angle light distribution is suitable for the lighting of large production halls, among others.

The E4-E5 with double asymmetric light distribution ensures high vertical illuminance on the product racks.

Save additional energy thanks to the integrated daylight sensor.

The new lightline systems E4 and E5 have been specifically developed for the lighting of large spaces. Thanks to the modular structure and flexible lighting technology, you will get the lighting best suited to every space and application. High-quality LEDs and innovative lens technology guarantee efficiency and visual comfort.

Large spaces such as industrial halls, public buildings, warehouses or retail spaces require a lot of light. Thanks to their high efficiency and long service life, LEDs are increasingly becoming the preferred light source. However, each space demands a specific lighting solution - both in terms of light distribution and in terms of illuminance. E4 and E5 fill those needs in a flexible way.

The right light distribution

The E4 and E5 are fitted with innovative DUAL•LENS™ technology (see page 6). The structure of the linear lens provides both at the same time high comfort (UGR < 22 or < 25) and the desired light distribution. Depending on the area and the application you have the choice between a wide angle, narrow angle, asymmetrical or double asymmetrical light distribution.

Sustainable solution

The long service life of the LEDs is a great advantage in environments where lamp replacement is not always easy. Thanks to a sophisticated heat management ETAP ensures that the LEDs retain their luminous intensity as long as possible. With E4 and E5 you will still have 98% of the initial luminous flux after 50,000 burning hours.

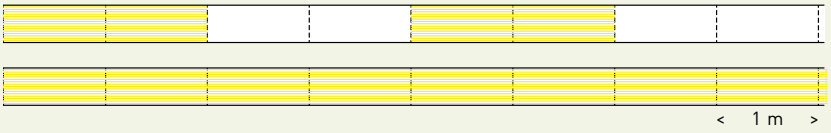
Finally, light control - including specific daylight sensors for high altitude - and emergency lighting can be seamlessly integrated in the luminaires.

E4-E5

E4: EFFICIENT AND FLEXIBLE

The E4 series offers an efficient solution for the lighting of production halls and warehouses, workstations and store shelves. You can choose individual luminaires or uninterrupted light lines. The housing is white-painted extruded aluminium. Maintenance on the drivers is effortless, through the lateral cover plate.

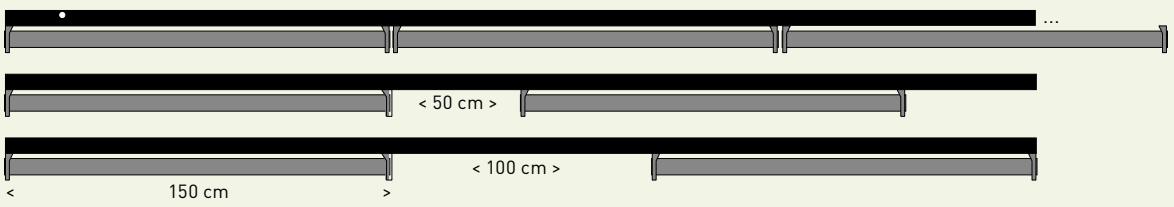
E4 is available with different lumen packages (2000, 3000, 4000 or 6000 lumen per metre) so that you get the right amount of light for your spaces. E4 luminaires are available in different lengths, individual or in-line, as a suspended or mounted version.



E5: TAILORED TO YOUR NEEDS

The E5 series comprises a steel base unit on which you can mount separate white-painted extruded aluminium LED modules. The variable spacings (multiples of 50 cm) guarantee optimum flexibility. E5 achieves luminous fluxes up to 6000 lm/m and is suitable for industrial environments such as production or storage areas.

Depending on the spacings you choose - 50 cm or a multiple of this - you achieve up to 6000 lumen per metre. If your lighting requirements change, you can simply add or remove modules. Any defective modules can easily be replaced.

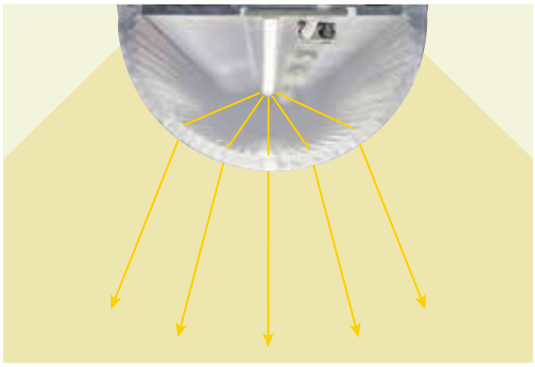


DUAL LENS TECHNOLOGY

DUAL•LENS™ technology

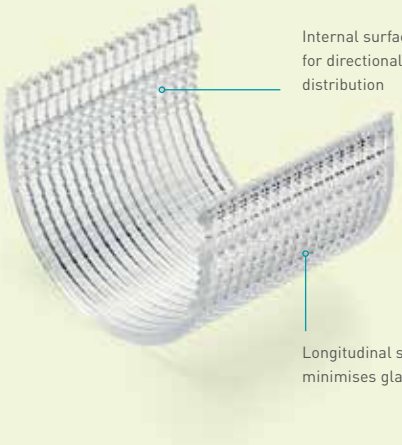
Leading-edge lighting technique

DUAL•LENS™ represents an innovative lens technology, specifically developed for the lighting of large spaces. The linear lens combines superior comfort with directional light distribution for the most diverse applications.



The unique linear lens provides correct light distribution and low glare (UGR < 22 or < 25).

The surface structure on the inside ensures directional light distribution.



DUAL•LENS TECHNOLOGY

1 lens, 2 functions

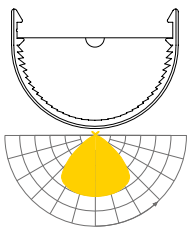
The unique surface structure of this linear lens has a double function. The structure on the outside of the lens reduces the luminance of the LEDs (UGR < 22 or < 25), without compromising the efficiency (luminous efficacy up to 110 lm/W).

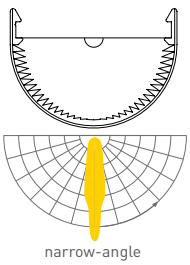
The structure on the inside determines the light distribution. Depending on the kind of space you'd like to light, you can choose from four types. The wide angle light distribution allows you to provide uniform lighting in large open spaces - such as production halls - with a minimum of luminaires. The narrow angle version provides optimum lighting in the aisle between racks in warehouses. The asymmetric optics is suited for the directional lighting of vertical surfaces, such as work stations. Finally, the double asymmetric optics allows you to highlight product shelves on both sides.

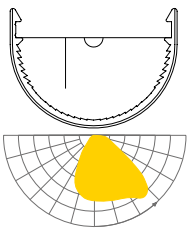
The lens has been specifically developed for the lighting of large spaces (read more about the E4- and E5 series on pp. 4-5).

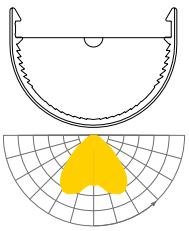
High efficiency, long service life

DUAL•LENS™ technology combines a unique lens structure with medium power LEDs, which stand out because of their high efficiency, their low consumption and their long service life. The ceramic LEDs are very stable, also with high temperatures: after 50,000 hours they keep up to 98% of their luminous intensity (LLMF - Lamp Lumen Maintenance Factor).


Wide-angle


narrow-angle


asymmetric


double asymmetric

[further information at www.etaplighting.com]
Brochure: downloads > brochures > LED lighting for large spaces

LED module for renovation projects

The fastest route from fluorescent to LED

Good news for ETAP customers with E3 or E5 luminaires with fluorescent lighting. Thanks to the LED module they can easily switch to energy-efficient LED lighting, thus minimising installation costs.

With the LED module it is easy to switch from fluorescent to LED.

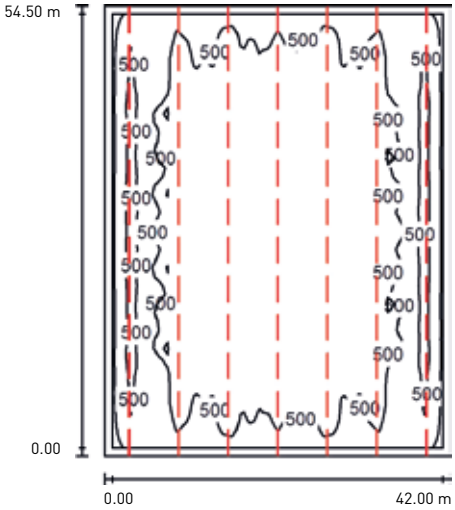
LEDs offer quite a few benefits in industrial environments. The long service life, is an important argument in environments where lamp replacement is not always easy. They are also a lot more energy-efficient than the traditional fluorescent applications, which will allow you to save up to 35% energy – with great luminous flux and a high number of burning hours.

Yet many companies still hesitate to take the plunge, as the costs for a completely new lighting installation can add up. ETAP provides a solution with the LED module.

New module on existing profile

The principle behind the renovation is simple. We keep the existing E3 or E5 profile and merely replace the fluorescent lamp and the reflector with an LED module. Therefore no adjustments have to be made to the ceiling or cabling, which will considerably reduce installation expenses. This solution also increases ease of maintenance: any potential defective modules can be easily replaced. Should you wish, an ETAP team can visit you to analyse your specific circumstances and carry out the renovation. Depending on the situation, cost recovery of approximately three years is possible.

CONTACT YOUR ETAP ADVISER FOR FURTHER INFORMATION. SHOULD YOU WISH, WE WILL CARRY OUT THE FULL RENOVATION FOR YOU.

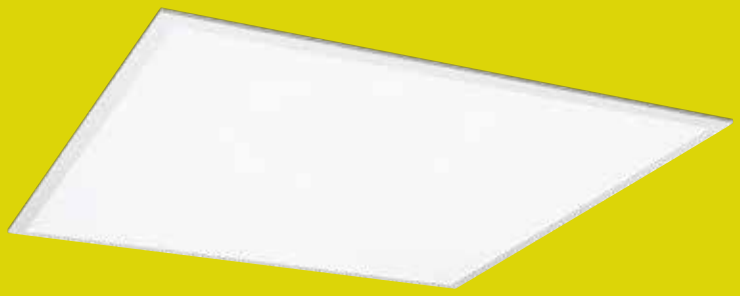


By replacing 168 E3 luminaires with fluorescent lamps by as many LED modules in a production hall measuring 42 x 55 metres, the specific power will drop from 1.61 to 1.23 W/m²/100 lx whilst the lighting level will remain constant (500 lux). This boils down to total savings of 24% on energy costs. In addition, the maintenance cost for lamp replacement is non-existent. This equals a cost recovery period of 3 years under continuous use of your lighting.

The LED module is simply mounted on the existing E3 or E5 profile.

Diffusers with LEDs

U2: the best of both worlds



U2 with LED: perfectly evenly illuminated light surfaces.

ETAP's new U2 series combines the best of both worlds. The recessed diffusers with LEDs couple comfortable lighting with the high efficiency of the latest generation LEDs, which also makes them suitable for the most demanding office environments. To top it off the minimalist design is finished to a high standard.

Diffuser lighting has grown into an absolute must for the general lighting of offices and public buildings. There are reasons for this. Diffusers provide comfortable, soft and pleasant lighting. Walls and ceiling are illuminated brightly and uniformly, without shadows and dark spots. Thanks to their soft light, diffusers are also particularly popular in the care sector. By combining them with high-performance light sources (such as LEDs) they furthermore become increasingly efficient and durable.

Opt for comfort as well as performance

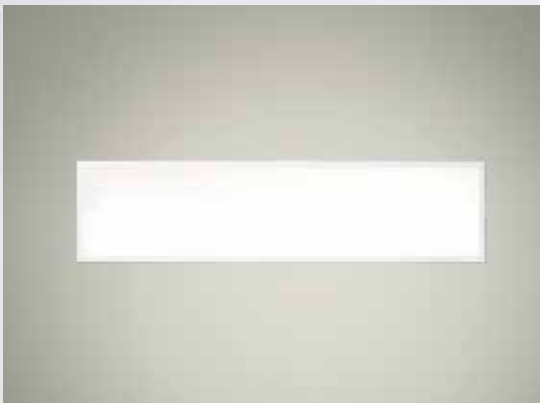
U2 luminaires provide well-thought out light distribution with particularly high efficiency. ETAP simultaneously launches two versions in the series, each with its own specific applications. The U21 uses a matte plastic HaloOptics® diffuser. The specific luminous flux (up to 133 lm/W) and glare (UGR < 22 or UGR < 19) make this version suitable for the lighting of corridors and reception areas, among other applications.

The U25 combines the MesoOptics™ diffuser with a quality glass cover plate. High output (up to 131 lm/W) and low glare (UGR < 19) result in optimum visual comfort, making the U25 suitable for the most demanding office environments. Thanks to sophisticated light distribution you will be able to illuminate larger spaces such as open-plan offices with the fewest possible luminaires.

The U2 series is available in square and rectangular versions. You can choose from several colour temperatures (3000 and 4000 K) and luminous flux (2000 to 5000 lumen). Furthermore we also offer (bespoke) solutions for specific ceiling types.

U25 – visual comfort for the most demanding office environments.

U21 – even and bright illumination of corridors and reception areas.



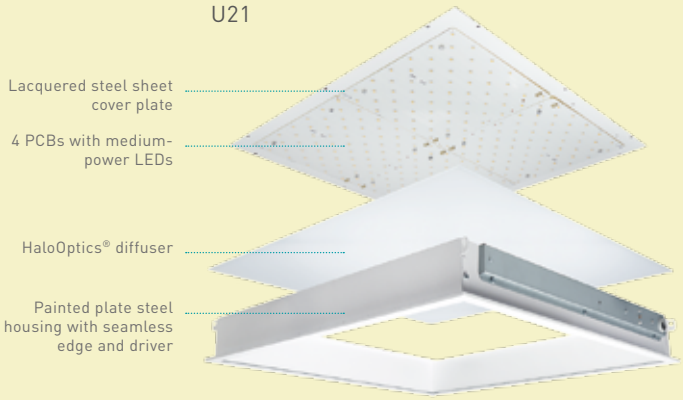
U2 luminaires come in a square and rectangular version.

Smart investment

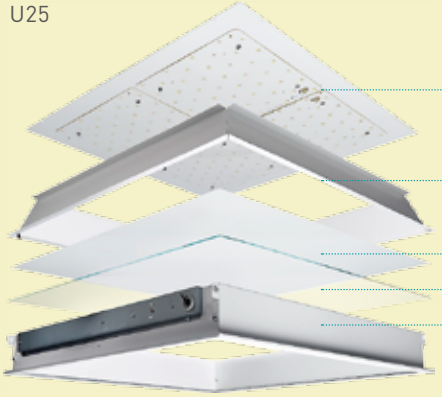
The LEDs' long service life and high lumen maintenance turn the U2 series into a smart investment for the long term. The LEDs in the U21 and U25 still achieve respectively 90% and 98% of their initial luminous flux after 50,000 burning hours . In order to save further energy, all U2 luminaires can be fitted with the ELS sensor for daylight-dependent control and a hidden microwave motion sensor. If you wish to combine general and emergency lighting in the same luminaire, you can opt for integrated emergency units.

U2 luminaires are easy to clean with their smooth cover plate. They form a compact, sealed unit, thus keeping dust and insects at bay. In the unlikely event of defects, LEDs and driver are easy to replace.

U21



U25



[further information at www.etaplighting.com]
Brochure: downloads > brochures > U2

Round diffuser luminaires with LEDs

W1: timeless design for wall and ceiling

W1 LED lighting in an elegant, timeless design.

With the W1 ETAP completes its LED range with a true classic in a timeless design: the round luminaires for walls and ceilings are suitable for lighting in the care sector, offices and public buildings, among others.

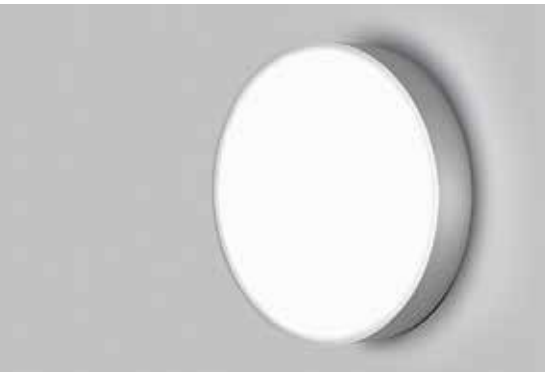
At home everywhere

Thanks to its classic, round shape, the W1 is an elegant and timeless luminaire, at home in any environment – from reception halls to patient rooms, from cafeteria to front desk. Its round shape also makes the W1 a practical, easy to install alternative for corridors and stairwells, where elongated luminaires are not always the perfect choice. The W1 is available in two different sizes (380 mm and 600 mm diameter) and colour temperatures (3,000 and 4,000 K).

Soft, but efficient light

The W1 uses medium-power LEDs and a polycarbonate HaloOptics® diffuser for comfortable and pleasant lighting.

With two large W1 luminaires you will achieve a 300-lux lighting level in a 3.5 x 5-metre room.



W1: also available as wall-mounted luminaire.

Thanks to the low glare (UGR < 22) both the small (1400 lumen) and the large version (4000 lumen) satisfy the standard for patient rooms and corridors in the care sector. A 2000-lumen (UGR < 25) version is available for spaces where you wish to combine the small version with a greater lighting level.

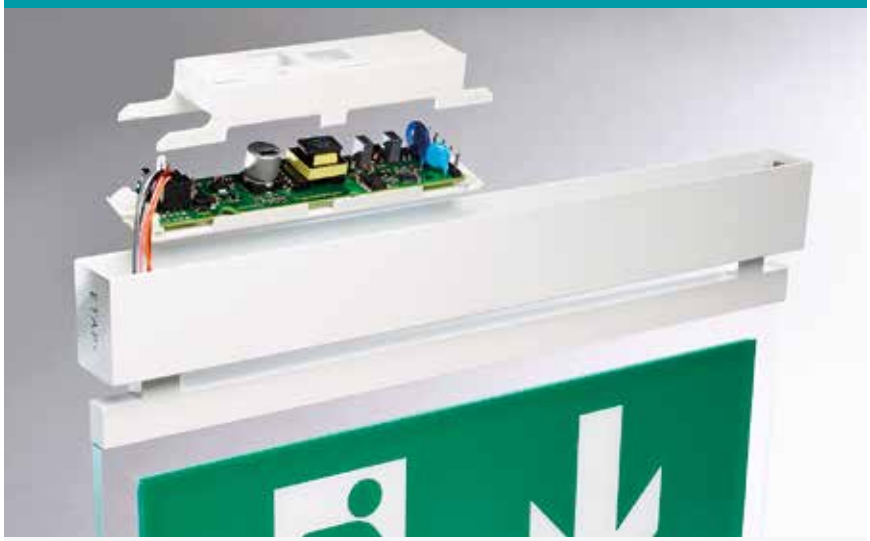
The W1 blends comfort and efficiency. The luminaires feature a specific luminous flux up to 105 lm/W and after 50,000 burning hours still achieve 71% of their brightness (LLMF = 80%). In practical terms: two large W1 luminaires are all it takes to provide a room in a care establishment measuring 3.5 x 5 metres with a 300-lux lighting level.

Lastly, the luminaires are also finished to a high spec. The diffuser is uniformly illuminated. The smooth diffuser plate and narrow anodised aluminium rim make the unit easy to clean. In addition, the sealed lighting module ensures that dust, dirt and insects do not stand a chance and the luminaires permanently leave a clean impression.

[further information at www.etaplighting.com]
Brochure: downloads > brochures > W1

New electronics for emergency lighting

ETAP introduces a new electronics platform for its emergency luminaires, to make maintenance and updating of emergency lighting installation easier.



The new electronics platform increases the efficiency of the LED luminaires by 10 to 15%.

The new LED Electronics Platform (LEP) is in line with ETAP's quality and innovation policy. The new platform includes all electronics controlling the luminaires and is responsible for charging the batteries, the start-up of the tests and communication with systems and interfaces. ETAP initially introduced the updated electronics platform in the new K2 and K9 series and will integrate them systematically in all further LED series.

Greater flexibility

The new electronics result in even higher efficiency and greater flexibility for the user. For example, by means of a simple jumper you can switch between permanent, non-permanent or switched use of your luminaires.

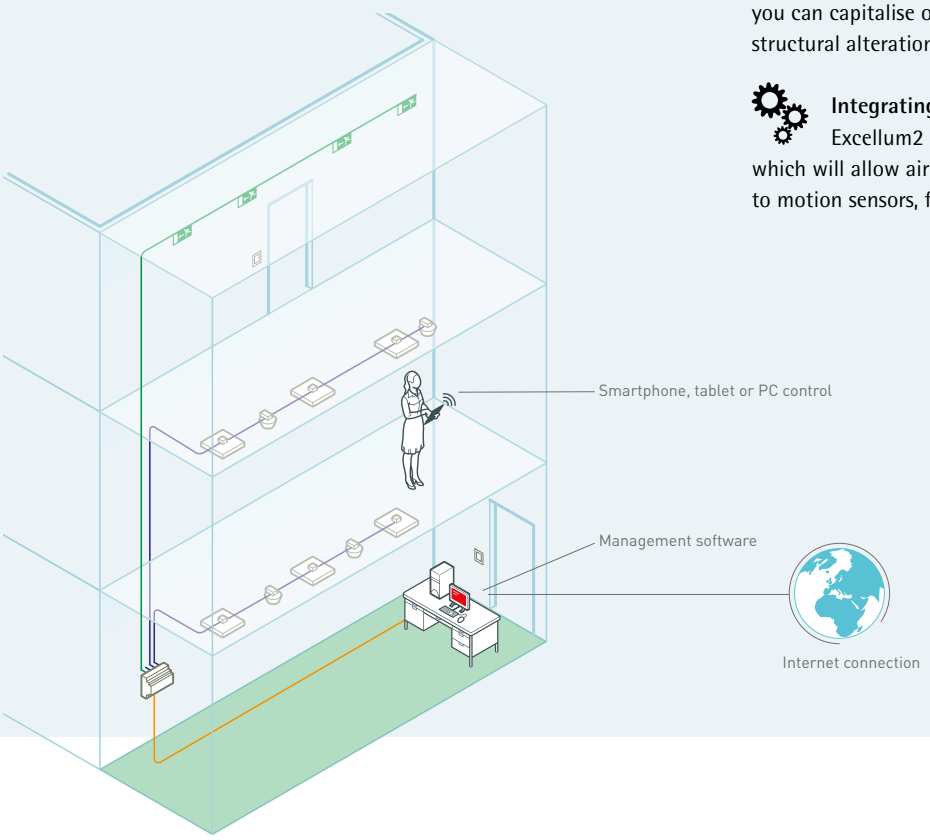
By investing in an advanced and uniform electronics platform ETAP can finally guarantee the best possible quality care for its emergency lighting. As a result installation and maintenance take place a lot more easily and we are able to implement updates more quickly.

Central light control for general and emergency lighting

Smart lighting does not have to be difficult

With Excellum2 ETAP launches a fully new central light control system for general and emergency lighting. During development the focus was on simplicity and ease of use – for both user and manager. At the same time the emphasis – in addition to energy savings – was also on the system's flexibility and adjustability.

Light control systems also form an integral part of the trend towards *smart buildings*. In the first place since thanks to automated light control, we can save a lot of energy. As the most efficient lighting is the lighting that is only on when and where necessary. However, at the same time, light control can also increase the comfort of those who work or stay in the building. Especially if users can adjust the lighting to specific scenarios or personal wishes.



Light when and where you need it

Excellum2 offers a wide array of options to send lighting into your building depending on the activities taking place.

Personal control: Every user can adjust the lighting in their workstation to their own preference: switching on or off, dimming or calling up scenarios.

Scenario setting: you can assign several scenarios to a specific space, where the lighting is adjusted to the activity taking place at that time, e.g., presentations, training and maintenance.

Emergency lighting management: with Excellum2 you can also manage your emergency lighting centrally. You can plan tests and will be alerted to any breakdowns or defects. All actions are automatically recorded and at the same time use the system as a legally required logbook.

Evolving with the building: the layout or function of a building or space often changes over time. With Excellum2 you can capitalise on changing lighting needs without radical structural alterations.

Integrating with other technologies: you can integrate Excellum2 into your general building management system, which will allow air-conditioning, ventilation or heating, to respond to motion sensors, for example, in addition to lighting.

Excellum2

A compact, discrete controller manages up to 256 luminaires. For large projects, up to five controllers can be linked.

Saving up to 75% energy

A central, automated lighting system obviously also provides quite a few options to save energy. Excellum2 uses five strategies to save energy:

Daylight-dependent control: Excellum2 dims artificial light depending on incident daylight.

Smart time control: You can plan the lighting with the calendar function from day to day and from hour to hour.

Occupancy detection: the light is only switched on once a person is detected.

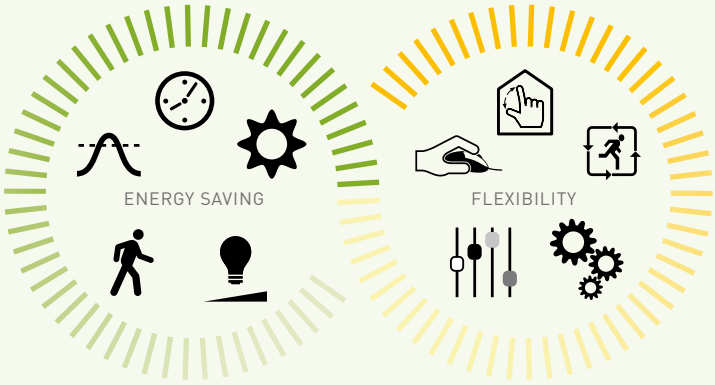
Adjustment to the task: Not all tasks require the same lighting level. Excellum2 ensures that lighting in a space is adjusted to the activities taking place in it.

Load shedding: Excellum prevents overburdening by temporarily dimming or switching off the lights.

Thanks to a smart combination of these strategies you can save up to 75% energy in your building. An integrated energy meter measures the actual energy consumption of your lighting at all times, enabling you to easily monitor your usage and savings.

Easy installation and implementation

Installation is child's play. The system uses compact controllers (150 x 90 mm), which can control an average of 256 luminaires. Up to five controllers can be linked, which also makes the system suitable for large buildings with several floors. All cross-platform software is web-based, which allows you to have access to the system anywhere. Emergency luminaires can also be included in the same system. Lastly you can also integrate Excellum2 into your general building management system.



Excellum2: a long-sighted investment for smart buildings.

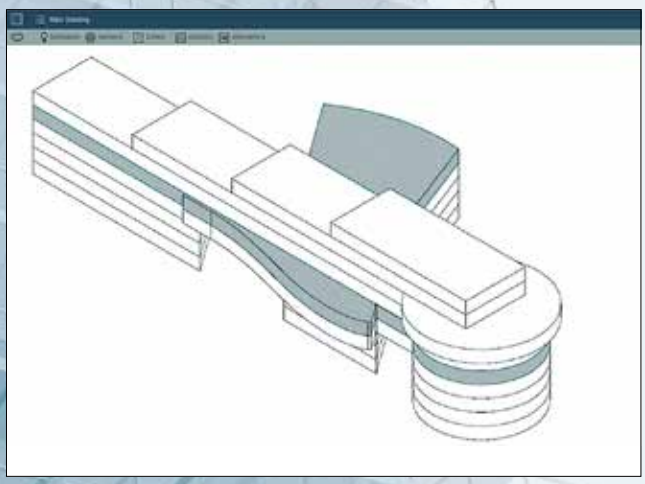
Simplicity and comfort for everyone

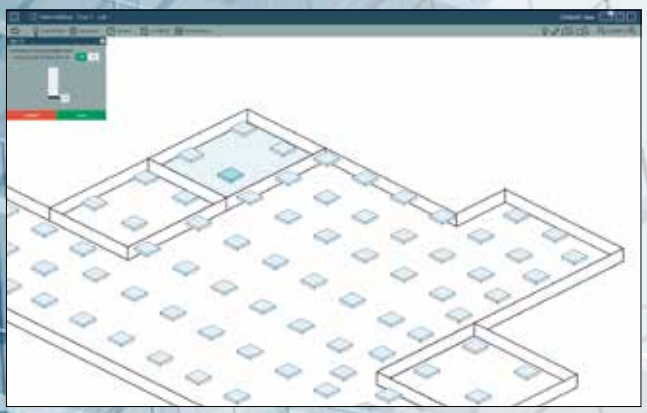
USERS:
Personal preferences at the forefront

Access via smartphone or tablet
Users control lighting with their own smartphone or tablet. In the first place, they will view their own workstation on screen. By means of a menu they will have an overview of all spaces they are able to control.

Choosing scenarios at the touch of a button
Users can not only switch the light on or off, but also select pre-defined scenarios, by means of a simple key on the touchscreen on their smartphone, tablet or PC.

Further individual adjustments
Still a little too much or not enough light? Luminous intensity can be further adjusted at any time by moving the slider.





ADMINISTRATORS:
Responding quickly to changing needs

Status in a simple overview
Administrators easily navigate through the 3D plans for the various floors and buildings. They immediately get an overview of the status of all regular and emergency luminaires (on/off). If a luminaire is defective, it will turn blue.

Adjustments using drag-and-drop function
Administrators can easily and at any time define zones, adjust settings on luminaires and sensors, manage calendars, amend scenarios, generate reports ... By means of a simple drag-and-drop-system a luminaire can be assigned to another zone.

Adjust once, for all spaces
Does the light switch off too soon in the lavatories? Did you define a new scenario for the conference rooms? Only make the adjustment once and it will be immediately applied to all spaces of the same type within the building.

[further information at www.etaplighting.com]
Brochure: downloads > brochures > Excellum2

Welcome to Portugal's most efficient library

Portugal's most efficient library was inaugurated at the end of 2014: The Daniel de Sá municipal library in Ribeira de Grande, on São Miguel Island in the Azores. The new LED lighting is controlled by the Excellum2 light control system.

The new library is situated in the old *Casa de Natividade*, a building listed as municipal heritage, but that had been vacant for quite some time. The listed monument underwent a thorough renovation over the past year, whereby the focus was on sustainability. Today the building houses a large reading room, smaller story and research spaces, as well as an auditorium, a magazine zone and a checkout counter. Suitable LED lighting was chosen for each space.

Bespoke system

For efficiency reasons the municipality opted to have the new LED lighting controlled centrally by the new Excellum2 light control system (see pp. 12 to 14). As usual ETAP configured the system to the customer's specifications and in accordance with the building's properties. For example, the library used daylight-dependent light control, presence detection, intelligent time control, adjustment to the task, evolving with the building and scenario setting.

Light depending on the time of day

The daylight sensors lead to major savings, thanks to the many windows and ample daylight. Also the more centrally placed luminaires can generally be dimmed 30%, which results in extra savings.

Through scenario-setting, you can choose more lighting levels, for example at night or for special events and presentations. For smaller reading spaces, several lighting levels are possible as well, depending on the relevant activity.

Thanks to calendar function and presence detection the light is only switched on when and where necessary - without users having to manually switch the light. This contributes to energy savings, user-friendliness and personal comfort, to the great satisfaction of staff and readers.

PROJECT DATA

- Consultancy: Eng. Delfim Pacheco
- Architect: Arq. Farelo Pinto
- Installer: Caetano e Medeiros
- Lighting:
  - 78 LED downlights
  - 71 E1 and E7 LED luminaires
  - 18 x accent lighting (Flare spot & WA?)
  - 29 LED+LENS™ luminaires
  - 128 R8 LED luminaires
  - 106 emergency luminaires (K2 & K9), centrally controlled by ETAP Safety Manager
  - 1 Excellum2 controller and 22 sensors

Clinique Notre Dame de Grâce opts for sustainable LED solution

Bespoke LED lighting

ETAP provided a tailored solution, seamlessly integrating LED lighting into the false ceiling.

PROJECT SHEET

Lighting:
- U7 & R7 luminaires (LED+LENS™)

Emergency lighting:
- K9 signage luminaires
- K9 luminaires for anti-panic and escape route lighting

The Clinique Notre Dame de Grâce (CNDG) is a nearly 100-year old hospital in Gosselies, near Charleroi. This traditional institution was able to perfectly combine its rich history with a fresh, innovative interior and the latest technologies. The hospital initiated a thorough renovation in 2014 , of which the first phase was recently completed. Reception and administrative spaces are fully renovated and fitted with LED lighting. "We are completely satisfied with the result," says Dimitri Vermeulen, project engineer at CNDG, "Thanks to ETAP's flexible tailored solution, we were able to execute our plans precisely the way we wanted."

Thanks to a complete renovation, from now on the CNDG welcomes its visitors in a fresh, modern interior.

Pleasant environment

Hospitals are typically not places where we like staying. Those who visit CNDG will be pleasantly surprised: both patients and staff are welcomed here in a bright, modern interior. Before the start of the renovation the CNDG listened to its patients. "A TV for every patient, improved thermal and acoustic comfort, more colour in the hospital and adapted lighting – were frequently recurrent requests," explains Dimitri Vermeulen. "The lighting had to be visually attractive, and at the same time comfortable and energy-efficient. This is how we ended up with ETAP."

Aesthetic, economical and comfortable

Three requirements were imposed on the new lighting. First and foremost the lighting had to contribute to the new, fresh design. The LED+LENS™ luminaires perfectly fit into the chosen interior concept. Sustainability was another important aspect in this renovation. With a specific power of 1.45 W/m²/100 lux this requirement was also largely satisfied. Lastly, users' comfort was also a prerequisite. The luminaires' lenses have a patented surface structure that controls luminance and reduces the LEDs' glare (UGR < 16).

Flexible and bespoke luminaires

The false ceiling represented an additional challenge: ETAP provided a tailored solution in collaboration with the ceiling's supplier, whereby the luminaires are neatly integrated into the ceiling tiles. Not only is the colour of the luminaires geared to that of the ceiling, their position also varies, in order to achieve an attractive, uniform arrangement.

Find the emergency lighting

The CNDG opted for K9 emergency lighting with LEDs, a series characterised by discreet, minimalist design. The LED modules for escape route and anti-panic lighting are so small and unobtrusive that they are barely visible with the naked eye. The signage luminaires feature an evenly lit pictogram, which guarantees optimum safety.

The LED+LENS™ luminaires link nice design with high comfort (UGR < 16).

itsme Rotterdam

Innovation sets the tone

The sales office of the itsme industrial supplier group in Rotterdam sets the example in terms of innovative lighting technology: ETAP' K4 emergency lighting. The signage luminaires feature an OLED panel as their light source.

Innovation is one of itsme's core values. When ETAP was the first lighting specialist in the world to market emergency lighting with OLEDs at the end of 2013, they immediately showed their interest. The construction of a new branch in Rotterdam, which houses the sales departments of ES Elektro and Hoogland-Mennens - two of the group's subsidiaries - was a unique opportunity to start using the emergency lighting.

Ideal light source

The light source for ETAP's K4 signage series is an OLED, an LED version based on organic materials. The organic materials are evenly spread across the entire surface of the safety sign. Hence the pictogram is no longer illuminated, it is the light source itself, which results in perfectly uniform lighting.

In addition, the K4 is also the slimmest emergency luminaire on the market. Since light source and sign form a single unit, the panel is a mere 4 mm thick. Electronics are built into the wall or ceiling. The luminaires are powered by EBS Compact, ETAP's central battery system.

Safety is a priority

Design and innovation is one thing, but safety obviously remains the first concern in emergency lighting. That is why the K4 luminaire is fitted with patented light source monitoring: a sensor constantly measures the sign's effective brightness and issues a warning as soon as it no longer satisfies the standard. Furthermore itsme's Rotterdam subsidiary's emergency installation is connected to ESM (ETAP Safety Manager). ESM continuously monitors the operation of the luminaires and immediately reports battery or operational issues. It also controls the central battery system EBS Compact.

With ETAP's OLED emergency lighting, itsme puts safety in the forefront and enhances its innovative image, by providing a visible example to its customers.

EMERGENCY LIGHTING:

- 17 x dust and watertight K2 luminaires in warehouses
- 13 x K4 OLED luminaires in offices
- 17 x K9 luminaires for escape route and antipanic lighting in offices
- EBS compact
- ETAP Safety Manager (ESM)

ABOUT ITSME

The industrial supplier group itsme specialises in electrical and mechanical engineering solutions. Lighting technology is an important mainstay in this context. The group focuses on industrial end users, machine manufacturers and technical installers.

NEW GREENLIGHT PARTNERS

In the past year the following customers have been awarded a GreenLight certificate, in recognition for their efforts with respect to energy-efficient lighting:

- Alcon, Kayserberg (France)
- Habitat Sud Atlantique, Bayonne (France)
- Mairie de Pibrac (France)

ETAP INFORMS

New product catalogue

Looking for information on one of our products? You will find everything in our comprehensive catalogue, illustrated with numerous project images.

Product brochures

Would you like further information on our new products: E4, U2, W1 or Excellum2? You will find all the details in the matching brochures.

For a printed copy of our publications, please contact your ETAP advisor or download the electronic version from our website.

Tailored solutions detailed to perfection

At the beginning of this year, the Jansen Service centre opened its doors in Zonhoven. Here, Building Group Jansen, a specialist in the interior finishing work of buildings, showcases the various options of the Alura climate ceilings in a number of conference and seminar spaces. ETAP supplied seamlessly integrated LED+LENS™ lighting for the technical ceilings.

Smart ceilings

A sophisticated cooling system - based on a network of water pipes - hides behind Jansen's climate ceilings. "The unit is able to cool as well as heat," explains Product Development Manager Johan Croimans. "The smart control uses the excess heat or cold air available in the building. Due to this energy recycling we achieve high performance."

PROJECT DATA

- 115 U7 recessed luminaires (LED+LENS™)
- 14 D4 downlights (LED+LENS™)
- 22 K9 signage luminaires
- 27 integrated LED modules for emergency lighting
- Individual & central daylight and motion sensors

Minimalist design

In order to be able to use as much of the ceiling area as possible for the technical cooling panels, it was important to integrate lighting and other technical modules (smoke detectors and ventilation grilles, among others) as compactly as possible into the bandraster. "The result not only ensures optimum efficiency of the cooling ceilings, but is also extremely attractive aesthetically. Thanks to this seamless integration our ceilings retain a low-key, minimalist appearance," says Johan Croimans.

Energy savings through lighting

The chosen LED lighting nicely fits in with Jansen Finishings' sustainability concept. The U7 and D4 luminaires with LED+LENS™ technology guarantee low energy consumption and long service life (the LEDs still achieve 97% of their luminous flux after 50,000 burning hours). In the larger offices the luminaires are fitted with individual daylight sensors, in the smaller spaces, central daylight sensors and presence detectors result in additional energy savings and extra comfort. "We are pleased with the extra savings and flexibility provided by the central sensors," adds Johan Croimans. "Once in use, the dimming level was easily adjusted using the remote control."

Best possible safety

ETAP was also responsible for the emergency lighting in the new service centre. Optimally illuminated pictograms (K9 with LED) ensure safe evacuation in emergency situations. The compact LED modules for escape route and anti-panic lighting are also integrated into the bandrasters.

ETAP
EXCELLENT LIGHTING, SAVING ENERGY

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