LIGHTPOINT.

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Energy-friendly lighting in Typsa's new headquarters, Madrid (Spain)

K1 emergency lighting now also with LEDs

LDI strengthens the ETAP group

GreenLight dossier: rational energy use

ETAP lighting

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→ NEW PRODUCTS

K1 signage now also with LEDs

The successful K1 range has been on the market for more than one year. ETAP is now extending the range with single-sided permanent LED signage. The use of LEDs in permanent emergency lighting actually offers several advantages.

Long lifetime

LEDs are ideally suited for permanent signage because of their long lifetime. The new K1 with LEDs has an expected liftetime of more than ten years, resulting in drastically reduced maintenance.

Increased recognisability

LED's are illuminating point light sources. A light guide between the two 1W LEDs is used to evenly illuminate the pictogram. The result: excellent recognisability through quiet illumination, with no light stains where the LEDs are located.

Guaranteed standard compliant brightness

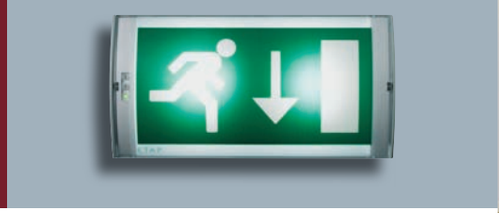
As LEDs age, their luminous flux declines. To prevent the luminance of the pictogram from falling below the standard value of 2cd/m², this K1 is fitted with a light sensor.
As soon as the sensor detects that the luminance has fallen below the standard value, it generates a fault message, indicating that the LEDs need replacement (after which no further maintenance is required for the next ten years). The exchangeable LED holders allow for quick and smooth LED replacement.

Complete project with environmentally friendly NiMH batteries

All non-permanent ETAP luminaires are available with NiMH batteries. The (permanent) K1 with LEDs is standard equipped with NiMH batteries. So from now on, you can use this environmentally friendly battery technology for your complete lighting project and (single-sided) signage.

△ *The light guide ensures even and quiet illumination of the pictogram.*

Illumination with no light guide ▷



MesoOptics™ range is extended


UM10


UM18


UM11

The UM1 range with MesoOptics™ is extended with the addition of UM11. With the same revolutionary features, but in a new, more rigid design.

Optical control 'microtechnology'

MesoOptics™ optics contain a specially designed microstructure that distributes the light in a controlled fashion. The result is a rigidly and evenly illuminated room, with uniformly lit walls and without any disturbing luminances or colour interference. Luminaires with MesoOptics™ create tranquility and pleasantly illuminate your room. The efficiency is about 30% higher compared with luminaires using conventional diffuser techniques. This means you require fewer luminaires and hence less energy for the same illumination level.

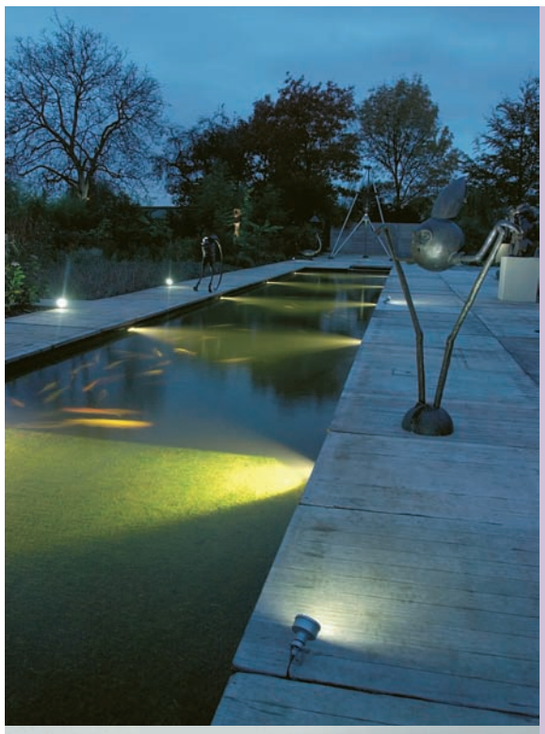
Easy installation and maintenance

UM11 can be inserted or mounted with continuously adjustable mounting brackets. For optimal integration, for instance in plaster ceilings, versions with wafer trim are available. The hinged optics allow for easy lamp replacement or cleaning of the optics.

A wide array of possibilities

UM11 is available in square and rectangular versions. In addition to the versions completely fitted with MesoOptics™ optics (UM10), there is also a version with an EQUILUM® reflector in the central panel (UM18), for even better luminance control. You can integrate both emergency lighting and light control systems into your UM11 luminaires.

LDI strengthens the ETAP group



On January 1st, LED Design Innovation (LDI) joined the ETAP Group.

Growing popularity of LED lighting

LEDs are the light source of the future, and already today they are causing a revolution in the world of lighting. ETAP, too, strongly believes in the potential of LED lighting. In the short term, they will be applied in emergency lighting, decorative applications and accent lighting. In the longer term, LEDs will probably be able to compete with fluorescent lighting in the areas of energy efficiency and lumen output.

LDI: innovation with LEDs

LDI, a young and dynamic company based in Drongen near Ghent, specialises in architectural lighting with LEDs. In just a few years, LDI has built itself a strong reputation among architects and designers across Europe.

Strong together

LDI and ETAP will continue to go their own ways, with their own development and sales departments. The merger does, however, offer advantages for both parties. ETAP's experience in quality assurance and logistics will help LDI to boost its performance in these areas. LDI's experience and knowledge in the design of luminaires with LEDs will prove useful in the development of LED luminaires as part of the ETAP range.

LDI sales network

LDI will retain its own sales organisation, operating fully independently of ETAP's sales teams.

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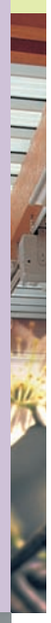


Better lighting with less energy

On 7 February 2000 the General Energy and Transport Directorate of the European Commission launched the GreenLight programme. GreenLight is a voluntary programme that encourages commercial and public enterprises to become a GreenLight partner and apply energy-efficient lighting in their buildings. The starting points are that the quality of the lighting is improved and that the investments have a short payback time.

GreenLight Partners work together for a better living environment.

In the Kyoto protocol, the EU countries agreed to reduce greenhouse gas emissions over the period 2008-2012 by on average 8 % compared to the 1990 level. After the industry, buildings are the second largest producer of greenhouse gases with almost 34 % of total energy use. Improved operational performance and more efficient technical management of buildings may result in energy savings of up to 45 %. In offices and schools, lighting often accounts for over 50 % of electricity use.

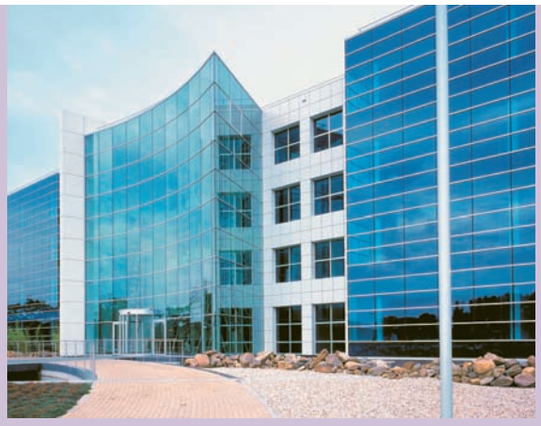
GreenLight Partners: companies that actively contribute to the environment

As a GreenLight Partner you save on energy costs while ensuring good light quality and therefore pleasant working conditions. As a Main GreenLight Endorser, ETAP will gladly support you to become a GreenLight Partner. Together with you, we submit your application based on an energy-efficient lighting project or projects in which you have invested. In exchange, you receive a GreenLight plate and the right to carry the GreenLight logo as proof of the fact that you run your business in an environmentally responsible manner. In addition, your organisation receives free publicity from the European Commission, e.g. your name is published on the website www.eu-greenlight.org.

→ DOSSIER *rational energy use*

"We see the GreenLight programme as an important lever for our companies in Europe to rationalise energy use and to obtain extra tools to accelerate our lighting upgrades"

Harry Kauffman, Corporate Energy Director Johnson & Johnson



The movement detectors in the classrooms of the Lorentz Casimir Lyceum allow for extra savings. The energy-efficient lighting perfectly compensates for the increased energy use of the computers.

EINDHOVENS LYCEUM HAS MODEL FUNCTION IN SUSTAINABLE ENERGY

In 2003 the Lorentz Casimir Lyceum Eindhoven received the EU GreenLight Partner Award at the Light Pavilion of ETAP Verlichting in Malle. In addition, the lyceum was recognised as one of the year's GreenLight Partners at the Intel World Light Show.

In 2002 the lyceum renovated the lighting system of the school. ETAP provided the new ceilings with energy-efficient luminaires with mirror reflectors with daylight dependent light control. In classrooms, corridors and change rooms, the movement sensors produce an additional saving, whilst at the same time both the light quality and the work atmosphere improved. As a result of the increased use of computers at the school, the electricity connection had to be stepped up. The energy-efficient lighting more than compensated for the increased use of electricity by the computers. The school seeks to set an example in sustainable energy and energy saving for the pupils and for the entire region. Payback time of the investment: seven years.

	old, per classroom	*new, per classroom*
Number of luminaires	*6 luminaires 2x58W*	*6 U1 luminaires HF with ELS 1x58W*
Installed power	*860W*	*340W*
Annual energy costs	*€ 146*	*€ 32*
Annual costs lamps/starters	*€ 19*	*€ 4*
Total annual costs	*€ 165*	*€ 36*
Percentage saving		**80%**

JOHNSON & JOHNSON FIRST GREENLIGHT PARTNER

Pharma giant Johnson & Johnson was one of the first organisations to become a GreenLight Partner in 2000. In the Janssen Pharmaceutica facility in Belgium, ETAP Verlichting has performed a relighting study for 75% of the 410 000 m² workspace.

Within the scope of sustainable entrepreneurship, already 62,000 m² of workspace at Janssen Pharmaceutica has been relighted with daylight and occupancy sensors, and with energy-efficient high frequency lighting with mirror reflectors. This has resulted in less cooling, less maintenance and 40% less electricity being required in the modified facilities. The company reports energy savings of 1 240 000 kWh or € 62 000 per year. Depending on the project, Janssen Pharmaceutica achieves payback times from one and a half to six years.

As a GreenLight Partner, Janssen Pharmaceutica saves € 62 000 per year on 62 000 m² workspace through energy-efficient and ergonomic use of lighting.

"Light control systems provide each room with just the right amount of light, resulting in enhanced working comfort."

Jaime Mengual, Director of the Electrical Engineering and Telecommunication Department

GREENLIGHT HAS FOR EIGHT YEARS BEEN THE HALLMARK OF TYPSA'S CONSTRUCTION PROJECTS

With over one thousand employees, Spanish group Typsa is one of the world's largest engineering consultancies. Typsa engineers work on a wide variety of construction projects in over fifty countries.

Typsa's headquarters in Madrid: natural light is used wherever possible throughout the building.

New headquarters in Madrid

Typsa's new headquarters in Madrid are an outstanding example of respect for the environment. The entire building is constructed from recyclable and environmentally friendly materials. The philosophy behind GreenLight has for eight years been the hallmark of Typsa's construction projects. For its headquarters this implies, among other things, the choice of ETAP lighting luminaires: flexible solutions in harmony with the architecture, energy-efficient and ergonomic by optimally gearing the lighting to man in his working environment. Natural light is used wherever possible throughout the building. Light control systems provide each room with just the right amount of light.

Enhanced working comfort

The efforts automatically lead to enhanced working comfort: e.g. visual comfort, as Typsa opts for the EQUILUM® reflector, which has a higher efficiency and offers better glare control. DALI ballasts provide extra comfort and flexibility. But Typsa was above all impressed by the reliability and durability of the ETAP solutions. ETAP's environmentally conscious, energy-efficient technology has therefore also been used in Typsa's other major construction projects.

© RATP - Photo Jean-François Mauboussin

The bus depot of Pavillons Sous Bois was selected by RATP management to represent RATP for the "Trophée de L'Innovation". 189 luminaires ensure more light, more comfort and less energy consumption than the 462 that they replaced.

PARIS BUS COMPANY SAVES 45 % ON LIGHTING ENERGY IN BUS DEPOTS

The Paris public transport authority, RATP, known mainly for its metro, wanted to renovate its lighting. The objectives were better working conditions, energy saving and reduced maintenance.

After sending out a request for quotation to five lighting experts, RATP selected the most efficient solution: that of ETAP Verlichting. The bus depot of Pavillons Sous Bois was equipped with luminaires with daylight dependent light control and reflectors of high reflection aluminium. The result: added comfort for visual tasks, a 67 % increase in the light level (from 150 lux to 250 lux) and a 45 % energy saving. The number of installed luminaires fell from 462 to 189.

In this way, RATP saves 45 % or 132 218 kWh on lighting electricity. Maintenance costs have fallen by 59 %. On the basis of these results, RATP has decided to apply this lighting solution in all of its bus depots. Works have already started in six bus depots and nine others are slated for upgrading. RATP was awarded the GreenLight label for these initiatives. The project fits in with the Paris transport company's policy of sustainable development and efficient energy use.

© RATP - Photo Jean-François Mauboussin

DOSSIER. rational energy use

Welcome to the age of wireless!

When in the 19th century Alexander Bell presented his telephone to his local mayor, he assumed there would be market for a single telephone in each big city. The mayor was not impressed: if he needed his secretary, he could simply call her, and at the other end of the country there was no one he knew anyway.

Would Bell also have thought that only a century later "his" fixed wire networks are being used less and less. Wireless communication from anywhere, is becoming the standard: radio and mobile phones have become indispensable. Besides, not only people, but devices too communicate wirelessly with one another. Time for a guideline in the jungle of recent wireless protocols: WiFi, BlueTooth and ZigBee.

How to choose the right wireless protocol?

Which protocol you choose for your application, depends on the frequency (band), the amount of data to be transmitted and the distance to be bridged.

Wi-Fi wireless home network

Wi-Fi or Wireless Fidelity is a certification label or logo for wireless data network products at radio frequencies in the 2.4 GHz or 5.0 GHz band. In daily practice, Wi-Fi is increasingly becoming a wireless home or corporate network for the two-way transmission of large amounts of data.

BlueTooth increasingly replaces conventional cables

BlueTooth is a standard for short distance wireless communication between two devices. BlueTooth is gradually taking the place of conventional cables, e.g. those used between your printer and your PC. BlueTooth is too slow for transferring large data files (such as video files or presentations).

	Wi-Fi	*BlueTooth*	*ZigBee*
Frequency	*2,4 (of 5,0) GHz*	*2,4 GHz*	*2,4 GHz*
Maximum transmission rate	*11 Mbit/s*	*1 Mbit/s*	*250 Kbit/s*
Range	*100 metres*	*10 metres*	*70-300 metres*
Battery duration	*hours*	*days*	*years*
Number of connections	*32*	*7*	*64 000*

ZigBee for building automation and networks

The name 'ZigBee' refers to the communication between bees, the principle of which has been applied to technology, as it were. ZigBee is an energy-efficient alternative for building automation and monitoring and control networks. It is suitable for applications that do not require large bandwidths, but that do need batteries with long lifetimes. Examples include thermostats, doorbells or light switches. ZigBee is ideal for communication between many hundreds of devices.

Wireless control of your emergency lighting?

The ETAP Safety Manager can be used for the wireless monitoring, control and maintenance of your emergency lighting luminaires via the Zigbee standard. It can also be used to combine wireless and wired networks. Especially for renovations of historical buildings, the installation of a BUS network is often less convenient from a financial or aesthetic point of view. The same applies for large shops or factory buildings where flexibility is required to allow frequent and rapid changes in layout. In both cases, a wireless monitoring and control system provides the ideal solution.

Telenet opts for perfect ceiling-lighting integration

Rigid, sober, minimalist: the architecture of the new Telenet headquarters, with perfectly integrated ETAP lighting luminaires.

IN THE SPOTLIGHT.

ETAP specially modified the luminaires for integration into the ceiling planks.

For the Telenet headquarters in Mechelen, the architects chose ETAP lighting luminaires. They were especially enthusiastic about the possibility of perfectly integrating the luminaires into the ceiling.

In consultation with architects Poponcini & Lootens and design office RCR, Telenet opted for a closed linear plank ceiling 225C from Hunter Douglas. The lighting solution was to be optimally integrated into the ceiling. It was decided to incorporate the special ETAP recessed luminaires into the metal planks. For this, ETAP punched the necessary holes into the ceiling planks, so that the luminaires perfectly fit into the holes. The reflector floats in the ceiling and there is no coarsely finished edge. Ceiling and lighting form one harmonious whole.

The ISOLUM® reflectors with their ingenious light concept provide excellent light control and enhance the light comfort for the user. They direct the light and shield it where necessary.

Telenet also emphasised the need for energy efficiency. The high efficiency of the reflectors allowed the absorbed power in the building to be reduced to a strict minimum. As a result, 949 luminaires 1x54W could be used instead of the initially planned 949 units 2x28W. The resulting specific power of only 1,67 W/m²/100 lux not only earns Telenet a higher REU (Rational Energy Use) premium from network operator Eandis, but also substantially brings down the energy bill.

At Telenet, aesthetics and energy efficiency go hand in hand.

PROJECT DATA

Telenet Headquarters Phase 3, Mechelen

Engineers
Roelandts, Cornelissen en Rys, Herent

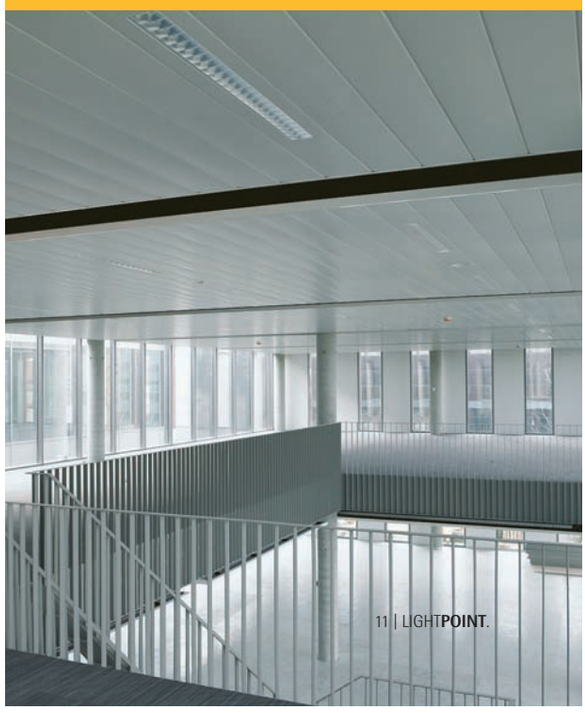
Architects
Poponcini & Lootens, Antwerp

Contractors
Electro Entreprise, Gullegem and Interalu nv, Wilrijk

Number of luminaires
949 x 1x54W
226 x 1x28W
32 x 2x28W

Power
1,67W/m²/100 lux

Type of lamp
T5-ø16mm lamp



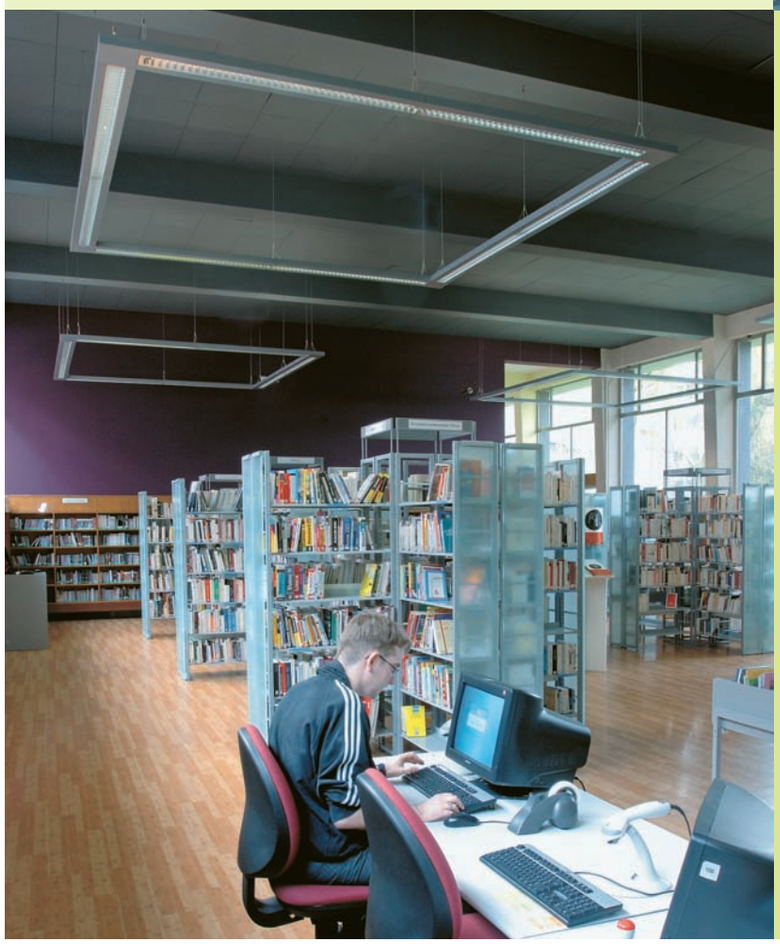
The Médiathèque Jean Lévy in Lille

The City of Lille has been committed to sustainable development for many years. This means that for its buildings it promotes high environmental quality and for the lighting in particular it seeks economical solutions in terms of consumption and maintenance yet without sacrificing visual comfort and utilisation costs.

GREENLIGHT

For its mediatheque, Lille's commitment is reflected in a first project which it undertook in the framework of the European Commission sponsored GreenLight programme.
Christophe DUMONT, architect of the municipality of Lille, wanted an elegant but discreet lighting that was not to interfere with efficiency. The light and sober lines of the R4 luminaire, its modular concept and Up-light effect allowed for the creation of a pleasant and conducive reading environment.

New reading room with high visual comfort



Before: the rooms, over 5m in height, were lighted by 107 fluorescent luminaires 2x58W with conventional ballasts, resulting in an installed power of 15,4 kW. The utilisation, approx. 2080 hours per year, represented an electricity consumption of 32 000 kWh.

After: the choice fell on ETAP luminaires R48 1x49W, suspended from a 3m height. Each luminaire is fitted with regulating electronic ballasts and daylight sensors. The unit power is 54W, and with a total of 130 luminaires installed to obtain good uniformity, total installed power is 7,02 kW.

Savings: with the T5-ø16mm lamps and the electronic ballasts, the required power falls from 15,4 kW to 7,02 kW, i.e. a 54 % gain. Using an ELS sensor on each luminaire in combination with natural daylight allows the required power to be reduced whilst maintaining the illumination level. This reduces consumption by almost 30 %. Total annual consumption is estimated at 10 221 kW instead of 32 000 kW.

With a 68 % saving realised in terms of energy use alone, the renovation gives full satisfaction to all users. This achievement perfectly meets the requirements of the GreenLight programme. The energy saving and the increased illumination level allow for improved reading conditions, greatly enhanced visual comfort and a satisfactory saving in terms of consumption and maintenance.

Summary table

	Before	After	Change
Illumination level	380	420	11 %
Unit power in Watt	144	54	-63 %
Total installed power in kW	15,408	7,02	-54 %
Nominal annual consumption in kW	32 049	14 602	-54 %
Impact of ELS sensor		-30 %	
Total annual consumption	32 049	10 221	-68 %

ETAP

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