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ESYWORLD

THE LATEST FROM THE WORLD OF LIGHTING AND AUTOMATION

SHINING PERFORMANCE

INNOVATIONS AND A NEW CONCEPT AND DESIGN AT LIGHT + BUILDING 2018

LIGHT IN ALL DIMENSIONS

PROFESSOR ROLAND GREULE ON ASPECTS OF MODERN AND FUTURE LIGHTING

IN THE AGE OF PHOTONS

HOW THE HELMHOLTZ-ZENTRUM BERLIN IS IMPROVING THE WELLBEING OF ITS RESEARCHERS

WELCOME

Dear readers,

In a world that is becoming increasingly complex, one thing is more important than ever as the key to success: the art of simplicity or concentrating on the essential. As we all know, this sounds easier than it actually is. After all, the things that appear simple generally require a strong design, a well-thought-out plan and, above all, a lot of work to achieve that end result. We had the opportunity to present the results of this »Performance for Simplicity« approach to our visitors at this year's Light + Building live. Find out how they reacted to the new, solution-oriented stand design and which innovations we presented in Frankfurt – all that and more in the latest edition of ESYWORLD. Happy reading!

Mareks Peters

Chairman and CEO, ESYLUX

TOPICS

SHINING PERFORMANCE

LIGHT + BUILDING 2018: INNOVATIONS AND A NEW CONCEPT AND DESIGN

2714 exhibitors from 55 countries presented their new products and innovations in Frankfurt, with a record number of visitors in attendance. It was not only the exhibition itself that exceeded the success of previous years – the two ESYLUX stands proved to be real visitor magnets. The secret: a successful stand concept, a great atmosphere – and intelligent control technology.

»It gave me a good idea of what I can offer my customers,« »really interesting,« »modern and contemporary« is just some of the feedback that we received from visitors regarding the modernised ESYLUX stand design. They appeared to like the new concept of the stand spaces, and the great atmosphere also helped with the positive overall experience: »All the members of staff beam at you when you approach the stand,« said Thomas Beck, Branch Manager at DEG Deutsche Elektro-Gruppe, a Sonepar Deutschland brand. ▶

A SYNERGY OF AUTOMATION AND LIGHTING THAT VISITORS CAN EXPERIENCE

»We wanted to present the synergy of automation and lighting and its benefits in a simpler way and in a manner that really brought it to life,« explains Anne Spielberg, Head of International Marketing at ESYLUX. The aim was also to present the company as a provider of application-oriented solutions for the first time. While products were available to see and touch as normal, there were also three solution portals that could even be seen from a distance, framing and – at 3.50 m – towering over the long component display.

»Selling solutions enables the benefits of products to be presented much more effectively,« confirmed Thomas Beck. The goal: to give visitors specific examples that they can apply to their own day-to-day working life. With this in mind, the portals presented intelligent solutions in offices, educational institutions and medical facilities for specific types of room, such as open-plan offices, classrooms and patient rooms. The feedback received from visitors such as Normen Dieckmann, a master electrical engineer from Bad Fallingbostel, is that it was »very clear.«

HUMAN CENTRIC LIGHTING: A HOT TOPIC

One of the hot topics at the exhibition was biologically effective light and the energy-efficient implementation of this light using SymbiLogic technology from ESYLUX. Those who were already familiar with the positive effects of this type of lighting had a clear opinion on the subject: »An important issue,« according to Thomas Beck. »It will be the standard in ten years,« predicts Sönke Jansen, a master electrician from Hamburg. However, there was also a consensus on the fact that, to achieve this, there was still a long way to go. »It is not yet widely accepted that you can actually improve the quality of work with this light,« believes Frank Günther, Managing Director of Schwarzenbek-based company EFG.

◄▲ *ELC lighting system with the energy-efficient human centric lighting provided by SymbiLogic technology: front of a CELINE Quadro-Set and back with simple plug-and-play connections.*

◄ *Lots of visitors were interested in the opportunities that biologically effective light offers to improve quality of work and life.*

▼ *Demonstration of an extendible lamp head: Remco van Kerkvoorde, ESYLUX Managing Director in the Netherlands, shows visitors the PRANA+ Office Floor Light.*

LIGHTING SYSTEM WITH SYMBILOGIC AND PLUG-AND-PLAY INSTALLATION

Fittingly, ESYLUX presented a comprehensive development of ESYLUX Light Control (ELC) at the trade fair – the intelligent control technology for system lights with biologically effective light and plug-and-play installation. The ELC Quadro-Sets have already proven themselves in practice for offices. According to Normen Dieckmann, »automation is a must because then you no longer have to think about it.« You do not notice the dynamic light sequences when working, said Frank Günther, who has installed the lighting system in his own offices.

Whether at the main ESYLUX stand in Hall 11.1 or the new stand in the Light trade fair area, there were happy visitors across the board – and not just because of the good catering: »ESYLUX delivers fantastic customer service,« said master electrician Sönke Jansen. For Frank Günther, who has been a partner of ESYLUX since his company was first established nearly 25 years ago, it is not just about the human element: »Why go anywhere else when you are perfectly happy with the quality?« Master electrician Michael Peters shared that view: »When you need a good presence detector, look no further than ESYLUX.« ■

LIGHT IN ALL DIMENSIONS

FROM THE DAYLIGHT TO THE VIRTUAL REALM

Nowadays, the importance of light in day-to-day life is more varied than ever. This is also evident in our interview with Roland Greule, Professor of Lighting Technology, Lighting Design and Virtual Systems at Hamburg University of Applied Sciences. He believes that lighting design is entering a new era.

Prof. Roland Greule is a leading expert in lighting technology, lighting design and virtual systems in Germany. He teaches at the Faculty of Design, Media and Information at Hamburg University of Applied Sciences. Professor Greule specialises in light and wellbeing, light and health, lighting systems, light and colour, and light and wellbeing on aircraft.

25 years ago, Roland Greule and his colleagues developed the software Relux, which today is one of the leading programs for professional lighting design.

Professor Greule, you work in a place that was associated with pioneering ideas in the past. The brick buildings of your university on Finkenau were once home to the first gynaecological clinic in Hamburg.

One of the largest maternity clinics, in fact, where countless children were brought into the world and saw daylight for the very first time. The facilities that this institution offered were, at the time, extremely modern and advanced. We have incorporated this idea into our work today. Our motto is: »We deliver new ideas.« Daylight also still plays an important role in these rooms.

What have you yourself brought to the topic of light?

I initially studied medical engineering. I always found it fascinating how people respond to medicine. That is why I eventually specialised in this topic, looking at how people's perception functions. I also focused on this topic during my dissertation: How does light affect perception, how do we perceive light. That's how I came to lighting. I have been engaged in the subject for 40 years now – and it feels like it – and it is still just as important to me. ▶

◀ *Modern interior architecture flooded with light: staircase and corridors at Hamburg University of Applied Sciences.*

▲ *From event technology to the measurement of melanopic light reaction, ready for anything: the light laboratory at Hamburg University of Applied Sciences.*

One of your research areas is the emotional effect that light has on people. Where do you see new developments and trends in this area?

Light has always been associated with emotion, even in the stone age. Research into this topic is extensive and complex. We don't necessarily associate white light of the kind we are familiar with from typical indoor spaces with emotions, although even this light can stimulate moods. A better example of the emotional use of light is in productions in the events industry, such as musicals. Coloured lighting is used to a much greater extent here. This type of lighting has the greatest emotional power. If you go to see a show like The Lion King, for example, what do you take away from it other than the music? The images with all the colours, of course!

»Even white light in indoor spaces can stimulate moods, but coloured light has the greatest emotional power.«

Coloured lighting is also being used increasingly outside of the events industry.

Absolutely. People are having more and more fun incorporating coloured lighting into rooms. This trend can also be seen in architecture. We have not seen this emotional effect of light for a long time. At the same time, control systems today are opening up a lot more possibilities in terms of design. One of the things that modern light control enables us to do is change lighting dynamically. This means that we have emotions in the room to a greater extent than ever before.

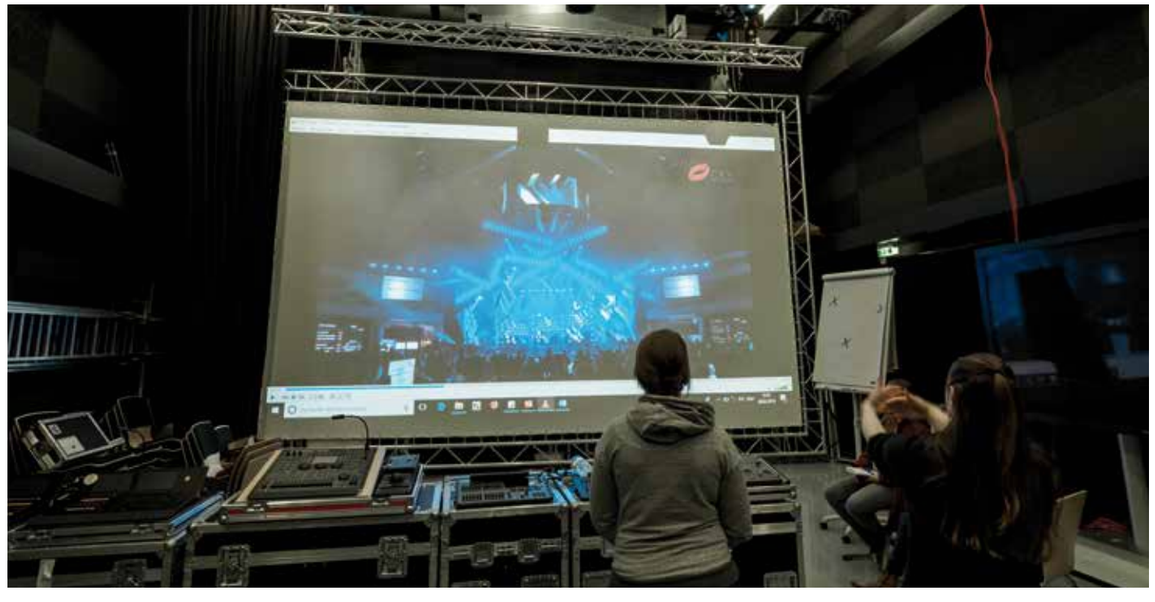
If you had to explain why, besides emotions, light is important for people, what would be the main reason for you?

Light simply helps us to be fit. We all know what it's like when we go out in the morning or go into the bathroom and catch the first rays of sun. Only then do we feel properly awake. Light is crucial to us feeling truly healthy, light is an element of the quality of life. Light can energise or relax us, helping us to feel good or calm. Light is unbelievably important for the human body. And vice versa: Too little light is a big problem.

»Lighting affects our wellbeing. It can energise us or help us to relax.«

»The positive effect of human centric lighting on the day-night rhythm can be used in an even wider range of applications in the future.«

▼ *Find out what actually makes the show appealing: Students at Hamburg University of Applied Sciences work on eye tracking.*



When discussing sunlight and light deficiency nowadays, it is virtually impossible to avoid the topic of biologically effective light, or human centric lighting, indoors.

With human centric lighting, it is now possible to bring an important portion of natural daylight indoors with the same positive effects. This is achieved through the light colour, and also by having more lux in the room, i.e. greater illuminance. If you are just looking at the standards in this regard, then you will overlook the fact that the values required there were merely considered to be minimum lux values. When they were introduced around 20 years ago, probably no one could have anticipated that lighting design would still only be based on the lower threshold. Many people say: I don't need any more because it is not required according to the DIN. However, we know that the human body actually needs more light. And it is not just today's studies that show that humans also emphatically want more light. Even my former professor – Professor Bodmann – knew: If people had the freedom to decide for themselves, they would choose around 800 to 1000 lux.

Biologically effective light is now not just used in offices, educational institutions and health care facilities – it can also prove useful when travelling.

Indeed. On long-haul flights, for example, it can help people to better acclimatise to the new time at their destination and to the day-night rhythm there. With Airbus, we have discussed the extent to which appropriate lighting could help flight crew. However, in reality things are moving in the opposite direction here, as aircraft captains and cabin crews often fly straight back nowadays. It remains an important issue with regard to passengers, though, and in particular business travellers. If I land in New York at 9 am and have a meeting at 10 am, it would be good if I were already slightly acclimatised to the day-night rhythm. We are currently working with the German navy to develop a lighting solution that helps the crew to get used to their new place of deployment quicker and thus helps them to be fit. ▶

In your laboratory, you regularly measure the melanopic effect of light, like recently with an ELC system light from ESYLUX. What does this term mean?

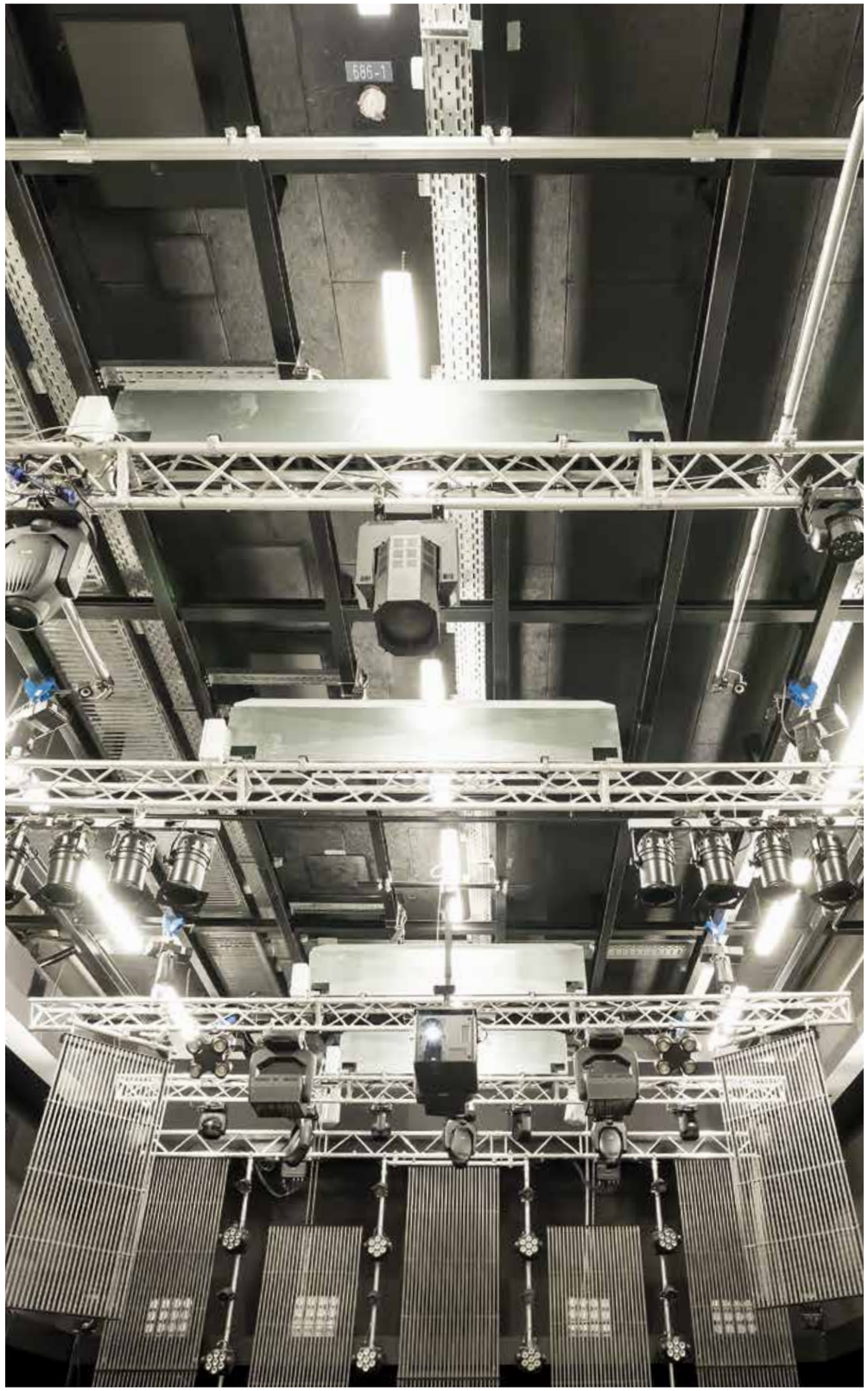
The melanopic effect is the central biological effect of human centric lighting. Around 15 years ago, it was discovered that, in addition to the rods and cones in the retina of the human eye, there is a third receptor: the photosensitive ganglion cells (editor's note: also known as ipRGC). Some of these ganglion cells have a very high level of melanopsin. This means that if they receive enough light and the right colour temperature, they are responsible for either waking the body or sending it to sleep. This is called the melanopic or biological effect. For the ganglion cells to respond, the eye must be exposed to a sufficient level of illuminance. The lux value specified in the standard is not relevant for this purpose. It does not say anything about the activation or deactivation of the body.

How is such a measurement carried out, and what do you need to consider during the process?

It works initially like the measurement performed using a normal lux meter. However, unlike with this process, we do not perform the measurement at the work surface, but rather directly at the eye. We install the measuring device at the average eye level, for example the eye level of someone working at a desk. The lights themselves are mounted on the ceiling at the standard height. We then adjust the measured lux value using an effect factor. The wavelength range at 480 nanometres has an effect factor of 1. The effect factor for anything outside of this range is lower. Red light, for example, can have an effect factor of below 0. However, anything in this blue range of 480 nanometres is particularly effective. We refer to the calculated final value as »melanopic lux.«

With Relux, you have developed one of the leading lighting design programs, and you are still very active in this field. What particular aspects need to be considered when planning biologically effective light?

The light must come diagonally from above because the relevant ganglion cells are located towards the bottom of the eye. The extent to which this should be a planning standard is still being discussed. Any lighting designers who are concerned with human centric lighting nowadays must put people at the centre of their designs. If they only consider the DIN, they will not do this concept justice. A good lighting designer must actually always be one step ahead. Lighting designers must normally base their designs and plans on the latest technology, and that is currently human centric lighting. Only, a requirement like the melanopic lux is not yet included in workplace guidelines.



Perhaps that is why lighting design programs are also not yet using corresponding design parameters.

We are working on that. Relux could easily calculate this kind of measurement, but there is not yet an appropriate calculation template available. You currently have to either perform the measurement yourself or estimate using a calculation if you want to improve the effectiveness of lighting. It would therefore be extremely useful to implement this in design programs. In any case, I can see lighting design progressing in new dimensions. One reason behind this is the LED, which is now established on the market. The emergence of the LED has seen the automated control of coloured lighting in architecture, for instance, become an increasingly important topic. Naturally, this must also be taken into account during the planning process – in as illustrative a manner as possible. With building information modelling, or BIM, buildings can be designed and planned in detail in 3D. However, the actual issue will be about being able to experience these rooms during the planning process as the users themselves will experience them later on. I am talking about virtual reality, an area that we are closely involved in at Hamburg University of Applied Sciences. I believe that virtual reality will play an important role in lighting design in the future.

What challenges will that pose?

Lighting is the most challenging area in virtual reality. You can build entire floors and buildings, have avatars walk around, but it is extremely difficult to represent real lighting in virtual spaces. That is considered the premier league, as it is very much about the lighting technology, with light control, distribution curves, lumen, lux and so on. If it is to look realistic, the light must look just as good as the shadows and materials. And in real time. Only then will the immersion work, diving into a world that feels real to me. For building owners and architects, this offers an enormous benefit. They can simply put on a pair of VR glasses, view the entire thing and then decide. Of course, effects can also be demonstrated far better in virtual reality – or even human centric lighting.

Mr Greule, a personal question to finish:
What do you want to see from the lighting of the future?

I want us to have even more natural light indoors and for control to be even more natural, more intuitive. At the moment, we are still dependent on switches or smartphones. Imagine if I could simply point a finger at several lights and make them into a group using a gesture. I then point at a couple of other lights, also make them into a group, and use a different gesture to dim them to 50 percent. Gesture control – that would be exciting, however it is done!

MANY THANKS FOR THE INTERESTING CONVERSATION. ■

IN THE AGE OF PHOTONS

HELMHOLTZ IS RESEARCHING IN HEALTHY LIGHT

While many office spaces were being modernised, the Helmholtz-Zentrum Berlin decided to take the opportunity to have a state-of-the-art LED lighting system installed in its spaces. With energy-efficient human centric lighting, this new system improves the wellbeing of the scientists at work. This is made possible due to intelligent ESYLUX technology.

▼ *Ideal microscope for space and time thanks to ultrabright photon beams: the BESSY II storage ring on the Helmholtz premises in Adlershof, Berlin.*

USING LIGHT IN ALL ITS FORMS INTELLIGENTLY

Candles, warmth, shadow – if you ask people what they associate with the term »light«, you will often get a wide range of answers. For scientists at the Helmholtz-Zentrum Berlin, however, the answer is clearer. For them, it is all about the photon: the light particle. From producing and using photons to energy conversion and the associated materials research, scientists here are on the hunt for new, energy-efficient solutions. The goal: to tackle global challenges, such as the energy revolution.

▲ *Intelligent ELC lighting system with integrated sensors and energy-efficient human centric lighting: NOVA Quadro-Sets from ESYLUX.*

▼ *Incoming natural daylight and lighting similar to daylight: the break room in the Helmholtz EM-AMCT department.*

ENERGY-EFFICIENT MODERNISATION FOR BETTER WORKING CONDITIONS

In order to create the ideal conditions for this pioneering work, managers make sure that the workplaces at both sites in Adlershof and Wannsee in Berlin are modernised on a regular basis. The project-based fundamental research performed by the institute also often gives rise to a need for such modernisation, says Uwe Grabe, Head of Facility Management. This research always necessitates personnel and spatial changes and, in terms of the content, has a different focus every time: »Here, no two laboratories are the same.«

A current example of this continual change is the relocation of the »Methods for Characterization of Transport Phenomena in Energy Materials« department, or EM-AMCT for short. The rooms occupied by the 16 employees at the Berlin-Wannsee site had to make way for a new design, and so a section of a different building on the expansive grounds was completely gutted ready for new office spaces and reconfigured using plasterboard walls and ceilings. The result across a total area of approx. 300 m^2: eight outer, spacious, open-plan offices enclosing the corridors, a copy room and a central break area with kitchenette.

OPTIMAL USE OF DAYLIGHT, EVEN INDOORS

The use of natural daylight played an important role in the new room concept. In the offices, large windows allow a lot of light in, and glass panels and doors that let light through were integrated into the corridors during the modernisation process. The designers planned the location of the break area so that a former smoke extraction unit is at the centre of this space, now serving as a wide skylight that brings in fresh air and sunlight.

»In order to remain consistent in this approach, we decided on light that is similar to daylight for the ceiling lighting as well,« explains Uwe Grabe. With the NOVA Quadro-Sets, they opted for an intelligent ESYLUX lighting system with ESYLUX Light Control (ELC) control technology. The sets offer a pre-configured, ready-to-install integrated solution consisting of master and slave lights with an integrated control unit, integrated presence and light sensors and all the necessary cables. The lights are connected to each other by RJ45 cables and the system is then immediately ready for use without the need for any programming – a plug-and-play installation. ►

▼ *Transparent glass panels bring daylight indoors: The corridors in the newly created offices at the Berlin-Wannsee site.*

LIGHTING SYSTEM WITH ENERGY-EFFICIENT HUMAN CENTRIC LIGHTING

The lights in the lighting system feature state-of-the-art LEDs, which fits in perfectly with the philosophy of the Helmholtz-Zentrum. After all, the centre is not only conducting research to facilitate greater energy efficiency – huge importance is also placed on energy efficiency in day-to-day working life there. The light itself was ultimately also an important factor in the decision to invest in the system: The NOVA Quadro-Sets feature ESYLUX SymbiLogic technology. This technology generates biologically effective light – also known as human centric lighting.

Through dynamic sequences of brightness and light colour that are similar to daylight, this light improves the vitality, wellbeing and concentration of employees in the workplace, as well as helping to ensure a restful night's sleep by stabilising the day-night rhythm. Based on integrated sensors, SymbiLogic ensures the energy-efficient implementation of this system: The light turns on only when people are present and only if the daylight already coming in through the window is not sufficient for working. The system also features SymbiLogic with presence and daylight dependent adaptive HCL light control, which automatically ensures the use of daylight in the dynamic brightness sequences by only setting the illuminance at the level required based on the light already available.

▲ *Helmholtz-Zentrum in Berlin.*

▲ *Next-generation solar cells with versatile thin-film technology are a research focus at Helmholtz.*

INTELLIGENT AUTOMATION OR MANUAL, INDIVIDUAL OVERRIDE

Feedback from employees has been extremely positive – across cultures and languages: »The light is very pleasant,« says instrument scientist Siqin Meng, who is in Berlin for two years to research neutron scattering as part of a cooperation between Helmholtz and an institute in his native China. He also likes the fact that the lighting is controlled and switched off automatically. »This allows me to concentrate completely on my work and means that I don't have to worry about anything else.«

But the new lighting has also highlighted how different people are. For Jan Hoffmann, for example, a scientific/technical employee whose desk is in a corner office on the same floor, the light from outside is usually sufficient during the lighter part of the year. »I then simply switch the lights off.« Others, on the other hand, use the opportunity to adapt the lighting to their own personal preferences. This is the case with Danny Kodja, a doctor of physics, who prefers the light to be bright and the light colour to be cold white. He can continuously adjust the light accordingly using a switch. »But I usually simply use the light switch to set the appropriate scene.«

A SUCCESSFUL EXPERIMENT

Facility Manager Uwe Grabe understands the differences in colleagues' preferences well. From his office opposite, he can see the building and observe the different characteristics during the working day. »From one window the light shines bright and cold white, while from the other it is darker and warmer,« he says. But irrespective of whether employees are currently using the automation or are overriding it manually, the »experiment« with the lighting system, as he puts it, has been a success. Although he does not yet know when the next rooms will be modernised, he imagines that the lighting system will also be installed in these rooms. He explains that the installation will certainly not pose any problems: »The lights simply need to be connected. Like on a computer.« ■

ENERGY-SAVING SHOPPING IN VANTAA

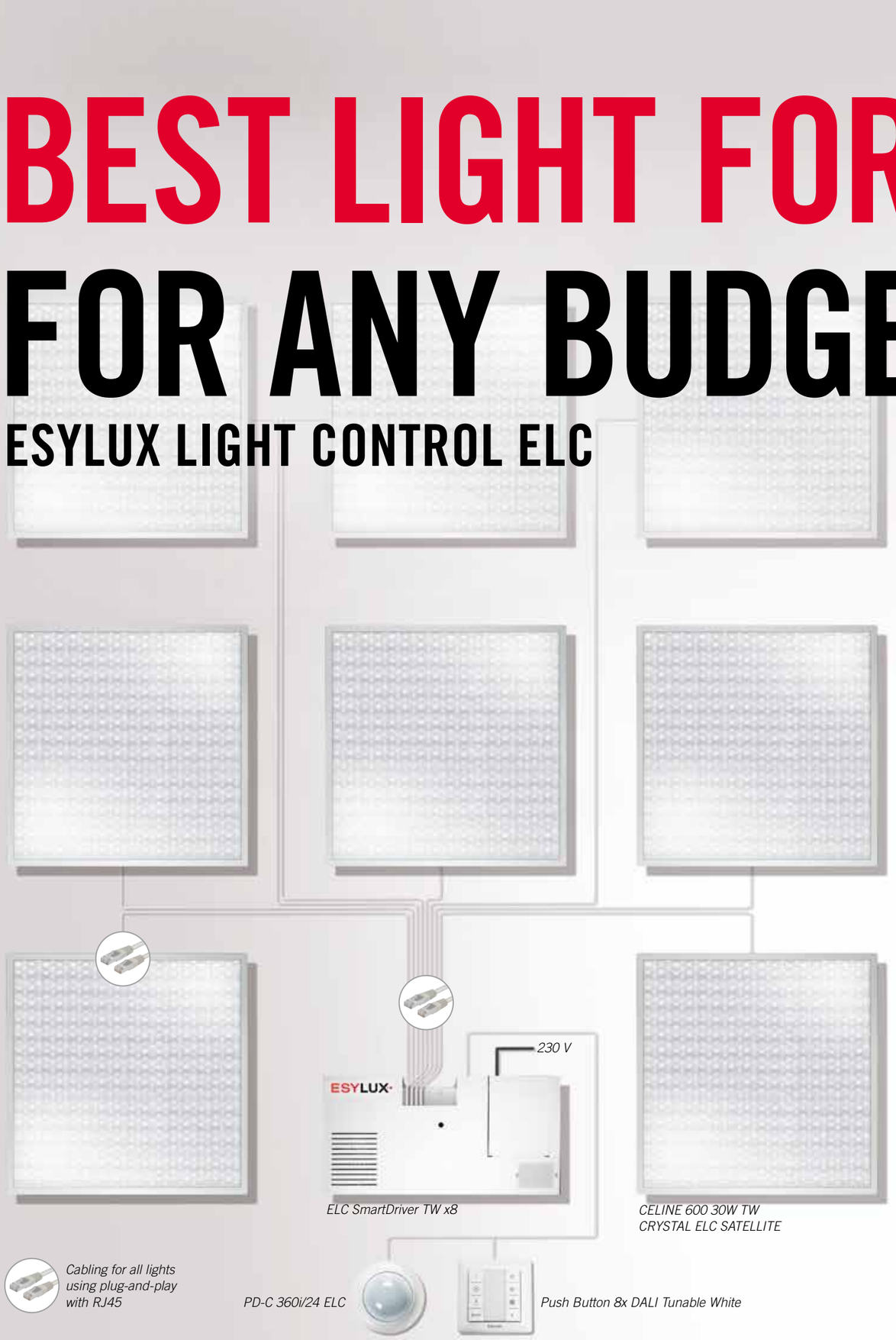
DIXI is a modern shopping centre located in Tikkurila station in Vantaa, Finland – one of the busiest stations in the country. The operators focus not only on delivering excellent customer satisfaction, but also on achieving the highest possible level of energy efficiency on their premises. ESYLUX presence detectors of the COMPACT series adjust the lighting automatically to the incoming daylight and thus consistently reduce energy consumption. ■

BIOLOGICALLY EFFECTIVE LIGHT IN GÜSTEN

Stemmler, based in Güsten in the east of Germany, specialises in work in low and medium-voltage networks. The company has been looking after its customers, some of whom are very well-known, such as Deutsche Telekom and Deutsche Bahn, in structural and civil engineering for over 40 years. When constructing the new company building, the company decided to install a KNX system. Seamlessly integrated through an installed KNX module: NOVA Quadro-Sets from ESYLUX with the biologically effective light of SymbiLogic technology. ■

BEST LIGHT FOR WORKPLACES FOR ANY BUDGET

ESYLUX LIGHT CONTROL ELC



With the ESYLUX Light Control (ELC), we have developed a control technology for intelligent system lights featuring energy-efficient human centric lighting (HCL). The systems are installed via plug-and-play and can be used immediately without any programming effort, making them ideal for rapid modernisation projects, even during ongoing operation.

Greater quality of life and energy efficiency are important requirements when modernising offices, educational institutions and health care facilities nowadays. ESYLUX Light Control (ELC) control technology provides a simple way of meeting these requirements.

ELC SMARTDRIVER AS AN INTELLIGENT CONTROL UNIT

The central control unit in the system is the ELC SmartDriver. All other components, such as ESYLUX LED recessed lights and presence detectors, are connected to and supplied with power by the control unit via plug-and-play. The system requires no additional programming effort and can be used instantly, making it ideal for rapid modernisation projects, even during ongoing operation. With an optional KNX module, the system can also be integrated into a KNX building automation system without a separate gateway.

During operation, the system generates a biologically effective light for enhanced wellbeing, concentration and health. The SymbiLogic technology from ESYLUX delivers presence and daylight dependent adaptive HCL light control. This light control provides the best light at the right time, as well as ensuring that using the biologically effective light is highly cost-effective. As an alternative, system variants with a fixed light colour of 3000 K or 4000 K are available.

ERROR-FREE GROUPING WITH VARIANTS FOR DIFFERENT ROOM CONCEPTS

The system units work independently but can be connected to other units to be adapted to any dimensions. Individual constant lighting control for different room zones and a demand-based orientation light with cluster function can be implemented by means of connection via the ELC bus. Centralised manual control is always possible, as is the selection of individual scenes. In addition, it is possible to incorporate HVAC devices or supplementary lighting and control them in line with demand.

The ELC system solutions can be combined individually or are alternatively available as pre-configured, ready-to-install solutions for offices, classrooms or patient rooms in a standard size in the form of the Quadro, Classroom or Patient Room-Sets. You will then receive all the system components, cables and additional devices under one item number. ESY! ■

SYMBI™ LOGIC

◀ *The ELC portfolio offers luminaires, presence detectors, control units and respective cabling as basis for energy-efficient lighting solutions. Offering the best light for workplaces.*

THE INSTALLATION ALL-ROUNDER

ESY-PEN CREATES INTELLIGENT SYNERGY

A practical all-in-one device for simple commissioning, remote control, light measurement and project management – the ESY-Pen. It enables communication between mobile end devices and the intelligent automation and lighting solutions from ESYLUX independently of physical interfaces.

In many places, remote control via apps and Bluetooth has long been standard practice. With the ESY-Pen, from our intelligent automation and lighting solutions, this is now possible.

EASY CONFIGURATION AND PROJECT MANAGEMENT

The ESY-Pen's bridge function supports direct communication between mobile end devices and our presence detectors or system lights. This capability enables the convenient configuration and commissioning of installed systems using the ESY app. A further helpful advantage of the pen is its silicone tip, which makes it ideal for use as a stylus in conjunction with the touchscreen surfaces of mobile end devices.

When combined with the app, the ESY-Pen can be used for project management on the move. The configurations of entire projects can be stored and then retrieved later on. This provides you with a better overview and gives you the ability to clone saved parameters and apply them easily to similar products or rooms. It is also possible to export a project report as a PDF document.

INTEGRATED LIGHT SENSOR FOR OPTIMUM MEASUREMENT AND CONTROL

The integrated light sensor offers two benefits. To begin with, it eliminates the need for a separate lux meter during commissioning. And in addition to this, it ensures especially precise light measurement and control during operation: As a desktop device in the charging cradle on the work surface, it measures light precisely where it is required for the visual task and then sends the results directly to the presence detector or system light. This capability offers a high degree of reliability when designing lighting and the end user benefits from the optimal level of control it provides.

SIMPLE REMOTE CONTROL AT THE WORKSTATION

Users can also use the ESY-Pen as a remote control via the three buttons on the housing. Depending on the type of detector being controlled, the lighting can be switched on or off, or dimmed. In the case of ELC lighting solutions with SymbiLogic technology, the light colour can also be changed. In systems with stored scenes, these can be selected at the touch of a button.

The ESY-Pen replaces the universal remote control and is backwards compatible with all presence and motion detectors currently available – and essential for the commissioning of future detectors. The ESY app is available free of charge. ■

◀ *Simple commissioning and project management with the ESY-Pen and Bluetooth control for Android and iOS.*

INTELLIGENT ALL-ROUNDER FOR DALI-2

PD-C 360i/24 PS PLUS DALI PRESENCE DETECTOR

ESYLUX PREFERS RADIATION-FREE PIR SENSORS WITH NO ELECTROSMOG

With the PD-C 360i/24 PS plus DALI presence detector, we are offering a prototype for intelligent light control as per the new DALI-2 standard. With its integrated bus power supply, the presence detector makes optimum use of the options provided by DALI-2 and enables groups and scenes to be controlled in line with demand. The adjustable light sensor enables highly precise light measurement and lighting control.

The purpose of DALI has always been to ensure simple planning and installation, and the revised version, DALI-2, expands the options available considerably: Sensors can now be used as active control units, allowing event-related actions such as presence and daylight-dependent light control to be implemented more easily.

LARGE RANGE AND INTEGRATED BUS POWER SUPPLY

With the PD-C 360i/24 PS plus DALI, for the very first time we are offering a presence detector prototype for DALI-2 that, using its own power supply unit, delivers the bus power required for up to 64 operating devices and enables presence and daylight dependent constant light control. Thanks to this feature, up to 16 groups and 16 scenes can be set up, and an additional output is available for presence-dependent control of HVAC devices. The detector has four PIR sensors, enabling it to switch individual lights or groups of lights on or off depending on the zone where it detects movement.

Based on its range of 24 metres, the detector can easily monitor a large room entirely by itself. Should this not be sufficient, ESYLUX COMPACT slave presence detectors can be connected to its four push button inputs. The inputs also allow semi-automatic operation and are suitable for the manual control of groups or scenes. As an alternative, it is possible to set up time-controlled scenes, such as an automatic day/night mode.

ADJUSTABLE LIGHT SENSOR AND SIMPLE INSTALLATION

To enable the optimisation of light measurement and control, the light sensor in the detector is located outside of the lens and is individually adjustable. As a result, the light can be measured exactly where it is required when it comes to completing visual tasks. As the housing diameter of the presence detector is 68 mm, a standard drill bit can be used to create the necessary recess. Commissioning is straightforward using the ESY-Pen. The detector is expected to be available as a multi-master device following successful DiiA certification from October 2018.

Find out more at www.esylux.com/compact

A PRETTY BRIGHT SPARK

ISABELLE PENDANT LIGHT

**The ISABELLE pendant light is a new ESYLUX lighting solution for inside lighting with integrated intelligence:
A presence detector integrated in the lamp head ensures convenient and energy-efficient operation at its highest level of configuration. Due to its sleek design, the light is perfectly suited to use in a wide variety of surroundings.**

Reception desks, conference rooms, buffet areas – pendant lights are often installed in locations where a subtle, understated appearance is required in addition to a high quality of light. For applications such as these, ESYLUX has developed the ISABELLE pendant lights.

SLEEK DESIGN AND OPTIONAL INTELLIGENCE

The elegant design of its powder-coated, warp-resistant metal housing enables the light to be installed in any space. At its highest level of configuration, an intelligent DALI presence detector is installed in the centre bar: The detector ensures that the light is only activated when people are present and only to the brightness required according to the available daylight. In this way, it provides a high level of automation convenience, reduces energy consumption and makes optimal use of the LED lifetime (50,000 h L80B10). Users can easily perform manual override using the switch on the lamp head or via the supplied infrared remote control. When the light is dimmed manually, the target value for daylight dependent constant light control is also adjusted automatically.

▲ *Intelligent light in a subtle design: In the ISABELLE pendant light, the presence detector ensuring energy-efficient operation is integrated into the lamp head.*

GLARE-FREE DIRECT AND INDIRECT LIGHT

The ISABELLE light comprises both direct and indirect illumination that floods the ceiling with light. The transparent, easy-to-clean cover prevents dirt or insects from penetrating inside the light from above. The high-grade PMMA-plastic diffusor for direct illumination produces particularly glare-free light. A UGR value of less than or equal to 19 means that it is suitable for use in screen-based workplaces. The pendant light provides flicker-free lighting for healthy, fatigue-free work in every space.

In addition to variants equipped with a presence detector, versions of the pendant light are also available for a simple 230-V switching operation or with DALI electronic ballast. As with sensor-controlled lights, no additional accessories are required for installation as the electronic ballast is integrated at the factory. All versions are available in black or white and in light colours of 3000 or 4000 K. The luminous efficacy is, depending on the light colour, 105 or 110 lm/W. ■

NEWSFLASH

PRANA+ OFFICE FLOOR LIGHT
IMPRESSIVE IN THE DURABILITY TEST

The PRANA+ has already won a whole host of design awards. Now the light has been placed under the microscope for the first time by a renowned office trade magazine. Sebastian Klöß, editor of »Das Büro« (The Office), and his colleagues subjected the light to a durability test and assessed it in terms of operation, design, performance, price/performance ratio and overall impression in particular. The positive test result: »The PRANA+ was impressive in the office.« The testers particularly liked the intuitive touch panel with easy-to-understand symbols, the integrated presence and light sensors – and, of course, the pleasant light that the SymbiLogic technology provided during their day-to-day work. ■

THE PRANA+ BASE
OUR LATEST PATENT

Product designers often have to tackle a wide range of challenges. Sometimes it is a particular material and a special manufacturing process, other times the need for a new creative design. With the PRANA+ Office Floor Light, both played a role, and there was also a crucial issue to consider. Floor lamps usually have a heavy base. This is necessary because otherwise the lights would not be stable and would easily fall over. But what to do if the desk has floor-level side edges and the base is always in the way? The intelligent solution: Develop a two-part, separable base that can be seamlessly integrated and is also supported by the weight of the desk. Successfully patented by the European Patent Office since 03/01/2018! This is PRANA+. ESY! ■

▲ ***One base for every situation.*** *Always stable and a perfect fit: available in either the standard design or as a separable, patented variant for desks with floor-level edges.*

COMPETENCE CENTRE
OPENED IN AHRENSBURG

Biologically effective light, the planning of presence-dependent automation or the programming of a KNX system – many topics in the ESYLUX world require solid expertise not just from our employees, but also from our customers. To create a suitable environment for this, we have set up a dedicated competence centre at the Ahrensburg site with seminar rooms that are ideal not only for presentations, but also for informative talks.

In order to demonstrate the possibilities of our intelligent automation and lighting solutions in an especially clear manner, a large selection of our products has been installed in the room or is easily accessible in cupboard drawers. Likewise, intelligent ESYLUX lighting solutions are used as lighting in both rooms – be it the PRANA+ Office Floor Light or an ELC lighting system with luminiares of the CELINE series. »This enables us to show our guests the many possibilities of automatic or manual control in the best possible way,« explains Marcus Pabsch, Head of Product Management at ESYLUX. ■

TOUCHPOINTS

BELEKTRO | 06–08/11/18
Berlin | Germany

GET NORD | 22–24/11/18
Hamburg | Germany

ELTEC | 09–11/01/19
Nuremberg | Germany

ELEKTROTECHNIK | 13–15/02/19
Dortmund | Germany

ELTEFA | 20–22/03/19
Stuttgart | Germany

ELFACK | 07–10/05/19
Gothenburg | Sweden

This is an excerpt from our list of exhibitions and events. Visit our website for more information and to find out when you can meet us in person.

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PERFORMANCE FOR SIMPLICITY

ESYLUX develops, manufactures and sells intelligent automation and lighting solutions for improved quality of life and energy efficiency in office buildings, educational institutions and health care facilities. People's requirements and needs are central to what we do. To satisfy these requirements, we use our experience in electronics and automation to develop products such as LED-based systems for energy-efficient, Biologically effective lighting. Our perspective ranges from the complete automation and illumination of individual rooms through to networking and integration into building-wide systems. In light of the often complex requirements that we are faced with, we place particular importance on easy operation of our product solutions.

We work with wholesalers, installers, electrical planners, lighting planners and architects as both customers and partners who place their trust in our extensive market experience dating back 50 years and in the personal technical advice from our experts. Furthermore, we meet the highest quality standards in our research, development and production at our German location in Ahrensburg. Our sales organisation is global: ESYLUX operates in collaboration with experienced trading partners and is represented by numerous subsidiaries in Europe, Asia and Oceania.

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