Das gute Licht
01 | 2019

Cover story
Light in the Wiesbaden CongressCenter

References
The Porter Building and STUDIO LINE
Pendant luminaires in a large space

Know-how
Smart lighting in public spaces
Façade lighting – a comparison
Façade lighting – a comparison

RheinMain CongressCenter in Wiesbaden

Intelligent space lighting with modular light building elements

Façade lighting – a comparison

STUDIO LINE - The Porter Building
Dear reader,

In our exciting and ground-breaking times of rapid technological development, I am proud to present our new BEGA customer magazine, “Das gute Licht”. The magazine is a follow-up to our popular BEGA information brochure. It will allow us to take you one step further on the road of networking ideas – with a lot more detail. I hope the articles included here will pique your interest in BEGA and the fascinating world of smart lighting.

Unique luminaires for outside and inside spaces – developed, manufactured and produced by BEGA. And all that with a passion that encompasses target-oriented ideas and actions to the benefit of our customers. An important consideration is the zeitgeist of our times – but that doesn’t mean that we could ever abandon our vision in favour of short-lived trends: uncomplicated design, reliable, proprietary technology and a harmonious coordination of all components – that is and will always be our understanding of unbeatable quality.

Each new edition of this magazine will be another invitation for you to experience the world of BEGA. Life isn’t getting smart – it has already become smart. Light has a future. Our expertise will help develop tomorrow’s solutions. As a manufacturer of high-quality and long-life luminaires, we see it as our responsibility to take the lead in bringing about an exciting transformation that will result from the use of new technologies and market expectations.

Our experience and our know-how are our core capital. New products within this organically grown and reliable structure have the advantage of being born from the unrivalled passion for innovation that characterises each and every BEGA product.

The RheinMain CongressCenter in Wiesbaden is an impressive example of what a fully harmonised solution with various luminaires from our range can look like. The imposing structure and the light we provide form a symbiotic whole based on our impeccable BEGA products: they blend in with the architecture and accentuate, rather than dominate.

Our new modular light building elements allow planners to respond to the many different requirements of public spaces and paths. We present to you the versatility of this luminaire and its various components. Our modular system combines smart lighting with today’s many other requirements for public spaces, like WiFi, camera surveillance, or visitor information via PA systems.

Our BEGA luminaire technology presentation elaborates on the many possibilities posed by a variety of new luminaires for façade illumination.

We are very proud of the fact that our STUDIO LINE series was chosen for the Porter Building in Slough, UK. After all, the philosophy of this certified building focuses on the well-being of each and every person employed there. The light we provide and our luminaire solution play their part in the overall success of the concept.

I hope you will enjoy reading this very first edition of our magazine! Yours,

Heinrich Gantenbrink
Creating an identity with character in the context of traditional architecture

The RheinMain CongressCenter in Wiesbaden A state-of-the-art complex in the immediate vicinity of a museum and several government buildings. Unique architecture – certified for sustainability.
Creating an identity with character in the context of traditional architecture
An event centre for 12,500 visitors with an architecture that welcomes daylight

How do you efficiently integrate an innovative event venue for up to 12,500 visitors into an organically grown city centre architectural theme? The RheinMain CongressCenter in the heart of Wiesbaden is the answer to this architectural and urban planning challenge. Top modern architecture – a mix of traditional elements and a modern construction style – fits in well in a city centre with great architectural tradition.

The architect, Ferdinand Heide, proposed much more than an impressive drawing with a sophisticated and transparent design that invites daylight in at every turn. The design integrates seamlessly into the urban surroundings of Hesse’s state capital with a façade that is reminiscent of the great structures of one of the oldest spa facilities in Europe. The tall colonnades around the RheinMain CongressCenter serve as a reminder of some of the style elements found in the Wiesbaden Kurhaus and the state theatre.

The increasing importance Wiesbaden places on high-impact façades and their illumination at night is documented by the outward reflection of the structure, segmentation and materials used in the interior.

One key factor in the integration of the complex with the immediate urban neighbourhood of the Wiesbaden Museum and two ministerial complexes of the state is the separation into two distinctive parts by way of a public passageway. It means that pedestrians don’t have to walk all the way around the centre to access the middle of the inner city. It additionally supports the core philosophy of the layout: the complex is not just an attraction for visitors – locals are invited to utilise the facility independent of scheduled events as well.

A total of 45 event rooms and daylight-flooded lobbies are integrated into the RheinMain CongressCenter, including a hall for up to 9,000 people and a second large room for 3,200 guests. Portable wall elements add to the flexibility of the facilities. A grandstand system with 3,000 seats in the large hall can be retracted into a holding space designed specifically for this purpose. Spacious access options allow simultaneous events – in the halls and in the other, smaller conference rooms – each with their own infrastructure.

Each one of these details is part of the ambitious goal of the planners: “harmoniously integrated into its immediate surroundings on the outside, and the most innovative conference and events centre in Germany on the inside.”

The CongressCenter benefits from underfloor heating via a heat pump. Peak loads are supplied via district heating from a biomass heat and power plant.

The electricity for the heat pump is generated via the photovoltaic system on the roof of the great hall.

The complex was awarded the pre-certificate in platinum of the German Sustainable Building Council (DGNB) three years before its official opening.
The high-end materials of the façade in warm shades of yellow and beige allow the RheinMain CongressCenter to seamlessly integrate into the existing Wiesbaden city centre with its great architectural tradition. Large green areas underline the transparency and permeability of the complex. *The materials of the congress centre are characterised by natural stone and fair-faced concrete with a natural stone aggregate finish, as well as the wood panelling of the hall interiors*, explains the lead architectural firm Ferdinand Heide. The supporting pillars of the metal and glass elements received a back-ventilated and thermally insulated stone cladding facing outward. The bases, columns and roof of the colonnades are made of prefabricated fair-faced concrete, which was given a natural stone look with relevant aggregates and a roughened finish. Accented lighting on the sophisticated façades keeps the focus on all the premium materials used – by day and by night. The clever interplay of the surfaces and colours with the illumination of this state-of-the-art structure has left an impression on the overall urban landscape of the state capital.
The layer principle

How do you integrate an innovative new construction like the RheinMain CongressCenter into the existing surroundings without interrupting the flow of the overall cityscape? The architectural firm Ferdinand Heide called their solution the “layer principle. Features of the adjoining public spaces – be it the forecourt of the complex or the park in its immediate vicinity – reappear in the colonnades of the CongressCenter and continue on into lobby areas and to the various event halls.”

BEGA light building elements are the perfect medium for underlining this architectural structure on the exterior and creating a transition between the new complex and the existing cityscape at night through illumination. They add structure to exterior spaces and follow the movement of people on public areas like the forecourt of the CongressCenter. The light building elements also mirror the stylistic idiom of the cubic columns in the colonnades and create a harmonious connection between the representative forecourt and the entrance area of the CongressCenter.

Did you know...

...Wiesbaden was built on the ruins of the Roman settlement “Aquae Mattiacorum” (first historical mention in 121 AD)? The name “Wisibada” first appeared around 830 AD. Today, Wiesbaden, and not the twice as large and probably much more renowned metropolitan city Frankfurt/ Main, is the capital of the German federal state of Hesse.
The look is unmistakeable. The certified design of BEGA luminaires is easily recognizable. They are great building details and become a harmonious part of a building’s architecture. The new, modular light building elements embody that same principle and offer the kind of versatility needed for tailor-made solutions in the public sphere.

BEGA’s smart lighting and state-of-the-art technology for public spaces can now be successfully combined. The structure and design of the light building element offer an opportunity to choose from multiple components and to equip the light building element on two sides. In our digitalised world, we see public WiFi hotspots including their commissioning service by our telecommunication partners and an integrated camera module for the identification of individuals, objects and vehicles as a basic requirement. The additionally configurable PA modules are an essential communication medium in inner cities.

Our various lighting modules for unshielded light, for path illumination or for the creation of light accents in the vicinity of the luminaire complete the innovative lighting technology all-rounder.

The configurator offered on the BEGA website is a useful tool for the creation of tailor-made lighting solutions with our modular light building elements.
Luminaires 1–4, 7

Outward facing:
- Three unshielded LED lighting modules for each luminaire
- One of the light building elements is equipped with a WiFi module (100 m free-field range)

Inward facing:
- One unshielded LED lighting module for each luminaire
- Recessed luminaires with asymmetrical flat beam light additionally illuminate the ground

Luminaires 5–6

Outward facing:
- Three unshielded LED lighting modules for each luminaire

Inward facing:
- Adjustable LED floodlights, supported by an unshielded LED lighting module illuminate the façade
- A camera module monitors the surroundings
- Additional recessed wall luminaires with asymmetrical flat beam light illuminate the ground

Practical implementation:
a future-oriented solution in a public space
A fascinating façade: the perfect luminaires

The look of a façade is the calling card of sophisticated architecture – the perfect luminaires are essential for staging cleverly designed exteriors at night.
Floor-level asymmetrical light for balanced façade illumination – four solutions

84 164
Drive-over in-ground luminaires
4800 lm · 54.0 W

Light
- Soft light distribution
- Illumination with great upward reach

Perception of the luminaire
- High-visibility, glare-free, linear light emission with a length of 1.50 m; optionally suitable as a continuous light band

Control system
- DALI controllable for illumination adjustment to suit the architectural conditions

Installation
- In-ground luminaires · pressure load 1000 kg
- The luminaires are installed inside a recessed housing on a foundation that absorbs the pressure load
- Installation interval between luminaires around 6 - 8 m

84 155
Drive-over in-ground luminaires
2929 lm · 30.0 W

Light
- Soft light distribution
- Slight, uniform upward luminance reduction

Perception of the luminaire
- Perceived as a glare-free light point in the ground

Control system
- DALI controllable for illumination adjustment to suit the architectural conditions

Installation
- In-ground luminaires · pressure load 2000 kg
- The luminaires can be installed in an installation housing or as a “floating” solution (e.g. in gravel, green areas, flower beds, paved areas).
- Installation interval between luminaires around 5 - 6 m
Excellent illumination up to a height of around 7-8 m

Wall clearance of the luminaire: 2 m

Excellent illumination up to a height of around 9-10 m

Wall clearance of the luminaire: 2 m

84 618
Drive-over in-ground luminaires
2100 lm · 27.5 W

Light
- Wide and soft light distribution
- Increased luminance in the lower part of the façade

Perception of the luminaire
- The light emission is directed solely at the surface to be illuminated and its individual light points are barely detectable with the human eye

Control system
- DALI controllable for illumination adjustment to suit the architectural conditions

Installation
- In-ground luminaires · pressure load 1000 kg
- The luminaires are installed inside a recessed housing on a foundation that absorbs the pressure load.
- Installation interval between luminaires around 8-9 m

84 174
LED on-ground luminaires
4300 lm · 34.0 W

Light
- Very wide and uniform light distribution
- Illumination with excellent upward reach

Perception of the luminaire
- The light emission is directed solely at the surface to be illuminated and its individual light points are barely detectable with the human eye

Control system
- DALI controllable for illumination adjustment to suit the architectural conditions

Installation
- On-ground luminaires
- The luminaires are installed on a foundation, an anchorage unit or a connection housing via a mounting plate.
- Installation interval between luminaires around 8-10 m
One of the most health-oriented office buildings in England

The Porter Building in Slough focuses specifically on the well-being of workers in their work places.
Excellent and comfortable illumination of the work place is proven to significantly improve performance.

Countless studies have shown that the well-being of employees in their workplace is very important: a positive ambiance in the work environment impacts significantly on productivity. The Porter Building is located in Slough, Greater London, and was designed and built to specifically benefit the people working in the complex – physically as well as mentally.

The Porter Building maximises the well-being of workers with plenty of natural light, fresh air, filtered drinking water, indoor plants, noise reduction measures and interior office layouts that promote movement in the workplace. None of the workplaces is more than nine metres away from a window.

The lighting systems – including some BEGA solutions – comply with best practice standards for glare suppression and ensure excellent visual comfort.

All these efforts are done in support of the planner’s unique approach: optimised illumination alone can improve work performance by up to 18 percent.

The complex in Slough is Britain’s first office structure to receive a certification by the International WELL Building Institute as one of the healthiest office buildings in the country.

WELL is recognised as an important benchmark for ecological architecture and for planners who focus on building features that improve the health and well-being of workers at these facilities.

First WELL-certified building in the UK
The performance-based system for the measurement, certification and monitoring of building features is based on empirical scientific studies and their analyses, which document the impact of health and well-being on facility users. The standard is the result of many years of scientific, medical and architectural research in the US and is increasingly recognised in Europe as well.

More than 10,000 square metres of office space on six floors

The lobby and seating areas in the entrance of the six storey Porter Building with a total of 10,000 square metres of office space is equipped with BEGA pendant luminaires from the STUDIO LINE series. Their highly effective glare suppression complies with the standard set for the complex.

Their velvet black metal shields and metallic interior colour create a sophisticated lighting ambiance that reflects the feel-good atmosphere of the entire complex as you enter the lobby. Shielded to the outside, the light of these pendant luminaires is directed downwards inside the luminaire housing to ensure excellent visual comfort. The colour temperature of the light (3000 or 4000 Kelvin) is inviting and underlines the representative value of these stylish luminaires.

The rooms with high ceilings and generous window fronts ensure a maximum of natural daylight and offer a perfect backdrop for the elegant luminaires, which are visual highlights for arriving workers and visitors. They also fulfill the requirement for using only a select range of materials. Feeling good – the lighting concept at the Porter Building is an essential part of that maxim.

Cooperation partners: Landid and Brockton Capital, London
Architecture: TP Bennett, London
Lighting design: Light Bureau, London
Photography: Hufton + Crow, Herts
Project Consultant: Onlite UK, Burnham
BEGA Plug & Play

BEGA Plug & Play is the smart LED light system for your garden illumination – it is incredibly easy to install and control. Place the portable luminaires in your garden – the system is set up using the free BEGA Smart smartphone app.