

3000 NIMBUS LED LUMINAIRES FOR UNILEVER – NEW CORPORATE HEADQUARTERS WITH EXEMPLARY ENERGY CONCEPT



Unilever's new corporate headquarters (Behnisch Architekten, Stuttgart) in Hamburg's HafenCity sets standards with a unique energy concept. **Light is the building's central component:** on 35,000 square metres, extremely energy-efficient LED luminaires from Nimbus shine on six levels.

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>> Profile: Dietrich Brennenstuhl, managing director of the Nimbus Group; Dr. Uwe Slabke, development manager of the Nimbus Group; Martin Haas, partner in Behnisch Architekten, Stuttgart; Michael von Rudloff, managing director of Unilever.

3000 NIMBUS LED LUMINAIRES FOR UNILEVER – NEW CORPORATE HEADQUARTERS WITH EXEMPLARY ENERGY CONCEPT

Unilever's new corporate headquarters (Behnisch Architekten, Stuttgart) in Hamburg's HafenCity sets standards with a unique energy concept. The building's central component is light. **On 35,000 square metres, extremely energy-efficient LED luminaires from Nimbus shine on six levels.** The decision to adopt this innovative concept enables Unilever to save several hundreds of thousands of euros every year. Says Nimbus managing director Dietrich Brennenstuhl: „There is no future alternative to the LED.“ At only nine months, the time needed for development of the complex LED lighting concept was extremely short.

Hamburg HafenCity, Strandkai 1 – the best address in Hamburg that you can imagine: directly on the river Elbe, right in the middle of the HafenCity project of the century, the cruise terminal and the river promenade only a few steps away, and Hamburg's harbour just opposite. The Unilever Deutschland corporation has settled in this sensational location with its new corporate headquarters. But not only the location is unique. The building designed by Behnisch Architekten, Stuttgart, Germany, also sets standards in every respect. The six levels embrace the heart of the building: the spacious atrium flooded in daylight, which invites passengers on the ground-floor level to stroll and while away some time in the shops, the cafe and the restaurant. At the same time, it is the central place for an exchange among the almost 1,200 employees of Unilever. Light, openness and transparency characterise the work areas, and linking elements such as staircases, bridges and ramps enable spontaneous and inspiring communication.

The central elements of the building are ecological aspects and primarily **the energy concept**. The architects of the new Unilever headquarters, Behnisch Architekten from Stuttgart, had already received the „BEX 2009

International Award“ in the „Outstanding Contribution to the Built Environment of Hamburg“ category for the consistent implementation of holistic, sustainable architecture in Unilever’s headquarters. The factor of lighting plays the central role. **„Worldwide, it is the largest building to exclusively feature general LED lighting and it can therefore be described as being extremely energy-saving“**, says Harry Brouwer, chairman of the board of Unilever Germany, Austria and Switzerland.

The Stuttgart-based Nimbus Group is held to be the market leader in general LED lighting. With his team of engineers and designers, its founder and managing director Dietrich Brennenstuhl has already been working on the development of efficient LED lighting for more than ten years. The application spectrum ranges from the single-family house to the large-scale project. They have proven several times over that the **LED is capable of taking the place of all conventional light sources**. Michael von Rudloff, from the management of Unilever Deutschland, was also convinced. On the occasion of his visit to the Nimbus „Mock-Up“ exhibition and light simulation centre in Stuttgart, he received a vivid and convincing demonstration of the differences between conventional lighting and efficient LED luminaires, and was highly impressed. Thus, the original plans to equip only the workplaces with LED luminaires turned into a **large order for 3,000 series-produced and special luminaires** for function areas such as WCs, staircases and corridors. Nimbus is exclusively responsible for all the general lighting of Unilever’s new headquarters.

Climate change due to CO2 emission and increasing scarcity of resources are urgent challenges, and a sustainable technological and economic response to them must be found. Decision-makers in public administrations and also private consumers are increasingly coming to this conclusion, not least because rising energy costs are making themselves felt drastically in budgets. Says Nimbus managing director Dietrich Brennenstuhl: **„We are convinced that there is no alternative to LEDs in the medium term.“**

The characteristics of the LEDs themselves are already remarkable; however, it was only product development at Nimbus that opened peoples’ eyes to all the things that can be achieved on this basis. „Engineered design“ is the term used within the company. This describes the complex technology Nimbus has integrated into the LED series and which belongs to the most sophisticated lighting technology currently to be found on the market. In this connection, precise light guidance, thermal manage-

ment, direct and indirect light and also presence and daylight control are the essential key words. All these factors together make it possible to **cut electricity costs for lighting by up to 70 percent**. This can be demonstrated very lucidly with reference to the example of the „Office Air LED“ standard lamp for office workplaces, 1,400 of which were used in the Unilever building.

At Strandkai 1, the entire bandwidth of LED luminaires is now put to use, from the series-produced to the special luminaire. Until they had got that far, Nimbus itself had to invest maximum flexibility and efficiency. The reason for this is that they only had just less than nine months from the point of decision-making through design, planning, development of special luminaires – including the development of 13 different variants of the „Module R“ luminaire – to production and delivery on the site. The round Module R luminaire has now also been included in series production.

Over 1,400 Office Air LED luminaires now brighten up the workplaces of Unilever’s staff. The „Q modules“ create a bright atmosphere in the recreation and traffic areas. The LED light rings, which have a spectacular effect due to their diameters of up to 10m, shine in the atrium. These were developed by cooperation between Behnisch Architekten and Licht01. Nimbus was in charge of engineering and technical implementation, while Büro Werner Sobek was responsible for the structural calculation. „Although the use of LED luminaires signifies 20 to 30 percent **higher procurement costs, these pay for themselves** even after a short time thanks to their substantially lower operation and maintenance costs“, says Nimbus development manager Dr. Uwe Slabke as he explains the unique lighting and energy concept. Unilever recognised the signs of the times early on. Ecological responsibility pays off economically.

Hamburg, July 2009

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Figs. 1 and 2 Two „LED light rings“ attract all attention in the new Unilever building’s atrium. They consist of an 80 mm high aluminium load-bearing structure on which plastic honeycomb segments revolving towards the outside are fitted at top and bottom – transparent at the top and mat below. Between the honeycombs, LEDs are fitted on the full circumference of the load-bearing structure which radiate horizontally towards the outside. Dimensions of top ring: diameter 9045 mm, 1,680 LEDs. Bottom ring: diameter 7500 mm, 1,344 LEDs. From the segment joints, steel ropes run towards a central node, from where a further steel rope leads to the ceiling. Fig. 3 Nimbus was in charge of engineering and technical implementation of the LED light rings.

All photos: Sabine Vielmo, Hamburg



Fig. 1

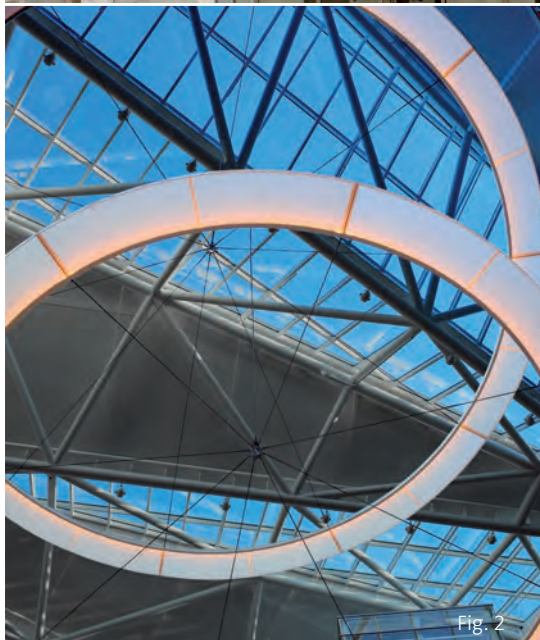


Fig. 2



Fig. 3

Figs. 4 and 5 Two „LED light rings“ attract all attention in the new Unilever building’s atrium. They consist of an 80 mm high aluminium load-bearing structure on which plastic honeycomb segments revolving towards the outside are fitted at top and bottom – transparent at the top and mat below. Between the honeycombs, LEDs are fitted on the full circumference of the load-bearing structure which radiate horizontally towards the outside. Dimensions of top ring: diameter 9045 mm, 1,680 LEDs. Bottom ring: diameter 7500 mm, 1,344 LEDs. From the segment joints, steel ropes run towards a central node, from where a further steel rope leads to the ceiling. Fig. 3 Nimbus was in charge of engineering and technical implementation of the LED light rings. .



Fig. 4



Fig. 5



Fig. 6

Fig. 7 There is no situation that could not be resolved with LED lighting. In corridors and other function rooms – catering areas, for example – use is made of the „Module L” pendant lamp. Dimensions: 1,290 x 300 x 60 mm; chrome-plated or silver anodised-finish aluminium; diffuser surface made of acrylic glass.

Figs. 8 and 9 Round LED pendant lamps from the „Module” series illuminate the conference rooms at Unilever. They unfold their entire charm when several of them are hung from the ceiling on thin steel cables (adjustable from 360-720 mm). Diameter: 60 mm. Fig. 10 In the canteen, the „Q modules” shine at two levels. Thanks to their high energy efficiency, it is



Fig. 7



Fig. 8



Fig. 9



Fig. 10

ABOUT THE NIMBUS GROUP

The Nimbus Group is an internationally oriented company with two established brands, Nimbus and Rosso, and a broad spectrum of sophisticated products for the contract bracket and residential buildings – successful for over twenty years and now operating from Stuttgart with around 100 employees.

The Nimbus brand stands for an extensive range of series-produced luminaires – based on LED.next technology. Within the scope of the Rosso brand, the company offers highly flexible shading and room divider systems with integrated acoustics solutions.

„Our products are energy-efficient, are produced with gentle use of resources and are long-lived – in one word: sustainable. For us, that is our claim and obligation in one“, says managing director Dietrich Brennenstuhl as he formulates the Nimbus Group’s corporate concept. Referred to LED product development, this means that, in future, new developments will be based solely on the LED.

Among others, cooperation partners in the academic and research world include the renowned Fraunhofer Institute. Nimbus has been a founding member of the German Sustainable Building Council (Deutsche Gesellschaft für Nachhaltiges Bauen DGNB) since 2007.

In July 2008, the company inaugurated an innovative lighting and acoustics laboratory that goes by the name of MOCK-UP. It boasts a generous 1,500 square metres of rooms for lighting and acoustics simulations, events and conferences.

Stuttgart, July 2009

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