Dear reader,

Finding sophisticated, efficient and lasting lighting solutions – those are the kinds of challenges we love to take on. Harmandir Sahib – the Golden Temple – is one of the holiest places for the Sikh in India – and it is illuminated with BEGA LED high-performance floodlights, which were developed specifically for operation in high ambient temperatures.

After all – one of the main focal points of what we do is to highlight architectural perfection with great lighting. Truly memorable structures can be the result of combining traditional elements with modern architectural design – for example the Anneliese Brost Music Forum Ruhr in Bochum, Germany. BEGA luminaires set the scene for the object, which brings together a repurposed church and new structures. The old church was remodelled and now acts as the foyer for the cultural centre.

We didn’t call our new LED downlights GENIUS for nothing. The optical systems made of very durable materials form the basis for truly ingenious lighting technology. The faultless interaction between our optical lenses made of silicone and the precisely dimensioned reflectors never ceases to fascinate even us – and we are experts in everything light.

A worldwide certification underlines the effectiveness and efficiency of our LED system bollards with drive-through protection. They are the perfect choice for high-traffic areas and buildings, and offer suitable protection against trucks with an overall weight up to 7.5 metric tons: our highly effective answer to heightened hazard potential.

Heinrich Johannes Gantenbrink
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Harmandir Sahib: The Golden Temple of the Sikhs

The history of the Harmandir Sahib – the most holy place of the Sikhs – is as turbulent as it is moving. Built in the 16th century in Amritsar, in the heart of the Indian province of Punjab, the Golden Temple is not just home to the original holy scriptures of the Sikhs. Harmandir Sahib became a place of sorrow and loss in the 1980s – a battleground, where many people lost their lives.
Following the proclamation of the state of Khalistan, Sikh extremists holed up inside the Golden Temple for two years. 400 troops and 2,000 Sikhs lost their lives when the Indian army stormed the temple in 1984. In response to these atrocities, Prime Minister Indira Gandhi was assassinated by her Sikh bodyguards a few months later.

Today, thousands of pilgrims – and not just Sikhs – visit the Golden Temple and its beautifully appointed palace grounds every day. The gates on all four sides of the temple signify the openness of the Sikhs with regards to all people and religions. The temple structure is illuminated by BEGA LED high-performance floodlights.
The Golden Temple stands on an island in Lake Amrit Sarovar, at the centre of the palace grounds in Amritsar. It is covered entirely with gold leaf and this unusual appearance makes it particularly breathtaking to look at.

The interior of the temple is cleaned with milk every day. Pilgrims are allowed to remain below the arcades and in adjacent spaces of the palace for a maximum of three days.

The illumination of this holiest of the Sikhs’ sites after sunset and throughout the night is the responsibility of BEGA LED high-performance floodlights. Emanating from the installation points at the four palace gates, their symmetrical, very narrow beam luminous intensity distribution and a luminaire luminous flux of over 18,000 lumen sets the stage for the incredible beauty of this impressive temple architecture.

The warm colour temperature of 2,200 Kelvin underlines the golden shine of the temple and its crenellations and decorative features, as well as the cupola dome, which was added as part of a palace extension in the early 19th century.
The LED high-performance floodlights used at the Golden Temple of Amritsar are designed specifically for operating in high ambient temperatures.

Our BEGA power supply units and the components that are relevant to the service life of the luminaires are developed and produced in Germany with very low quality tolerance. The exceptionally high quality of BEGA power supply units means that our LED high-performance floodlights achieve unrivalled performance characteristics.

One of the many distinguishing features of these products is their excellent thermal regulation. The basic idea: the thermal level is much more carefully balanced than in other commercially available power supply units – instead of a shut-down due to irregular operating conditions, continued operation is ensured with only minimal loss of light output.

Custom construction measures ensure optimal temperature conditions inside our LED high-performance floodlights.
Anneliese Brost Music Forum Ruhr

The Anneliese Brost Music Forum Ruhr is a beacon for the arts across the entire region. It is the home of the Bochum Symphony Orchestra, doubles as a music academy and also offers a multi-functional event space.

The architects office Bez + Kock, which had won the design bid for the Music Forum, had an impressive solution for the greatest planning challenge in the concept: integrating the de-consecrated neo-Gothic St. Mary’s Church. The nave of the old church is now flanked by two building tracts constructed with whitewashed brickwork with copper-edged window openings. Modern brickwork is cleverly interspersed with the darker stone of the former church.

The choir section is slightly in front of the new ensemble. The main entrance of the music forum is located there. The old nave has been re-purposed into the building’s foyer. Memories of the sacred structure: the largest of the four former bells of St. Mary’s sounds for concert breaks at the new complex – in a clear “B” for “Bochum.”

The eaves height of the old church is used as the measure for the roof edge of the annex that houses the large concert hall with 1,000 seats, which was significantly lowered in contrast to the original plans to meet that height. The stage and stalls are located in the basement of the new building.
Developer: Stiftung Bochumer Symphonie
Architect: Bez + Kock Architekten Generalplaner GmbH, Stuttgart
Electrical planning: GBI Gackstatter Beratende Ingenieure GmbH, Stuttgart
CUT GmbH, Ingenieurbüro für Licht, Medien, Design, Heidelberg
Electrical installation: R+S solutions GmbH, Radebeul
Linear lighting solution in the forecourt

The former St. Mary’s Church creates the connection between the two new wings of the Anneliese Brost Music Forum Ruhr. It provides the access to the cultural centre. Entrances to the music forum were integrated into both sides of the apse, the choir section of the church.

The beautiful forecourt, including the unusual entrance area and the architectural features of the new wings are illuminated with linear lighting solutions at dusk and during the night. BEGA LED in-ground luminaires illuminate the whitewashed brickwork of the music forum’s new wings. The contrast between the dark brickwork of the church and the white clinker walls is an eye-catching feature at night time.

The linear LED in-ground luminaires can be driven over by vehicles with pneumatic tyres. They are made of stainless steel and are mounted in a recessed housing on a foundation that absorbs the pressure loads.
The design of the forecourt of the Anneliese Brost Music Forum Ruhr underlines the architectural concept of this exceptional building ensemble. Linear lighting structures in the seating areas of the forecourt direct the gaze towards the choir section to emphasise the main entrance of the forum.

LED recessed wall luminaires with asymmetrical light distribution are used for this purpose. The cover frames and glass of these luminaires are positioned flush in one level without offset. They are available in various sizes and provide the most efficient solution for any lighting application.

Shallow installation depths and the BEGA mounting system ensure the simple and low-cost installation of these corrosion-proof stainless steel luminaires with high structural rigidity in solid and hollow installation locations.
Luminaires should fit in harmoniously as pleasant architectural highlights that perform their tasks for many years. Our light brick Lichtbaustein® is a shining classic and a great choice for beautiful lighting and areal design. It has been a BEGA trademark for more than 60 years and features an unmistakeable and highly recognisable design – now equipped with the latest LED technology, of course.

The attractively designed area around the stage entrance of the Anneliese Brost Music Forum Ruhr is the perfect stage for this ceiling and wall luminaire, whose trademark has become synonymous for all lighting solutions of this kind.

Light Brick – Lichtbaustein® – the shining classic for excellent lighting design
Light building elements for structured solutions

A wide, light-coloured pavement surrounds the unusual object of the Anneliese Brost Music Forum Ruhr on all sides. Vertical gaps between the individual wings create optical divisions between the functional areas.

Our light building elements – with optional symmetrical or asymmetrical flat beam light distribution – create architectural sub-divisions of the areas in front of the music forum and underline these visually. BEGA light building elements are luminous design tools that are perfectly suited for these types of public spaces. Their attention-drawing power is considerably greater than that of pole-top luminaires.

They are optionally available as WiFi light building elements. Freely accessible WiFi is in high demand in public spaces today and almost taken for granted in modern city spheres. We have designed and developed the new BEGA WiFi light building elements specifically for these requirements – BEGA luminaires combine light and WiFi options in one. The required planning and start-up service is provided by our telecommunications system partner “The Cloud Networks Germany GmbH”, which has positioned itself as an independent European market leader for public WiFi.

These BEGA light building elements can be combined with integrated LED floodlights to illuminate architectural details in the immediate vicinity of the luminaires.
Symmetrical Asymmetrical flat beam

Luminaires used: B8 067
Illumination for your balcony
Urban planning in Germany continues to push the envelope further and further. The construction of 375,400 new apartments was granted in 2016 – the highest number to date in the new millennium. The lion’s share of these permits is usually given to buildings with three or more apartments.

Balconies are the cleverest way to combine inside and outside space in modern living arrangements. It underlines the importance of extended living space. This emotional expansion of one’s own four walls has without a doubt become hugely important for us. The leisure time and feel-good value of a balcony can be bundled as one single requirement: it should be a matter of course to live closely in touch with the outdoors.

A good balcony design upgrades personal living space and the actual apartment building. Good lighting adds an air of exclusivity. BEGA luminaires will do all that. They integrate harmoniously into any façade and their state-of-the-art technology ensures a long service life.

Used individually or as part of a comprehensive illumination concept – a variety of products from various BEGA groups of luminaires are available for customised solutions: when used as recessed ceiling luminaires, downlights provide basic illumination for your balcony. Eye-catching light accents can be created with wall and ceiling luminaires. In-ground luminaires help orientation or highlight architectural features. An intelligent light control with BEGA Control rounds off the visual planning for the balcony.

Did you know ...

... the word balcony originates from the Germanic word “balko”, meaning “beam” in Old High German?

... balconies were initially a typical construction feature of rural farmhouses? In cities, balconies were not used until the 19th century, when city planners got a handle on the bad smells pervading the streets.

... until the late 1930s, balconies for living quarters were categorised as “decorative” (on the street front of the building) and “working” (on the rear of the building)? “Working” balconies were usually connected to the kitchen and reserved for outdoor tasks, e.g. for drying clothes.

... that it is quite rare for things to be assigned its own word creation simply for the well-being of people? The balcony and its value as a holiday replacement area has done just that – the Germans call that holiday destination “Balconia.”
In order to maximise efficiency, BEGA is increasingly using hybrid optics in technical indoor and outdoor luminaires. Luminaires with this optical system utilise the perfect interplay of precisely dimensioned reflectors with a pure aluminium surface and lenses made of ultra-clear silicone. In our GENIUS luminaires, virtually every beam of light from the LED module is captured by the hybrid optic and used for optimised light distribution. That is the biggest difference between GENIUS and conventional light distribution methods, in which a large part of the light passes through the luminaire without specific direction.

Our luminaires with this highly efficient, low-loss, glare-suppressed optic are available in various light distributions and with optional colour rendering index (CRI) > 90 or > 80.

Our GENIUS LED recessed ceiling downlights with hybrid optic are available now. The corresponding LED ceiling luminaires · downlights and LED pendant luminaires will be introduced in the new BEGA indoor luminaires catalogue 62 and presented for the first time at Light + Building in Frankfurt from 18 to 23 March 2018.
LED recessed ceiling downlights
for external On/Off or DALI power supply units

1010 - 3819 Lumen
ø 115 / 130 / 175 mm

LED recessed ceiling downlights
for external On/Off or DALI power supply units

1010 - 3819 Lumen
ø 140 / 155 / 200 mm

LED ceiling luminaires - Downlights
DALI controllable

995 - 3665 Lumen
ø 120 / 135 / 180 mm

LED pendant luminaires
with external On/Off or DALI power supply units

995 - 3665 Lumen
ø 120 / 135 / 180 mm
Increased safety with LED system bollards with drive-through protection

An effective answer to an increased hazard potential: vehicles with a total weight of 7.5 tonnes cannot break through BEGA drive-through protection bollards from our LED system bollards range even at speeds of 50 kph. High-traffic areas in inner cities, in front of buildings and on public squares can be effectively protected against vehicle access with our LED system bollard luminaires.

Crashtest-Service GmbH in Münster, Germany, is a certified testing authority for safety benchmarking of worldwide renown. Our drive-through protection was tested and certified for a 7.5 metric ton vehicle impacting at 50 kph.

The series of photographs above documents the crash test: BEGA LED system bollards stop a truck travelling at 50 kph without being torn out of its anchoring – the vehicle is immobilised by the collision.

The BEGA system bollard tubes with drive-through protection are installed on exactly calculated reinforced foundations and their interior consists of reinforced concrete.
BEGA provides the construction plans for the drive-through protection foundations, onto which the LED system bollards are then installed. Our luminaires with drive-through protection can then reliably withstand the tension forces of a vehicle impact.

The round drive-through protection bollard tubes with a diameter of 265 mm create an effective and certified protection against trucks with a total weight of up to 7.5 metric tons.

The drive-through protection-bollard tubes are also available in a square design with an edge length of 220 mm. They offer certified drive-through protection for passenger cars with a total weight of up to 1.5 metric tons.
We offer digital publications in five languages in the completely revised 2.0 version of BEGA Library.

Find out more about BEGA and learn interesting facts about lighting technology and illumination. The new version also includes a full text search function for all content and the option to mark individual publications as favourites.

All publications are also available offline. Content is added and revised continuously – any updated publications are automatically flagged in the app.