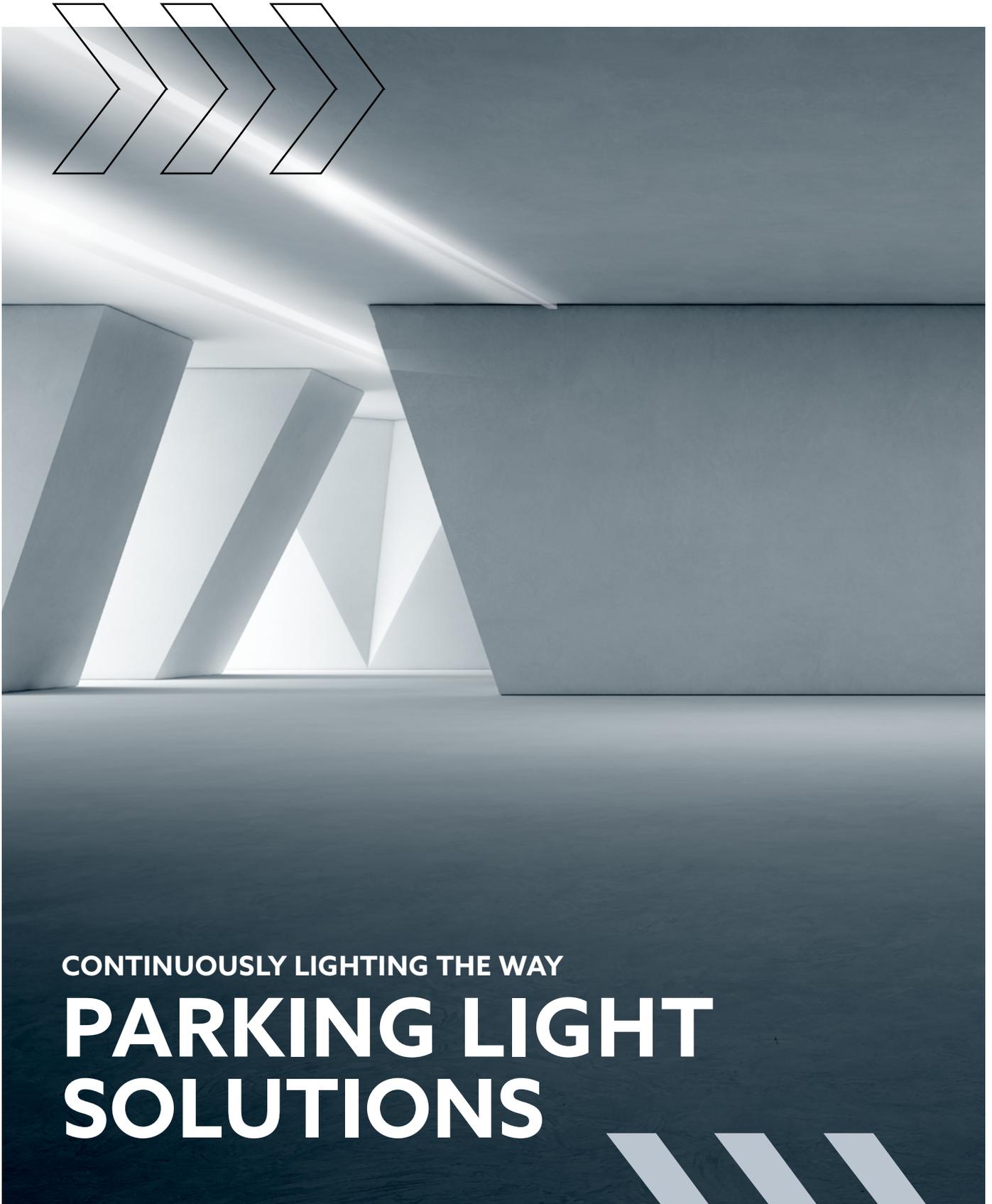


BILTON



CONTINUOUSLY LIGHTING THE WAY

**PARKING LIGHT
SOLUTIONS**

REQUIREMENTS

THE PROBLEM

Parking garages are an important part of the traffic infrastructure, the planning, operation and use of which must take both safety and ecological factors into account. Older lighting systems in existing, older parking garages, in a plethora of ways, can no longer be considered state of the art with regard to these factors, and lack the advantages offered by newer, advanced LED technology lighting systems.

DECISION CRITERIA

There are a number of factors which must be considered for creating an optimal lighting concept. This is why we recommend holding a first meeting and assessing the current situation with our experts on site. The findings gained from this assessment and meeting will then be used to create our individualised, tailored proposals.

PROJECT PARTICIPANTS

To be able to implement a project quickly and cost-effectively, the interests of all participants (owner, operator, electric fitter and planner) need to be taken into account. An optimal result is achieved when the lighting system meets the requirements in every respect.

OUR SOLUTIONS

POTENTIAL

Opting for BILTON's advanced lighting concept opens up great potential in several areas; regardless of whether you need a completely new installation or are looking to modernise an existing lighting system.



»»» **COSTS**
Better lighting for lower costs as well as a long service life with less maintenance costs.



»»» **VERSATILITY**
The individual and flexible lighting system can be adapted to fit any structural layout. BILTON's modular system enables a simple and proper modification at a later point.



»»» **APPEARANCE**
Appealing, sleek design using continuous lines of light without dark spots. Functionality and appearance working in harmony.



»»» **CUSTOMER SATISFACTION**
Customers feel safe and secure and feel at ease using these parking garages. Lighting can also be used as an orientation aid in the parking garage.

REASONS FOR BUYING A NEW SYSTEM

Ecological and economical factors are not the only reasons for upgrading or changing over to a new, advanced BILTON lighting system. There are three decisive factors that serve as arguments to choose the advanced BILTON LED lighting system:

»»» **TCO - TOTAL COST OF OWNERSHIP**
// Plausible investment costs
// Simple assembly and installation
// Reduced energy consumption
// Long service life
// Reduced maintenance requirements and costs

»»» **ECOLOGICAL**
// Reduced energy consumption
// Long service life
// High number of operating hours possible
// Lighting scenarios with dimmed areas as well as areas with lighting which can be switched on or off, are possible

»»» **OPTIMAL LIGHTING**
// Improved feeling of safety and security
// Better orientation and driving safety through illumination
// Efficient 24-hour operation possible
// Modern design
// Environmentally-friendly lighting technology

THE BENEFITS FOR THE PROJECT PARTICIPANTS

When planning the lighting system, the interests of all project participants need to be equally considered in an overall concept which takes into account the various requirements and objectives of the different participants. Only then can an optimal result be achieved which meets the expectations of the owner, fitters, operator, facility manager and users. BILTON offers a lighting system that gives an answer to every requirement and every need.

OWNER
Owners usually consider the one-time investment costs to be the most important element, and the optimal illumination of the parking garage is seen as a USP.

OPERATOR
Operators look for low operating costs, meaning that the energy consumption and maintenance costs of the lighting system are decisive.

FITTERS
A simple, intuitive and quick assembly and installation saves both time and costs, and helps eliminate possible sources of errors.

FACILITY MANAGER
The lower the need for maintenance, the more cost-effective the system's operation.

USERS
A parking garage should convey a sense of safety to the users and make them feel at ease when using it.

BILTON LIGHTING SOLUTIONS

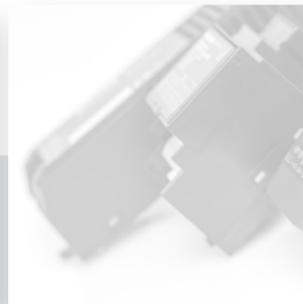
BILTON has developed its LED lighting system on the basis of a construction kit, which enables the system to be adapted to meet the special requirements of any parking garage. The individual components all work in concert and are designed to fit one another in terms of the thermal, lighting, optical and geometric properties. This light construction kit is constantly being expanded to ensure an optimal result of your project.

- »»» **FLEXIBLY ADAPTABLE LIGHTS**
Flexible in terms of length, colour, luminous flux, beam and dispersion characteristics and much more.
- »»» **INDIVIDUAL**
The versatile BILTON lighting system, with its countless variations, can be adapted to any project.
- »»» **WELL THOUGHT-OUT ASSEMBLY AND INSTALLATION OPTIONS**
Thanks to the limitless flexibility in its length and with the BILTON Smart Core, the lighting systems can easily fit any structural layout.
- »»» **FAIL-SAFE**
The BILTON lighting system uses two separate, independent lines of light running in parallel to each other. This significantly improves the failure safety of the lights.

BILTON TECHNICAL KNOW HOW

Realising the perfect solution for every project takes more than just the seamlessly harmonised lighting components, it also requires the technical know-how offered by BILTON. Only with this know-how is it possible to design tailor-made lighting concepts using the light construction kit.

- »»» **CUSTOMISED SOLUTIONS**
Depending on the customer, the colour temperature can be adapted to anywhere between 3,000 (warm white) to 6,500 (cold white) Kelvin.
- »»» **INTERPLAY OF LIGHT AND ENVIRONMENT**
All factors that could have an influence on the lighting measures (asphalt floors, bright walls,...) are taken into consideration for the lighting calculations.
- »»» **ANTI-GLARE MEASURES**
There are various ways to implement anti-glare measures. BILTON develops the perfect system for every project in cooperation with the customer.
- »»» **SLEEK DESIGN**
The sleek design of the lighting system complements the light and lets it take centre stage rather than pushing itself to the forefront.
- »»» **COMPLIANCE WITH APPLICABLE STANDARDS**
Standard-compliant and attractive lighting for the entire area.



LINEAR LED-MODULES

- // The flexible LED modules in the protection class IP20 and IPX6 produced by BILTON are integrated into the construction kit.
- // Different luminous flux packages and light colours as well as high energy efficiency.

LUMINAIRE DESIGN

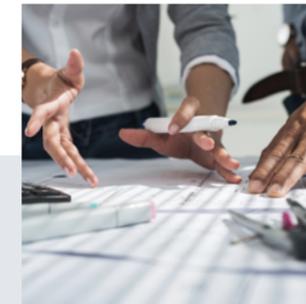
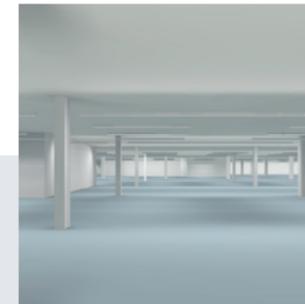
- // The covers for the luminaires are available in a variety of different versions; for example, wide-angled, anti-glare, asymmetrical.
- // The luminaires are made of an extruded slim profile.
- // Available as a ceiling-mounted, but also hanging version.

LIGHT MANAGEMENT

- // BILTON only uses high-quality components for controlling the LED light bands.
- // All interfaces used in practice can be operated.

SMART CORE

- // The BILTON smart core is a circuit board developed in-house at BILTON with integrated LED chips and strain relief.
- // Using BILTON Smart Core for the central power supply enables long line lengths to be used without dark spots forming.



ANALYSIS OF THE SURROUNDINGS

- // The conditions on site (floors, walls, height, size...) have an impact on the choice of lighting measures.
- // We recommend using ceiling-mounted lighting for structures with a low ceiling.
- // On-site visits can give a clear idea of the right lighting.

ANTI-GLARE ANALYSIS

- // Avoiding a glare effect from the lighting requires special measures: anti-glare grilles, covers or edge.
- // The right distribution of the light sources is vital for a glare-free illumination of the driving route and an even illumination of the parking spaces.

CUSTOMISED

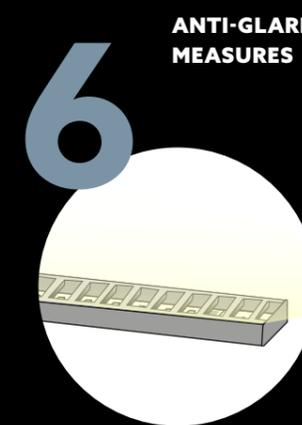
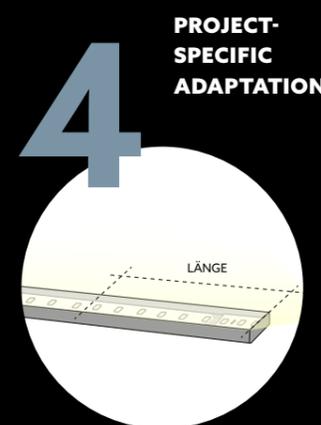
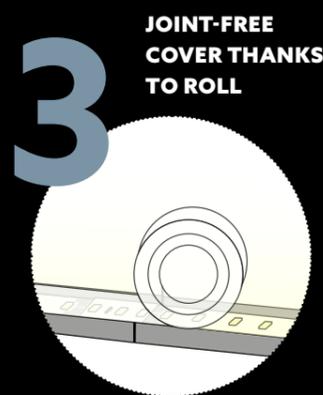
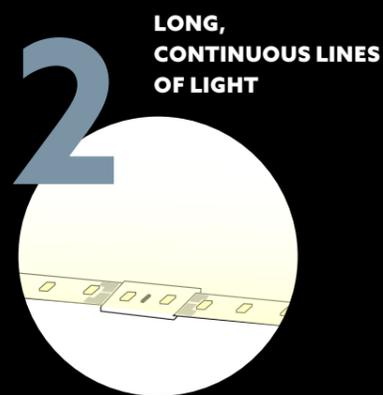
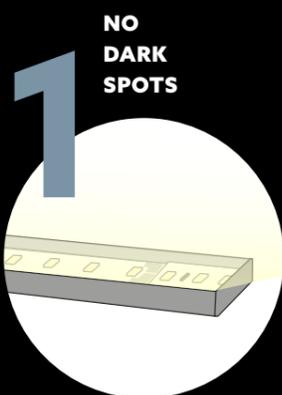
- // Individual configuration of the flexible length of the lighting system.
- // Colour temperature from 3,000 to 6,500 Kelvin.
- // Sleek and slim luminaires with anti-glare grilles seamlessly become part of their surroundings

LIGHTING SCENARIOS

- // Movement and daylight sensors for switching the system on or off automatically.
- // Dimming for an energy-efficient control of the lighting system.

UNITES FUNCTIONALITY AND DESIGN

The BILTON light construction kit elevates BILTON high above the competition. The LED modules produced in BILTON's own production facilities, the perfectly matching profiles, the possibilities offered by the BILTON Smart Core system and the laying of the cover right from the roll, ensure that long, continuous lines of light can be realised without the formation of dark spots.



UNITES TECHNOLOGY WITH KNOWLEDGE

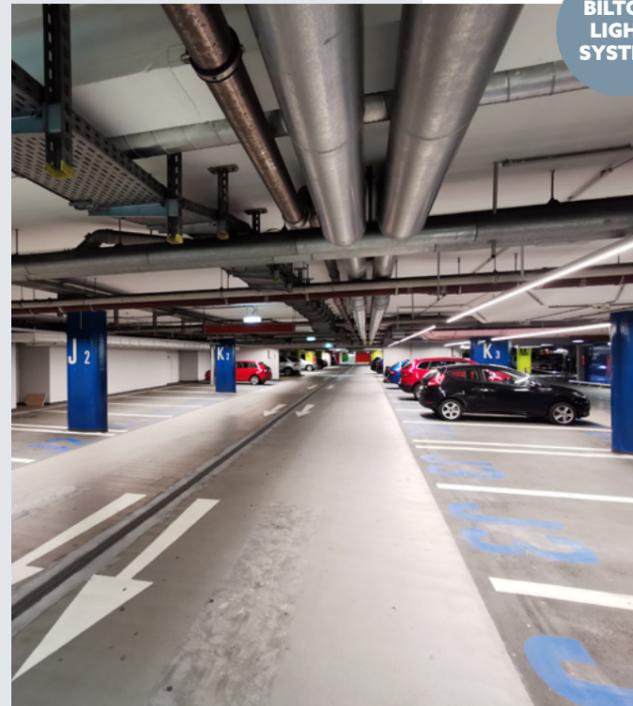
As a specialised company, BILTON focusses its entire know-how on linear LED lighting, and it is precisely this specialisation that allows BILTON to always develop individualised solutions for every customer. In this way, the LED specialist can design the lighting components so that they fit the individual solution in the best way possible.

BEFORE

AFTER



BILTON LIGHT SYSTEM



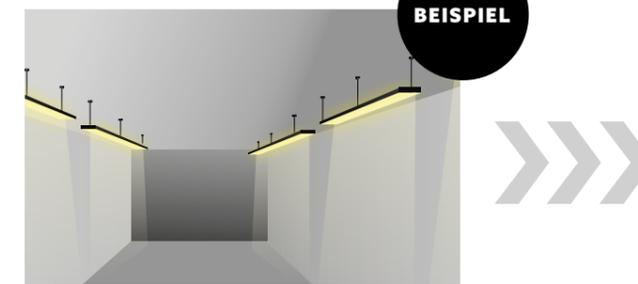
BILTON LIGHT SYSTEM

BILTON OFFERS FLEXIBLE LED LIGHTING SOLUTIONS

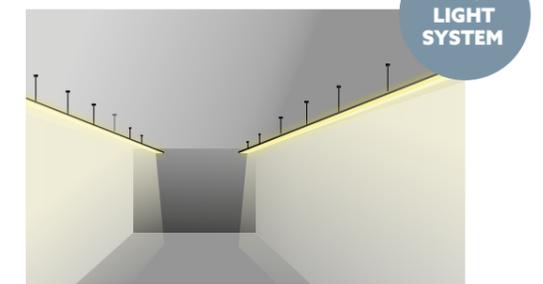
The entire BILTON LED lighting system was developed according to the light construction kit principle. The BILTON light construction kit enables different LED lighting components to be combined to create a cohesive, continuous and homogenous LED lighting system. The luminaires can be configured individually in terms of their

colour, length, intensity and beam characteristics. The luminous flux of the individual luminaires can be dimmed using movement and daylight sensors and PWM components. This enables the creation of lighting scenarios which provide significant savings in terms of energy consumption and costs.

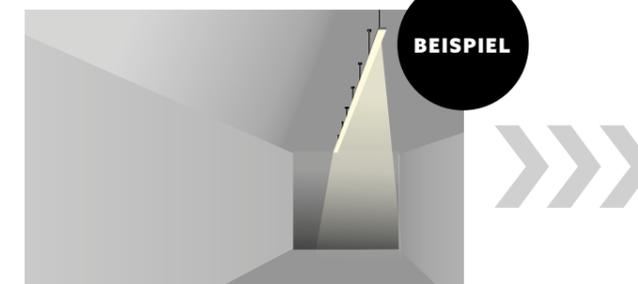
INDIVIDUAL LUMINAIRES



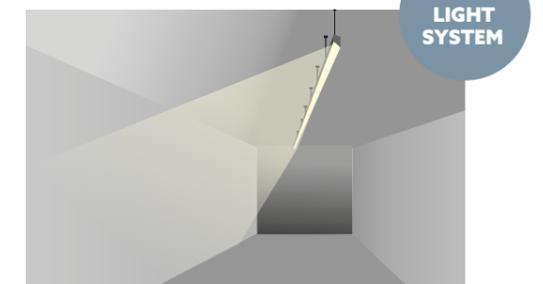
CONTINUOUS LINES OF LIGHT



NO WALL ILLUMINATION



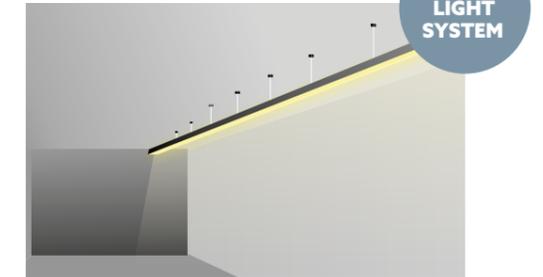
DIRECT WALL ILLUMINATION



DARK SPOT CREATED BY A CONNECTION POINT



CONTINUOUS LINE OF LIGHT WITH CENTRAL POWER SUPPLY

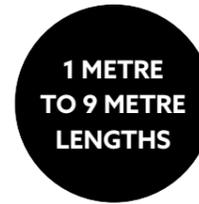


YOUR BENEFITS

FROM INDIVIDUALISED LED LIGHTING

BILTON develops and manufactures its products in Austria, ensuring a highly efficient design and production of our luminaires with low operational costs. All our luminaires emit a continuous, homogenous light without any dark spots. In the same way, the system features unrivalled failure safety thanks to two redundant

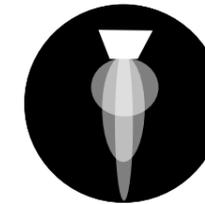
LED bands in the luminaire. The structure of the lighting system is based on the BILTON light construction kit, giving our customers complete freedom in choosing whatever colour, length, beam angle and mounting material they wish.



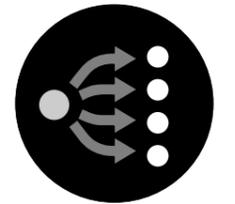
FLEXIBLE LENGTHS



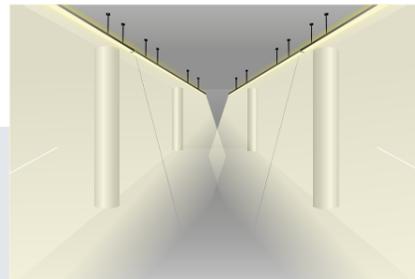
FLEXIBLE LIGHT COLOURS



OPTIMISED BEAM CHARACTERISTICS



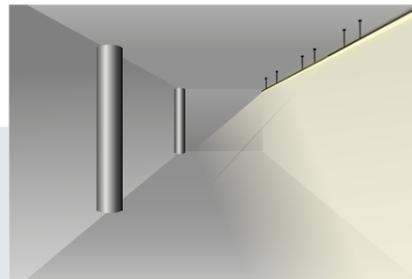
FLEXIBLE LIGHTING SCENARIOS



ROUTE ILLUMINATION

The use of two LED modules arranged in parallel to one another and good anti-glare properties due to the special design of the luminaires, makes these luminaires ideal for route illumination in parking garages.

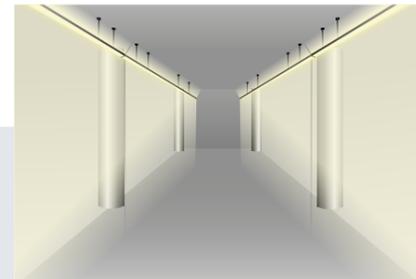
- // Two internal LED modules operated in parallel.
- // Flexible in terms of length and colour.
- // Also suitable for simultaneously lighting the parking spaces with anti-glare edge.
- // Anti-glare grille.



PARKING SPACE LIGHTING

Energy-efficient lighting for well-illuminated parking spaces.

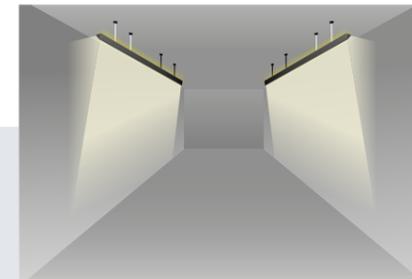
- // One LED module.
- // Flexible in terms of length and colour.
- // Ceiling-mounted lighting available as an option.



ACCENT LIGHTING

The light is emitted both towards the ground and towards the ceiling, making the luminaire particularly suited for accentuating the area around the exit of the parking garage.

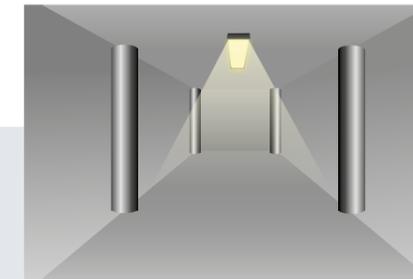
- // Different lighting properties upwards and downwards.
- // Flexible in terms of length and colour.



WALL LIGHTING

This luminaire is designed as a wall light (entrance area and connecting roads between the levels).

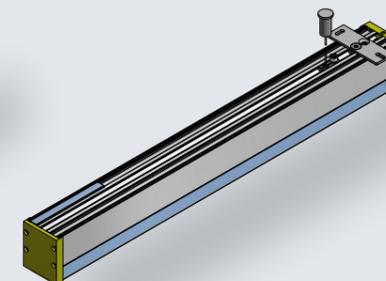
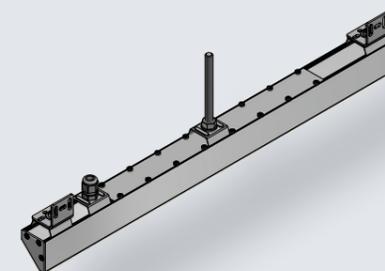
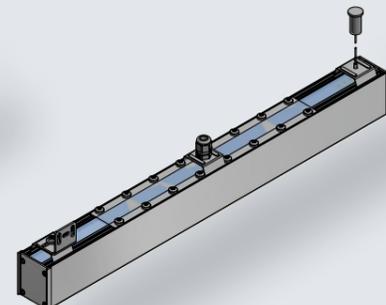
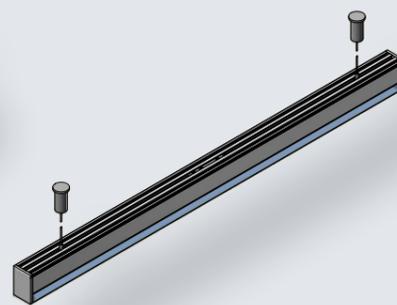
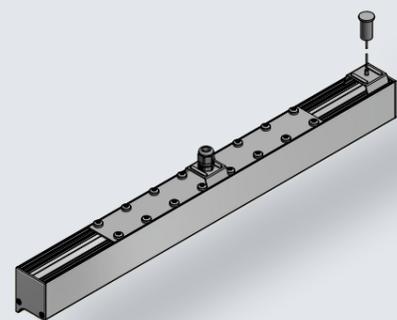
- // Two internal LED modules operated in parallel.
- // Lateral illumination.
- // Flexible in terms of length and colour.



STANDARD LUMINAIRE

LED luminaires with integrated LED converter.

- // 1:1 exchange of existing ceiling lighting possible.
- // Length 1.2 or 1.5 m.
- // Innovative push-in technology enables the installation of different control electronic systems (e.g. emergency light).
- // Available in two versions (ECO and PLUS)





- »» **BILTON LIGHTING SYSTEM**
Optimised luminaires for various applications in parking garages
- »» **FLEXIBLY ADAPTABLE LIGHTS**
Variable lengths, colours, luminous fluxes and various assembly and installation options
- »» **HIGH EFFICIENCY**
BILTON's lighting system is perfectly harmonised, ensuring the highest possible efficiency of the luminaires
- »» **FAILURE SAFETY**
Parallel-fitted LED bands with a service life of 100,000 operating hours
- »» **ATTRACTIVE DESIGN**
Homogenous and glare-free light, sleek and discreet luminaire
- »» **FLEXIBLE LIGHTING**
Customer-specific light scenarios are completely controllable
- »» **SUITABLE PROTECTION CLASS**
The BILTON lighting systems have a protection class of IP54

