

# Future **Sport & Event.**

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We take responsibility for your light – lighting technology designed and engineered in Germany.

Shape the future of sports and events.



# Quality of life

Sustainability Flexibility

### Prime time for hero origin stories.

Get right up close, see everything first hand and embrace the fascination of the moment. It's all about that one perfect image, the snapshot that endures for eternity.

When heroes are born and the event is transformed into a priceless experience. Peak performance is called for. The same goes for the lighting: Maximum visual comfort for athletes, supporters and spectators and perfect quality of light for broadcasting those magic moments across the globe.

SITECO stands for exceptional lighting technology.

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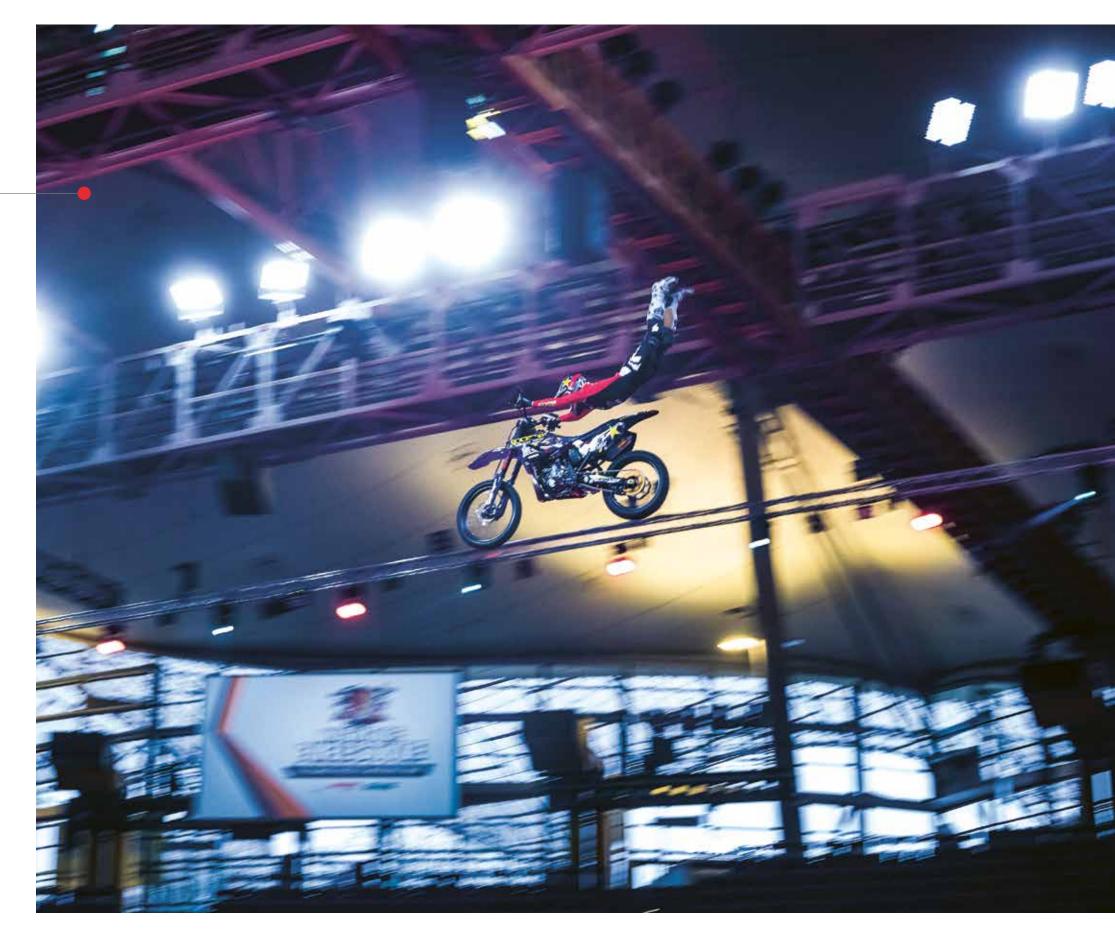
A new dimension of visual perception for spectators.

### Being there (and seeing perfectly) is everything.

For that truly magical moment and ultimate experience, everything has to be right: No distractions, maximum attention and complete focus on the performance.

The essential component is exceptional quality of light with super-high illuminances and maximum glare control. Spectators should enjoy a tremendous experience even from the farthest seats. Thanks to our full cut-off technology, the impossible becomes possible and glare is eliminated through precision targeting of light.

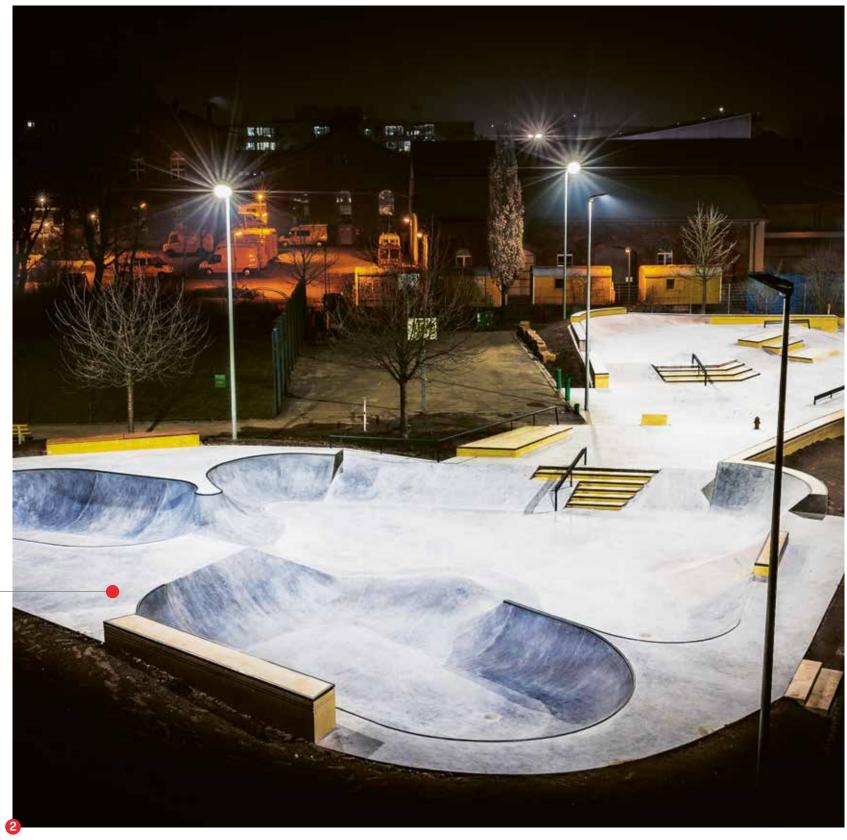
A cool business card: The Olympic Hall in Munich.



Project: Olympic Hall, Munich, Germany Product: Sirius<sup>®</sup>



More light, more safety, more HD action – in real time.



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1 + 2 Project: Skate park, Karlsruhe, Germany Product: Floodlight FL 20

### Lighting up the stunts: For more than just the goosebumps.

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Light is crucial for avoiding obstacles and taking risks. But light shouldn't be a distraction either.

SITECO technology makes uniquely directed light possible. Without spill light or light pollution. The light immission of our Sirius<sup>®</sup> high performance floodlight is only < 3 % with vertical orientation – and even as low as 0 % when horizontal. We only apply light where it is needed.

The lighting solution for the new skate park in Karlsruhe delights both residents and skate acrobats.

## Quality of life **Flexibility** Sustainability

### It doesn't matter what's booked for tomorrow.

First-class sporting events, legendary concerts and unforgettable moments. The flexibility of modern stadiums and event arenas is increasingly becoming a factor for competition and success. One of these factors is light that optimally showcases the event and at the same time provides the best possible viewing conditions for the spectators.

Light embedded in a flexible infrastructure with open standards. Ideal conditions for the future trends of the sports and media industry!

Spectacular variety – it's simple with intelligent lighting.



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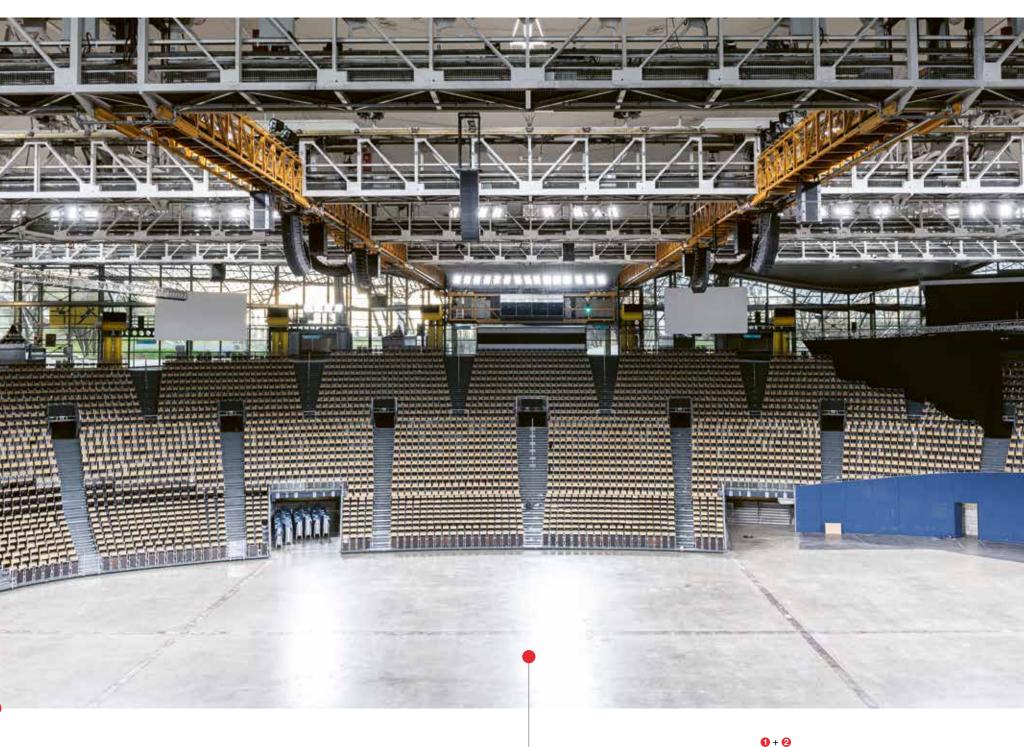
### Full power with a wow factor guarantee.

Modern multipurpose halls and multifunctional arenas work day and night. They need the best light for the show, players, spectators and broadcasters. Controllable at any time and from a single system – simply pure flexibility.

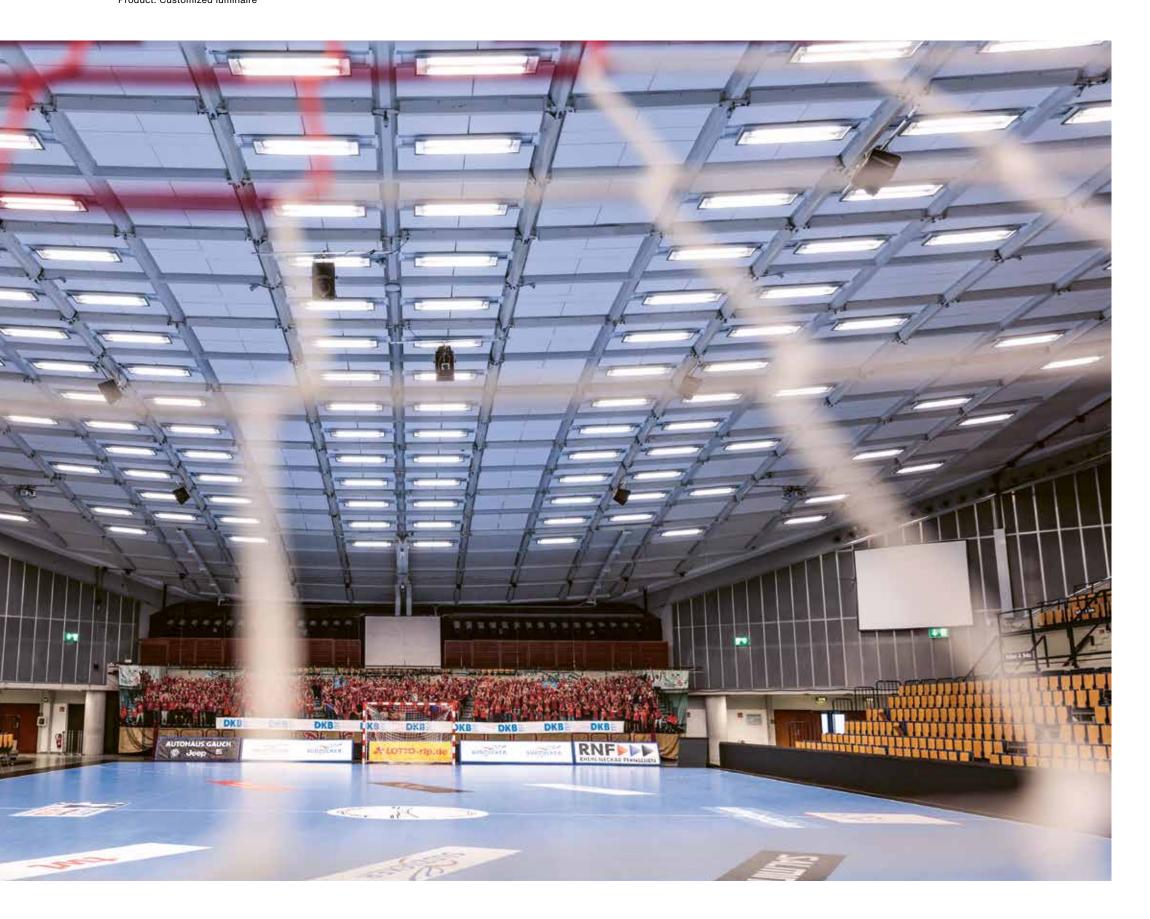
The new Sirius<sup>®</sup> LED high-power floodlight features this flexibility thanks to various lighting technologies and controllability with complete integration into the building management system. A globally unique feature to Sirius<sup>®</sup>: The light modules can be controlled individually. DMX show lighting with a genuine wow factor suddenly becomes possible with technical lighting. And if even more dynamic is required, SITECO is able to implement holistic event lighting solutions through its reliable partner network.

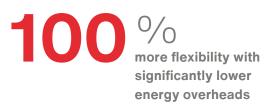
Thanks to outstanding color rendering and flicker-free light, Sirius<sup>®</sup> is already ideal for the emerging development of 8K broadcast standards.





Lighting technology from SITECO enables maximum flexibility in the application. Project: Olympic Hall, Munich, Germany Product: Sirius®





### From professional sports today to trade show tomorrow.

First division handball with TV transmission followed by a wedding convention. Such are the uses of today's multifunctional halls. To handle specific event requirements, these venues need flexible solutions incorporating adjustable color temperatures, dimming and control features.

SITECO offers the right lighting solution for any occasion: Bright 4000 K light for professional handball tournaments and warm 3000 K temperature light for festive occasions. Individually controlled via the building management system and completely flexible thanks to open standards.

The German city of Ludwigshafen simultaneously expanded its spectrum of events and reduced costs thanks to a globally unique SITECO solution.

## Quality of life Flexibility Sustainability

### Competitiveness is a high performance sport for the operator as well.

Conserving resources and delivering maximum results is the everyday business of mega-events. Sustainable concepts are a goal rather than an option – and are becoming a central factor for success in the competition to attract event organizers and visitors.

Lighting is an essential part of this. "Green events" therefore incorporate the use of efficient lighting.

### SITECO stands for intelligent sustainability.

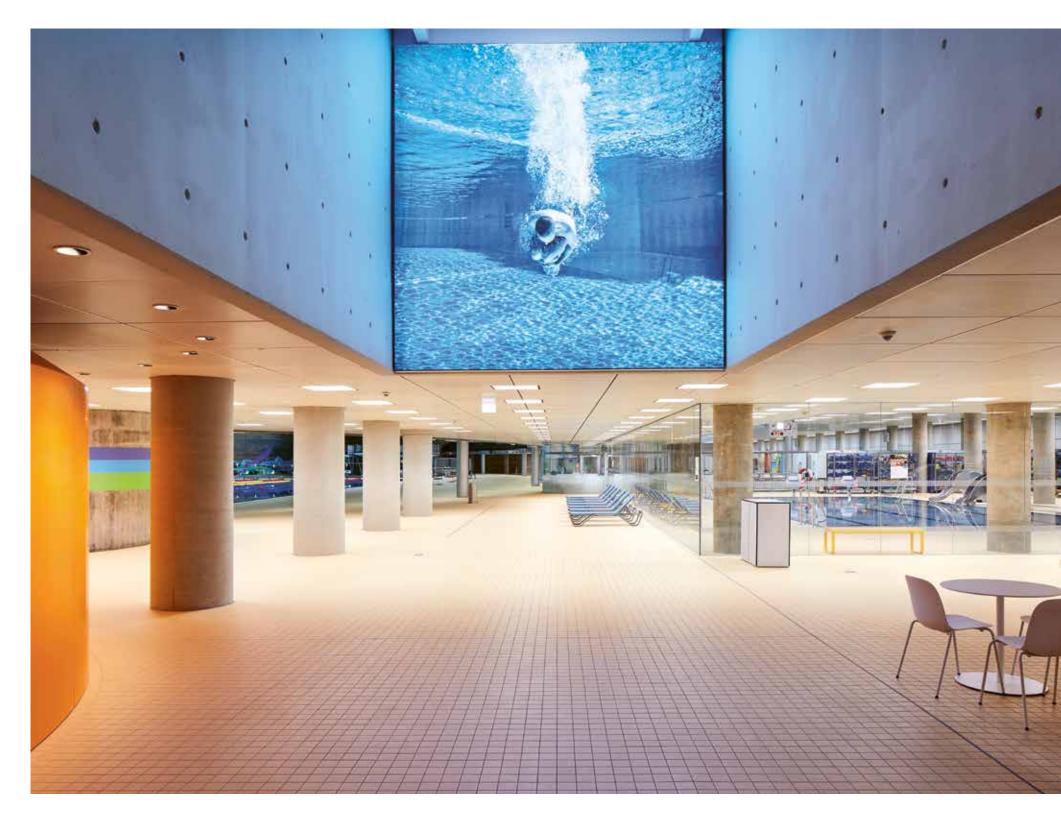
## Not just words, but significant $CO_2$ savings.

Light only when and where it is needed. For sports and events, this principle for lighting design must be used in combination with requirements of sustainability and cost efficiency.

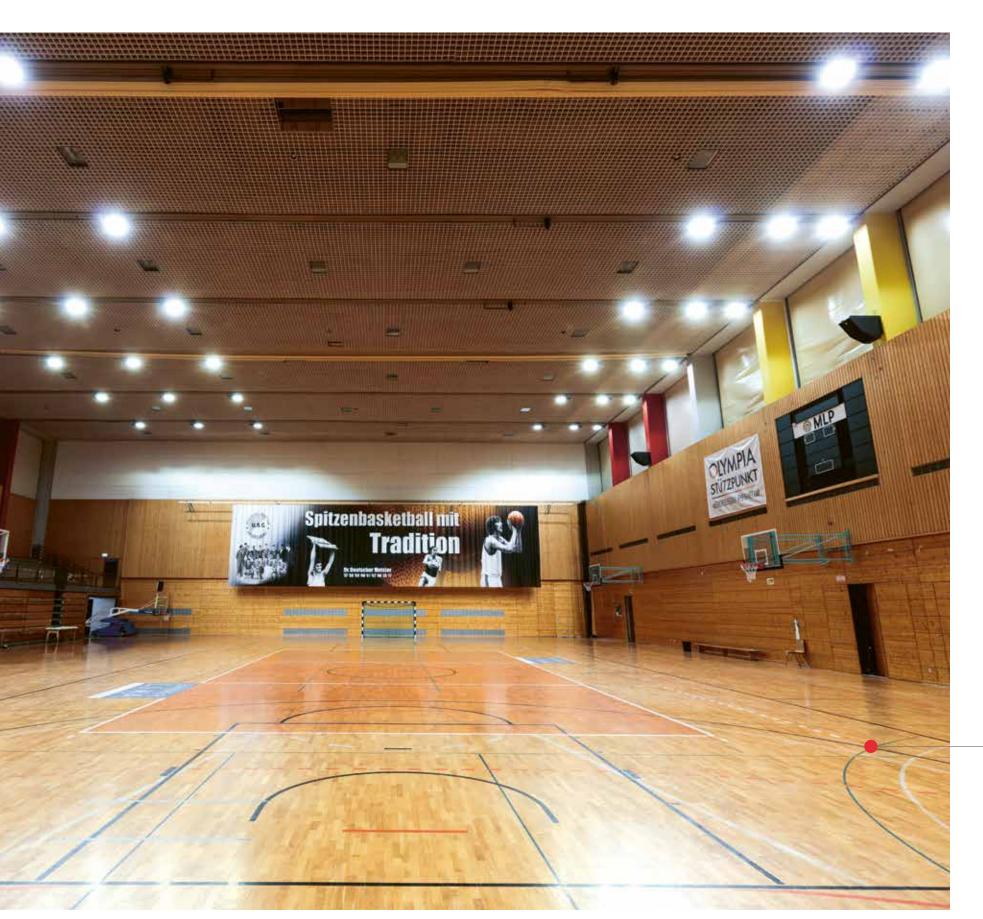
Our outstanding lighting technology reduces operating costs and  $CO_2$  emissions in many dimensions. Above all, through maximum photometric efficiency with up to 170 lm/W. The unique use of silver reflectors alone increases the efficiency by up to 11 %. In addition, the patented CLO 2.0 constant luminous flux technology saves up to 6 % in energy.

Project-specific special luminaires were developed for the Olympic Swimming Hall in Munich that function reliably even under the special conditions. At the same time, thanks to the Tunable White function, they simulate the course of daylight in the building and create a pleasant atmosphere. In every project, our advanced technologies ensure maximum efficiency – and up to





Project: Olympic Swimming Hall, Munich, Germany Product: Customized luminaire



## Discover unparalled reliability and minimum operating costs.

Our luminaires are designed and engineered in Germany. High grade components combine to create optimum lighting systems for stadium and event lighting. They incorporate extremely long service lives of up to 100,000 hours for minimum maintenance and clever mounting concepts for ultra-fast installation. Our Sirius® high-end solution incorporates CLO 2.0 to optimise energy use and to extend the lifetime of the LED module. The ideal foundation for plannable operating costs and low total cost of ownership (TCO) throughout the entire life cycle.

An Olympic training base such as Heidelberg is the epitome of continuous load and top sporting performance:

"SITECO is our partner for maximizing performance through technology."

Project: Olympic training base, Heidelberg, Germany Product: Floodlight FL 20

### If not now, then when.

Our specialists show you what's possible by analysing the specific conditions at your venue.

Hand in hand with architects, lighting designers and electrical contractors, we translate your functional and design requirements into your ideal technical solution - made tangible through state-of-the-art visualization.

SITECO enables all scales, from pilot projects to a big step.

Total cost of ownership (TCO) comparative calculation for payback period

Sirius® Conventional projector

Savings over **15 years** • 454,707€ • 1,027,800 kWh • 617 t CO<sub>2</sub>

> With 22 % higher illuminance

Time (years)

The SITECO audit provides complete transparency about the energy consumption and CO<sub>2</sub> emissions of your existing system.

Our lighting consultants design a solution that is based on your requirements and tailored to your needs.

The result: Clarity on your cost and energy savings potential, made completely transparent thanks to our detailed TCO comparison calculation.

## TCO

Sustainability

Luminaire type

0

1

System configuration Rated luminous flux [lm] Rated power (W)

Energy consumption Energy consumption /year lkWhil

Reduction in energy consumption Investment costs

Investment costs (€)

Energy costs

Energy costs over system service life [€] Energy cost saving

#### Maintenance costs

Maintenance costs over system service life [€] Maintenance cost savings

Total costs over system service life [4]

otal cost savin ayback time in years

O\_saving over system service life [1]

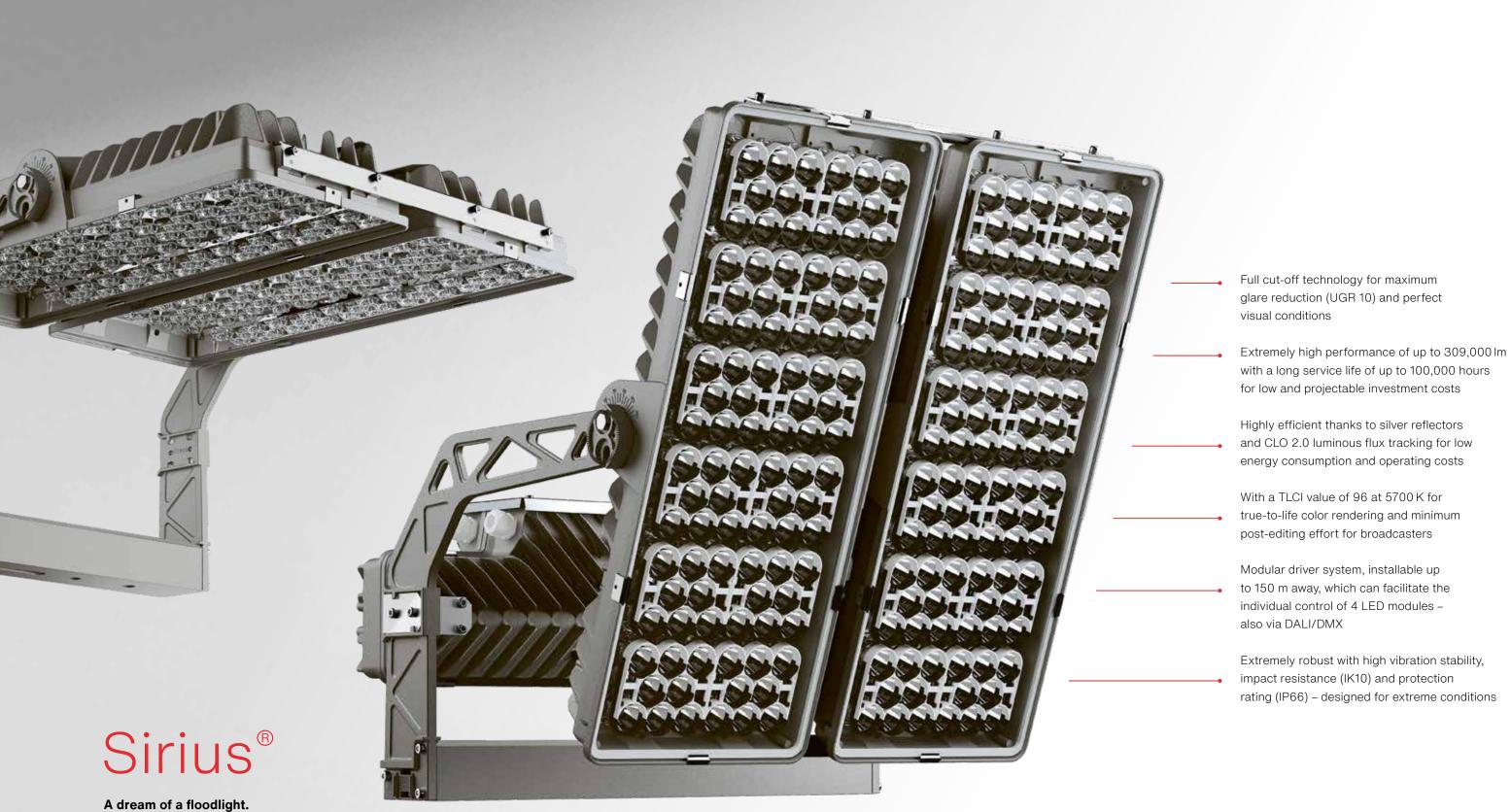


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### We admit it, we love lighting technology.

SITECO is a technology pioneer with more than 150 years of experience. CLO 2.0, full cut-off, freeform reflector technology with a globally unique silver coating process. We stand for more than 200 patented lighting technologies with diverse application options for you and your future. We also offer you holistic luminaire development from a single source – from the optics, mechanics and thermal design right up to the control electronics. The perfect integration of hardware and software designed and engineered in Germany.

SITECO stands for exceptional lighting technology.



A revolutionary floodlight system for sports and event lighting with unparalleled performance, efficiency and light quality.

Sirius<sup>®</sup> means: "the best view" - no matter the seat number. Thanks to the luminaire's unique full cut-off technology, the show can now be enjoyed from any vantage point along with top visual conditions. And completely without the distraction of glare: Sirius<sup>®</sup> features maximum glare control beyond the market standard.

Our patented free-form reflector technology enables extremely precise light control with a very high optical light output ratio.

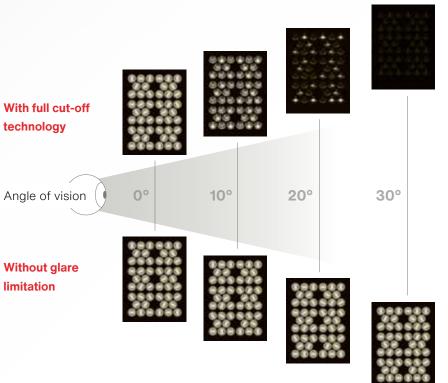
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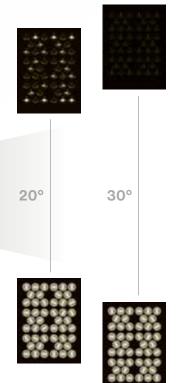
The silver coating acts as a multiplier thanks to the significantly higher reflection factor of the precious metal.

The result: precision down to the smallest facet and > 11 % increase in efficiency.

## 11 % increase in efficiency is a whole new class of sports lighting.

Reflectors are typically aluminized. Not at SITECO – we coat our reflectors with silver. Our coating process is unique worldwide, and in combination with our free-form reflector technology is a guarantee for precision and quality of light.





### Full cut-off technology for the best view. On everything!

- The effect is immense: Without disturbing light spill, spectators see the action on the playing field more completely, crisply and with greater color intensity.
- No light spill thanks to perfect light focusing.
- Other manufacturers do not incorporate glare control. This means the light source is clearly visible from any angle and results in lower visual comfort.



100

90

80

70

Sirius<sup>®</sup> features a TLCI value of 96 at 5700 K, thus setting a new benchmark for broadcasting.

From a TLCI value of 90 upward, perfect conditions are achieved for sports broadcasts and live events at the highest level. And they keep getting better.



With a competition-typical CRI value of 80, which approximately corresponds to a TLCI value of 76, it is not possible to meet the future requirements of broadcasters.



## Perfect lighting technology for the perfect HD image.

With lighting technology, many competitors brag about using CRI color index from the 1960s. However, in today's digital world of broadcasting this is hardly sufficient.

We adhere to the pioneering Standard Television Light Consistency Index – and are best-in-class. Why? Instead of 8 reference colors we measure ourselves against 24 colors - the definition of color rendering thus becomes much more precise.



Project: Ski slope, Horn, Switzerland Product: Floodlight FL 20

## Floodlight FL 20

The all-purpose solution for sports and area lighting. This floodlight family is characterized by high efficiency and optimized light distribution.

- Avoidance of light spill and glare due to design as a wide-beam floodlight with 0 % light immission up to an inclination of 15°
- Very long service life of up to 100,000 hours due to optimal heat dissipation via cooling ribs for predictable investments
- Optimized thermal management due to decoupling of module and housing for minimum luminous flux degradation and reliable operation

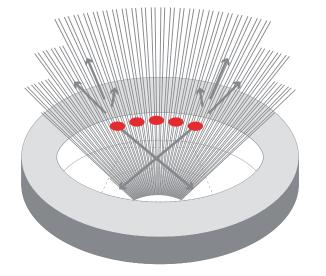


- Very robust: IP66 protection rating and vibrational stability tested with over 250,000 strikes
- ESD-protected plug-and-play modules for easy maintenance and low-maintenance costs
- Optical cover made of glass, corrosion protection class C4 with microcor<sup>®</sup> screws and non-yellowing PMMA lens material for increased durability

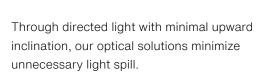
## Minimum light pollution with outstanding optics.

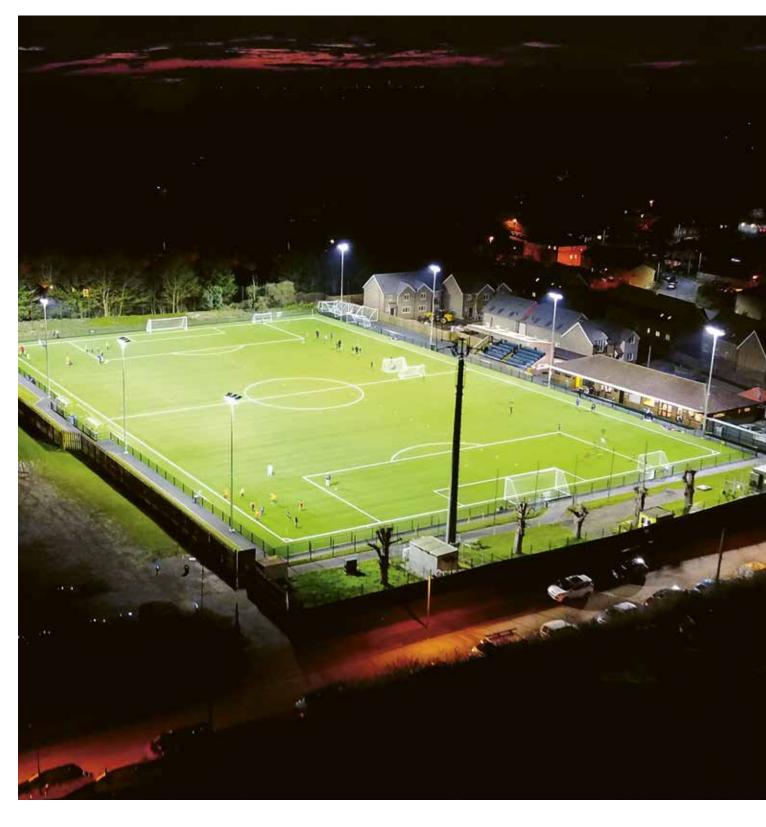
The focused application of light increases efficiency and reduces light immissions. Thanks to its clever construction and precise light distribution Floodlight FL 20 requires only minimal inclination to minimize light spill while providing optimum lighting conditions. And with our Sirius<sup>®</sup> high performance floodlight with integrated full cut-off shield, the light immission is less than 3 % when positioned vertically – and even 0 % in the horizontal position.

### We only use light where it is needed.



Conventional floodlight systems generate increased light pollution - and therefore adversely affect the environment, adjacent areas and air traffic.





## < 3 % ULR light immission

Project: Newmarket Town FC, Newmarket, Great Britain Product: Floodlight FL 20

Ball-proof thanks to mechanical reinforcement – ideal for sports halls

## High Bay

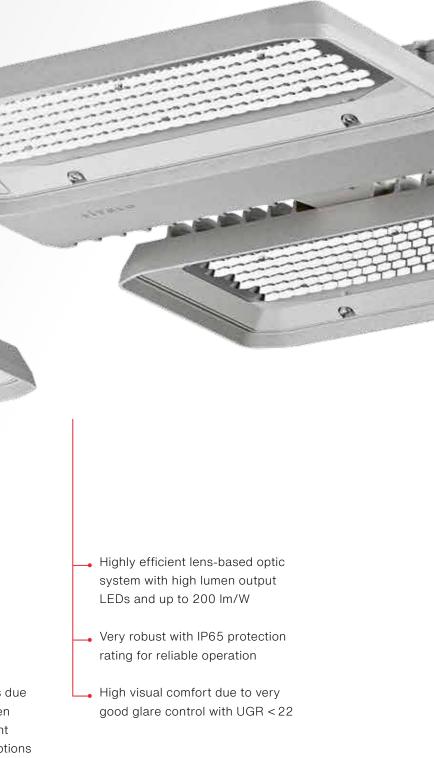
### A new era for highbay lighting.

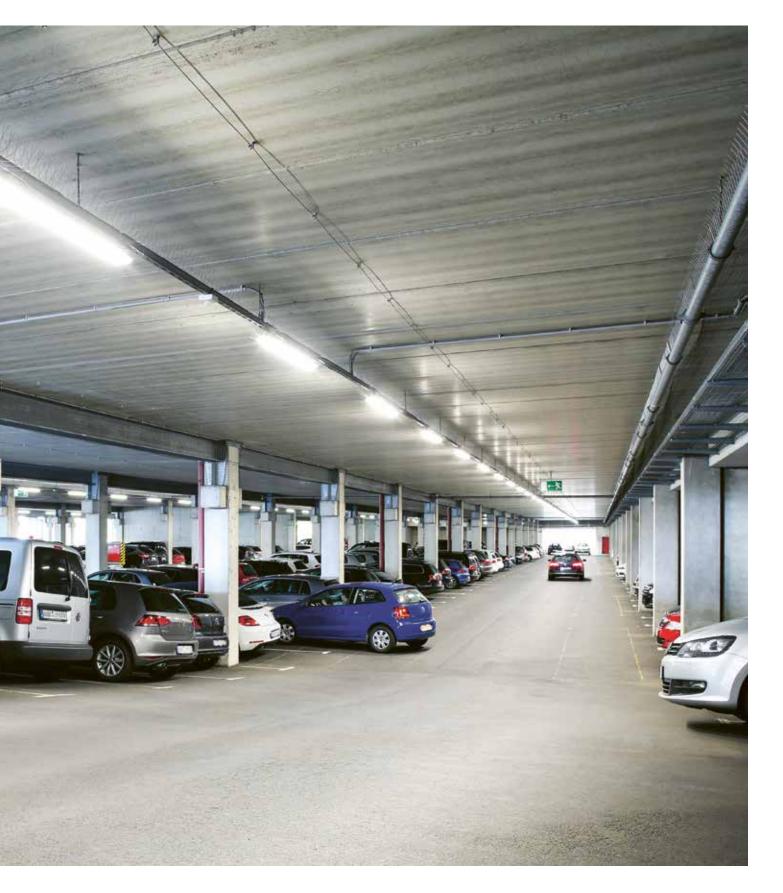
The universal hall lighting solution that looks toward the future – both as a stand-alone luminaire as well as integrated in the Licross<sup>®</sup> trunking system.

 Durable and reliable with service life up to 100,000 hours

 $c_{2}$ 

- Optional sensor technology for light control depending on movement and available daylight
- Ready for a wide range of applications due to various construction sizes with lumen packages up to 64,000 lm, various light distributions and different mounting options





Project: VW car park, Baunatal, Germany Product: Compact Monsun® 2

## Monsun®

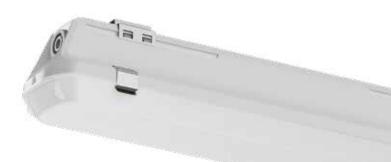
### The next level of damp-proof lighting.

- Multilumen technology with luminous fluxes up to 12,000 lm for maximum adaptability
- Highly robust with IP66 protection rating and suitable for outdoor use in ambient temperatures up to 50 °C
- Simple maintenance and uncomplicated retrofitting of sensor technology via tool-free opening of the luminaire
- CLOi also with On/Off types, for standard-compliant lighting over the complete service life and for optimized energy consumption
- Durable and reliable with up to 100,000 operating hour service life

## Apollon®

### The intelligent luminaire range for office and general lighting.

- Highly efficient lighting technology and CLO luminous flux tracking for low energy consumption – realizable energy savings of up to 55 % with refurbishment projects (T5/T8)
- Supports demanding visual tasks and enhances well-being with very high color rendering value (CRI90) and via optional Tunable White function for HCL<sup>live</sup>







## Streetlight SL 11

### The top model for technical streetlighting.

- Future-proof thanks to state-of-the-art lighting control and networking options, simultaneously robust and durable due to stable diecast aluminum housing and more than 90 % residual luminous flux after 100,000 operating hours
- High efficiency due to latest LED technology (up to 150 lm/W) for low energy consumption and precise light control via silver-coated HD reflectors for optimum illumination

## DL<sup>®</sup> 20

#### The design benchmark among road luminaires.

- Precise light distributions due to double reflector technology in MIRO<sup>®</sup> quality for different road and plaza situations, and optimum glare control - allowing even a glare-free view into the luminaire
- Filigree design with resistant workmanship (IP66, IK08), dirtresistant toughened safety glass and low-maintenance continuous operation of up to 100,000 hours with minimum luminous flux degradation thanks to optimal thermal management



Project: Siemens Flow Goods, Sonderborg, Denmark Product: DL<sup>®</sup> 20

# Lighting solutions



## One of many topics for you, but for us it's everything.

Outstanding lighting technology provides the perfect foundation. In addition, our claim is to also make a significant contribution to the future viability of our customers.

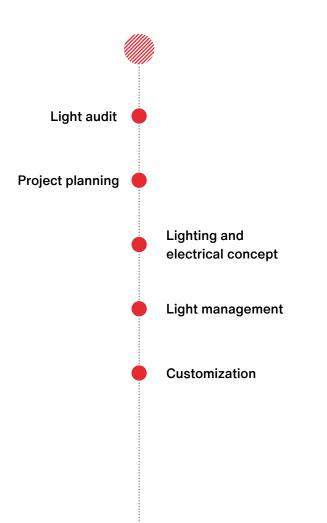
For this reason SITECO solutions include the complete spectrum of services, ranging from planning and project management to the financing and operation of your system.

SITECO takes responsibility for your light.

### Complex is fine. But not complicated.

Whether functional lighting or complex lighting solutions - each project is individual and depends on the lighting requirements, the existing conditions and the architectural demands. SITECO supports you in defining these parameters and converting them into an overall concept. We also speak your language - putting complex technologies into plain words. This is how we make sure that your specific requirements are taken into account and successfully implemented in the project.

SITECO – the planning and development partner for your lighting solution.

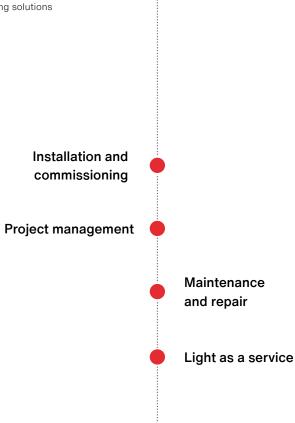


## Your time and your budget are not infinite.

Modern lighting systems not only require precise planning but also precise implementation. This often results in high organizational and coordination efforts which should not result in a decision against the project. Concerns about high investment costs should also not hinder project progress. The systematic modernization of lighting systems usually pays for itself through lower operating costs.

We have a network of reliable partners ranging from installers to programmers to provide you with turnkey solutions. We also offer you individual financing solutions, for example monthly installments or individual leasing contracts. You decide whether CAPEX or OPEX and whether we take over your maintenance at the same time.

SITECO guarantees the success of your project.



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For reasons of readability, the brochure largely dispenses from using gender-specific formulations.

If personal designations are only provided in masculine form they refer to persons of every gender.

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