

SPORT

SCHRÉDER SPORTS LIGHTING SOLUTIONS

Schröder





SPORT LIGHTING SOLUTIONS FOR SPORTS ENVIRONMENTS



SAFETY

Preventing disturbances, danger and violence is achieved by ensuring efficient lighting at crucial moments in the whole sporting environment including surrounding areas. An interactive lighting network using sensors, cameras and sound features contributes to detecting danger, emergency marking and crowd management.



SUSTAINABILITY

Preserving the environment is a collective obligation. Schröder uses sustainable materials for benches, poles and luminaires. In addition, our technology provides significant energy savings and high efficiency through combined LED and control solutions. Interactive solutions and dimming technology make it possible to only light when necessary.



WELL-BEING

Efficient lighting offers excellent visibility and provides comfortable environments to play or watch a sport. Complementary urban furniture, benches, bins, picnic tables and acoustic panels create a welcoming environment. They contribute to the comfort of the audience inside and outside the complex: the event starts before even entering the arena!



SAVINGS

From local club facilities through to large multi-purpose stadia capable of accommodating tens of thousands of spectators, Schröder's full scope solutions ensure that they are correctly illuminated for their use whilst operating with minimum energy. Cutting-edge LED luminaires and cost-effective control systems will generate significant energy and maintenance savings for a low total cost of ownership.

SOLUTIONS FOR ALL EVENTS

Sport complexes are iconic places to be emphasised.

Light and control systems are crucial to optimise visibility for both the participants and the spectators and to facilitate television broadcasting. Sporting events are also full of passion and enthusiasm. The lighting can also be adapted with colour scenographies to boost the festive atmosphere.

It is equally essential to manage mobility and crowds within the venue.

With modern solutions and expertise in control systems and integration, Schröder is the ideal partner to deliver the entire concept.



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SCHRÉDER SPORTS LIGHTING SOLUTIONS

SCHRÉDER PROVIDES COMPREHENSIVE LED LIGHTING SOLUTIONS TO SATISFY THE DIVERSE NEEDS AND RANGE OF SPORTS LIGHTING APPLICATIONS. FROM THE STADIUM PITCH TO THE CAR PARK TO THE SEATING AREAS, SCHRÉDER OFFERS A RANGE OF LUMINAIRES TO PROVIDE QUALITY PHOTOMETRY AND OPTIMUM VISUAL COMFORT FOR LARGE SCALE AREAS, BOTH INDOORS AND OUTDOORS, AT EVERY POSSIBLE LEVEL OF COMPETITION.

Schröder sport floodlighting solutions meet the important needs of the players whilst minimising light pollution and glare for spectators and local residents. These solutions also meet the strictest criteria defined by the international competition sports associations for high definition television broadcasting to avoid flickering and capture sharp and vivid images for viewers at home.

LEDS FOR A BETTER EXPERIENCE

LEDs provide better visibility and excellent uniformity with a natural colour temperature for the players, spectators, photographers and television crews. LEDs generate less flickering than fluorescent or metal halide lamps to deliver crystal sharp images for television broadcasting.

HIGH PHOTOMETRIC PERFORMANCE

Schröder's large range of luminaires and floodlights are equipped with specifically developed second generation LensoFlex®2 photometric engines for lighting spaces in a sustainable and efficient way. The LensoFlex®2 builds on the flexibility offered by a selection of lenses to perfectly meet the needs of each kind of place to be lit.

Schröder luminaires can also be fitted with reflectors and collimators to provide specific photometry options with excellent uniformity to offer the correct lighting levels for each area of the sporting environment.

VISUAL COMFORT

Schröder solutions offer precise photometric distributions to ensure visual comfort and excellent colour rendition for both the players and the spectators so that they may enjoy every minute.

MECHANICAL ROBUSTNESS

All Schröder luminaires possess a remarkable mechanical design. They are subjected to the most rigorous tests to guarantee their durability, offer high resistance to shocks and anti-corrosion.

COST-EFFECTIVE SOLUTIONS

Installing LED floodlights in large, high areas like ice hockey or basketball halls reduces annual maintenance in normal use. In case of maintenance or upgrading the technology in years to come, the expert design, low weight and simple cabling of our FutureProof luminaires make it easy to replace the electronic or photometric compartments for a more efficient lighting. LED luminaires also provide a more energy efficient solution with a rapid payback.

Moreover, Schröder luminaires can be equipped with a variety of different control systems such as motion detection or daylight sensors, dimming or even a remote management system to adapt the lighting levels to the real needs of the place to be lit, generating further energy savings and optimising maintenance management.

In short, a Schröder sport solution is synonymous with savings in investment, installation, energy and maintenance.

To discover more of our sports lighting solutions for tennis, football, athletics, basketball, hockey, swimming pools and much more, visit our web site: www.schreder.com

A FEW OF OUR REFERENCES



◀ MILAN GALE MUSKATIROVIC SPORTS CENTRE, BELGRADE

High levels of luminance and a high level of visual comfort thanks to excellent uniformity for these tennis courts which host the Serbian Open.



OLYMPIC STADIUM, KIEV ▶

Lighting solutions for most of the public areas including the main entrance hall, VIP and spectator areas as well as the upper ring of the public seating area.



◀ MARACANÃ ARENA, RIO DE JANEIRO

Complete lighting solution including the illumination of the stadium roof and lighting the access paths and roads to welcome the World Cup in June 2014.



GONDOMAR PAVILION, PORTO ▶

Lighting solution to adapt to different events, from training to high-definition television broadcasting with high colour rendering and excellent uniformity for the UEFA indoor football championship.



◀ BANJICA SPORTS CENTRE, BELGRADE

The swimming pools are lit to meet Olympic standards for high-quality television broadcast by minimising the reflection from the water surface in the camera direction.



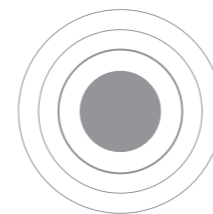
Owlet CONTROL SOLUTIONS

READY TO BE A SMART SPORTING VENUE?

Sporting venues are equipped with high intensity lighting systems to cater for important events. This high-power lighting is not always needed however. With the Owlet smart control solutions offered by Schröder, facility managers can dramatically reduce the energy bills while adapting the lighting levels to the real needs of the moment. The lighting can be adapted to numerous different scenarios (competition, training, social events...) through modern control systems that can be managed by simply tapping on a tablet from anywhere in the venue or in the world. In addition, they can improve maintenance and asset management all while providing safety and well-being.



OWLET OFFERS 3 TYPES OF CONTROL SOLUTIONS, FROM BASIC TO ADVANCED

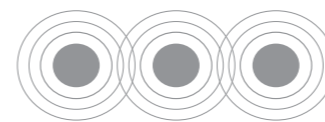


STAND-ALONE SOLUTIONS

RECOMMENDED FOR BASIC SMART LIGHTING

Each luminaire is fitted with a control unit and can be managed independently. This type of control system is ideal for areas with little activity at night such as pedestrian areas, parks, car parks and warehouses. Owlet stand-alone solutions encompass:

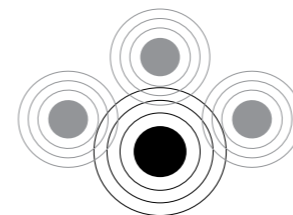
- **intelligent drivers** with features such as an astronomical clock for a constant adaptation of the dimming profile, constant light output to eliminate overlighting and scheduled dimming with multi-level programmes;
- integrated **photocells** to switch the luminaire on or off following the level of natural light;
- **motion and speed detection** sensors that enable interactive dimming.



AUTONOMOUS NETWORK

RECOMMENDED FOR RESPONSIVE AREAS

The Autonomous Network Dimming system enables **luminaires to communicate together in a wireless network** to provide dynamic profile dimming. The dimming profile can easily be changed by simply connecting wirelessly a laptop to one luminaire without using any tools. The new configuration will be deployed to all the luminaires in the network. This system can be enhanced with motion and speed detection sensors. When motion is detected, the detection scenario supplants the dimming scenario to provide safety and comfort for users. The sensors can be centralised or decentralised. Each luminaire is fitted with a control unit and can be managed independently. The autonomous network is perfectly suited to sport fields, streets, roads, squares, parks, etc.



INTEROPERABLE NETWORK

RECOMMENDED FOR ENTIRE LIGHTING INSTALLATIONS
(ROADS, STREETS, TUNNELS,...)

The Schröder Owlet Nightshift is a remote control system for monitoring, metering and managing a lighting network. **It is a unique combination of state-of-the-art technology and an easy-to-use web interface to control each luminaire at all times from anywhere in the world.** Thanks to bi-directional communication, the operating status, energy consumption and possible failures can be monitored. Thanks to its open source Zigbee technology and its flexible MySQL workflow, the Nightshift system can easily be associated to third party systems through data bridges. This flexibility increases the functionalities far beyond lighting.

SMART DRIVERS

INTELLIGENCE AND FLEXIBILITY TO SAVE ENERGY

SCHRÉDER LED SOLUTIONS INCORPORATE DRIVERS THAT INTEGRATE A LOT OF SMART FEATURES TO AVOID UNNECESSARY LIGHTING AND REDUCE YOUR ENERGY EXPENSES.

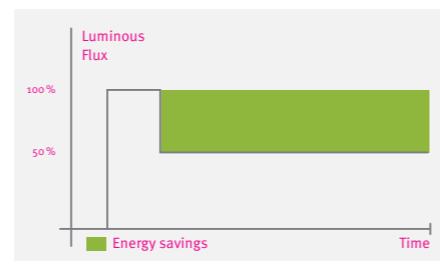
BI-POWER FUNCTIONALITY

In some countries, a control wire or switched line, is distributed throughout the street lighting network.

When the street lighting is switched on, both the line and the switched line are energised to the 230V level. During the night, this switched line is switched off from the grid. The bi-power driver detects this signal as a command to reduce the output current to a lower preset value, usually 50%.

This procedure is common practice for luminaires fitted with traditional discharge lamps but generates little savings. However for LED equipped luminaires, the decrease in energy consumption is almost linear to the decrease in light output.

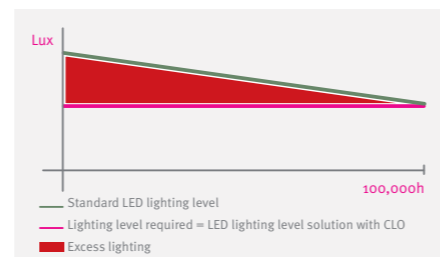
This basic dimming method lacks flexibility, but generates considerable energy savings for night-time periods when less light is required.



PROGRAMMABLE OUTPUT CURRENT

Traditional light sources offered a limited choice in power to achieve the required lighting levels resulting in some streets being over lit. For example, a 150W lamp would be installed even if 115W was sufficient to achieve the necessary lighting level.

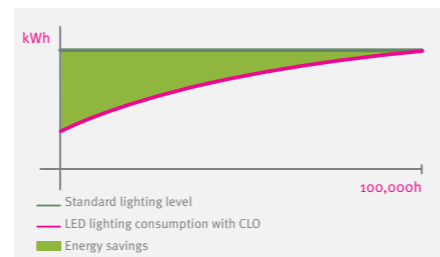
The combination of LEDs and intelligent programmable drivers makes it possible to adjust the output current to obtain the absolute flux level required for a given application. As a consequence, energy consumption and spill light are further reduced.



CONSTANT LIGHT OUTPUT (CLO)

Constant Light Output (CLO) compensates for the depreciation of luminous flux over time and avoids excess lighting at the start of an installation's service life. In fact, the luminous depreciation that takes place over time, is taken into account to ensure a predefined lighting level during the luminaire's useful life.

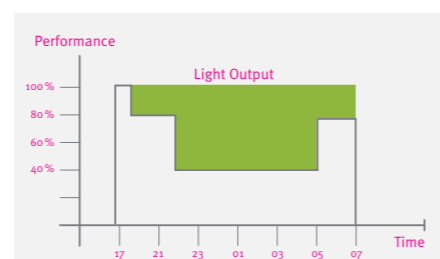
Without a CLO feature, the initial power upon installation would be increased to make up for luminous depreciation. By precisely controlling the luminous flux, the energy is controlled to provide the required level - no more, and no less - throughout the luminaire's life.



CUSTOM DIMMING PROFILE

Intelligent drivers can be programmed in the factory with complex dimming profiles. Up to 5 combinations of time intervals and light levels are possible. This feature does not require any extra wiring.

This customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.



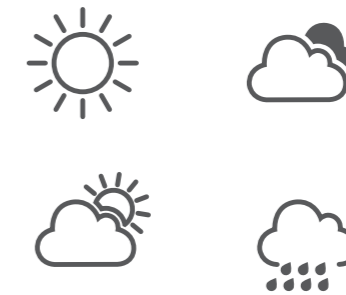
INTERACTIVITY

LIGHT ONLY WHEN NECESSARY

TO ADAPT LIGHTING TO REAL NEEDS, OUR SOLUTIONS INCLUDE SENSORS. THEY MEASURE NATURAL LIGHT LEVELS, MOTION OR SPEED TO PROVIDE LIGHT ONLY WHERE AND WHEN IT IS NECESSARY. THIS FEATURE ENABLES YOU TO AVOID UNNECESSARY LIGHTING IN FAVOUR OF ENERGY SAVINGS.

DAYLIGHT SENSORS

Our solutions can be managed by photoelectric sensors that switch on the luminaires exactly when natural light becomes insufficient (cloudy day, night fall...) so as to **provide safety and comfort in the public space.**



MOTION SENSORS

In places with little nocturnal activity, the lighting can be dimmed to a minimum most of the time. By using motion sensors, levels can be raised as soon as a pedestrian or a slow vehicle is detected in the area.



SPEED AND DIRECTION SENSORS

Speed (and direction) sensors, on the other hand, work with a wider detection area to classify the identified moving item following its speed and its direction.



This classification provides **the right response according to predefined lighting scenarios.** These light-on-demand functions enhance the safety and the well-being of the users while saving energy.



POWERFUL LED SOLUTION FOR LIGHTING PROFESSIONAL AND RECREATIONAL, INDOOR AND OUTDOOR, SPORTING VENUES

THE OMNISTAR SETS A NEW STANDARD BY PROVIDING A REAL AND PERFORMING LED ALTERNATIVE FOR HIGH-POWER HID FLOODLIGHTS (1,000 - 2,000W) FROM VERY NARROW TO WIDE LIGHT BEAMS.

The OMNISTAR has been designed to provide a powerful and flexible lighting solution for lighting all types of sporting venues, from small clubs to major league stadia.

This modular luminaire can be installed on a bracket of one, two or three luminaires to provide the lighting distribution and lumen package needed to meet the specifications of the area to be lit. Equipped with the latest cutting-edge technology, it provides exceptional light quality with a high visual comfort, excellent uniformity, and optimum colour rendition for both the players and the spectators. With an effective thermal management and a long lifespan, the OMNISTAR guarantees an energy efficient solution that will reduce energy and maintenance costs.

The OMNISTAR has instant restrike.

It guarantees the necessary levels required and for television broadcasting. It perfectly lights large stadia when excellent colour and vertical illumination are required for frequent colour TV recording and broadcasting.

The OMNISTAR can integrate daylight sensors and dimming systems to ensure that the lighting is adapted to the real needs of the venue, reducing power consumption and generating energy savings.



CHARACTERISTICS

Installation height	8 to 30m		
Lumen package range (nominal flux)	Mono 30,000 - 40,000lm	Duo 70,000 - 80,000lm	Trio 105,000 - 120,000lm
Colour temperature	Neutral white (cool and warm white: optional)		
Optical compartment tightness level	IP 66 ^(*)		
Control gear tightness level	IP 66 / IP 20 for indoor applications ^(*)		
Impact resistance (glass)	IK 08 ^(**)		
Nominal voltage	120 - 277V - 50 - 60Hz		
Electrical class	US 1	EU I or II ^(*)	
Weight (without gear box)	15.6kg		
MATERIALS			
Body	High-pressure die-cast aluminium		
Protector	Glass		
Colour	AKZO grey 900 sanded Any other RAL or AKZO colour upon request		

^(*) according to IEC - EN 60598 | ^(**) according to IEC - EN 62262

»»KEY ADVANTAGES

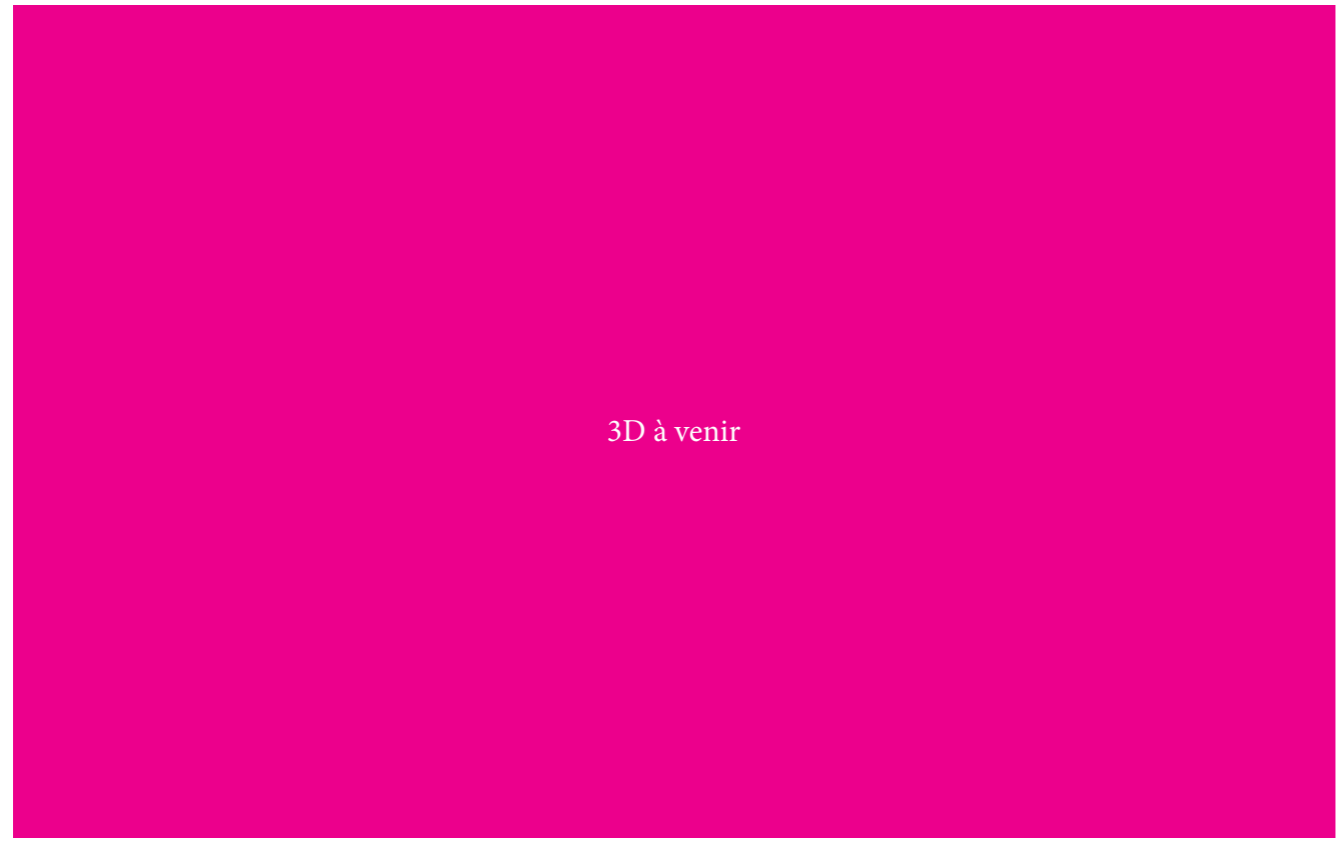
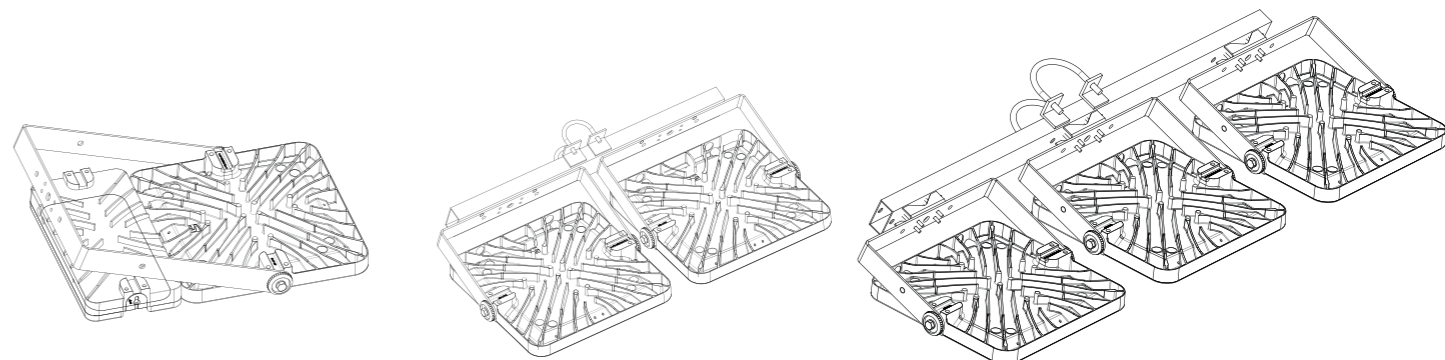
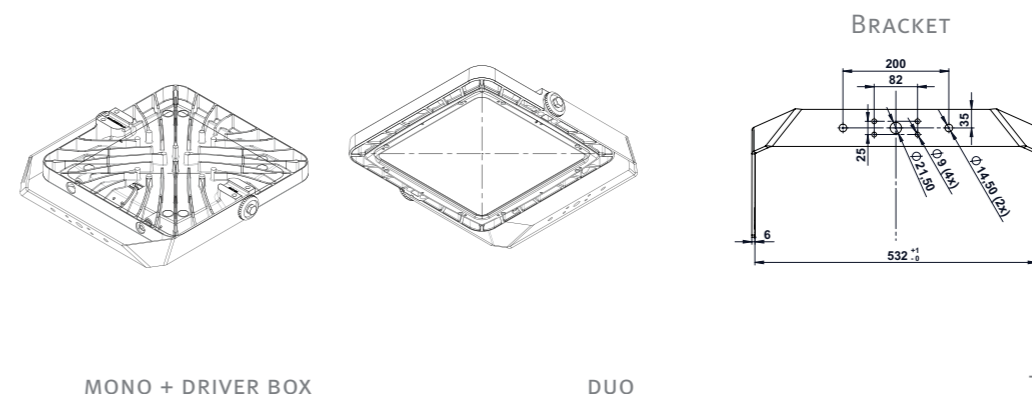
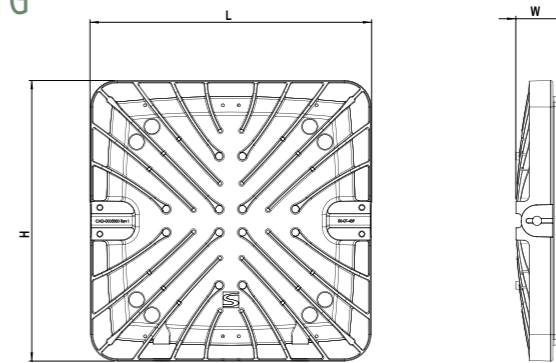
- High intensity lighting solution for indoor and outdoor venues
- Numerous and accurate light distributions including narrow and large
- Modular system to adapt to specific needs
- Instant ignition and restrike
- Daylight sensor to adapt lighting to real needs (optional)
- Low glare solution - suitable for HD television broadcasting
- ThermiX® + FutureProof
- Maintenance free

OPTIONS

- Structured glass

DIMENSIONS | MOUNTING

Mono	
L	532mm
H	530mm
W	80mm



3D à venir

YOA



DESIGN
MICHEL TORTEL

ENERGY EFFICIENT URBAN LIGHTING SOLUTION WITH A TOUCH OF AMBIANCE

DESIGNED FOR URBAN APPLICATIONS, THE YOA LUMINAIRE PROVIDES A TOUCH OF AMBIANCE TO CREATE IDENTITY IN THE CITY LANDSCAPE OR AROUND A SPORTS VENUE.

Yoa is a contemporary interpretation of the classical range Citea - Maya - Scala – one of Schröder's best-sellers in urban lighting – based on LED technology. It is equipped with the second generation LensoFlex®2 photometric engine which offers a high-performance photometry optimised for each specific application with minimised energy consumption.

Built with recyclable materials - aluminium and glass - the Yoa luminaire is proposed in two sizes:

- **Yoa Midi** is particularly suited to lighting residential areas, urban roads, parks, squares, pedestrian zones,...
- **Yoa Maxi** is ideal for large avenues and main roads.

The Yoa range offers flexible combinations of LED modules, driving currents and dimming options to provide the most cost-effective solution while improving comfort and safety for people.

The Yoa is available for side-entry, post-top or suspended mounting.

A catenary version is also available.



CHARACTERISTICS

Installation height	4 to 10m
Lumen package range (nominal flux)	2,200 to 23,300lm
Colour temperature	Neutral or warm white
Optical compartment tightness level	IP 66 (*)
Control gear tightness level	IP 66 (*)
Impact resistance (glass)	IK 08 (**)
Nominal voltage	230V - 50Hz
Electrical class	I or II (*)
MATERIALS	
Body	Aluminium
Protector	Flat glass
Colour	Any RAL or AKZO colour

(*) according to IEC - EN 60598 | (**) according to IEC - EN 62262

MAIN APPLICATIONS



NARROW ROAD



RESIDENTIAL STREET



MOTORWAY



URBAN ROAD



MEDIUM AREA



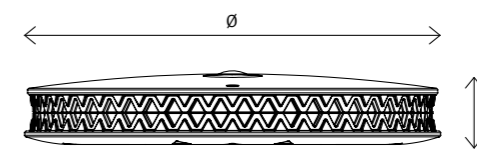
LARGE AREA

KEY ADVANTAGES

- Maximised savings in energy and maintenance costs
- LensoFlex®2 offering high performance photometry, comfort and safety
- LED modules with flexible combinations of LEDs
- FutureProof
- ThermiX®
- Surge protection 10kV
- Designed to incorporate Owllet range of control solutions

DIMENSIONS

	Yoa Midi	Yoa Maxi
Ø	500mm	650mm
H	90mm	90mm



MOUNTING

The Yoa luminaire offers slip-over mounting onto a bracket with a 60mm diameter spigot (length 100mm).

A special bracket and pole for side-entry and post-top mounting are available (option).

TRESSA
(STANDARD SIDE-ENTRY)

LUCEA
(OPTIONAL SIDE-ENTRY)

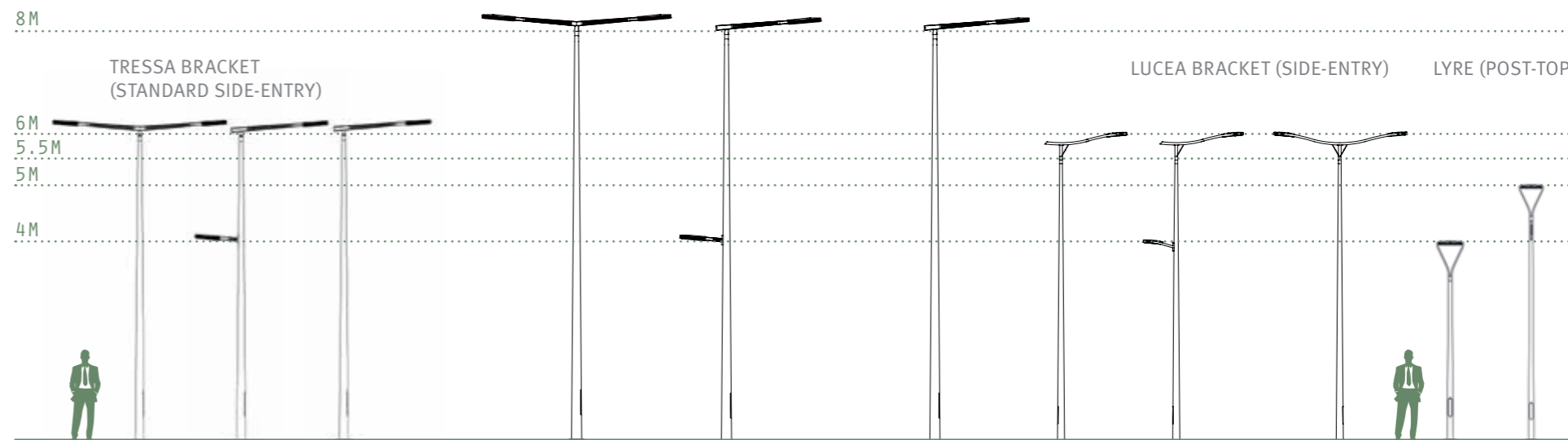
LYRE
(OPTIONAL POST-TOP)



OPTIONS

- Catenary version
- Warm white LEDs

COLUMNS AND BRACKETS





DESIGN
VOLKER VON KARDORFF

COMBINING ALL LIGHTING NEEDS AND MORE IN A SINGLE COLUMN

THE MODULLUM RANGE OFFERS A MULTIFUNCTIONAL LIGHTING SYSTEM FOR THE CREATIVITY OF ARCHITECTS AND CITY PLANNERS.

Reducing the quantity of poles and organising urban furniture in an optimal manner are key issues for preserving open spaces and making them as welcoming as possible.

The Modullum column provides a comprehensive solution for a variety of applications throughout the city. Thanks to multiple lighting configurations and additional features, it can potentially meet every need in the urban space. The versatility of Modullum, with its different modules as well as variable diameters and heights of up to 9.5 metres, guarantees a perfect match between the column and its architectural environment.

The Modullum is available in four sizes and can be equipped with one to six modules which swivel around 360° so as to better fit the desired function: lighting roads and squares, illuminating facades, accentuating objects, signage, sound systems, video surveillance etc.

The Modullum offers a broad palette of light sources (HID and LEDs) and distribution options for each of its configurations.



CHARACTERISTICS

Lumen packages (nominal flux) (*)				
	Micro	Mini	Midi	Maxi
Accent lighting	520 to 1,950lm	520 to 1,950lm	1,580 to 4,900lm	1,580 to 4,900lm
Façade lighting	3,300lm	3,300lm	1,800 to 6,800lm	3,300 to 16,500lm
Ambiance lighting	1,040 to 3,300lm	1,560 to 3,300lm	2,080 to 6,600lm	3,300 to 6,600lm
Road and urban lighting	/	/	2,700 to 6,600lm	2,900 to 16,500lm

	Micro	Mini	Midi	Maxi
Colour temperature	Neutral or warm white			
Optical compartment tightness level	IP 65 (**)			
Impact resistance (glass)	IK 08 (***)			
Aerodynamic resistance of a module (CxS)	0.04m ²	0.04m ²	0.07m ²	0.13m ²
Nominal voltage	230V - 50 Hz			
Electrical class	I or II (**)			
Weight of a module (empty)	3kg	3kg	5kg	6.8kg

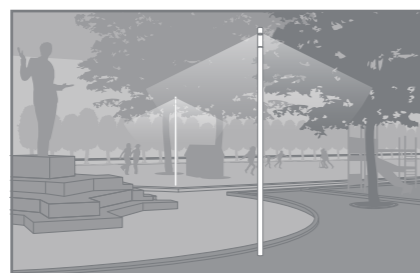
MATERIALS	
Column	Thermo-lacquered galvanised steel
Module housing	Die-cast aluminium
Module protector	Polycarbonate
Base	Die-cast aluminium
Colours	AKZO grey 900 sanded Other RAL or AKZO colours upon request

(*) both HID and LED versions | (**) according to IEC - EN 60598 | (***) according to IEC - EN 62262

MAIN APPLICATIONS



RESIDENTIAL STREET



SQUARE



ACCENT LIGHTING



FAÇADE LIGHTING

KEY ADVANTAGES

- Multiple configurations: 4 sizes with up to 6 modules per column
- Designed for multi-purpose lighting: from ambience to architectural and street lighting
- Total versatility with 360° rotatable modules
- Adjustable on-site (spot module)
- Possibility to integrate beyond light features in a module
- Durable, recyclable and robust materials
- Easy installation and maintenance
- Designed to incorporate the Owlet range of control Solutions

MORE THAN LIGHTING

The versatility of the Modullum means it can satisfy virtually every need. It is much more than a luminaire. Starting from an empty module, it is possible to integrate all the features you need in a public space to create a comprehensive solution while making a place attractive both by day and by night.

As a tool for enhancing public spaces and creating places where people enjoy spending time, the potential of the Modullum is almost unlimited. It is a truly modern system that cities and investors need to create places with real dynamics, stimulating economic activity and social interaction.



EMERGENCY LIGHTING

VIDEO SURVEILLANCE

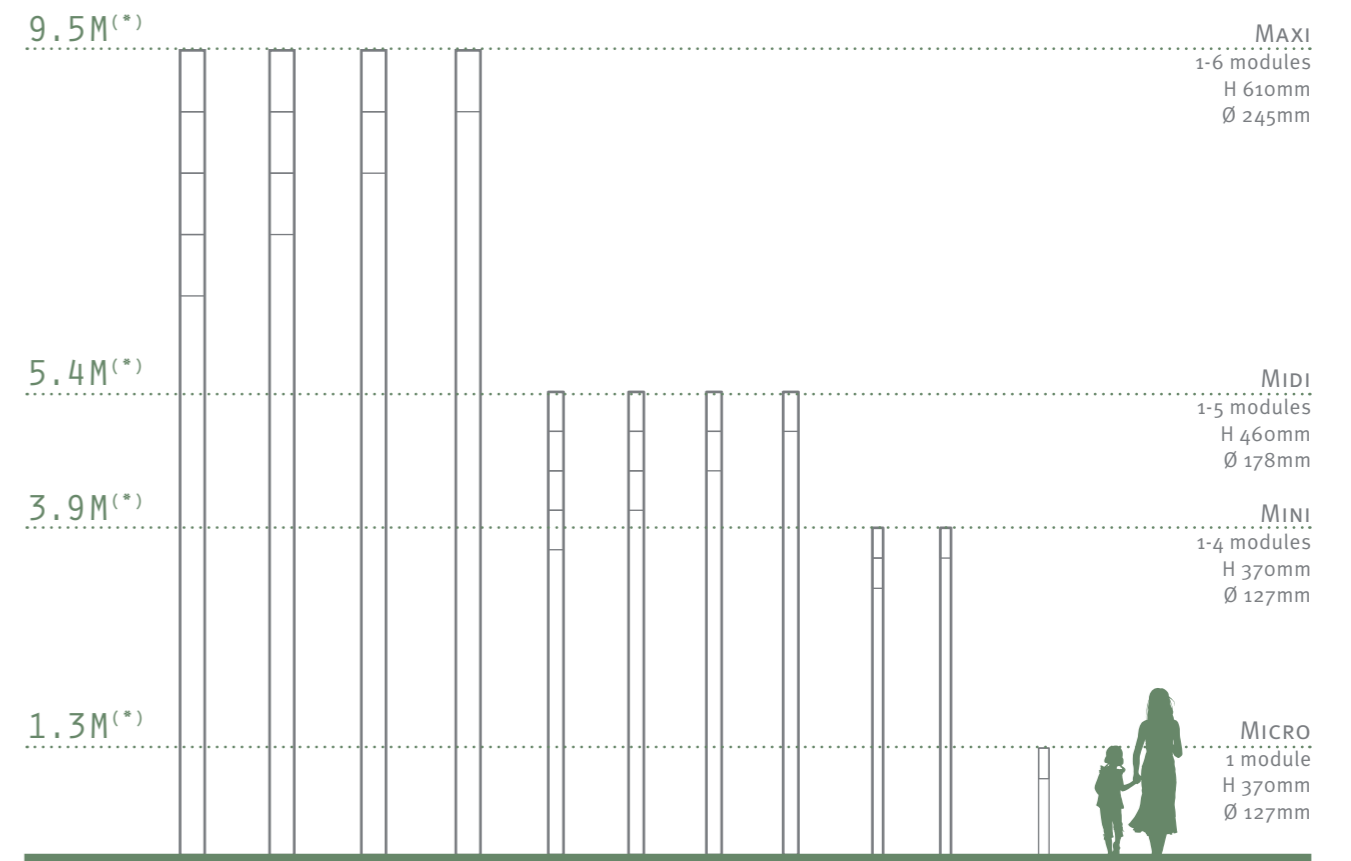
LOUDSPEAKER

WIRELESS INTERNET

ELECTRIC VEHICLE CHARGING STATION

The images are not contractual and do not represent items for sale. Please inquire for more information.

DIMENSIONS | MOUNTING



(*) Other sizes available on request

PERCEPTO



DOWNLIGHTING IN AN EFFICIENT AND COST EFFECTIVE MANNER

THE PERCEPTO LUMINAIRE WAS DEVELOPED TO OFFER OPTIMISED PHOTOMETRICAL PERFORMANCE WITH A MINIMUM TOTAL COST OF OWNERSHIP FOR DOWNLIGHTING APPLICATIONS.

An integrated motion detector combined with a dimming scenario guarantees the required lighting levels to ensure safety and comfort while generating a dramatic reduction in energy consumption. The Percepto can achieve energy savings of up to 80% compared to luminaires fitted with traditional light sources. This performance reduces its payback time to less than 5 years. It is therefore financially more interesting to install new Percepto luminaires rather than replacing traditional lamps in existing fittings.

Available in a recessed or surface mounted version, the Percepto is equipped with an LED photometric engine fitted with reflectors for symmetrical or asymmetrical lighting. Its design, with a gear unit separated from the optical compartment, guarantees perfect thermal behaviour to maintain performance over time. It also makes the mounting operations much easier.

The Percepto is the perfect tool for downlighting applications at a height from 3 to 8m.



CHARACTERISTICS

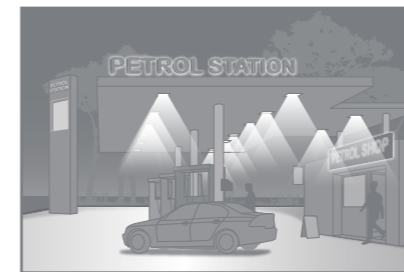
Installation height	3 to 8m
Optical compartment tightness level	IP 66 (*)
Control gear tightness level	IP 66 (*)
Impact resistance	without motion detector: IK 08 (**)
	with motion detector: IK 07 (**)
Nominal voltage	120 - 277V
Electrical class	I or II (*)
MATERIALS	
Body	Galvanised steel
Heat sink	Aluminium
Protector	Thermally tempered glass
Colour	White RAL 9003 Other RAL colours upon request

(*) according to IEC - EN 60598 | (**) according to IEC - EN 62262

»»KEY ADVANTAGES

- Flexible LED solution for downlighting
- Maximised savings in energy and maintenance costs
- Easy installation: one technician needed to mount the luminaire
- Symmetric and asymmetric photometric solutions
- Integrated dimming with motion detection system
- Flexibility: easy dimming profile adjustment via a remote control
- Can be integrated into a remote control network

MAIN APPLICATIONS



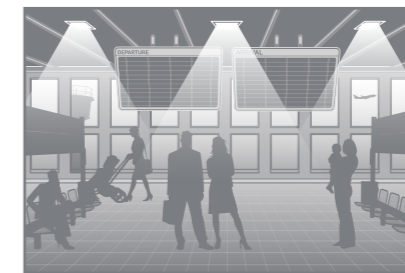
PETROL STATION



DROP-OFF AREA



SHOPPING CENTRE CANOPY



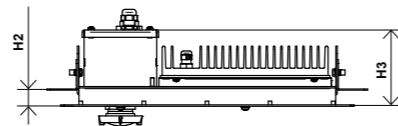
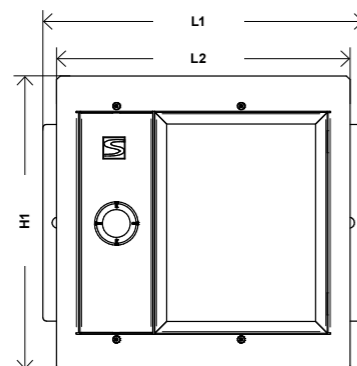
TRAIN STATION HALL

OPTIONS

- Autonomous dimming with motion detection
- Neutral or warm white LEDs
- Surge protection 10kV

DIMENSIONS

L1	437mm
L2	400mm
H1	400mm
H2	max 49mm
H3	105mm

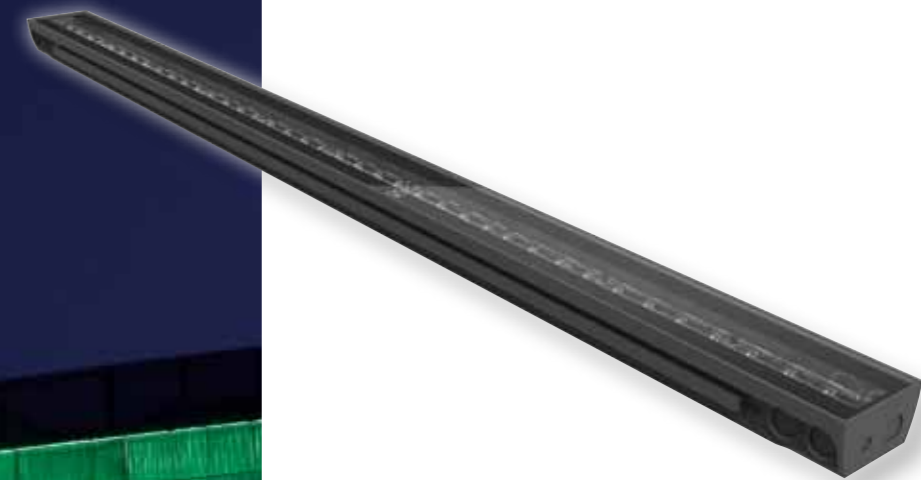


FLUX AND POWER CONSUMPTION

Percepto			Lifetime residual flux @ tq 25°C	
Number of LEDs	Cool white (5,000K)	22 LEDs	44 LEDs	@100,000h
Current: 500mA	Nominal flux (lm)*	-	8,400	90%
	Power consumption (W)	-	75	
Current: 700mA	Nominal flux (lm)*	5,500	11,000	80%
	Power consumption (W)	53	105	

(*) The nominal flux is an indicative LED flux @ tq 25°C based on LED manufacturer's data. The real flux output of the luminaire depends on environmental conditions (e.g. temperature and pollution) and the optical efficiency of luminaire. Nominal flux depends on the type of LED in use and is likely to change in accordance with the continuous and rapid developments in LED technology. To follow the progress of the luminous efficiency of the LEDs used, please visit our website.





COMPACT WALLWASHER FOR ARCHITECTURAL ILLUMINATION

THE SCULPLINE IS A MODERN FLOODLIGHT OFFERING A WALL WASHER EFFECT THAT CAN BE USED FOR FAÇADE OR MONUMENT ILLUMINATION.

It can also be fitted in a handrail solution, a column illumination or recessed.

The available accessories enable lighting designers to sculpt the light to create a unique identity and emotion for existing monuments and buildings. It also ensures safety and well-being in the public space.

The SCULPline creates a warm ambiance while providing huge energy savings thanks to its performing LensoFlex®2 photometric engine.

It offers a wide palette of colours and lighting effects.

Different light diffusers are available and can be mounted and exchanged on-site, providing lighting designers with maximum flexibility.

It can be controlled for dynamic colour variations and conditional triggering using the DMX protocol.

The stylish yet discreet design ensures an easy integration. The power supply can be located in a central cabinet to minimise the installation footprint on the façade.



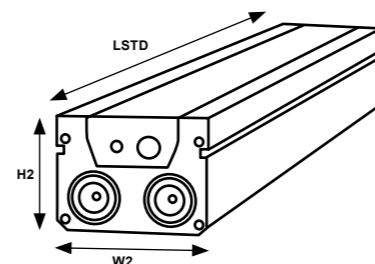
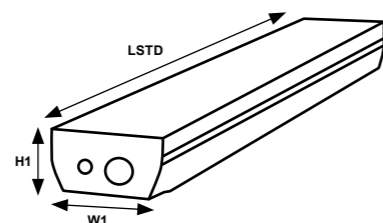
CHARACTERISTICS

Lumen package range (nominal flux)	Linear: 450lm/m - 4,800lm/m Warm White	LensoFlex®2: 6,600lm/m Warm White 80CRI
Colour temperature	Tunable white (CW, NW, WW or CW+A), CW, WW, RGBCW, RGBA	
Optical compartment tightness level	IP 66 (*)	
Impact resistance	IK 07 (glass) (**) IK 08 (polycarbonate - option) (**)	
Nominal voltage	120 - 240VAC / 50 - 60Hz	
Electrical class	III (*)	
Weight	Optical unit only 3kg/m	Complete (with power supply and driver) 8kg/m
MATERIALS		
Base, cover and arms	Extruded aluminium and polycarbonate end caps	
Protector	Glass / Polycarbonate	
Colour	Standard black (cover plate can be customised with any RAL colour as an option)	

(*) according to IEC - EN 60598 | (**) according to IEC - EN 62262

DIMENSIONS

H1	34 - 40mm
W1	65 - 95mm
H2	80mm
W2	105mm
Lstd	499 - 999mm



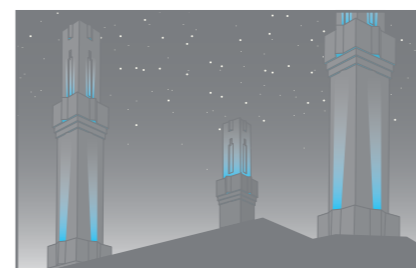
MOUNTING

- Wall/façade mounting with tiltable brackets/rotule
- Floor recessed version (up to 500kg)
- Handrail integration

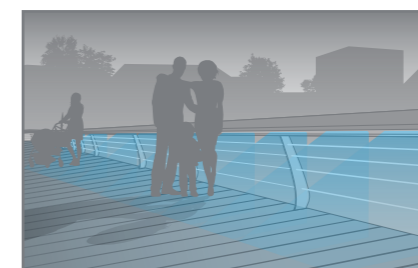
»KEY ADVANTAGES

- Elegant and compact design for minimum impact on architecture
- Front cover can be customised to perfectly integrate the environment
- Broad palette of colours and lighting effects/distributions
- External light diffusers allowing on-site testing
- Symmetric and asymmetric light distributions
- Variable number of LEDs: 10 or 40LEDs/m
- Low energy consumption

MAIN APPLICATIONS



NARROW OR MEDIUM



HANDRAILS



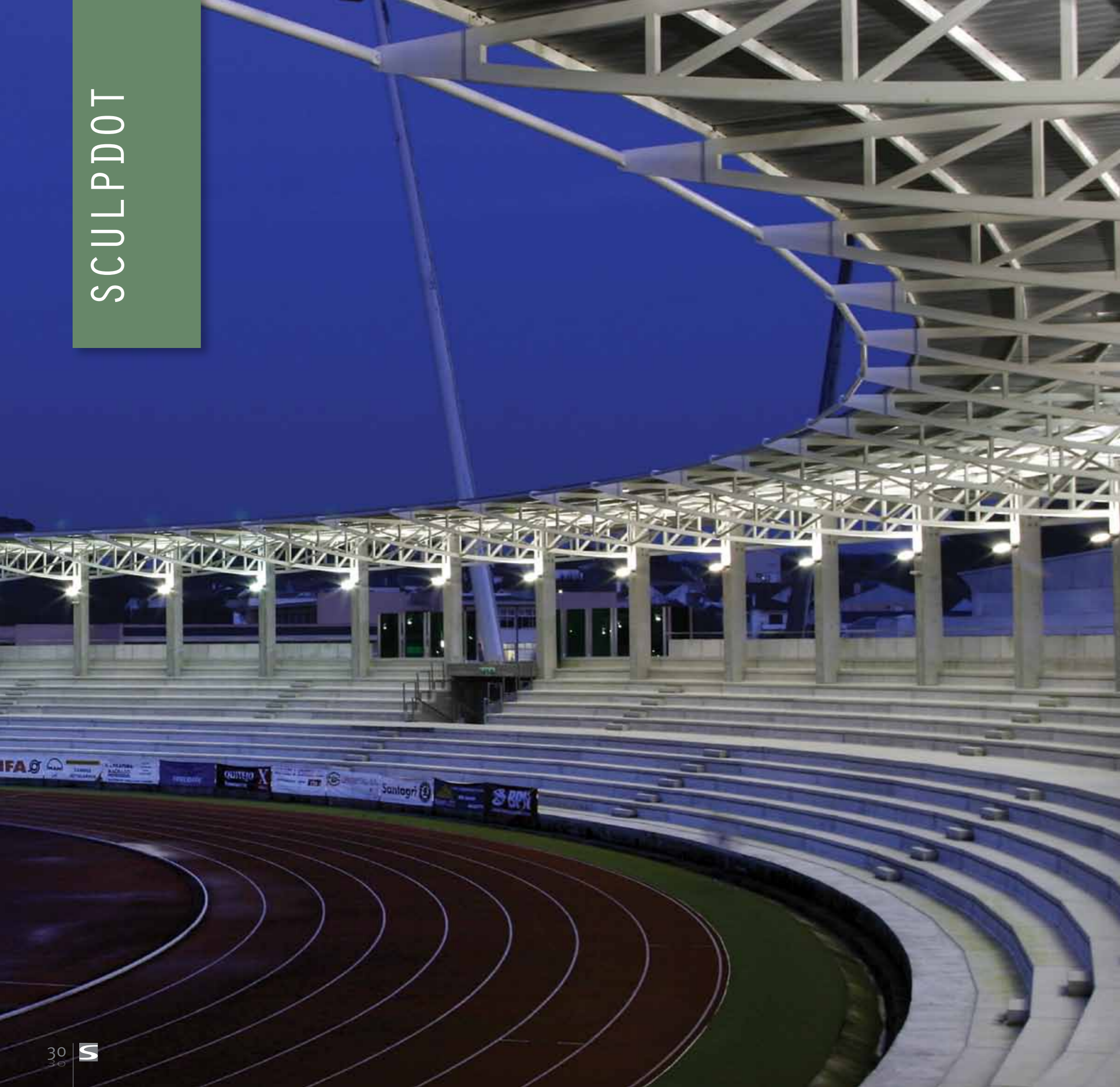
ELLIPTICAL



ASSYMMETRICAL



SCULPDOT



VERSATILE SPOTLIGHT FOR ACCENT AND ARCHITECTURAL LIGHTING

DESIGNED TO ENHANCE ARCHITECTURAL DETAILS AND TO UNDERLINE THE LANDSCAPE ELEMENTS, THE SCULPDOT IS A HANDY TOOL FOR A CAREFUL LIGHTING DESIGN.

Compact and elegant, the rectangular shape of the SCULPDOT has high-quality feel. It has been designed with no visible screws on the front of the frame.

The floodlight combines multi-die technology and special lenses for a perfect colour mix. Thanks to an external refractor, the beam can be easily adapted on-site. The refractor can mimic the soft-edged light distribution of an HID solution. In addition, the associated bracket offered with a degree angle indication system allows a precise adjustment. All these features ease the fine-tuning of the installation for an optimal final result.

For more flexible mounting options and to satisfy specific constraints (high ambient temperature for example), the driver and the power supply can be installed remotely.



CHARACTERISTICS

Lumen output (nominal flux)	2,000 and 3,000lm
Tightness	IP 66 (*)
Impact resistance (glass)	IK 08 (**)
Nominal voltage	230VAC
Weight	7kg
Surge protection	10kV
Electrical class	II + functional earth
Material	Die-cast aluminium

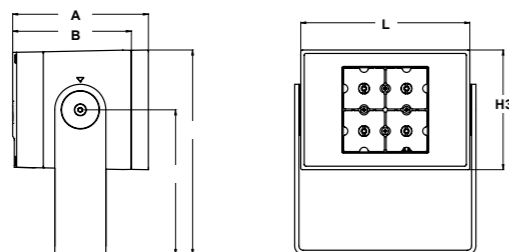
(*) according to IEC - EN 60598 | (**) according to IEC - EN 62262

OPTIONS

- Accent lighting for statues & details

DIMENSIONS

A. With BEZEL	160mm
B. Without BEZEL	140mm
H ₁	240mm
H ₂	170mm
H ₃	141mm
L	199mm
W	213mm



»KEY ADVANTAGES

- Precise on-site photometric distribution customisation via external refractor
- Internal (standard) and remote driver options
- Wide range of operating temperatures from -20° up to 50°C
- Very good colour mixing at close distance with special lenses on multi-die LED technology
- Connections can be made without the need for stripping or special tools
- Inclination angle indicated on bracket

PHOTOMETRY

	Mono-chromatic	RGBCW / RGBA
Colour temperature	CW/NW/WW	Single or multi-die
Lumen output & current power supply	3,000lm @ 600mA	1 multi-die @ 500mA

PHOTOMETRY AND ACCESSORIES

- Intensive symmetrical beam (standard)
- A range of optional refractors/diffusers is available, including medium beam, wide beam, elliptical beam and rectangular beam
- Stirrup mounting bracket (standard)
- Post-top mounting bracket (option)
- External louvres (option)
- Protection grid (option)

MAIN APPLICATIONS



NARROW: LONG OBJECTS | PILLARS & COLUMNS | VERTICAL ACCENTS



MEDIUM OR WIDE BEAM: TREES | STATUES | ACCENTS



LIMARK

A VERSATILE AND MULTI-PURPOSE LED LINE

THE LIMARK IS A LINEAR FLOODLIGHT FITTED WITH LOW-POWER LEDS FOR MARKER OR ACCENT ILLUMINATION. THIS RANGE OF RECESSED FLOODLIGHTS WITH A HIGH TIGHTNESS LEVEL (IP 67) IS AVAILABLE IN 2 LENGTHS.

The Limark is particularly suited to ground-lighting public or private areas and to highlighting architectural details. When installed, the modules can form a continuous curtain of light.

The Limark floodlight is composed of a body in anodised aluminium and an optical unit with a protector in frosted polycarbonate. The optical unit is connected to the mounting profile by a click-system.

Thanks to the Limark's mechanical design, the IP 67 tightness level is maintained in the long term. Installation and maintenance operations are also very easy.



CHARACTERISTICS

Tightness level	IP 67 ^(*)	
Impact resistance (polycarbonate)	IK 09 ^(**)	
Static load resistance	< 500kg	
Nominal voltage (external power supply)	24V DC	
Electrical class	III ^(*)	
Weight	Limark 1 0.6kg	Limark 2 1.2kg
MATERIALS		
Body	Anodised aluminium	
Optical unit	Frosted polycarbonate	
Colour	Aluminium	

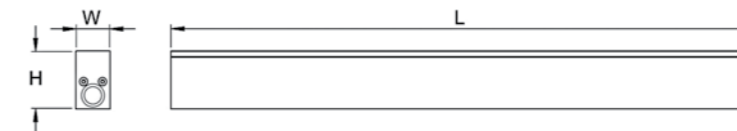
^(*) according to IEC - EN 60598 | ^(**) according to IEC - EN 62262

»»KEY ADVANTAGES

- Continuous line of light
- Ultra-compact linear module for discreet integration into the environment
- High tightness level (IP 67)
- High-quality and resistant materials
- Easy installation
- Savings in energy and maintenance costs

DIMENSIONS

	LIMARK 1	LIMARK 2
L	510mm	1010mm
H	50mm	50mm
W	30mm	30mm



INSTALLATION

These recessed floodlights create a continuous or discontinuous line of light. A maximum 8 modules of 1 metre each can be connected to each channel of a 150W power supply.

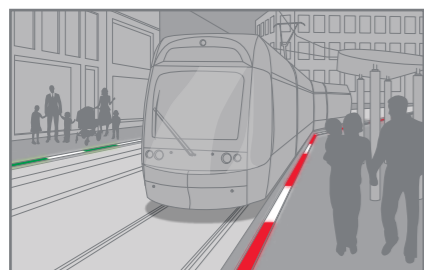


LIGHT SOURCES

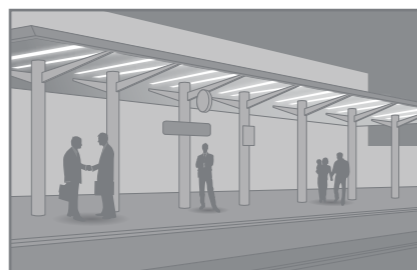
LOW-POWER LEDs		
Power/LED	0.07W	
Number of LEDs	Limark 1: 60	Limark 2: 120
Colour	White, Red, Green, Blue, Amber or Yellow	
Temperature of white LEDs	Cool 6,000K Neutral 4,100K Warm 3,050K	
Maintained nominal flux at @ tq 25 °C	60.000 hours - L70 ^(*)	
Typical luminous flux	Limark 1: 225lm	Limark 2: 450lm

^(*) L70 means that after the number of hours indicated, the luminaire maintains 70% of its initial luminous flux. The flux is an indicative LED flux based on LED manufacturer's data. The real flux output of the luminaire depends on environmental conditions (e.g. temperature and pollution) and the optical efficiency of luminaire. Flux depends on the type of LED in use and is likely to change in accordance with the continuous and rapid developments in LED technology. To follow the progress of the luminous efficiency of the LEDs used, please visit our website.

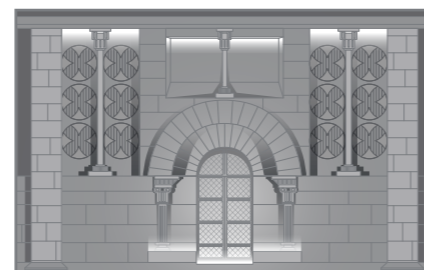
MAIN APPLICATIONS



TO CREATE SECURE ENVIRONMENTS



TO CREATE A DIFFUSE LIGHTING AMBIANCE



TO CREATE ACCENTS OF LIGHT





A ROBUST MULTI-PURPOSE ILLUMINATED HANDRAIL

COMBINING PRACTICALITY AND ELEGANCE, THE SIXTYLINE CAN BE EASILY INTEGRATED INTO ALL KINDS OF EXISTING SAFETY BARRIERS, GUARDRAILS OR HANDRAILS TO GUIDE PEOPLE WHILE CREATING A PLEASANT AMBIANCE.

The SIXTYline provides a stylish yet vandal resistant LED handrail solution with high photometric performance. A very flexible tool, it is available with a wide choice of options: colour or white (warm, neutral or cool) LEDs, beam angles in symmetrical (narrow, medium, wide, elliptical) or asymmetrical distributions and a motion detection sensor. It can be tilted on-site to guarantee the perfect lighting effect and reduce light spill.

With the long life span of its LEDs and its high IP 67 tightness level it offers a virtually maintenance free solution.

This practical solution can be installed as a standalone handrail or integrated into an existing handrail, safety barriers or guardrail. With a discreet integration and real visual comfort, the SIXTYline is a truly valuable tool for creating safe and pleasant places at night while marking the way without obtrusive lighting.

Please consult the Schreder web site for more information: www.schreder.com





SAFETY



WELL-BEING



SUSTAINABILITY



SAVINGS



SOLUTIONS

