Schréder
Experts in lightability™

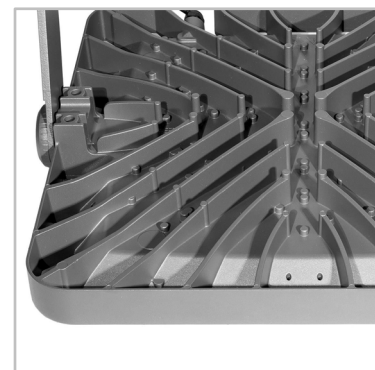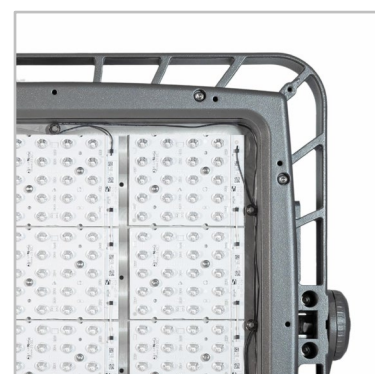# OMNISTAR

LENSO**FLEX**™4

BLAST**FLEX**™4

RE**FLEXO**™

Designed to generate massive savings and bring benefits to area and tunnel lighting

OMNISTAR is setting a new standard by providing a performing LED alternative to HID luminaires for high-mast, high bay, tunnel and other high-power applications with a minimum total cost of ownership.

This luminaire has been designed to provide an unrivalled combination of performance and flexibility for lighting areas where high lumen packages are needed with the added advantages of an LED solution: low energy consumption, improved visibility with white light, limited maintenance and longer life.

In addition to maximising energy savings, the OMNISTAR is a connected-ready lighting solution to meet your future smart city or tunnel requirements.

OMNISTAR can be installed in various configurations (suspended, surface-mounted or post-top) with one to three optical units.
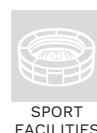
IP 66   IK 08   IK 10

UL 1598
CSA C22.2
No. 250.0

RoHS

TUNNELS & UNDERPASSES

RAILWAY STATIONS & METROS

CAR PARKS

LARGE AREAS

INDUSTRIAL HALLS & WAREHOUSES

ROADS & MOTORWAYS

SPORT FACILITIES

OMNISTAR | SUMMARY

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Concept

OMNISTAR provides a complete solution for applications requiring high lumen packages. It is composed of an optical unit (up to 240 high-power LEDs), a remote gear box, cables with quick connectors and various mounting systems.

OMNISTAR combines the energy efficiency of LED technology with the performance of the photometric concepts developed by Schréder. The design of the LensoFlex® photometric engines and the flexibility of the photometric distributions ensure safe and pleasant conditions for users while offering superior efficacy.

OMNISTAR can be also be fitted with reflectors to provide a counter beam lighting solution (ReFlexo photometries) for sports, tunnel and apron applications.

Dedicated collimator optics (BlastFlex) and louvres are also available to deliver the requested beams for specific sport and architectural lighting applications.

Composed of robust materials, OMNISTAR is highly resistant to shocks and corrosion in harsh environments. As an option, an explosion proof version is available to meet specific industrial requirements.

OMNISTAR offers a modular concept of optical units which enables 1, 2 or 3 modules to be grouped on the same bracket to meet the specifications of the area to be lit. On-site adjustment guarantees the perfect lighting.

Separate driver boxes or GEARBLAST driver can be easily connected to one or more LED optical units using quick connectors, simplifying both installation and maintenance. This also means that the OMNISTAR will be able to take advantage of future technological developments.

OMNISTAR is delivered with quick connectors for an easy installation.

The OMNIBOX, OMNIBOX XL and GEARBLAST driver are remote power devices that can be easily connected to one or more OMNISTAR luminaires, enabling easy installation and maximum flexibility.

TYPES OF APPLICATION

- TUNNELS & UNDERPASSES
- RAILWAY STATIONS & METROS
- CAR PARKS
- LARGE AREAS
- INDUSTRIAL HALLS & WAREHOUSES
- ROADS & MOTORWAYS
- SPORT FACILITIES

KEY ADVANTAGES

- Real beneficial LED alternative to HID floodlights for high-power applications
- Cost-effective and efficient to maximise energy and maintenance savings
- Flexibility: modular approach with wide range of lighting distributions
- Highly efficient light distributions reduce the quantity of luminaires to be installed
- Various mounting options and inclination possibilities on-site for optimal photometry
- Explosion proof variant for use in industrial environments with a hazardous atmosphere
- Compact size: for tunnels with restrictive heights and to avoid any damage
- Various control options including remote management systems
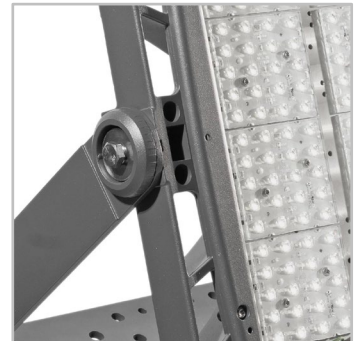
The inclination angle can be easily adjusted on-site.

With up to 240 high-power LEDs, OMNISTAR delivers high lumen packages.

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OMNISTAR | standard U bracket

OMNISTAR | large U bracket (wall mounting)

OMNISTAR | large U bracket (pole mounting)

OMNISTAR | tiltable ceiling mounting

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OMNISTAR | fixed ceiling mounting

OMNISTAR | suspended with chains

OMNISTAR | 2 optical units, tiltable together


OMNISTAR | 2 optical units, tiltable independently

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OMNISTAR | 3 optical units, tiltable together

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Control light spill

As an option, the luminaire can be equipped with louvres to minimise light spill and prevent intrusive lighting. They can be fitted inside or outside the optical unit, depending on the desired direction of the light distribution.
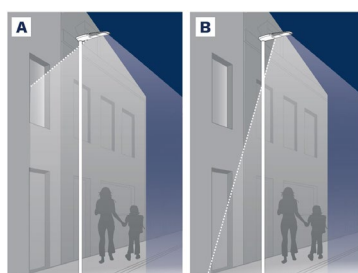
A. Without louvres
B. With louvres

LensoFlex®4

LensoFlex®4 maximises the heritage of the LensoFlex® concept with a very compact yet powerful photometric engine based upon the addition principle of photometric distribution. The number of LEDs in combination with the driving current determines the intensity level of the light distribution. With optimised light distributions and very high efficiency, this fourth generation enables the products to be downsized to meet application requirements with an optimised solution in terms of investment.

LensoFlex®4 optics can feature backlight control to prevent intrusive lighting, or a glare limiter for high visual comfort.

ReFlexo™

Using metal reflectors with a superior reflective co-efficient, the ReFlexo photometric engine delivers high performance for specific applications such as counter beam lighting in tunnels or very extensive light distributions for sports or apron lighting.

Another key advantage of the ReFlexo is its' ability to direct all the light to the front of the luminaire, ensuring that no back light is emitted. This photometric engine guarantees glare free lighting for excellent visual comfort and the creation of ambiance.

BlastFlex™4

Using collimators made of high-transmission PMMA, the BlastFlex 4 photometric engine offers the highest efficiency for directional beams dedicated to specific applications in architectural and sports lighting. The ability to control the light with the highest accuracy reduces light spill in the surroundings, improves uniformity on the area to be lit and contributes to optimal use of the energy consumed.
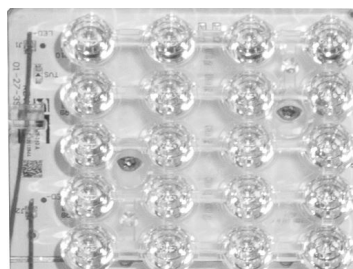
Constant Light Output (CLO)

This system compensates for the depreciation of luminous flux to avoid excess lighting at the beginning of the installation's service life. Luminous depreciation over time must be taken into account to ensure a predefined lighting level during the luminaire's useful life.

Without a CLO feature, this simply means increasing the initial power upon installation in order to make up for luminous depreciation. By precisely controlling the luminous flux, the energy needed to reach the required level can be maintained throughout the luminaire's life.
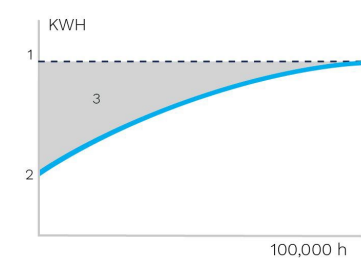
1. Standard lighting level | 2. LED lighting consumption with CLO |
3. Energy savings

Custom dimming profile

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

The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.
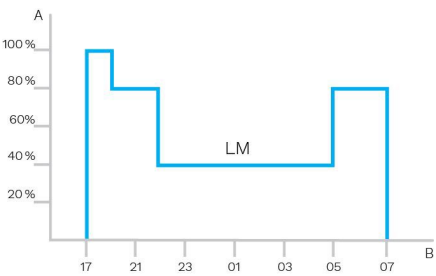
A. Dimming level | B. Time

Advanced Tunnel System 4 (ATS 4)

The ATS 4 (Advanced Tunnel System 4) is a powerful tunnel lighting control system for precise remote dimming and switching of each individual connected luminaire, based on various tunnel parameter inputs (emergency exits, smoke extraction system, traffic cameras, etc.).

The ATS 4 permanently communicates with the Lumgates, an RS422 closed-loop device connected to the luminaire drivers, to control the light intensity and provide command/reporting features.

Advanced Tunnel System 4 DALI (ATS 4 DALI)

The Advanced Tunnel System 4 DALI provides the essential functions of the ATS 4 over a DALI network protocol, enabling dimming of luminaire clusters to be controlled collectively.

The ATS 4 DALI is the ideal solution to implement a reliable and powerful tunnel lighting control system with streamlined features and optimised costs.

Lumgate V4

The Lumgate is a luminaire control unit that acts as an interface between the lighting management system and the tunnel luminaires or driver boxes. Connected to the luminaire drivers, it switches the drivers on/off, controls the light intensity and provides command/reporting features.

It is suitable for installation in driver boxes or directly in the luminaire. It communicates with the driver via 0-10V or DALI command. This brand new interface includes advanced Inrush Current Limitation Features and a 24 hour fail-safe repeat mode.

Jointly developed by Schréder and Phoenix Contact, the Advanced Tunnel System 4 (ATS 4) has been designed to control every lighting point or clusters of luminaires to perfectly adapt the lighting level according to conditions in the tunnel, to monitor the power consumption and to report the burning hours or any failure to facilitate maintenance. The system includes a self-commissioning feature and enables scenarios to be adapted remotely at any moment.

ADAPTIVE LIGHTING ACCORDING TO SPEED
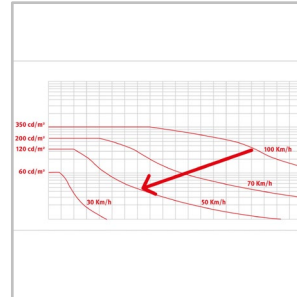
The ATS 4 can be linked to a traffic monitoring system to obtain data regarding speed or density to adapt the lighting level according to safety standards. This option further reduces energy consumption and increases the lifetime of the installation while ensuring the best driving conditions for motorists.

PRECISE AND CONTINUOUS DIMMING
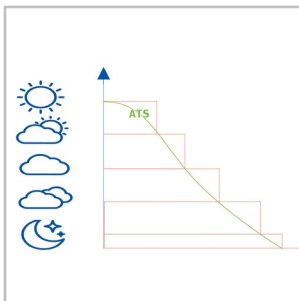
ATS 4 provides 25 different dimming levels to precisely adapt the lighting to the real needs. Without any over-lighting, the energy consumption is limited to what is absolutely necessary to ensure safe and comfortable driving conditions.

ADAPTIVE LIGHTING ACCORDING TO POLLUTION

Based on cleaning cycles, the ATS 4 can take into account the depreciation of the flux due to dirt accumulation to continuously provide the requested lighting level in the tunnel. No more, no less. This feature offers additional energy savings while providing safety and comfort for users.

FLEXIBILITY

Flexible redundancy offers security on multi-level applications, not only for the lighting.

PLUG AND PLAY COMMISSIONING

This control system is easy to install and configure. The tunnel lighting study can be directly imported into the ATS 4 control system. This unique feature, in combination with the auto-addressing of the Lumgates, leads to an extremely short commissioning time once the fixtures have been installed.

The ATS 4 benefits from a complete set of toolless smart cables and connectors, allowing installers to speed up cabling and save valuable time on-site

INTERACTION WITH THIRD PARTY SYSTEMS

Every command or signal sent to or coming from a tunnel component (emergency exit, smoke extraction system, traffic management system...) can be used to trigger a responsive lighting scenario. All of the tunnel equipment can be controlled through the same bus command.

MAXIMISED SAFETY

The system enables the easy set-up of emergency and disaster management scenarios.

EXEDRA

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Schréder EXEDRA is the most advanced lighting management system on the market for controlling, monitoring and analysing streetlights in a user-friendly way.

Tailored experience

Schréder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable and includes tools for user management and multi-tenant policy that enables contractors, utilities or big cities to segregate projects.

A powerful tool for efficiency, rationalisation and decision making

Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Standardisation for interoperable ecosystems

Schréder plays a key role in driving standardisation with alliances and partners such as uCIFI, TALQ or Zhaga. Our joint commitment is to provide solutions designed for vertical and horizontal IoT integration. From the body (hardware) to the language (data model) and the intelligence (algorithms), the complete Schréder EXEDRA system relies on shared and open technologies. Schréder EXEDRA also relies on Microsoft Azure for cloud services, provided with the highest levels of trust, transparency, standards conformance and regulatory compliance.
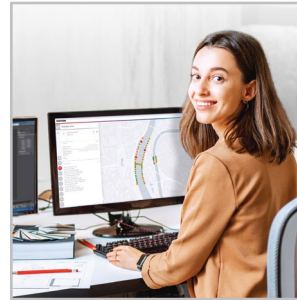
Breaking the silos

With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:
• control devices (luminaires) from other brands
• manage controllers and to integrate sensors from other brands
• connect with third-party devices and platforms

A plug-and-play solution

As a gateway-less system using the cellular network, an intelligent automated commissioning process recognises, verifies and retrieves luminaire data into the user interface. The self-healing mesh between luminaire controllers enables real-time adaptive lighting to be configured directly via the user interface. OWLET IV luminaire controllers, optimised for Schréder EXEDRA, operate Schréder's luminaires and luminaires from third parties. They use both cellular and mesh radio networks, optimising geographical coverage and redundancy for continuous operation.

Protected on every side

ISO 27001
BUREAU VERITAS
Certification

Schréder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services. The whole platform is ISO 27001 certified. It demonstrates that Schréder EXEDRA meets the requirements for establishing, implementing, maintaining and continually improving security management.

Mobile App: any time, any place, connect to your street lighting
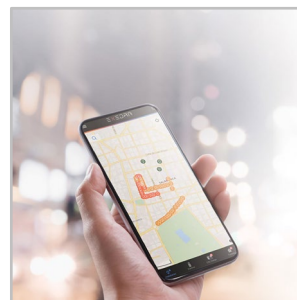
The Schréder EXEDRA mobile application offers the essential functionalities of the desktop platform, to accompany all types of operator on site in their daily effort to maximise the potential of connected lighting. It enables real-time control and settings, and contributes to effective maintenance.

GENERAL INFORMATION

Circle Light label	Score ≥90 - The product fully meets circular economy requirements
CE mark	Yes
CB mark	Yes
ENEC certified	Yes
ENEC+ certified	Yes
UL certified	Yes
ROHS compliant	Yes
French law of December 27th 2018 - Compliant with application type(s)	a, b, c, d, e, f, g
RCM mark	Yes

HOUSING AND FINISH

Housing	Aluminium
Optic	Aluminium reflector PMMA
Protector	Tempered glass Frosted glass Polycarbonate
Housing finish	Polyester powder coating Standard polyester powder coating (C2-C3 according to the ISO 9223-2012 standard) Optional "seaside" polyester powder coating (C4 according to the ISO 9223-2012 standard) Optional "seafront" polyester powder coating with anodisation (C5-CX according to the ISO 9223-2012 standard)
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 08, IK 10
Vibration test	Compliant with ANSI 1.5G and 3G and modified IEC 68-2-6 (0.5G)
Access for maintenance	Tool-less access to gear compartment
Safety compliance against ball throwing	DIN18 032-3:1997-04 according to EN 13 964 Annex D
Explosion proof compliance	IECEx / ATEX according to EN 60079 | TÜV 16 ATEX 7895 X | Ex II 3 G Ex nR IIC T4 Gc | TÜV 16 ATEX 7896 X | Ex II 2 D Ex tb IIIC T100°C Db | IECEx TUR 16.0037X

· *Any other RAL or AKZO colour upon request*

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +55°C / -22° F up to 131°F

· *Depending on the luminaire configuration. For more details, please contact us.*

ELECTRICAL INFORMATION

Electrical class	Class 1 US, Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 220-240V – 50-60Hz 347-480V – 50-60Hz
Surge protection options (kV)	10 20
Control protocol(s)	1-10V, DALI, DMX-RDM
Control options	Lumgate, Custom dimming profile, Remote management
Socket	NEMA 7-pin (optional)
Associated control system(s)	Advanced Tunnel System 4 (ATS 4) Advanced Tunnel System 4 DALI (ATS 4 DALI) Schréder EXEDRA Nicolaudie Pharos

· *Electrical information given for the gear box*

OPTICAL INFORMATION

LED colour temperature	2700K (Warm White WW 727) 3000K (Warm White WW 730) 3000K (Warm White WW 830) 4000K (Neutral White NW 740) 4000K (Neutral White NW 840) 5700K (Cool White CW 857)
Colour rendering index (CRI)	>70 (Warm White WW 727) >70 (Warm White WW 730) >80 (Warm White WW 830) >70 (Neutral White NW 740) >80 (Neutral White NW 840) >80 (Cool White CW 857)
ULOR	0%
ULR	0%

· *Other colour temperatures available as an option. Please contact us for further information.*
· *ULOR may be different according to the configuration. Please consult us.*
· *ULR may be different according to the configuration. Please consult us.*
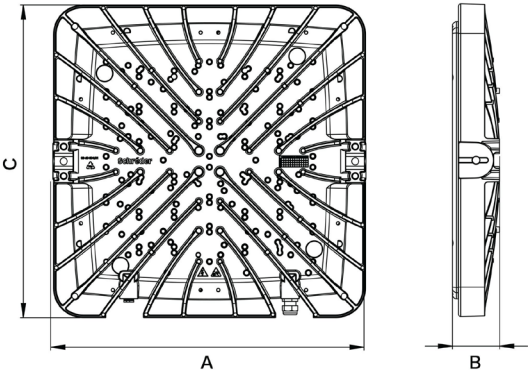
LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L95 (high-power LEDs)

· *Lifetime may be different according to the size/configurations. Please consult us.*

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DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	532x80x530 | 20.9x3.1x20.9
Weight (kg | lbs)	12.0 | 26.4
Aerodynamic resistance (CxS)	0.17
Mounting possibilities	Hook(s) for suspension Side-entry slip-over – Ø76mm Post-top slip-over – Ø76mm Post-top slip-over – Ø76-108mm Bracket enabling adjustable inclination Surface mounting Direct mounting on ceiling

· For more information about mounting possibilities, please consult the installation sheet.

Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
Warm White WW 730		Warm White WW 830		Neutral White NW 740		Neutral White NW 840		Cool White CW 857				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
160	12600	60200	11800	56400	13600	65300	12600	60200	12600	60200	173	505	167
240	18900	75700	17700	70900	20500	82100	18900	75700	18900	75700	259	595	165

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

Luminaire output flux (lm)										Power consumption (W)		Luminaire efficacy (lm/W)
Warm White WW 730		Warm White WW 830		Neutral White NW 740		Neutral White NW 840		Cool White CW 857				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
160	12600	60200	11800	56400	13600	65300	12600	60200	12600	60200	173	505	167
240	18900	75700	17700	70900	20500	82100	18900	75700	18900	75700	259	595	165

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

OMNISTAR | PERFORMANCE

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Photometry

RE FLEXO™

Luminaire output flux (lm)									Power consumption (W)		Luminaire efficacy (lm/W)
	Warm White WW 727		Warm White WW 730		Neutral White NW 740		Cool White CW 857				
Number of LEDs	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to
72	8600	28300	9600	31500	10200	34600	9000	31900	77	270	163
144	17200	56700	19200	63100	20400	69200	18100	63800	153	541	164

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %