LED STREET LIGHTING

SWARCO I FIRST IN TRAFFIC SOLUTIONS.

SWARCO is a growing international group providing the complete range of products, systems, services and solutions for road safety and intelligent traffic management.

With almost five decades of experience in the industry, the corporation supports the growing mobility needs of society with turnkey systems and solutions in road marking, urban and interurban traffic control, parking, public transport, infomobility and street lighting. Cooperative systems, V2I communication, electromobility, and integrated software solutions for the Smart City are latest, future-oriented fields in the group’s portfolio.

www.swarco.com
Amazing performance delivered by fireflies. The quantity of light radiated is very large compared to the size of the bioluminescent source. This is due to the outer state of the lighting elements. Researchers from a number of countries have come together to work on a study delivering findings which are also reflected in FUTURLUX. By applying an outer coating, inspired by that in glow-worms, the luminous efficacy of conventional gallium nitride light-emitting diodes can be increased by up to 55%.

INNOVATION INSPIRED BY GLOW-WORMS

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INNOVATION INSPIRED BY NATURE

FUTURLUX STREET LIGHTING
STATE OF THE ART

The street lighting systems „made in Austria“ are outstanding in terms of reliability, cost efficiency and aesthetics. State-of-the-art LED technology is combined with perfected lens systems and sophisticated designs to create internationally popular lighting solutions under the FUTURLUX brand.

- Reliable and long-lasting
- Sustainable
- Attractive in design
- Smart city-ready
CONSISTENT QUALITY TESTING
Thanks to ongoing quality checks, our own lighting laboratory, the fulfillment of all necessary certifications and specific national standards, FUTURLUX lighting systems leave nothing to chance.

PRODUCTION IN AUSTRIA
Quality made in Austria – FUTURLUX street-lighting systems are high class Austrian solutions.

CONSISTENT QUALITY TESTING
Thanks to ongoing quality checks, our own lighting laboratory, the fulfillment of all necessary certifications and specific national standards, FUTURLUX lighting systems leave nothing to chance.

Pioneers in LED technology
SWARCO FUTURT is a reliable partner in signaling and lighting technology, with over two decades of expertise in the use of LEDs and over 50 years of experience in the processing of polycarbonates.

The products in the FUTURLUX lighting family satisfy with high levels of luminous intensity throughout their life cycles of many, many years. FUTURLUX lights are not off-the-peg solutions, but are tailored to meet the needs of customers and to comply with prevailing national standards.

Customer satisfaction, thanks in part to optimized production processes
FUTURLUX does not compromise on the quality of any of its components. Strict quality assurance measures and checks throughout the entire production process ensure that we produce perfected products which consistently satisfy the needs of national and international customers.

LONG-LASTING AND OPTIMIZED PERFORMANCE
THE FUTURLUX QUALITY ETHOS

OVER 20 YEARS OF LED KNOW-HOW
FUTURLUX LED solutions guarantee optimum energy efficiency coupled with lighting efficiency throughout the entire life cycle.
Compared to conventional sodium vapor lamps, LED lights reduce energy bills by up to 70%. At the same time, the lighting quality is improved, light smog is reduced, and traffic safety is enhanced.

**FUTURLUX is profitable**

FUTURLUX street lighting is a genuine highlight when you consider the total cost of ownership. State-of-the-art LEDs and cleverly designed optical systems create a symbiosis, combining optimum lighting quality and the very best in energy efficiency. Up to 70% energy saving compared to conventional light sources significantly reduce the pressure on your operating costs. The investment in switching over to LED street lighting will have paid for itself in about three or four years. The long-lasting LEDs ensure that you will have reliable, optimum lighting quality for more than two decades.

The simple and quick installation of the lights, their service friendliness and the extremely low maintenance requirements will also be a welcome relief to local authority budgets.

**LENS-REFLECTOR SYSTEM**
State-of-the-art LED technology couples optimized lighting efficiency with minimized energy consumption.

**LENS TECHNOLOGY**
Anti-glare light distribution without reflector technology.

**DIMMING**
A control unit integrated into the luminaire allows the lighting level to be reduced at night to suit the surroundings, thus achieving further energy savings.

**HOUSING**
The sophisticated construction of the luminaire housing with sealed light source considerably reduces installation and maintenance costs and offers the opportunity for a wide variety of smart city solutions.
TREND-SETTING AND FUTURE-SAFE

THE FUTURLUX VISION

The development engineers of FUTURLUX have not only implemented the latest state of the art technology, they are thinking beyond that.

FUTURLUX LED lights are future-safe and designed with the needs of smart cities in mind. By being integrated into modern, in part web-based communication technologies, street lighting is able to perform additional functions, offering additional benefits for road safety and general convenience.

FUTURLUX can warn road users about hazards such as accidents and traffic jams through different light colors, light intensities, flashing effects and such like, or guide them towards free parking spaces and charge points for electric vehicles. This makes street lighting part of the traffic infrastructure, turning it into a guidance and communication system.

FUTURE-ORIENTED
FUTURLUX LED street lights are ready for the smart-lighting solutions of tomorrow. They can be integrated easily into smart communication systems in order to perform additional functions besides simple lighting.

SYSTEM-COMPATIBILITY
The future-safe lighting systems already meet all the necessary requirements for remote diagnostics systems, automated control of lighting intensity, and much else.

RESEARCH LABORATORY
Experts in the Research & Development Department are working on future options for FUTURLUX LED street lighting, which has proved to be a success right around the world.
VERSATILE
AND INDIVIDUAL

THE FUTURLUX PRODUCT RANGE

Optimized solutions are used for all applications and design preferences in FUTURLUX LED street lights. Each model has its own specific advantages. However, all of them have SWARCO FUTURIT’s globally acclaimed quality, performance and cost-efficiency in common.

RIMANO
The weight-reduced luminaire with tried and tested FUTURLUX technology seamlessly fits into any street-scape.

AREDO
The futuristic solution with integrated communication module and adapted illuminance to suit the surroundings.

CITERA
Residential area lighting with a traditional look, but with long-lasting and sustainable LED technology.

HEAD
Modern LED technology in an attractive luminaire, available in various dimensions as a compact alternative to classical street lighting.

LUNIA
With sophisticated aesthetics and the highest class in light intensity, with reduced physiological glare; ideal for residential streets as well.

CITERA Style
Residential area lighting in a visually sophisticated design for a timeless and modern cityscape.

POLIFINA
The innovative combination of state-of-the-art LED technology and a UV-resistant polycarbonate housing.
AREDO Design

THE SMART FUTURE-SAFE SOLUTION

The technical look in a compact design makes AREDO Design a versatile lighting solution with a wide range of applications. AREDO Design is designed for an intuitive, quick and efficient installation. And the driver unit service is also 100% toolless, which means that it can also be done quickly.

The AREDO Design combines state-of-the-art design with the latest technology, low acquisition costs and sophisticated construction for maximum service life, as well as fastest and simplest maintenance.

- Intuitive technology for quick installation and assembly
- Long lifetime
- Light unit „sealed 4 life”
- LED lens system with a multi-layer function
- Sensor and smart city-ready
AREDO Design

AREAS OF USE

MAIN ROAD
ARED0 Design L10  ARED0 Design L25
Main roads and through roads. ARED0 Design L10 or L25 with an adapted lens system, can be installed at heights of up to 12 m.

SIDE ROAD
ARED0 Design L5
Narrow side roads and one-way streets, as well as in industrial zones. ARED0 Design L5 including its adapted P-class road lens systems for installation at heights of between 4 and 6 m.

CROSS-WALK
ARED0 Design L5  ARED0 Design L10
Pedestrian crossings and conflict zones. ARED0 Design L5 or L.10 with a narrow-band cross-walk lens system.

RESIDENTIAL AND SERVICE STREETS
ARED0 Design L5
Traffic-calmed zones such as service streets and medium-size roads in residential areas, as well as for pedestrian zones. ARED0 Design L5 with a medium-width lens system and excellent EIR.

CAR PARK
ARED0 Design L10  ARED0 Design L25
Large and medium-size surfaces. ARED0 Design L10 or L25 with a wide lens system for large parking areas and an installation height of up to 10 m.

CYCLE AND FOOTPATHS
ARED0 Design L5
Narrow footpaths or cycle paths. ARED0 Design L5 with special lens system for wide pole spacing and low pole heights of up to 4 m.

VARIANTS

ARED0 Design L5
- Up to 24 high-power LEDs
- Light output of up to 5,000 lm
- Installation height of 4 to 8 m
- < 7 kg

ARED0 Design L10
- Up to 48 high-power LEDs
- Light output > 10,500 lm
- Installation height of 6 to 12 m
- < 10 kg

ARED0 Design L25 (in planning)
- Up to 120 high-power LEDs
- Light output > 25,000 lm
- Installation height of 10 to 20 m
- < 15 kg
**DESIGN BENEFITS**

**FUNCTIONALLY CLEVER DESIGN**
- Luminaire housing made from powder-coated die-cast aluminum LM 6 for optimum corrosion resistance
- Low weight
- LED light source (sealed 4 life)
- Top- and side-mounting with variable tilt angle (120°) at increments of 5°
- Housing construction allows the installation of individual smart city components

**QUICK AND RELIABLE INSTALLATION**
- Driver unit is accessible and changed without tools
- Integrated, universal top/side mounting piece for Ø 42, 60 or 76 mm
- Electrical isolating switch for immediate switch-off when it is opened
- Cover unit is locked securely with a stainless steel locking bolt

**IMPRESSIONS DETAILS THROUGHOUT**
- IP66 ingress protection
- IK09 flat safety glass
- Overvoltage protection up to 10 kV
- Safety class II (optionally safety class I)
- Low switch-on current

**SYSTEM EFFICIENCY & SERVICE LIFE**
- up to 130 lm/W on the system
- Long service life: L80B10 > 150,000 h to reduce the total cost of ownership

**TECHNOLOGICAL HIGHLIGHTS**

**OPTIC AND LIGHT DISTRIBUTION**
- LED lens system with a multi-layer function
- Homogeneous light distribution for optimized lighting quality
- Led lens system with a multi-layer function
- Constant lumen management throughout the entire service life
- Adapted design for optimized thermal connection

**LUMINOUS COLORS**
- **3000 K** - BRIGHT WARM WHITE
  - The color temperature is similar to that of an incandescent light bulb, which gives it a calming and cozy feel. Therefore, it radiates a sense of well-being, in particular in car parks and on residential streets.

- **4000 K** - NEUTRAL WHITE
  - The shade of light with a balanced distribution of blue and red light components for discreet outdoor lighting solutions.

- **5700 K** - SIMILAR TO DAYLIGHT WHITE
  - With an increased blue component in the color spectrum, this luminous color delivers a better contrast ratio. This boosts safety on the road.

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Total Cost of Ownership

Areo Design with an O3 or O7 lens system, optimized for M-classes and very good EIR, pole height to pole spacing ratio of up to 1:6

Areo Design with an O2, O7 or O8 lens system, optimized for M-classes and very good EIR, pole height to pole spacing ratio of up to 1:6

Areo Design with an O2 or O4 lens system, perfect solution for very wide applications.
CITERA

STYLISH EFFICIENCY

The CITERA is a decorative, energy-saving and timelessly elegant solution for low pole heights. It is primarily used for lighting solutions on residential and service streets, cycle paths, in parking areas and public parks. Optimized for vertical lighting classes in conformity with EN13201. The classical design coupled with state-of-the-art LED technology guarantees optimized lighting for decades.

- Intelligent technology for quick installation and assembly
- Optimized die-cast aluminum for less weight
- LED lens system with a multi-layer function
- Expandable with diffuser for pleasant light atmosphere (Comfortlight)
- Alternative available as a variant in modern design with identical photometric parameters (CITERA Style)
AREAS OF USE

SIDE ROAD
CITERA 12    CITERA 16
Narrow side roads and one-way streets. CITERA 12 and 16 with their perfect S-class road lens for an optimized installation height of 4 m.

CYCLE AND FOOTPATHS
CITERA 16    CITERA 24
Narrow footpaths or cycle paths. CITERA 16 or CITERA 24, the stylish solution for narrow footpaths and cycle paths, for very wide spacing between lamp posts and low pole heights.

RESIDENTIAL AND SERVICE ROADS
CITERA 16    CITERA 24
Traffic-calmed zones such as service streets and medium-size roads in residential areas, as well as for pedestrian zones. CITERA 16 or CITERA 24 with a medium-width lens and excellent EIR.

CAR PARK
CITERA 24
Large and medium-size surfaces. CITERA 24 with a wide symmetrical optic for perfect illumination of park paths or parking areas.

VARIANTS

CITERA 12
- 12 high-power LEDs
- Light output up to 2000 lm
- Installation height up to 6 m (3 – 5 m recommended)

CITERA 16
- 16 high-power LEDs
- Light output of 2000 to 3000 lm
- Installation height up to 6 m (3 – 5 m recommended)

CITERA 24
- 24 high-power LEDs
- Light output of 3000 to 5000 lm
- Installation height up to 6 m (3 – 5 m recommended)
**DESIGN BENEFITS**

**FUNCTIONALLY CLEVER DESIGN**
- Powder-coated die-cast aluminum
- Weighs less than 8 kg
- Exchangeable, enclosed LED light source
- Tool-less retrofittable diffuser (Comfortlight)
- Very high impact resistance IK10

**QUICK AND RELIABLE INSTALLATION**
- Connecting cable included
- Top-mounting piece for Ø 60 mm or 76 mm
- Electrical isolating switch for immediate switch-off when it is opened
- Secure locking of the cover by stainless steel interlock
- Quick and easy pole mounting by two screws
- Opened without tools
- Tool-less exchange of driver unit
- Tool-less light source replacement (optional)

**IMPRESSIVE DETAILS THROUGHOUT**
- IP66 ingress protection
- Overvoltage protection up to 10 kV
- Safety class II
- Low switch-on current

**SYSTEM EFFICIENCY & SERVICE LIFE**
- up to 130 lm/W on the system
- Long service life: L80B10 > 120,000 h

**TECHNOLOGICAL HIGHLIGHTS**

**OPTIC AND LIGHT DISTRIBUTION**
- LED lens system with a multi-layer function
- Homogeneous light distribution for optimized lighting quality
- Constant lumen management throughout the entire service life
- Optimized thermal connection

**CITERA C1 lens system for P-classes, pole height to pole spacing ratio of up to 1:6 and pole height to road width ratio of 1:1.5**

**CITERA C3 lens system, symmetrical distribution for parks, footpaths and car parks**

**CITERA C2 lens system for narrow footpaths and cycle paths, pole height to pole spacing ratio of up to 1:7**

**LUMINOUS COLORS**

**BRIGHT WARM WHITE**
The color temperature is similar to that of an incandescent light bulb, which gives it a calming and cosy feel. Therefore, it radiates a sense of well-being, in particular in car parks and on residential streets.

**NEUTRAL WHITE**
The shade of light with a balanced distribution of blue and red light components for discreet outdoor lighting solutions.
OPTIMIZED INNOVATION IN DESIGN AND FUNCTIONALITY

With POLIFINA, SWARCO has incorporated for the first time its decades of experience in plastics processing into street lighting production. Due to its polycarbonate housing, POLIFINA not only offers significantly reduced weight, but also scores points for its ease of installation and maintenance. Its contemporary, timeless design allows it to blend in seamlessly into a wide range of different environmental scenarios. The design has deliberately gone for function over form which was developed in collaboration with a design agency.

- Significant reduction in life cycle costs and in the product carbon footprint (CO₂-footprint)
- UV-stable, weather- and impact-resistant polycarbonate housing (more than 30 years in use)
- Less weight, innovative and easy-to-handle design
- Sensor and smart city-ready
AREAS OF USE

MAIN ROAD
POLIFINA
For main roads and through roads. POLIFINA P1 with an adapted lens system, can be installed at heights of up to 8 m and up to lighting class M4.

SIDE ROAD
POLIFINA
For side roads and one-way streets, as well as industrial zones, with universal optics for P-classes.

RESIDENTIAL AND SERVICE STREETS
POLIFINA
Traffic-calmed zones such as service streets and medium-sized roads in residential areas, with medium optics and excellent EIR.

CAR PARK
POLIFINA
Medium-size areas for installation heights of up to 10 m.

VARIANTS

POLIFINA
- 96 extremely robust mid-power LEDs
- Light output of up to 5,000 lm
- Installation height of 4 to 8 m
- Low weight of only 4.5 kg
DESIGN BENEFITS

FUNCTIONALLY CLEVER DESIGN
- Housing made from high-strength, UV-resistant and long-life polycarbonate
- Integrated, universal top/side mounting piece for Ø 42, 60 and 76 mm
- Adjustable at increments of 5 degrees
- Labyrinth double-wall seal IP66
- LED light source hermetically (sealed 4 life)

QUICK AND RELIABLE INSTALLATION
- Driver unit is accessible and changed without tools
- Cover is anchored during removal
- Simple cable entry
- Guide pins for simple assembly
- Electrical isolating switch for immediate switch-off when it is opened

IMPRESSIVE DETAILS THROUGHOUT
- Significant reduction in life cycle costs and in the product carbon footprint (CO₂-footprint)
- Overvoltage protection up to 10 kV
- Safety class II
- Low switch-on current
- IK09 impact resistance

SYSTEM EFFICIENCY & SERVICE LIFE
- up to 140 lm/W on the system
- Long service life: L80B10 > 100,000 h

TECHNOLOGICAL HIGHLIGHTS

OPTIC AND LIGHT DISTRIBUTION
- Homogeneous, very large light array for high-quality and reduced physiological glare
- Highest color and contrast perception through a minimum CRI of 80 for all luminous colors

LUMINOUS COLORS
- 3000 K
- 4000 K
- 5000 K

BRIGHT WARM WHITE
The color temperature is similar to that of an incandescent light bulb, which gives it a calming and cozy feel. Therefore, it radiates a sense of well-being, in particular in car parks and on residential streets.

NEUTRAL WHITE
The shade of light with a balanced distribution of blue and red light components for discreet outdoor lighting solutions.

SIMILAR TO DAYLIGHT WHITE
With an increased blue component in the color spectrum, this luminous color delivers a better contrast ratio. This boosts safety on the road.
LUNIA comes in a variety of light packages, making it a versatile LED street light. Its distinctive design gives it an aesthetic appeal, and it boasts a clever structural design, which reduces maintenance costs with its sealed LED unit and updatable drivers.

The characteristic features of LUNIA are its unmistakable shape, which is a perfect blend of simplicity and technical individuality. The design has been developed in collaboration with a renowned firm of architects. The product name plays on the gentle, round shape, which creates associations with the moon (luna in Italian) and refers to the long-life, luminiferous function.

- Aesthetic, sophisticated design
- LED lens technology or LED lens reflector system
- Durable design thanks to die-cast aluminum, stainless steel and flat safety glass cover
- Sensor and smart city-ready
AREAS OF USE

MAIN ROAD
LUNIA 3  LUNIA L10
Main roads and through roads. With an optimized lens system, can be installed at heights of up to 12 m, three lanes, up to lighting class M3.

SIDE ROAD
LUNIA 1  LUNIA 2  LUNIA L5
Normal and narrow side roads or one-way streets and industrial zones. Optimized for installation at heights of up to 8 m.

CROSS-WALK
LUNIA 3  LUNIA L5  LUNIA L10
Pedestrian crossings and conflict zones with an adapted, narrowband cross-walk optic.

RESIDENTIAL AND SERVICE STREETS
LUNIA 1  LUNIA 2  LUNIA L5
Traffic-calmed zones such as service streets and medium-size roads in residential areas, as well as for pedestrian zones.

CAR PARK
LUNIA L10
Large and medium-size surfaces. For an installation height of up to 10 m.

CYCLE AND FOOTPATHS
LUNIA 1  LUNIA 2  LUNIA L5
Narrow footpaths or cycle paths. For wide pole spacing and low pole heights of up to 4 m.

VARIANTS

LED lens system
- Up to 48 LEDs
- Light output up to 9,500 lm
- Installation height of 3 to 12 m
- 9.5 kg post-mounting / 9.8 kg side-mounting

LED lens-reflector system
- Variants
- Areas of use
- Technical specifications
- Installation options
DESIGN BENEFITS

FUNCTIONALLY CLEVER DESIGN
- High quality long-life material combination
- The sealed LED unit prevents dirt ingress and keeps maintenance costs down
- Consistent luminaire design for different applications
- Reduced maintenance and long-lasting

QUICK AND RELIABLE INSTALLATION
- Easy-to-replace driver unit
- Simple handling

IMPRESSIONS DETAILS THROUGHOUT
- One size for all applications
- Overvoltage protection up to 10 kV
- IP66 ingress protection
- IK08 impact resistance

SYSTEM EFFICIENCY & SERVICE LIFE
- up to 130 lm/W on the system
- Long service life: L80B10 > 100,000 h

TECHNOLOGICAL HIGHLIGHTS

OPTIC AND LIGHT DISTRIBUTION

- Innovative multi-layer lighting technology prevents dark sections along the carriageway
- Optimized light guidance through a combined lens-reflector system
- Different dimming options
- Highly efficient brand-name LEDs with in excess of 160 lm/W

LUMINOUS COLORS

- 3000 K 4000 K 5700 K

SIMILAR TO DAYLIGHT WHITE
With an increased blue component in the color spectrum, this luminous color delivers a better contrast ratio. This boosts safety on the road.

BRIGHT WARM WHITE
The color temperature is similar to that of an incandescent light bulb, which gives it a calming and cozy feel. Therefore, it radiates a sense of well-being, in particular in car parks and on residential streets.

NEUTRAL WHITE
The shade of light with a balanced distribution of blue and red light components for discreet outdoor lighting solutions.