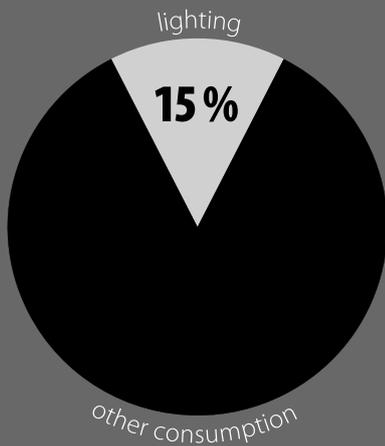


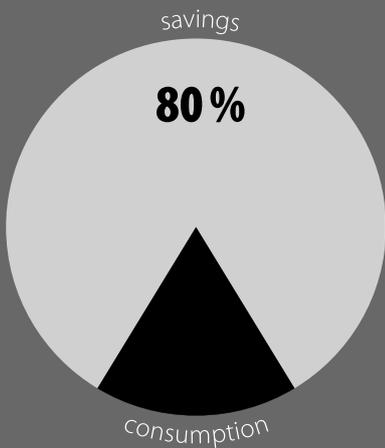
\* Potential savings  
using an intelligent  
industrial lighting system

**REFLECTA** 

### AVERAGE BUSINESS ENERGY CONSUMPTION



### ENERGY SAVINGS WITH REFLECTA



On average, companies use between **15 to 20%** of their total electricity consumption on industrial lighting (in logistics and storage facilities, up to 90%).

Intelligent industrial lighting solutions can yield electricity savings of **50 to 80%**.



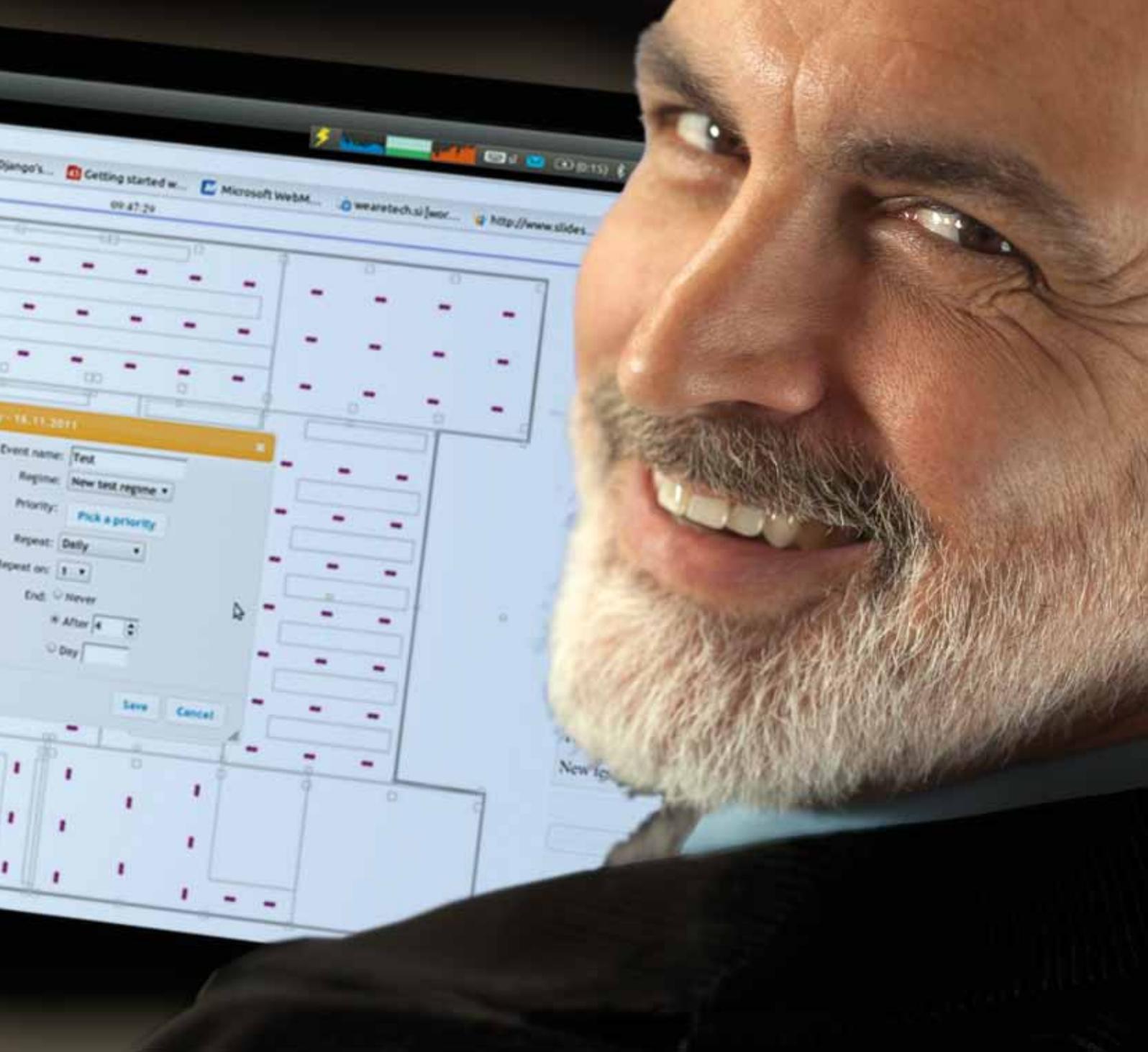
# 10

## good reasons for REFLECTA

Light can be a key resource – and a tool – for reducing costs, improving productivity and increasing added value. Choosing the right, energy-efficient lighting technology is of critical importance in a competitive marketplace.

Why do we believe that the best choice is embodied in REFLECTA intelligent lighting systems?

We have at least 10 reasons.



- up to **€ 250,000** in annual savings can be achieved at one production site,
- REFLECTA provides between **50–80%** savings in energy usage,
- on average, companies use between **15–20%** of their total electricity consumption on industrial lighting (up to **90%** in logistics and storage facilities),
- a **2–3 year** return on investment is ensured by REFLECTA,
- up to **500%** improvement in workspace lighting,
- up to **40%** higher productivity with better lighting,
- up to **50%** fewer workplace mistakes with better lighting,
- up to **85%** less worker fatigue with better lighting,
- up to **67%** fewer workplace accidents with better lighting,
- up to **70%** lower costs and installation time with REFLECTA.

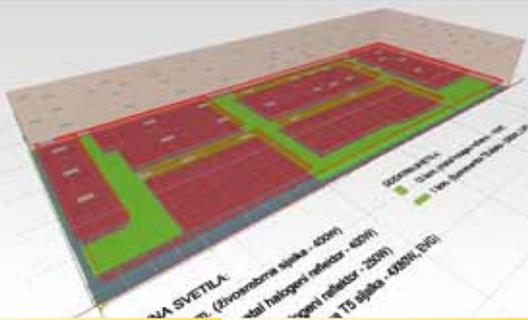
**Welcome to a world  
where you can create  
savings**

**REFLECTA**   
Intelligent Industrial Lighting

# 5

steps to savings

## ONE STOP SHOP



ANALYSIS

PLANNING

FINANCING

INSTALLATION

MAINTENANCE

# 1

### We bring you efficient lighting in five steps

The REFLECTA intelligent system is a comprehensive system that integrates knowledge and experience – not only from the areas of development and production – but also financing, planning, installation and maintenance.

Replacement of your existing industrial lighting with an energy-efficient system can be implemented quickly, with minimal costs, while your business process continues undisturbed.

### Free project analysis

Based on our analysis, we will discover how efficient your existing system is and define its key weaknesses.

Our free analysis shows:

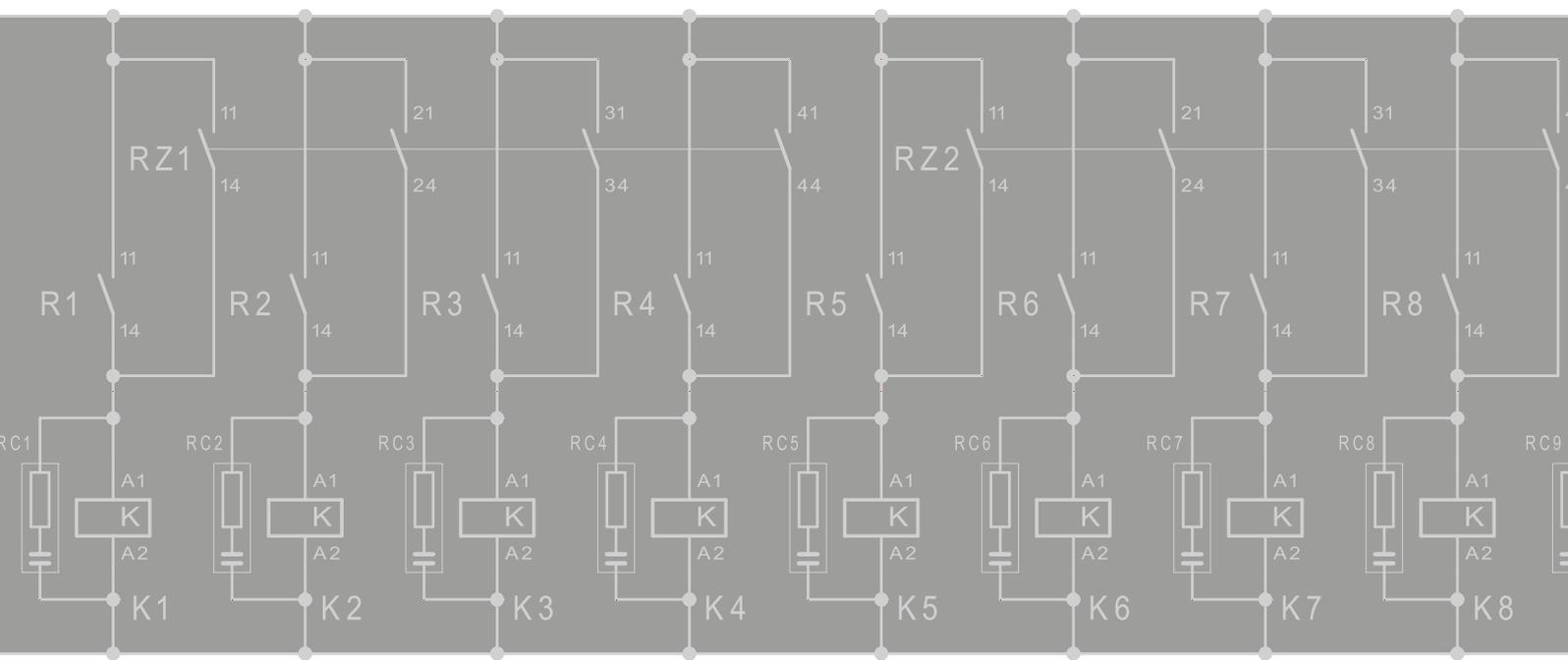
- how much electricity and maintenance could be saved – average savings are between **50 and 80%** and
- how soon your new industrial lighting will bring a return on investment – the average period is **2–3 years**.
- We will also prepare, free of charge, a proposal for a new industrial lighting system, with a detailed simulation of the new solution and the reduced costs of energy-efficient lighting. You can use the analysis of your existing lighting as part of an energy review, which can cost up to 3,000 Euro.

# 2

### Planning

Based on the results of your analysis and any other needs, you will also receive a free 3D simulation of the entire optimization project with REFLECTA intelligent lighting systems. With this we will:

- improve the brightness and quality of your light, which will remain constant throughout the 5-year-long warranty period (applies also for bulbs);
- install the luminaries where they are needed, eliminate the problem of shading and consequently reduce the number of required luminaries due to higher efficiency and luminosity;
- create an intelligent system of energy-efficient industrial lighting with sensors and user-friendly controls that take into account the availability of natural daylight, the organization of work time and practical switching cabinets.



LSD

IK

IK

IK

3

4

5

### Financing

REFLECTA will help you achieve substantial savings with a new energy-efficient industrial lighting system, and with only minimal investment. We can help you obtain funds for your investment in REFLECTA, such as through Project ZERO – Pay As You Save. For the installation of intelligent energy-efficient lighting, your company can obtain grants for efficient use of energy.

Your company can even avoid initial outlays by **paying for your renovation with monthly savings** in electricity. To enable this type of financing opportunity, we will prepare all technical and tender documents for you.

### Installation

A REFLECTA intelligent lighting system is installed quickly and reliably, usually outside of your working hours. We have reduced the time and installation costs, in comparison with other providers, by 70%. In addition, the installation is so simple that at your request, it can even be performed by your own professional staff.

Our process of installing luminaries is highly efficient and fast. Our expert team of installers is well equipped and able to work at any height. Your working process will not be disturbed since installation usually takes place outside of your working hours. If this is not possible, by agreement with you, we will appropriately secure the installation area and adapt our activities according to the needs of your operating staff.

REFLECTA luminaries are designed with special solutions for easy and quick installation, since most of the necessary installation work is carried out on the ground. Since replacement of the electrical infrastructure is not necessary in many cases, because of the reduced power requirements, the installation of REFLECTA lighting is especially affordable. The installation is so simple that, upon request, it can be performed by your own professional staff, while supervised by our experts who oversee the delivery and commissioning of the system.

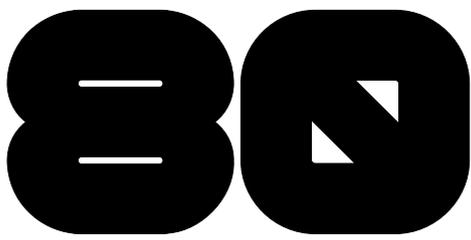
### Maintenance

Vigorous monitoring of our production process and product quality is the highest priority at REFLECTA, providing us with satisfied customers and high quality references.

After the installation, only a minimal level of maintenance is required. Because we offer products and services of such exceptional quality, we are confident to offer up to **5-year warranty**.

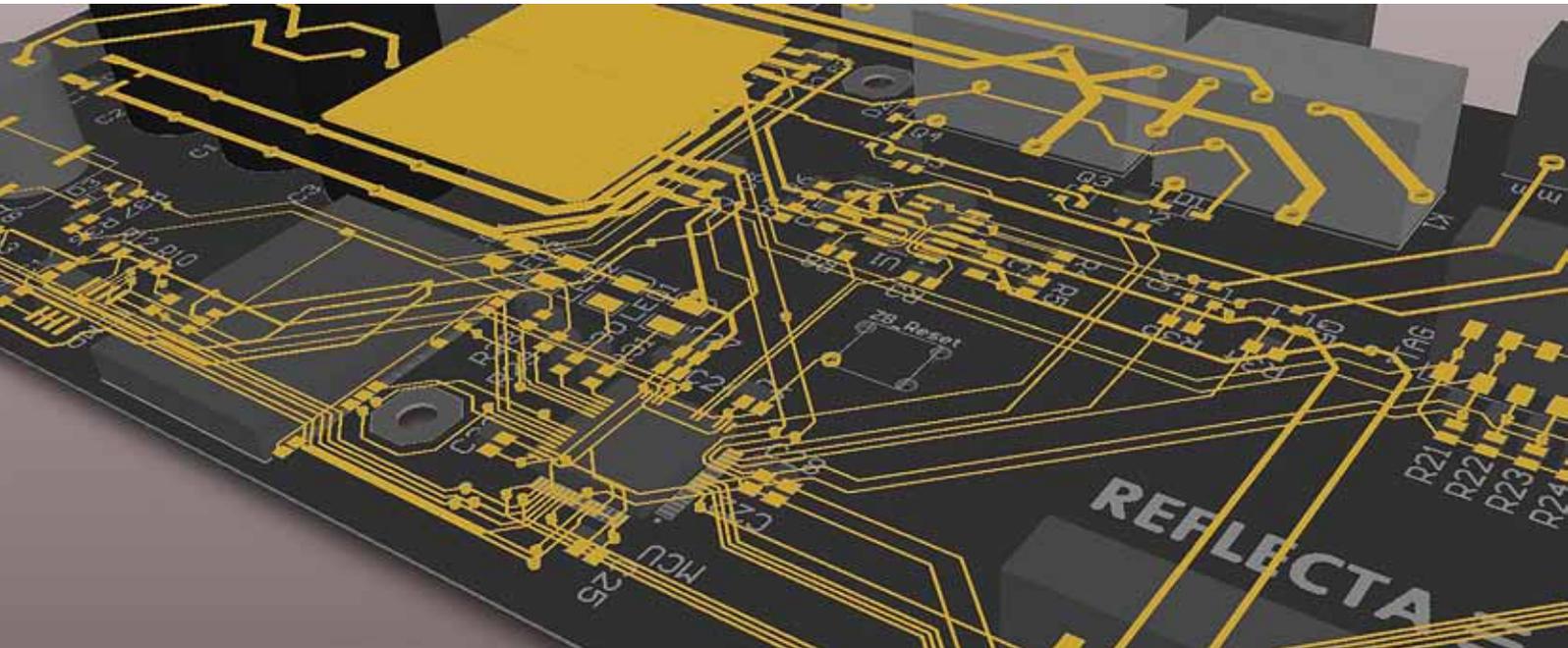
Energy efficient products from REFLECTA have:

- extended life expectancies for all lighting system elements, thanks to high resistance to dust, humidity, temperature fluctuations and aggressive compounds;
- ingenious housing systems that are easy to move if necessary, such as for the reorganization of production lines or cleaning purposes (which is rarely necessary due to antistatic properties).



% of savings with REFLECTA systems

## COMPREHENSIVE KNOWLEDGE, PRODUCTS AND SERVICES



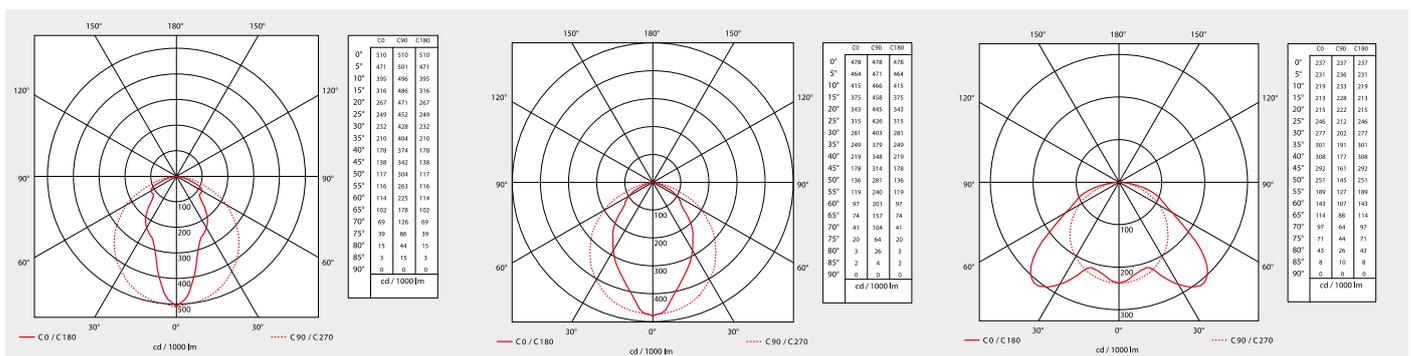
**M**any companies are unsuccessful at controlling the costs of their lighting and providing adequate illumination of their work spaces. This has an especially significant impact on efficiency issues in major industrial companies. The cost of lighting on average is between 15 and 20% of a company's electric bill (in storage and logistics facilities, even up to 90%). Most companies can reduce their lighting costs with REFLECTA intelligent systems by **50–80%**.

REFLECTA intelligent industrial lighting systems provide a comprehensive solution combining expert knowledge and world-class products and services in the REFLECTA 'one-stop shop' business model. REFLECTA intelligent industrial lighting solutions are being continuously developed and upgraded, ensuring trouble-free operation and complete energy management in even the toughest industrial conditions.

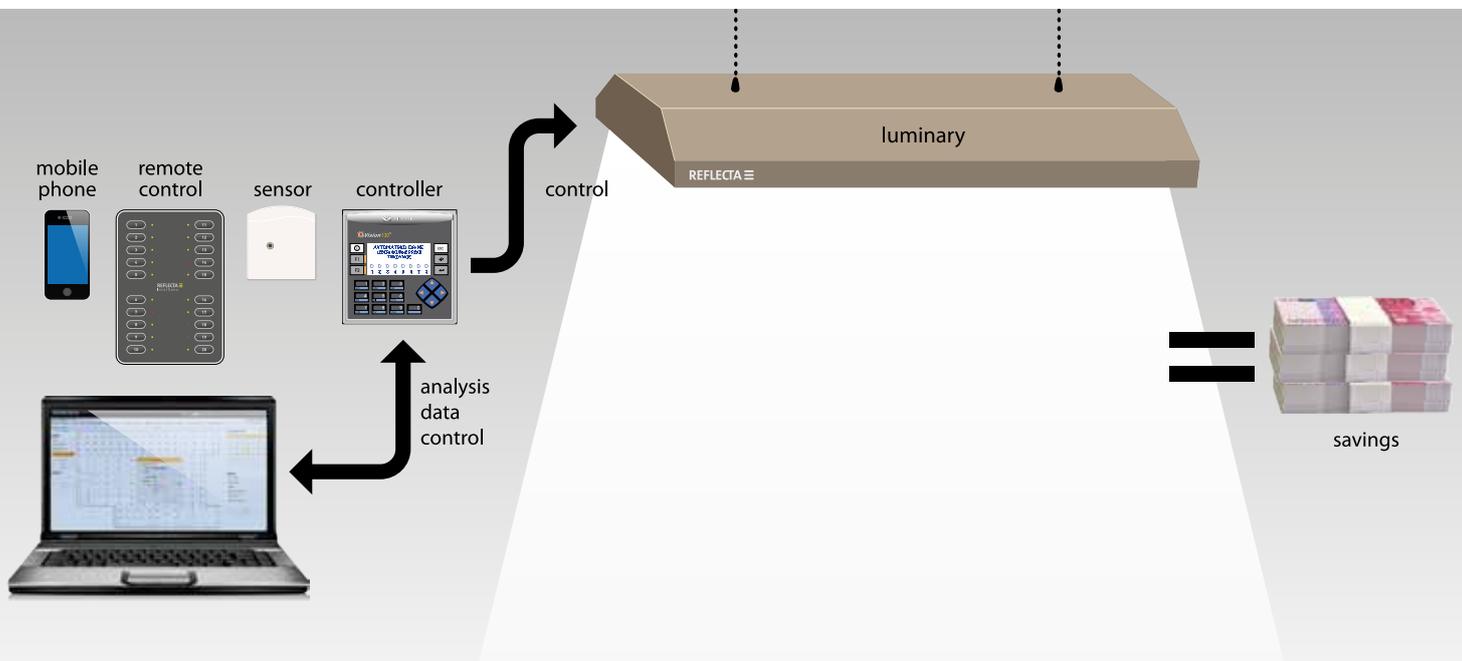
### High savings, complete control and full data management

REFLECTA's intelligent industrial lighting technology provides particular added value to lighting systems, allowing for:

- **50–60%** energy savings by installing REFLECTA luminaries,
- **20–30%** additional energy savings through REFLECTA's intelligent systems,
- **13–22% additional** savings through the optimization of the entire REFLECTA system,
- complete control over the costs of the REFLECTA lighting system,
- complete control over the operation of the REFLECTA lighting system,
- complete control over maintenance needs,
- comprehensive collection of data on energy consumption, working hours and costs of operation of the REFLECTA lighting system,
- processing and data analysis also via computer or mobile devices.



*Specially designed REFLECTA flexible reflections offer solutions for a series of common lighting problems, ranging from high shelves to wide beams of light.*



**Easy-to-use, 24-hour 'on-time' and 'on-line' access**

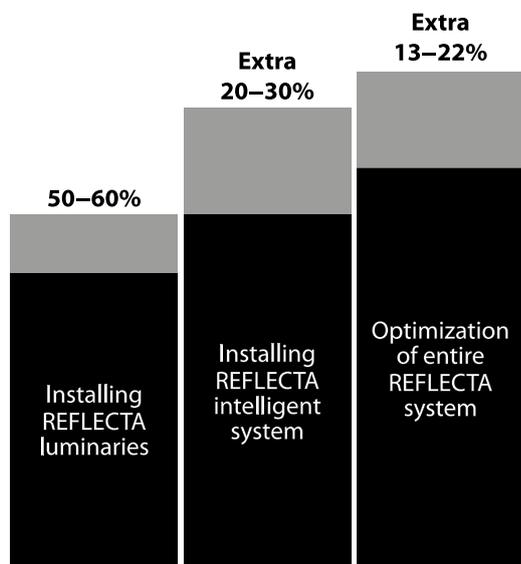
Besides being easy to use, an additional feature of energy management with REFLECTA systems is that they operate 24/7 with remote administration capabilities that offer real-time, on-line access, allowing you to check information about lighting even from the comfort of your favorite armchair.

This provides all the key functions of your company (upper management, finance, accounting, purchasing, investment, maintenance, manufacturing) with direct access to the databases of lighting. This allows for the further processing and analysis of data, along with customized monitoring and action, thus leading to additional savings.

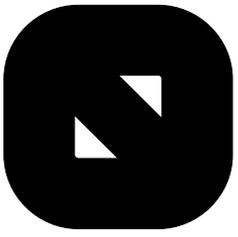
**Savings and additional returns**

Savings that are produced through REFLECTA intelligent lighting can create new returns, which you can further use, for example, to build complementary light-generating roof domes or windows in your industrial facilities. This leads to additional savings through the REFLECTA intelligent lighting system. With this strategy, the purchase of a REFLECTA system, for which the return-on-investment period is already extremely short (2-3 years), becomes even more compelling.

The range of products in the REFLECTA intelligent industrial lighting system allows for significant additional savings based on daylight sensors, sensors of presence and calendar-based input for turning on and off individual groups of luminaries. The REFLECTA lighting system is fully automated, while still allowing for manual settings to be adjusted according to wishes or needs. Your savings will be fully optimized because there is no unnecessary consumption of lighting without human presence.



**SAVINGS WITH REFLECTA SYSTEM**



cables

# REFLECTA

# IntelSens

## Light that accompanies you

**R**EFLECTA IntelSens is a wireless intelligent lighting system that controls flexible groups of luminaries based on the **ZigBee PRO** wireless industrial communication protocol.

Luminaries are equipped with daylight sensors and sensors of physical presence. The system monitors and controls each luminary separately, and each of them operates independently from the others. This allows for customizable options for arranging groups of luminaries that follow in a just-in-time manner the movements of people and objects from a large height.

It is also possible to use automatic light dimming, which adjusts to the presence of available daylight for each luminary separately, as well as provides greater control over luminaries. They communicate with each other via built-in communication units using ZigBee PRO.

The speed of movement detected by the sensors does not influence the proper functioning of the system. This is a unique innovation of REFLECTA that allows extra savings of up to 35%, which is not possible with other existing solutions.

### **'Fast as light' at a distance**

A special feature of the REFLECTA IntelSens system is its extremely fast reaction speed at turning luminaries on and off. This is highly recommended for logistic centers and warehouses, where the need for rapid transfer of goods is crucial. The system was tested and works efficiently at the speed of 15 km/h (i.e. forklifts).

### **Management in cloud computing**

Control over the system and costs of lighting is enabled 'from the sofa' via mobile devices (smartphones, tablet computers, portable computers), and a simple user interface. Turning the system on is carried out with a special REFLECTA wireless remote control system.

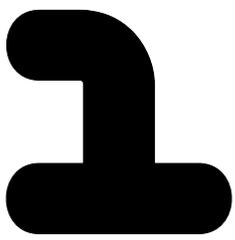
### **REFLECTA IntelSens as an anti-theft security system**

A set of motion sensors allows the tracking of each movement in a room at night in various operating regimes. Symbiosis with existing control systems (cameras) and sending alert signals to the designated security services is also possible. Sensors are virtually impossible to be disabled as they are inaccessible and continuously operating. It is also possible to use the REFLECTA IntelSens system with external applications. The system is made according to the IP66 standard.

### **Functional advantages of REFLECTA IntelSens**

- Creates savings that were previously not possible, due to superior presence detection.
- The ability to manage and control multiple remote IntelSens systems from one location (example: one company with ten manufacturing facilities).
- Brightness control from 0-100% brightness.
- The possibility of measuring and recording data such as: turning on/off lights and PIR sensors, ambient temperature, operating times of individual luminaries, bulb failures, power outages, etc.
- The possibility of separate or group addressing of luminaries.
- The possibility of timed control of individual luminary or groups of luminaries.
- The possibility to control individual luminary or groups of luminaries based on motion sensors or PIR sensors.
- Flawless operation of motion sensors from large heights (15m).
- Flawless operation of motion sensors despite rapid movement within buildings.
- Option of reading the history of individual luminary or groups of luminaries.
- Remote access for setting the mode of operation, analysis and control of the system via 'the cloud'.





sensor

# REFLECTA

# IntelLight

## Integrated lighting with a single sensor

**R**EFLECTA IntelLight is a wired version of the REFLECTA intelligent system, which controls groups of luminaries independently from each other, both according to time and the specific needs of individual work groups. It is highly useful and recommended for all industrial and storage facilities.

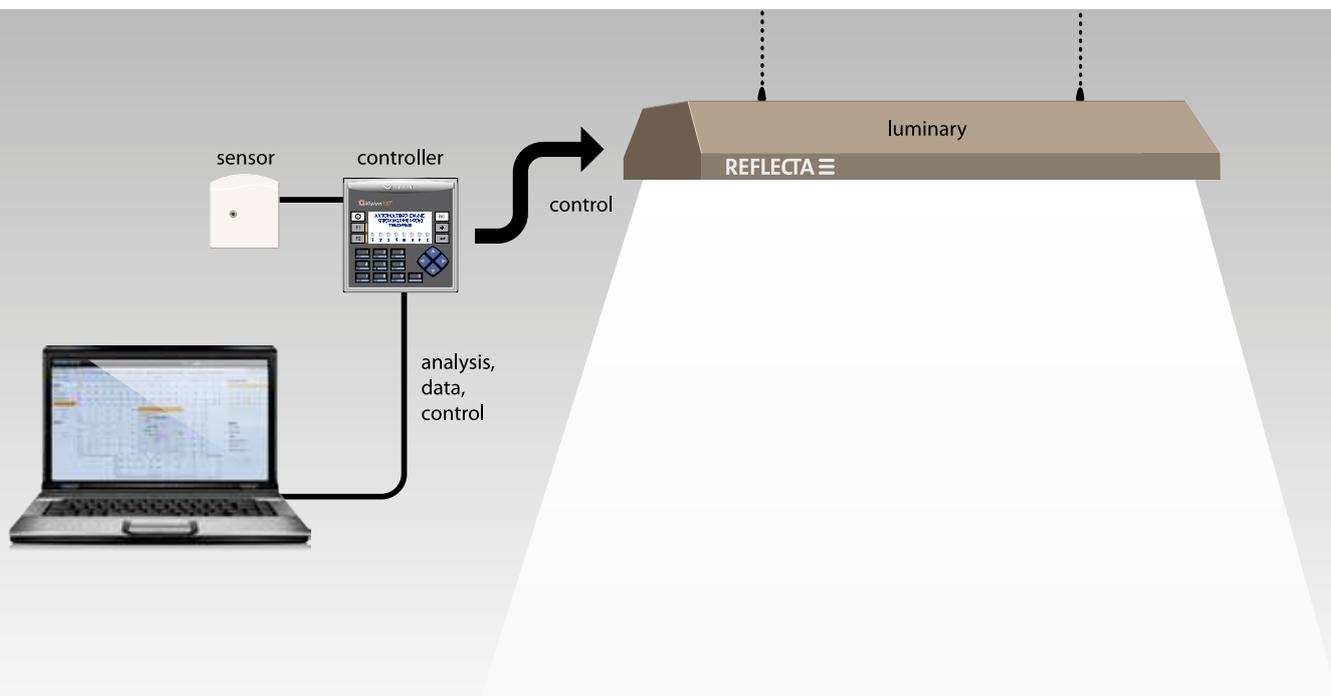
With a single daylight sensor that works as a luxmeter, you have the ability to control groups of luminaries and allow for dimming and lighting according to the presence of daylight in the room – and each particular group of luminaries can be controlled independently of each other.

Precise control over the system and lighting costs is enabled through a controller in the switching cabinet or by computer via an Ethernet connection.

REFLECTA IntelLight systems are equipped with several security subsystems, providing secure turning off of luminaries and a full functioning of the system in exceptional cases of controller outage.

### Functional advantages of REFLECTA IntelLight

- Additional 20–30% savings of electricity.
- Automation is adjusted to the actual needs of the user, with the optional integration of existing systems of security luminaries or outside lighting.
- The system of an automatic lightning is conceived on controlling luminaries of the new REFLECTA generation, which adjust to natural light availability in the room and in accordance with the dynamics of the business process.
- Displays data on working hours, electricity use and information on the life expectancy of individual bulbs.
- Acquisition and processing of data on energy consumption.
- The ability to input 8 time intervals throughout the day (lunch time, breaks, etc.) to save additional power consumption.
- The ability to wirelessly turn on and of all lighting within a range of 100 m (indoors) and 250 m (outdoors).
- Flexibility to change any parameters.
- Manual, semi-automatic or automatic control.





# 93.8

percent efficiency of luminous flow

# REFLECTA

# EcoPower

## Leading the world

**R**EFLECTA EcoPower delivers **93.8%** efficiency of luminous flow, making it unique in the world market. In transforming energy into light, it significantly surpasses other available solutions.

REFLECTA high-efficiency EcoPower luminaries are the result of two factors: our company's own groundbreaking innovation as well as years of cooperation with leading companies as well as scientific institutions such as the Faculty of Electrical Engineering at the University of Ljubljana, and SIQ – the Slovenian Institute of Quality and Metrology.

With REFLECTA EcoPower luminaries you will save 50 – 80% of your current energy consumption for lighting, leading to an average return on investment in just 2–3 years.

### Create daylight where it is not possible

The color of REFLECTA lighting is an optimal approximation to the spectrum of natural light. Due to the excellent spectrum of REFLECTA EcoPower luminaries, the perception of the human eye is increased substantially with the same power of light (lx). This is especially important for users who already suffer from degradation of vision. Optimal coverage of the color spectrum of light makes you feel better and fills you with new strength. Thus, visual perception significantly improves, particularly with older users.

REFLECTA EcoPower luminaries are suitable for every indoor space from heights between 4 to 40 meters. It is resistant to exceptionally high temperatures, humidity and dust. With different types of reflective options, they can be adjusted to the specific working processes and requirements of each workplace. It is suitable for industrial facilities, logistic centers, warehouses, sport halls, gyms and many other facilities.

### Technical data

	All models
Housing	Powder coated sheet (1 mm)
Cover	4 mm special antistatic tempered glass Optiwhite
Reflections	Special REFLECTA design
Protection	IP66, 350–400 V AC, tc = up to 80 °C, –20 °C up to +80 °C
Electronics 1	2 x 54 W, 2 x 80 W, up to 75,000 h
Electronics 2	2 x 54 W, 2 x 80 W, up to 200,000 h
Electronics DIM	2 x 54 W, 2 x 80 W, up to 50,000 h
Colour of light	4000 K
Distribution of RGB range	best approximation of daylight
Guarantee	3, 5 or 8 years
Made in	European union (EU components only)

	REFLECTA EcoPower 4 x 54 W	REFLECTA EcoPower 2 x 54 W	REFLECTA EcoPower 4 x 80 W
Dimensions L x W x H (mm)	1225 x 390 x 100	1225 x 225 x 100	1525 x 405 x 100
Power 1	max 216 W	max 108 W	max 320 W
Power 2	max 196 W	max 98 W	max 292 W
Bulbs	4 x 54 W T5 (T16); 25,000–60,000 h	2 x 54 W T5 (T16); 25,000–60,000 h	4 x 80 W T5 (T16); 25,000–60,000 h



REFLECTA III

REFLECTA III

REFLECTA III

# 4.5

times longer life expectancy

# REFLECTA

# Oval

## Designed for demanding conditions

Research shows that 75% of lighting is energy inefficient because it is based on outdated technology. Companies using REFLECTA energy-efficient lighting have saved more than half a million euro in one year.

Join companies that have reduced their energy costs for lighting by 50 to 80% with REFLECTA!

### Adjusted for industry

REFLECTA Oval is a new fluorescent luminary, with a high-quality polycarbonate housing for lower ceilings, that fully meets the criteria of industrial usage. Based on the efficiency of used energy, REFLECTA Oval luminaries significantly surpass the competition.

A special reflective design of the luminary provides 30-50% stronger light. Electronics with power factors from 0.95 to 0.98 fall within the energy class **A2 BAT**. Above-average efficiency can be achieved through specific reflective characteristics that are possible with premium silver-based reflective materials. The result is an outstanding efficiency of **98%**!

The reflective material virtually does not deteriorate, which is a rarity with reflective materials, because of the unique application process using aluminum and silver. Minimal dispersion of the reflected rays allows for precisely directed light without significant loss. A special connector enables quick and easy installation.

### Guaranteed up to 100,000 operating hours

The biggest problem of luminaries with plastic housings is the increased internal temperature. Measurements have shown that the temperature in plastic housings ranges between 68 and 71 °C in a surrounding temperature of 22-26 °C.

New, proprietary electronics built into REFLECTA Oval has raised the threshold of temperature to 75 °C. With this, we guarantee up to 100,000 operating hours even at maximum load, which means at a temperature of 75 °C. This was demonstrated through testing at one of our existing customers.

The temperature in the tested environment was on average between 85 and 105 °C and the humidity of air between 60 and 80%. The lamps passed a 9-month endurance test and were still running smoothly. The special polycarbonate housing was not deformed and transparency of the light was unchanged. In the same extreme conditions, no other competitive luminary has lasted more than 2 months.

Endurance testing has shown at least **4.5 times longer life expectancy with REFLECTA Oval!**

### Polycarbonate housings outperform other materials.

MATERIAL	Impact strength by 23 °C Din 53453 1-100 kJ/m <sup>2</sup>	Impact strength by -40 °C Din 53453 1-100 kJ/m <sup>2</sup>	Max. Temp. Long term values Din 53453 0-250 °C	Price comparison 1-100
	5 10 25 50 >	5 10 25 50 >	50 75 100 125 175	< 10 20 40
Polystyrene	PS	██████	██████	██████
Polymethyl-methacrylate	PMMA	██████	██████	██████
<b>Polycarbonate</b>	<b>PC</b>	<b>No breakage</b>	<b>No breakage</b>	<b>██████</b>
Acrylonitrile Butadien Styrene	ABS	████████████████████	██████	██████
Styrene Acrylonitrile	SAN	██████	██████	██████
Polyamide	PA6	No breakage	██████	██████

### Housing built to withstand the most aggressive chemicals.

Chemical	PS	SAN	ABS	PMMA	PC	PA6
Acetone	○	○	○	○	●	○
Alcohol	○	○	○	○	●	○
Ammonia solution	○	○	○	○	●	○
Benzene	○	○	○	○	●	○
Petrol	○	○	○	○	●	○
Diesel oil	○	○	○	○	●	○
Ethanoic concentrate	○	○	○	○	●	○
Hydrocarbon fluoride	○	○	○	○	●	○
Hydrofluoric acid 20%	○	○	○	○	●	○
Cautic potash solution concentrated	○	○	○	○	●	○
Methanol	○	○	○	○	●	○
Motor/engine oil	○	○	○	○	●	○
Cautic soda lye concentrated	○	○	○	○	●	○
Ozone	○	○	○	○	●	○
Hydrochloric acid 35%	○	○	○	○	●	○
Sulphuric acid 40%	○	○	○	○	●	○
Soap solution	○	○	○	○	●	○
Silicone oil	○	○	○	○	●	○
Toluol or methylbenzene	○	○	○	○	●	○
Tetrachloroethylene	○	○	○	○	●	○
Water - cold sea water	○	○	○	○	●	○
Water - hot	○	○	○	○	●	○

● Resistant  
◐ Semi resistant  
○ Not resistant



## Technical data

### All models

<b>Housing</b>	Above-standard polycarbonate cover
<b>Cover</b>	Transparent polycarbonate
<b>Reflections</b>	Special REFLECTA design
<b>Protection</b>	IP65, 350–400 V AC, tc = 75 °C, –15 °C up to +55 °C
<b>Colour of light</b>	4000 K
<b>Distribution of RGB range</b>	best approximate of daylight
<b>Guarantee</b>	3 or 5 years
<b>Made in</b>	European union (EU components only)

	REFLECTA Oval 2 x 54 W	REFLECTA Oval 1 x 54 W	REFLECTA Oval 1 x 80 W	REFLECTA Oval 2 x 49 W	REFLECTA Oval 1 x 49 W
<b>Dimensions</b> L x W x H (mm)	1230 x 155 x 70	1230 x 155 x 70	1570 x 155 x 70	1570 x 155 x 70	1570 x 155 x 70
<b>Power 1</b>	max 108 W	max 54 W	max 80 W	max 98 W	max 49 W
<b>Power 2</b>	max 98 W	max 49 W	max 73 W	max 90 W	max 45 W
<b>Bulbs</b>	2 x 54 W T5 (T16)	1 x 54 W T5 (T16)	1 x 80 W T5 (T16)	2 x 49 W T5 (T16)	1 x 49 W T5 (T16)
<b>Electronics 1</b>	2 x 54 W, up to 75,000 h	1 x 54 W, up to 75,000 h	1 x 80 W, up to 75,000 h	2 x 49 W, up to 75,000 h	1 x 49 W, up to 75,000 h
<b>Electronics 2</b>	2 x 54 W, up to 200,000 h	1 x 54 W, up to 200,000 h	1 x 80 W, up to 200,000 h	2 x 49 W, up to 200,000 h	1 x 49 W, up to 200,000 h
<b>Electronics DIM</b>	2 x 54 W, up to 50,000 h	1 x 54 W, up to 50,000 h	1 x 80 W, up to 50,000 h	2 x 49 W, up to 50,000 h	1 x 49 W, up to 50,000 h

# 2-3 year return on investment

## REFLECTA QUALITY

### From industry – for industry

**A** synonym of quality, the key advantages of REFLECTA intelligent lighting include:

- guaranteed cost savings between 50-80%, with average returns on investment in 2-3 years,
- a fixed and constant illumination of work areas, identical to daylight,
- no maintenance costs during the 8-year warranty period,
- analysis, expertise and innovation – all in one place (analysis of existing lighting, project optimization with REFLECTA lighting systems, installation, financing and maintenance),
- professionalism, innovation and optimization of internal processes.

#### From industry – for industry

REFLECTA intelligent industrial lighting systems are developed 'from industry, for industry'. That means that before they enter the marketplace they are **verified with difficult endurance tests in real-world conditions**. After that, we check and confirm the results in laboratories so that we can officially offer certified products and measurements (such as anti-dust and waterproof protection, IP66).

In doing so, we cooperate with renowned institutes and faculties:

- The Slovenian Institute of Quality and Metrology (SIQ),
- The Jožef Stefan Institute in Ljubljana,
- The Institute for Business Development,
- The Faculty of Electrical Engineering, University of Ljubljana, and others.

The innovation and quality of REFLECTA intelligent industrial lighting systems has been confirmed by our membership in (and regular cooperation with) various other institutions such as the Technology Parks based in Ljubljana, Klagenfurt, Prague and Zagreb.

#### Among the most recognized

We regularly receive awards for innovation and efficiency.

The REFLECTA lighting system has received the following awards:

- Best Maintenance Product of 2008 (Slovenian Society of Maintenance),
- Silver Award for Innovation in 2008 for REFLECTA luminaries (Slovenian Chamber of Commerce),
- Gold Award for Innovation in 2008 for our automated sensor management system (Slovenian Chamber of Commerce),
- Best Maintenance Product of 2012 (Slovenian Society of Maintenance),
- Innovative Product of 2012 (Slovenian Innovation Forum).

The REFLECTA 'one-stop shop' business model also earned the following awards & distinctions:

- Best Entrepreneurial Eco-idea 2010/2011 (Academy of Finance),
- The Best Business Model in 2010 (Slovenian Innovation Forum),
- ranked among the top 10 European companies in clean technology in 2010 (CleanTech Vienna),
- ranked among the best 50 European companies in 2010 (European Venture Summit, Düsseldorf 2010),
- Gold National Innovation 2010 (Slovenian Chamber of Commerce).



### Impossible is our challenge

The superior intelligence, innovation, and quality of REFLECTA intelligent industrial lighting systems has been confirmed by our many satisfied customers. Time and again our customers have realized that REFLECTA systems are verifiably the best possible investment in respect to efficiency, quality and reliability - even for periods that extend far beyond the original factory warranty.

They especially appreciate the fact that each project is designed and adapted to their needs. We are committed to finding appropriate solutions for each customer, even in extraordinary circumstances. Quoting Mark Twain, our company motto is: "They did not know that it was impossible – so they did it."

### Only excellent is good enough!

Superior added value distinguishes REFLECTA systems and services from competition in the market. We usually go beyond the written minimum conditions for the benefit of our customers. We are aware that the road to excellence is always full of unpredictable situations, but we are happy to solve them as we move forward to achieve our mutual goals, knowing that at the end, a solution that satisfies our customer is what matters.

References are the ultimate reflection of the quality of the REFLECTA brand, our company and services.

We strive for excellence!



TOYOTA PEUGEOT CITROËN AUTOMOBILE

After nearly a year of testing, the **TOYOTA PEUGEOT CITROËN AUTOMOBILE** company selected and approved REFLECTA as the only ceiling lamp to be used in their factory. With the entire project of replacing their old lighting with REFLECTA, the company now saves 51% of its former energy consumption (1,770,519 kWh per year, a 2.17-year return on investment period).

## Illuminating for a better world

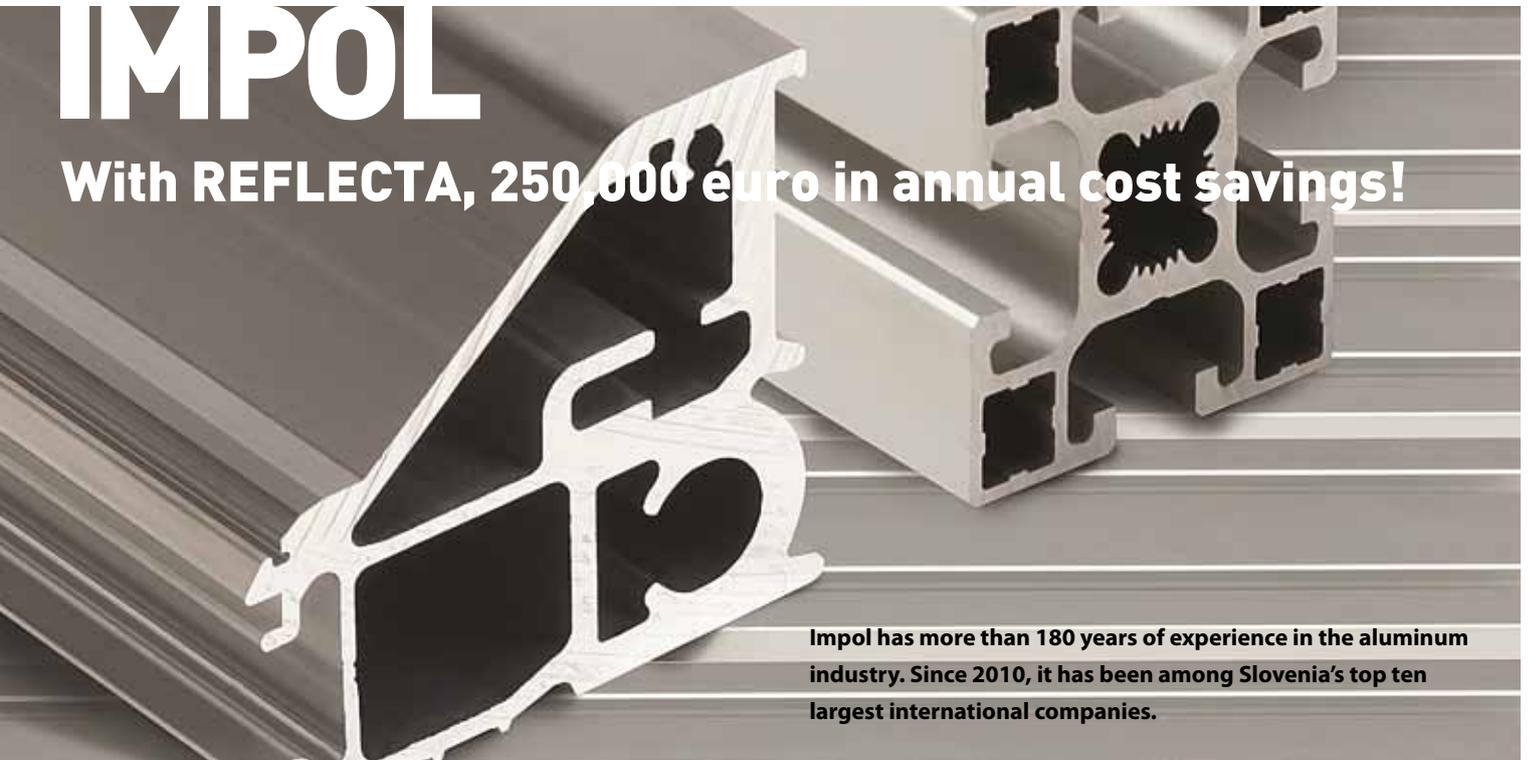
In the REFLECTA Group, we strengthen the energy efficiency of European companies. Activities within the project 'Illuminating for a better world' facilitate market penetration and dynamic promotion of energy efficiency, thereby supporting the European development policy for environmental and transport infrastructure.

# 70

% of savings

# IMPOL

## With REFLECTA, 250,000 euro in annual cost savings!



**Impol has more than 180 years of experience in the aluminum industry. Since 2010, it has been among Slovenia's top ten largest international companies.**

### Only 75 days for outstanding annual savings

At the production premises of the companies Impol PCP, Impol LLT. and Impol FT, REFLECTA EcoPower luminaries and the REFLECTA IntelliLight sensor control system have reduced the costs of lighting by 70%, with an annual savings amounting to a record of 250,000 euro. IMPOL's savings have already surpassed the previous record holder, the Toyota Peugeot Citroën Automobile (TPCA) factory in Slovakia, where REFLECTA, as the only approved ceiling luminary, annually saves 200,000 euro.

With an innovative approach, a modern and economically efficient solution and a highly trained team, REFLECTA faced a challenging installation during a '24/7' production process. Despite the obstacles for implementing work in certain places and time frames (when work during the week was not allowed to be discontinued or disturbed), the project was successfully carried out in less than 75 installation days.

**Dominik Strmšek**, responsible for lighting renovation at Impol:

"We contacted several companies that offered lighting solutions and gave them the same platform and requirements: maximum savings and minimal investment. We chose REFLECTA due to the technical sophistication of the product and the fact that their solution offered the greatest savings. Due to the signature of a co-financing contract with the Ministry of commerce, prolonging the time-frame for the renovation of interior lighting was not possible. The contractor had to ensure that work would get carried out in other facilities if it would disturb the facility which had been planned for implementation. We coordinated on a daily basis, appreciating the responsiveness of our partner, and also took into account the opinion of the employees."

**Jožef Pogačnik**, Energy Directorate: "With such projects, Slovenia is implementing policies within the framework of operational program development for environmental and transport infrastructure, and also benefits from the cohesion funds."

## *impol*

Impol successfully carried out a renovation of lighting, with a project utilizing available grants through a call from UREE, for co-investment of an installation of new efficient electrical appliances and regulators and control regulating equipment. Energy efficiency subsidies from EU funds are still available. The REFLECTA team also supports companies with preparation of their tender documentation.

# 8

% improvement  
in strength of  
light

# 1.9

year return  
on investment  
period

# 64

% of savings

## HYUNDAI DYMOS

64% less power consumption with Reflecta IntelLight!



As a global producer of basic auto parts, Hyundai Dymos is one of the leading global automotive companies in industry and technology. The Czech subsidiary is one of the main branches of the Hyundai Motor Group and falls under the umbrella of the parent company Hyundai-Kia.

### Nearly 252 thousand kilowatts of savings per year

The REFLECTA IntelLight system is one of the top and most advanced technologies in Hyundai Dymos. Control over the system and costs of lighting is enabled through the controller on the switching cabinet or by PC via an Ethernet connection. In the Czech factory, we upgraded the basic automatic version with control via computer. REFLECTA IntelLight provides the company with a total of 251,802.00 kWh of savings annually. Energy savings in total are 64%.

The REFLECTA system has become a synonym for measuring time in this technological giant – lights automatically turn off and tell the employees it is time for a break. A special nighttime setting allows the turning off of only half of each REFLECTA light during breaks. Thus, the facility never finds itself in total darkness.

As leaders in their own industry and technology, Hyundai Dymos and REFLECTA successfully adjust to the speed of further technological development. Cars, as a means of transport, bring a better quality of life all over the world, but Hyundai Dymos and REFLECTA, as partners in helping to build a better future, are fully committed to reducing the impact of industry on the environment while maintaining competitive advantages.

## HYUNDAI DYMOS

“Lock the switching cabinet! The automatic system works without flaws, so there is no need for it to be manually set by anyone” – this was the enthusiastic feedback after the installation of the system in the Czech branch. The energy manager there now simply changes settings via a computer that is connected to the REFLECTA IntelLight system.

155 % improvement  
in strength of  
light  
4.45 year return  
on investment  
period

# 77

% of savings

# TRIMO

## REFLECTA saves 70,000 euro annually



Trimo is a global company with comprehensive solutions in the field of steel buildings and structures, modular units and sound-insulating systems. Its brand is successfully established in 54 countries around the world, where preference is given to product lines and technologies that are friendly to people and the environment.

### The ambitious objectives of the project have already been exceeded

Among the technologies that enable Trimo to be efficient in energy management is REFLECTA. In the two facilities of the company, the replacement of luminaries with the REFLECTA intelligent lighting system has saved Trimo more than 70,000 euro annually, which means over 77% annual savings in electricity and maintenance.

**Danijel Zupančič, M.Sc.**, technical director of Trimo: "We decided for the project to save costs on energy and in this way contribute to reducing our CO<sub>2</sub> footprint. This is measured by Trimo every two years, and we are committed to a 5-percent reduction in the next three years. The decision was significantly influenced by the public call for energy efficiency of the Ministry of commerce, which co-financed the project. Since we also included a rearrangement of outdoor lighting in the project, we took into account the law on light pollution, where with reduced power lights, we achieved the prescribed limits. The selected contractor and system were, by measurable technical criteria, the most appropriate and they also met the conditions of the public call. The project was successfully implemented in many ways and we are satisfied with the results, which have even exceeded the goals set out with the project."



The company Trimo Trebnje is the recipient of the prestigious European leadership award 'Prize Winner in Leadership & Constancy of Purpose'. It also is the recipient of the Government Quality Award – the recognition of the Republic of Slovenia for business excellence, and the European award for business excellence 'Recognised for Excellence'.

**18** % improvement  
in strength of  
light

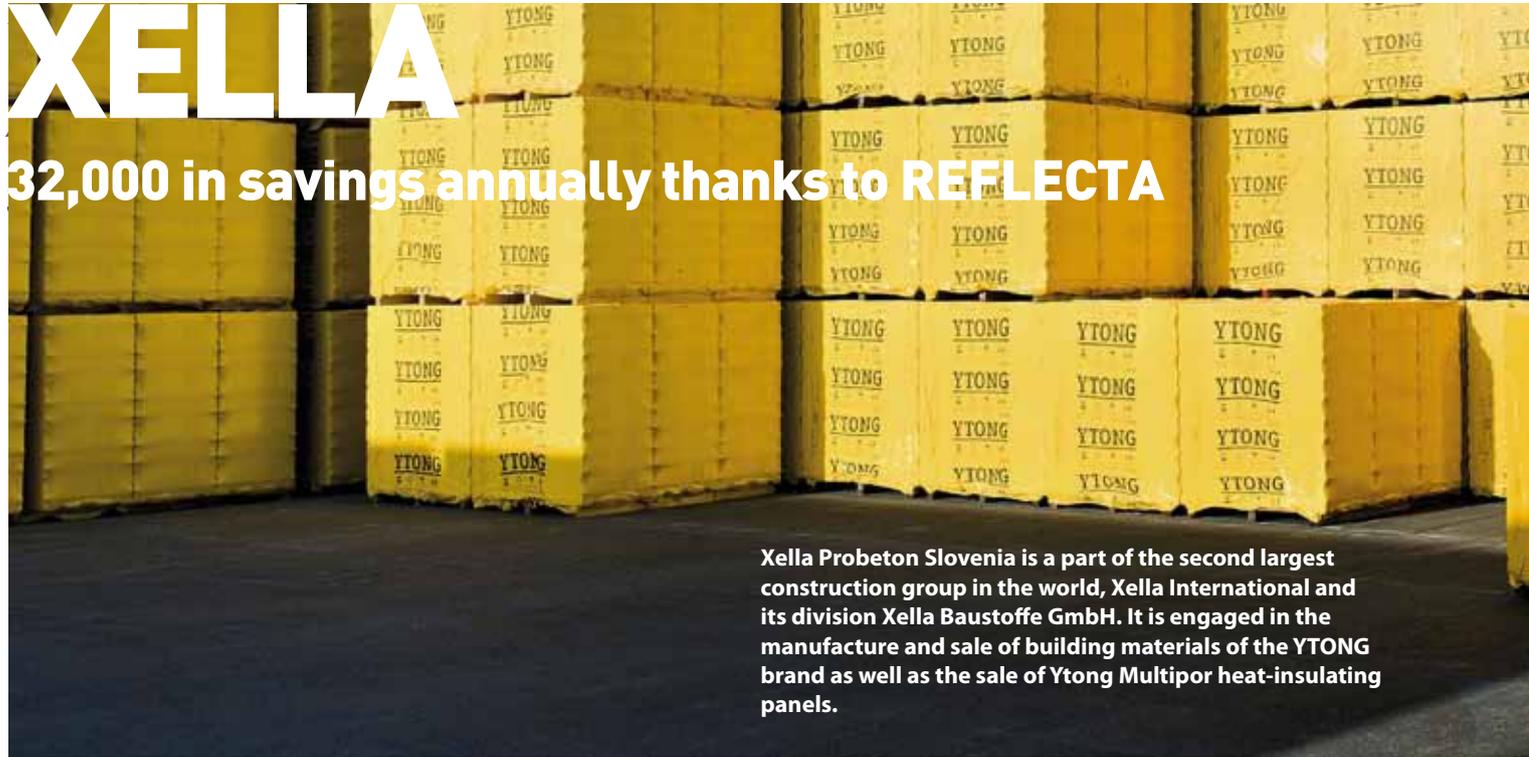
**1.6** year return  
on investment  
period

# 68

% of savings

# XELLA

## 32,000 in savings annually thanks to REFLECTA



Xella Probeton Slovenia is a part of the second largest construction group in the world, Xella International and its division Xella Baustoffe GmbH. It is engaged in the manufacture and sale of building materials of the YTONG brand as well as the sale of Ytong Multipor heat-insulating panels.

### **XELLA: The investment paid off in two years**

REFLECTA savings enabled Xella to reduce lighting power consumption by 68% of kwh, which means 32,000 euro annually with a total of 230 luminaries (previously 295).

Xella decided to replace its lighting system based on results of the free analysis. This showed that the company consumed almost 20% of total energy for indoor lighting, that the old lighting system demanded high maintenance costs yet produced poor illumination of the facilities, and created poor working conditions, requiring the installation of additional luminaries and consequently higher power consumption. The investment payback period with REFLECTA in Xella probeton SI was only two years, which was a key justification of the investment for the German owner Xella International GmbH.

**Jani Uranič**, manager of production and maintenance at Xella Slovenia:

“REFLECTA EcoPower luminaries placed over autoclaves, where the temperature is above 140 °C, continue to operate with unchanged performance. The investment returned in two years, which is at these times, when every competitive element counts, considered extremely important.”

# xella

Head of production and maintenance of Xella, Jani Urančič, made a bet with the technical director of REFLECTA, Hine Alex Vrtačnik, that REFLECTA luminaries placed above autoclaves, ovens with temperatures of up to 140 degrees, would certainly not last a year. Of course he lost the bet and took Vrtačnik to lunch.

# 110

% improvement in strength of light

# 2.2

year return on investment period

# 11

countries

**REFLECTA** 

- Austria
- Bosnia and Herzegovina
- Czech Republic
- Croatia
- Italy
- Germany
- Russia
- Slovakia
- Slovenia
- Serbia
- United Arab Emirates

REFLECTA's intelligent industrial lighting systems are used by the following Slovenian and international companies:

ALPLES,  
DUROPACK TESPAC,  
ESAB,  
GEBERIT,  
HENKEL,  
HYUNDAI DYMOS,  
IMPOL,  
DB SCHENKER,  
INDRAMAT (REXROTH BOSCH GROUP),  
KV KOVINARSKA VRHNIKA,  
LITOSTROJ POWER (CIMOS GROUP),  
PLAMA-PUR,  
PLANIKA,  
SIP,  
TOYOTA PEUGEOT CITROËN AUTOMOBILE,  
TRIMO,  
XELLA,  
GEP ŠTALEKAR,  
KOŠČAK ŠENTRUPERT,  
KOFRA,  
ISKRA BOVEC,  
TITAN KAMNIK,  
HTH ČERNAK PETER,  
ELVIPO,  
JUMAPLAST,  
DAMA,  
SILIKO,  
SUMIDA,  
PARTNER IN (TPV BREŽICE),  
LIV HIDRAVLIKA,  
FRUCTAL,  
PLASTIKA VIRANT,  
KOLDING,  
MONTING SK,  
ELAPHE,  
REIG,  
VISTOP,  
OBDELAVA TEKSTILIJ ŠINKOVEC,  
F.C. PANTER (FITNES KLUB),  
ODELO

RADENSKA,  
POVŠE METAL,  
STELEM,  
AUTOCON,  
LIV NOVA,  
HABJAN&HABJAN,  
TEHNIKASET,  
FRAGMAT,  
MONTER DRAVOGRAD,  
RIKO EKOS,  
ARMATURE MUTA,  
ECOLAB,  
KONUS KONEX,  
TROL,  
ALPLA,  
AGC FLAT GLASS CZECH,  
AISAN INDUSTRY CZECH,  
BENTELER AUTOMOTIVE,  
SILON,  
ZETOR TRACTORS,  
ONTEX,  
DOOSAN BOBCAT ENGINEERING,  
CHIRANA MOC,  
KIA MOTORS,  
PEWAG,  
PETAINER CZECH HOLDINGS,  
ISKRATEL,  
STILLES,  
MLEKARNA CELEIA,  
NOŽI RAVNE,  
GOSTOL-GOPAN,  
EGP ŠKOFJA LOKA,  
GORENJSKI TISK,  
DOMEL,  
NIKO ŽELEZNIKI,  
ELGOLINE,  
INTEC TIV,  
ETA CERKNO,  
TERMOPLASTI-PLAMA

•••

# REFLECTA

Intelligent Industrial Lighting

Would you like to know how efficient your existing lighting system is, and what kind of savings could be achieved by upgrading to a more energy-efficient lighting system?

For a free, non-binding analysis of up to 3000 Euros, – or for further information about REFLECTA intelligent lighting systems, please contact us at:

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**Let us help you save.**