

LUXIONA

magazyn LUXIONA Poland

EVENTS ●●●
REALIZATIONS ●●●
PRODUCTS ●●●
THE EXPERTS' ADVICE ●●●



FROM EDITORS

The LUXIONA Magazine is gaining its new readerships. We are pleased to edit our 5th number. Our ultra modern realizations and new products from LUXIONA Poland offer make our common aim. The present edition is enriched by the interviews with famous architects and designers of electric installation.

By the end of 2015, Polish institutions will have to meet the standards of equipment in all medical service buildings in accordance with the EU requirements. Apart from the hygiene and security, the changes also refer to the quality of the finishing materials. Thus, it is worth paying attention to the article about the use of sterile illumination in clean rooms and its long term benefits.

Additionally, the pages of the LUXIONA Magazine the experts raise the subject of control system applied in outdoor illumination.

We wish you a pleasant read.

The LUXIONA Magazine Editors

Diament miesięcznika **Forbes** 2014

We are pleased to announce that the LUXIONA Poland Company has been awarded by the "Forbes" magazine(in the swietokrzyskie province). The list of candidates included those companies that achieved the higher annual increase in value. Amongst the main criteria taken into account there were: profitability, high financial liquidity, and financial reliability. Additionally, the companies had to prove the positive financial profit or loss, and the value of equity. The success of LUXIONA proved its excellent condition and that it still remains the leader on the Polish lighting sector.

Mr. Michał Szybalski

The Director of the Production Facility of LUXIONA Poland.





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Realizations



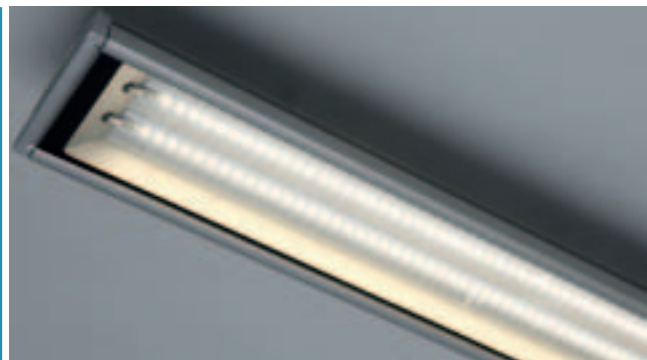
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The experts' advice



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Products



You are kindly welcome to visit our www.luxiona.pl

LUXIONA Magazine Editors interviewing the general director of the LUXIONA Poland Company, Mr. Rafał Wesołowski.



Mr. Rafał Wesołowski
The General Director of the LUXIONA Poland S.A.

DEAR READERS,

At the beginning I would like to share some positive news with you:

1. The company I am in charge of has been awarded a prestige prize "The Diamonds of Forbes 2014". This prize is granted for those companies that have reached the highest value percentage in their categories. More information about that event is presented in the later part of the magazine.

2. For many years, our company has been a leader as far as the clean room lighting solutions are concerned. Lately, owing to some professional work performance of our specialists, we have made a mile steps in the given area. And here, I am please to pay your attention to some very crucial facts. **In May 2013 we obtained the positive result of researches conducted in some accredited laboratory, and what follows we were given COC certificate confirming that our solutions can be applied in all clean rooms in accordance with ISO 09 and ISO 03 cleanliness class, under PN EN ISO 14644-1.** Obtaining the certificate has been preceded by period of several years of preparation that brought changes into whole production process of clean luminaries. They are made in accordance to same strictly defined procedures and instructions, in a separate production providing the quality, sterility and control of meeting the requirements on each production stage. CLEAN ISO luminaries are secured by a special anti bacterial cover that preserves all microorganisms from their development. Depending on location of usage, these luminaries have also antireflective cover which minimizes reflection of laser streams. All diffusers used in CLEAN ISO luminaries are resistant to common disinfectants.

February 2014, we have completed preparation of CLEAN ROOM building of the highest cleanliness class. A month later, we were allowed to expand our system of quality management to ISO 13485 under EN ISO 13485:2012 norm, while in May 2014 the whole range of our products obtained status of Class I in medical products.

The presented achievements guarantee all the Investors, the Architects, and Electrical Designers that application of our solutions minimizes the risk of infections caused by the use of inaccurate lighting for the particular environment. Excluding the risk of hospital infections is our parent value.

By the end of next year, all medical service structures have to meet their standards to the EU requirements in the scope of hygiene and security of clean rooms sterile



Realization - Rubin CLEAN SHM luminary

illumination, unifying quality of finishing materials, all equipment, space comfort, and quality of hospital patients service. Thus, it is indispensable to provide advised and functional solutions, as well as long term security policy counteracting the hospital infections.

LUXIONA Poland as the leader in clean room professional illumination branch provide a wide range of clean room dedicated solutions. We offer sterile lighting solutions for hospital wards, pharmaceutical plants, or chemical laboratories, regarding energy saving and environment protection matters. We design and produce complementary and innovative lighting solutions in accordance with the newest technologies, as well as social and legal requirements.

The wide range of CLEAN type luminaries offered by LUXIONA Poland guarantees quality and safety of illumination in such areas as: operating theatres and their surroundings, treatment and operating rooms, wards, clinics, sterilization rooms, laboratories, etc.

They can be successfully used in all room of any technical character in pharmaceutical, electronic, food, or chemical industries.

Last year, the LUXIONA Poland organized conferences devoted to subject of illumination of the clean structures, and those conferences were directed to architects and designers operating in the state and abroad. Those conferences were well accepted by our clients. Regarding all those interested in the subject, we are planning to continue providing the technical meetings this year. You are kindly welcome to participate the Health Care Conferences organized by LUXIONA Poland, and directed towards all architects, investors, and designers related to clean structures. The detailed information about the presented subject to be find in the later part of our magazine.

In the newest edition of the LUXIONA Poland magazine we also discuss one of the most interesting realizations of clean structures illumination – “BioNanoPark” in Łódź, which is an example of a successful application of CLEAN luminaries in laboratories – the Industrial Biotechnology and Molecular Biophysics Laboratories. All details about the subject in question to be found in the interview with Jerzy Jagas, the electrical designer who have prepared the project of illumination for the given investment.



New Medical Technologies Center in Szczecin

Another interesting realization within the scope of clean structures described in the present magazine is the Center of the Newest Medical Technologies in Szczecin – the first didactic object of the Pomeranian Medical University that have been built from scratches and is dedicated for geneticists and bio technicians. It aim is to provide the development of didactics and scientific researches in the field of medical bio technology which aims at obtaining modern oncological therapies. There are laboratories, seminar halls, and scientific labs all illuminated by the LUXIONA Poland company.

Mr. Paweł Zimnicki, the architect that has designed such prestige object, is answering questions about the influence of architecture and design on the whole health service image, the questions about the greatest challenges in the process of designing medical service objects, as well as questions about the way the function of the hospital object determines some lighting solutions.

Apart from the clean structures, LUXIONA Poland has illuminated investments of various use. One of such examples is the office of the University of Ecology and Management in Warsaw, which is located in the rebuilt and expanded building of the former printing house, while preserving its unique form and industrial style from the beginning of 20th century.

The later parts of our magazine will lead you to challenges our designers had to face while realization the project, you will find out how the unusual lighting solutions were used to match functionality and aesthetics of the rooms.

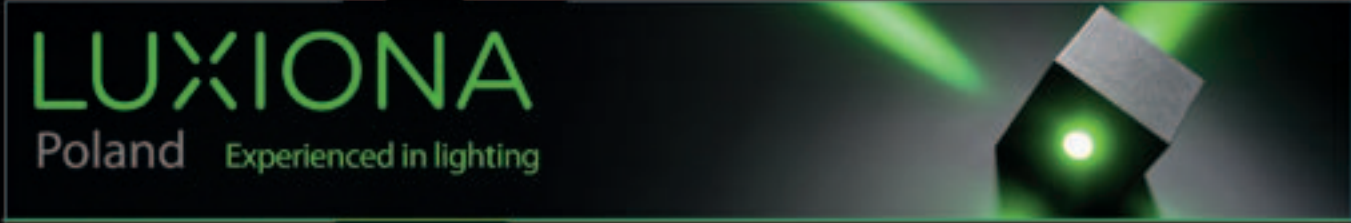
Moreover, we would like to present on the pages other interesting realizations of the LUXIONA Poland company in the scope of outdoor illumination.

Two of our latest achievements are presented in the later part of the magazine.

One of them is the investment named „Open Gates” in Goleniów. It provides the example of illumination of the open park spaces, where the whole image is created by connection of unconventional night lighting solutions with the functional look and location of luminaries in the day scenery. Illumination of the park alleys were achieved by the use of outdoor luminaries of direct lighting. The wider parts of parts were illuminated by the lighting pole of a triangular profile. To accent the smaller objects the line luminaries were used, and they were built-in the ground, or flooring. Additionally, there were round luminaries built-in the ground; those luminaries are aimed to illuminate both architectural objects, as well as the natural elements.

Another example of using our outdoor luminaries is illumination of parking lot and terrace neighboring the PKP Cargo building in Warsaw. Here, the LED version of luminaries were applied what led to the effect of the unique connection of the new image and functionality in the night scenery.

To complete the subject of the outdoor illumination, there is a professional article about control systems of outdoor luminaries presented here by Mr. Rafał Kłopotcki, out expert in outdoor illumination. The most important features of that kind of illumination include their durability, energetic effectiveness, and the attractive design. Selecting the appropriate outdoor illumination control system we take into consideration both the energetic effectiveness, and the durability of the whole system in order to operate then in the most efficient way. In the article mentioned above, you will find more details referring to criteria of selecting the outdoor illumination control system together with the cost analysis of the electric energy.



The ISO 13485 certificate awarded

We are pleased to announce that the audit that was conducted in the LUXIONA Poland Company resulted in granting ISO 13485 certificate.

Scope:

- Designing and producing luminaries for medical purpose

CLEAN ROOM production facility in Jacentów

Process of preparing and disinfection of luminaries in accordance with ISO norms.



CLEAN offer of 9-3 ISO Class

CLEAN ISO offer of the LUXIONA Poland Company which is qualified to prepare medical devices.

- Luminaries recommended for clean rooms of higher cleanliness class in health service structures, pharmaceutical, chemical, electronic, and food industries.
- Luminaries include anti bacterial cover that protects from the bacteria development.
- Depending on the place of usage, luminaries are equipped with anti reflective cover that minimizes reflection of the laser stream.

Usage in accordance with the ISO norm:

Clean rooms in accordance with PN-EN 14644-1 cleanliness class of ISO 9-3, or in accordance with the Ministry of Health nomenclature of A,B, C,D rooms. Luminaries have the COC certificate which is proved by the accredited laboratory.

TOPAZ ODG CLEAN ISO AL
luminary to be built-in



Construction version: aluminum frame - luminary to be opened from the top. Its mounting is on 50, 60, 90 mm large layered motherboards. Exploitation and servicing the luminary only from the top what guarantees no additional contamination of room. Only aluminum frame and hardened glass is visible from the bottom. The luminary standard in used in European western countries.

Light sources: T5 linear fluorescents, TC-L LED compact fluorescents

Diffusers: SH,SHM, Micro PRM SH, SHR, SHMR, SL, SLM, SLR, SLRM

Louvers: PPAR, PPARM, PPAR LUX SILVER, PPARM LUX SILVER

Mounting: easy and clean (SCM)

AGAT CLEAN ISO
luminary to be built-in



Construction version: no aluminum frame, or aluminum frame, adjustable reflectors, intermediate version, INOX, CLIP-IN

Light sources: T5 linear fluorescents, TC-L LED compact fluorescents

Diffusers: SH,SHM, Micro PRM SH, SHR, SHMR, SL, SLM, SLR, SLRM

Louvers: PPAR, PPARM, PPAR LUX SILVER, PPARM LUX SILVER

Mounting: easy and clean (SCM)

RUBIN CLEAN ISO
surface luminary



Construction version: no aluminum frame, or aluminum frame, adjustable reflectors, intermediate version, INOX, corner

Light sources: T5 linear fluorescents, TC-L LED compact fluorescents

Diffusers: SH,SHM, Micro PRM SH, SHR, SHMR, SL, SLM, SLR, SLRM

Louvers: PPAR, PPARM, PPAR LUX SILVER, PPARM LUX SILVER

Mounting: easy and clean (SCM)

Sterile clean room illumination – CLEAN ISO luminaries in LUXIONA Poland offer.



Sterile clean room illumination derives from the European Union norms. For the health service sector it guarantees the long term profits. The Polish sector of the health service protection is currently in the middle of great changes. By the end of 2015, all the health service structures will have to meet the requirements of the EU, not only referring to the hygiene and security of the medical facilities, but also unifying the quality of finishing materials, equipment, and the comfort of spaces. The process of adaptation refers also to the quality of patient service.

Cleanliness, security, and economics in the Health service sector are inextricably linked together. In the case of hospitals, clinics, or laboratories the casual investments are not profitable, whilst wisely considered and functional solutions are truly successful, together with the long term safety policy.

According to the researches, about 50% of operating theatres are badly illuminated, what has a negative influence on the quality of work and the staff comfort. The data referring to the hospital infections in Poland seem to be highly hazardous.

The social and economical results of the hospital infections in our country are very serious. According to the data of the Polish Hospital Infection Society, five to ten out of a hundred patients experience hospital infection in Polish hospital (www.ptzs.org.pl):

- The increasing number of post-infectional deaths is comparable to the number of casualties on Polish roads. The number of ten thousands of the infected patients die annually.
- Even 40% of deaths refer to people in the productive age, or even younger.
- The infections often occur during the vascular surgery, in

orthopedics during the prosthesis replacement, but also in neonatal units among the premature children, and in the intensive care units.

As a result of the infections and their complications, the time of medical treatment is extended from 1 to 40 days, what directly effects the costs of treatment (no NFZ refunds).

According to the Polish Hospital Infections Society data the estimated costs of treatment of infected patients reach even the 800 millions of Polish zlotys annually. Moreover, every year more and more damages are paid to those patients.

(Information source: Article: Technical infrastructure of a hospital, 1/2013, MSc Mr. Andrzej Różycki).

Results of hospital infections affect us all. The only cost-effective solution is the aware investment in cleanliness. The higher cleanliness and quality of the health service facilities is nothing like the higher contracts with NFZ.

Caring about the safety of patients who are weak and have to undergo invasive procedures during their hospitalization, as well as caring about the safety of medical staff we should minimize the risks of infections in all hospital units. Preserving the micro biological cleanliness in hospitals is of a great importance. It is particularly crucial as for the operating theatres and all treatment rooms. The LUXIONA Poland Company is undoubtedly the leader in the lighting sector providing solutions for CLEAN ROOM type structures.

Our company offers sterile lighting solutions for hospital, pharmaceutical plants, or chemical laboratories. Bearing into mind both the energy saving and the environment protection, LUXIONA Poland designs and makes complementary and innovative lighting solutions in accordance with the newest technologies, as well as legal and social requirements.

Owing to the wide range of CLEAN type certified luminaries, LUXIONA Poland guarantees quality and safety of such places as: operating theatres and their surroundings, treatment rooms, wards, clinics, sterilization rooms, laboratories, and other units of professional character in pharmaceutical, electronics, food, and chemical branches.

Our certified products meet the requirements defined for CLEAN ROOM type structures. PN-EN ISO 14644-1:2005 norm provides the lighting standards in accordance to PN-EN 12464-1 norm in medical units that has been accepted both by the European

Committee for Standardization (CEN), and the Polish Committee for Standardization.

PN-EN 12464-1 norm from December 2012 defines the lighting requirements including the following factors: lighting intensity, lighting regularity, color rendering indicator, color temperature, and the glare factor UGR. PN-EN ISO 14664-1:2005 norm for clean rooms and referring control environments is the basic document defining the level of acceptable pollutions in all CLEAN ROOM type units.

The norm includes classification of fair cleanliness in clean rooms and referring control environments as for the concentration of molecules in the air, and the procedure of measuring those molecules.

Depending on the cleanliness requirements, clean rooms are divided into classes, where pollution quantity and extend in the atmosphere is defined per cubic meter (or cubic feet):

- Cleanliness class no.1 classified in rooms of the highest possible asepsis (minimum level of bacteria), with the admissible bacteria intensity which is 70 cfu / 1 m³ of air.

- Cleanliness class no.2 classified in rooms of the highest possible asepsis (low level of bacteria), with the admissible bacteria intensity which is 300 cfu / 1 m³ of air.

- Cleanliness class no.3 classified in rooms of the highest possible asepsis (normal level of bacteria), with the admissible bacteria intensity which is 700 cfu / 1 m³ of air.

Cleanliness class no.1 includes:

- highly aseptic operating theatres (transplantation, heart operation, heavy burns, brain operation)
- sterile boxes
- infusive fluids labs – filling box
- professional wards (burns)

Cleanliness class no.2 includes:

- aseptic operating theatres
- septic operating theatres
- plaster rooms in operating units
- intensive care units with bed wards
- post operating units
- the premature rooms
- patient preparation rooms (operating theatre units)
- staff preparation rooms (operating theatre units)
- „clean” routes in operating theatre units
- „dirty” routes in operating theatre units
- sterilization rooms in operating theatre units

Cleanliness class no.2 includes:

- delivery suits
- treatment units – operating and plaster units in emergency assistance units
- central sterilization units – „clean” part
- central sterilization units – „dirty” part
- endoscopy rooms
- photo therapy rooms
- electro therapy rooms
- RTG rooms
- RTG control rooms

- blood samples rooms in blood donation points
- photo studios
- apparatus rooms

LUXIONA Poland provides complementary lighting solutions and guarantees the experts support on every stage of the project – it particularly provides the expert cooperation in the scope of luminaries used in ISO norms classified rooms.

The company guarantees support in the process of preparing the design and illumination of clean rooms – from the product advisory, to designing stage, and finally to technical service and clean room illumination trainings.

ALL DETAILED INFORMATION ABOUT THE CERTIFIED PRODUCTS FROM THE CLEAN ISO OFFER TO BE FOUND ON WWW.LUXIONA.PL

CLEAN ISO LUMINARIES IN LUXIONA POLAND OFFER

ISO Clean luminaries meet the requirements of PN-EN ISO 14644-1 norm referring to ISO 9-3 cleanliness class.

ISO CLEAN luminaries from LUXIONA Poland offer are awarded by certificate approved by the accredited laboratory.

ISO CLEAN luminaries from LUXIONA Poland offer are covered by anti bacterial material preventing the development of micro organisms.

Depending on a place of usage, the luminaries are equipped with anti reflective cover that minimizes laser lighting stream.

Diffusers used in ISO luminaries are resistant to all common disinfectants: ammonium salts, hydrogen peroxide, or chlorine.

Mr. Michał Szybalski

The Director of the Production Facility of LUXIONA Poland.

TECHNICAL CONFERENCE: „The Newest Lighting Solutions”

The Conference will be located: “Wityng” Training and Resort Center, Mikorzyn 1A, 62-561 Ślesin



Directed to:
the Architects, Electric Designers, and all these who
decide on the selection of lighting.

If you are interested in cooperation in the scope of designing the architectural, technical and industrial, office, clean rooms and medical illumination, you are kindly welcome to participate our two days long and free of charge Conference which is organized by our experts from the Luxiona Poland company.

The Conference offers:

- Professional technical training delivered by the lighting experts upon the illumination of various types of structures, in accordance with the newest trends and norms, including the LED technology
- Professional technical training upon the illumination of so called “clean rooms” which are located in hospital, health service, pharmaceutical, electronic and cosmetic industry structures, in accordance to PN-EN 14-644-1.2005 ISO class of cleanliness 9-3.
- Motorboat attractions – boats, water scooters, and other attractions.
- Gala Dinner

Terms available:

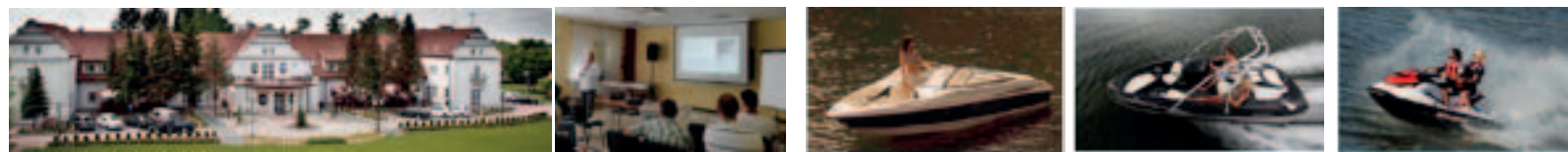
- 27/28 June, 2014
- 07/08 July, 2014
- 09/10 July, 2014
- 28/29 July, 2014
- 01/02 August, 2014
- 18/19 August, 2014

The participation in the Conference is free of charge.

The number of places available is limited. If you are interested, you are free to contact us on e-mail: e.szymczyk@luxiona.com

TECHNICAL CONFERENCE:

„Illumination of CLEAN ROOM type structures according to ISO cleanliness classes 9-3”



Directed to:

the Architects, Electric Designers, and all members of pharmaceutical and medical industries.

If you are interested in cooperation in the scope of designing clean room type and medical illumination in accordance with ISO cleanliness class 9-3, you are kindly welcome to participate our two days long and free of charge Conference which is organized by our experts from the Luxiona Poland company.

The Conference offers:

- Professional technical training delivered by the lighting experts upon the illumination of clean room type structures, in accordance with PN-EN 14-644-1.2005 ISO class of cleanliness 9-3 for hospital, health service, pharmaceutical and cosmetic industry structures.
- Establishing cooperation and relationships with the Luxiona Poland company upon the designing and producing illumination
- Motorboat attractions – boats, water scooters, and other attractions.
- Gala Dinner

Terms available:

30/31 July, 2014
20/21 August, 2014

The participation in the Conference is free of charge.

The number of places available is limited. If you are interested, you are free to contact us on e-mail: e.szymczyk@luxiona.com

University of Ecology and Management

interview with Mr. Michał Grzymała-Kazłowski, the director of the Archimed Sp.Z.O.O. Company.



Wyższa Szkoła Ekologii i Zarządzania

University of Ecology and Management
Interview with Michał Grzymała-Kazłowski, the President of the Archimed Sp. z o.o.,
Walczyńskich St.44 / 2,
03-916 Warszawa
tel.: 22 468 87 96,
mobile: 604 134 727,
www.archimed.com.pl



University of Ecology and Management surprises by its aesthetics, functionality, and originality of its form. Where did the idea derive from?

The Rector's Office was rebuilt and extended from the former industrial unit and printing house. The object has very nice proportions and situated in the heart of old Mokotów, Warsaw, gained a new life, and our task was to provide it the functionality and technology preserving its form and style of the 20th century industrial building.

Industrial form, functionality, design and art, or experiment... what were the assumptions of creating the spatial composition?

The main assumption was to preserve the climate and character of the object. We created a kind of loft, but school and not habitable. The modern school where the architecture and interior design is being studied should have the adequate office. So, these were our assumptions and our project includes it all – from concept itself to architecture, and later to interior design.

What was the greatest challenge in the process of planning and realization?

Our greatest challenge was operating on the existing object, its neighborhood, as well as urban, nature and technical conditions. There were loads of people working on it and it seems that they all meet the challenges.

What role does the lighting play in the aesthetic look of such building?

The object is one-sidedly illuminated because of the neighboring buildings – our role was to provide the all walls of the factory with the most of light that it was possible. In cases the solar lighting was not possible to be provided, we were designing artificial lighting with the adequate parameters.

Which of the lighting elements do you consider to be extremely interesting?

I think that among the most interesting ones, on the first place there is illumination of design rooms, exhibition halls, and accented old corridors.

How is the realization perceived by the visitors? And how by its everyday users?

The Rector of University of Ecology and Management highly assesses her new building. She also stresses that as well as other staff and the visitors like it very much.

On what stage of realization did you initiate cooperation with the lighting specialists?

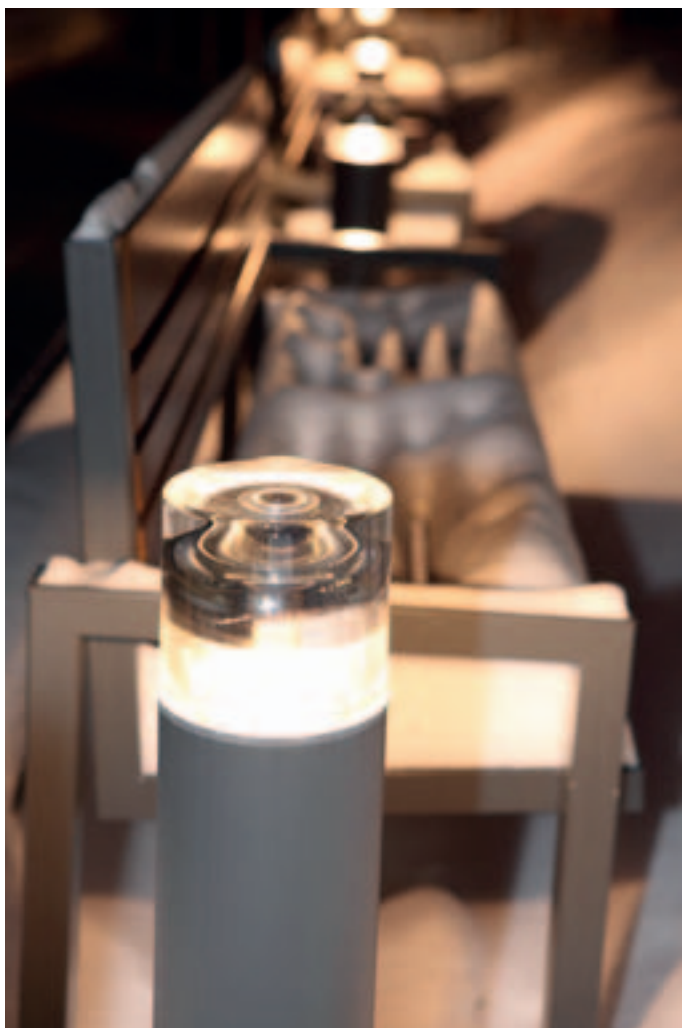
We usually begin such cooperation just after completing the functional concept in order to have the total idea about all interiors.

How do you value cooperation with LUXIONA Poland and its product offer while implementing the project?

Excellent.

Thank you. Editors of LUXIONA Poland.

University of Ecology and Management in Warsaw



Realization: **BALISA luminary**



Realization: **COPACABANA luminary**



Realization: **AGAT LUX PPAR RR luminary**



Realization: **MARTA luminary**

University of Ecology and Management in Warsaw

„Open Gates”

– the project of the center of Goleniów city – realization of illumination – the LUXIONA Poland products.



Realization: **MERLOT luminary**

Within the 2013 project named „Open Gates”, one of the most representative part of Goleniów city was revitalized and landscaped. Owing to the project, the area situated along the walls by the Ina River was modernized, as well as the Planty Square.

Embankment on the Ina River

Within the pre-war period it was the most place of the Goleniów inhabitants. Walking along the river, they admired the beauty of nature and the lively port at the other side of it. After WWII both the river and its port lost their economic meaning, but they kept their recreational value.

Unfortunately, a the time passed deterioration of walls, pavements, and greenery successfully discouraged the inhabitants to relax by the river. However, it all changed after “Open Gates” project implementation.

Information source: www.goleniow.pl

Within the project discussed above, the embankment was modernized owing to the products from LUXIONA Poland offer. Owing to the lighting poles, the ideal light intensity was provided for the strollers. Moreover, the river was beautifully illuminated what emphasizes the unique atmosphere of the place. The special design and the lightness of the lighting poles, together with the light color of their structure and the precise details, match the surrounding, what is visible during the daytime. In the evenings, warm color of the light accents the recreational character of the place encouraging to relaxation and family meetings.

The Independence Monument Square

Another part of the city that experienced spectacular changes



Realization: **MERLOT luminary**



„Open Gates” the project of the center of Goleniów city

„Open Gates”

– the project of the center of Goleniów city – realization of illumination – the LUXIONA Poland products.

Within the pre-war period there was the monument named “Der Krieger” which was unveiled in 1911, and was dedicated to the German inhabitants of Gollnow (the former name of Goleniów), who lost their lives in Franco-Prussian War. In 1947 the first monument dedicated to the Polish war heroes was built instead: “in memory to the fallen for freedom of the old Slavic lands”. Then, the Independence Monument was built there in 1993.

The Planty Square

Walking from the Independence Monument via 3rd May Constitution Street we reach the Planty Square. The 3rd May Constitution Street gained its look compact to development of the area around the Monument and Square.

Illuminating the square without any pole luminaries is a great challenge. In Goleniów city, the squares were lighted by the use of line luminaries built in the pavement.

Whereas, all the alleys leading to park were illuminated by

decorative luminaries equipped with the double optical systems. The warmth of the light color, light grey color of luminaries and the lighting poles make the architectural elements such as walls, tower and trees look more attractive in the area.

The final visual effect of the project implementation was preserved on pictures, however the real aesthetical perception is to be experienced on site. It is truly worth to visit Goleniów!

LUXIONA Poland luminaries applied in the Project:
Illumination of embankment and surrounding squares – **AURA MEGA lighting poles**
Illumination of park alleys – **MERLOT luminaries of direct lighting**
Illumination of squares and the monument – **FASAD FLOOR luminary**
Illumination of the walls and natural objects **FASAD OLD luminary**

Editors of LUXIONA Poland



„Open Gates” the project of the center of Goleniów city



Realization: **MERLOT i FASAD ODL luminaries**



Realization: **AURA MEGA** luminaries



„Open Gates” the project of the center of Goleniów city



Realization: **FASAD FLOOR** luminaries

New Medical Technologies Center in Szczecin

– interviewing Mr. Paweł Zimnicki,
the architect from Szczecin.



Realization: **KUBIK WALL luminary**

Interview with:
Architect
Mr. Pawłem Zimnicki,
The ATRIUM Design Studio
Prof. Szafera Street 196
71-245 Szczecin
tel/fax: 91 439 33 92
www.atrium.szn.pl



What are the biggest challenges while designing hospital units? Has the approach to design hospitals changed lately?

In my opinion, the Project of hospital seems to be one of the most difficult challenges for any architect. You need to join the architectural vision and medical technology which in a great degree determines the special and functional solutions. The functionality required by the technology, advanced equipment, computer systems, and high sanitary requirements have to match the aesthetics which is pleasurable for both the patients and the medical staff.

It is commonly known that being in hospital is not a nice experience for any patient. Designing hospital or clinics should be understood as linking the art and the medical technology to reach the desired effect of functionality and making the stay of patients more pleasurable. I reckon that over the past few years the conscience of positive perception of the surroundings has actually increased and has become to play a role in therapeutic process. Thus, we experience the new approach to designing such structures.

New Medical Technologies Center in Szczecin is considered to be prestigious. How does the role of architecture and design influence on the image and character of such places? Do you have your own definition of a design, color, or lighting?

New Medical Technologies Center in Szczecin was designed by the ATRIUM Design Studio, and owing to scientific researches in genetics conducted there and resulting technical advancement, it is the unique object not only in Poland, but also in the whole Europe.

Our purpose was to present that fact in the architectural expression. The building has its modern, simple form, and owing to its subtle design its character was revealed.

Apart from its basic function which is laboratory research and didactic center, the discussed building will successfully play a role of a conference center, the center of scientific thoughts exchange.

The ATRIUM Design Studio it is a team that each task they are entrusted with is treated highly individually. In my opinion, the most important is context which determines the solutions both those functional, and those referring to design, color, or lighting.



New Medical Technologies Center

●●● REALIZATIONS

Apart from basing on a great experience, do you happen to experiment in such projects?

Of course, I do! The innovative solutions are introduced in each project we implement. And it mostly results from the fact that the ATRIUM is a group of people, and though under one name, various projects may have various leading architects who have convinced their colleagues to their visions.

Our own experiences make a base which has a great influence on the project's quality, as well as aesthetical and functional solutions. Experimenting is a part of for a design studio with an ambition to be at the forefront in our branch. The architectural trends are continuously coming from the whole world, each year new collections of finishing materials and luminaries are released. On the one hand, it is very exciting when you create the space and use combination of different elements that nobody have ever used. However, on the other hand, it provides a risk and questioned creativeness whether it is possible to obtain the harmonious hole.

Watching one of your latest realizations which is Independent District Hospital in Nowogard, it is also easy to notice its aesthetics, richness in its form which has been untypical for hospitals in Poland so far. Where do your lighting ideas come from?

The hospital in Nowogard is a special case. I am not talking about technological thought but aesthetics itself. We decided to introduce many solutions there which were adequate to medical center of such scale and would maximize the feeling of comfort in hospital (to its possible degree) for all patients, their visitors, and medical personnel.

To provide easier identification of place we introduced color diversity of hospital wards, and their color accents we used in the main hall floor. It is worth to be mentioned that delivery suits block, maternity ward, and neonatology ward make considerable part of the hospital, thus it was necessary to create friendly atmosphere for all young mums, their children, and their young visitors. It was also the reason to resign from our characteristic moderation.



Realization: halls – BERYL K220 IP44 luminary



Realization: **AGAT T5 PPAR RO luminaries white net**

The particular place is a central part of hospital that makes communication routes with all the halls of particular floors, reception area and admissions. They all require such illumination that meets all the sanitary norms and be a part of some interesting interior. We decided to use several types of luminaries what resulted in a very positive visual impression.

Selection of illumination is a complicated achievement, whilst the offer on the market is very rich. During the design process the architect indicates what kind of finishing result fulfills his vision and what luminaries match. It is obvious that in the final selection we have to depend on advises of the professionals and the producers.

Does the function of the object determine or impose some lighting solutions? What is the role of light in designing a modern hospital?

Undoubtedly, yes. Apart from the obvious matter of context and adequate selection of illuminance, hospitals and other structures of the health service have some specific requirements of hygiene, robustness, non-combustibility, etc.

Illumination of operating theatres requires professional luminaries that meet norms of cleanliness, as well as luminaries that are airtight and resistant to being washed under pressure. However, it does not mean that all the health care facilities have to be illuminated in the same boring way.

In all places, where it is possible, together with meeting legal requirements and norms interesting a diverse luminaries shall be used.



Realization: **AGAT CLEAN PPAR SH luminaries**

It positively influences the patients' mood, and their families, and all the medical personnel. In my opinion, in the future crucial role will be played by LED illumination. These are currently still unpopular due to higher costs of the investment than in case of the more traditional lighting. Nevertheless, low exploitation costs, long durability, and primarily high quality of lighting, and access to easy control of luminance gradually convince the investors to such choice.

To what extent cooperation with LUXIONA Poland was an assistance for you?

The ATRIUM Design Studio has been operating on market for over twenty years. We design objects of different types and scale. When the opportunity occurred to design a health care structure we approach Aga Light (present LUXIONA Poland) many years ago. I must admit with pleasure that over these years LUXIONA Poland made a mile step of technology in its product offer. It currently offers high quality products of interesting design, an in competitive prices what was very important in cases of objects discussed above.

In cases of designing in public sector, e.g. health care units, it is in so far as difficult that the designer defining only the parameters of equipment he is not sure to the end which of these will be applied. The final effect mostly depends on cooperation of the investor, the general contractor, designer, and producer.

In discussed objects the assistance of the experts from LUXIONA Poland let us all obtain satisfactory effects.

Thank you. Editors of LUXIONA Poland

„BioNanoPark“

Realization of lighting with LUXIONA Poland cooperation – Opinion of Mr. Jerzy Jagas, the electric installation designer from the EL-BUD PROJECT S.C.



The “BioNanoPark” is one of the most modern centers of business implementation and research in Europe. With the preferential prices, the manufacturers may examine their products or technologies basing on *de minimis* assistance, on any stage of their introducing into market, and with the use of the most up-to-date devices.

Realization: X-LINE luminary BioNanoPark



Mr. Jerzy Jagas, the electric installation designer from the EL-BUD PROJECT S.C.

We are the design studio that creates electrical installations in objects of various functions. We mainly deal with such objects as: health care units, laboratories, and offices.

I have been cooperating with the LUXIONA Poland Company since 1996/1997. The Company produces luminaries of varied technical requirements. The luminaries characterize high technical parameters, great aesthetical values that meet the newest trends of art designing. Additionally, the professional advices as for selecting the products offered by the company are invaluable help in solving project problems. Solutions applied in illuminating the particular object determine the investor's ideas, and also constitute a continuation of the applied solutions in the following investments.

The „BioNanoPark” in Łódź is the example of such continuation. In the implemented project we applied luminaries for suspended ceilings, AGAT and TOPAZ. They are equipped with T5 fluorescents, and are mounted in wall covering gaps, or are used as outdoor contour lighting of a building.

In view of untypical construction of suspended ceilings it was necessary to provide untypical solutions. In the office part of the building we used RT E15 ceiling, whilst in clean rooms and auxiliary rooms, we used DS9 ceiling with the hidden construction. Untypical constructions needed some adaptation of luminaries to the requirements of the architect and investor.

need to confirm with pleasure that LUXIONA Poland met all the requirements. During the visit of the State Representatives (the President of the Republic of Poland and the President of the City of Łódź), all of the gathered paid attention to the materials used, as well as the illumination effects applied. As a result of evaluation of our cooperation, the new project documentation will be prepared for another object within the “BioNanoPark” area.

Our long-term cooperation with LUXIONA Poland confirms the professionalism of the implemented projects, its openness to the new technologies and new solutions, as well as constant improvement of the quality of provided luminaries.

As a designer I recommend the products offered by LUXIONA Poland.

**EL-BUD PROJEKT, S.C.,
94-057 Łódź, Tomaszewicza Street 3**



Realization: AGAT CLEAN luminary



Realization: AGAT LUX T5 PPAR RR luminary



BioNanoPark

PKP CARGO

Realization of illumination Project – the LUXIONA Poland products



Realization: MERLOT LED luminaries

The main assumption of the lighting project was to increase the attractiveness of the building neighborhood. To achieve that luminaries with additional reflectors were used what allow to obtain the regularity of luminance and limit the glare effect. Applying reflectors in multi-segment technology let to obtain high lighting efficacy based on direct lighting. The shape of reflector, its efficiency and unique regularity of the reflected light was not obtained accidentally. It is the result of work of those experts who specialize in developing high class optical

systems in lighting laboratories in Bartenbach, Austria.

LED technology applied in the used luminaries provided lowering of the exploitation costs of electric energy. Longer life of LED modules when compared with the conventional discharge lighting sources will certainly allow to control and lower the costs of conservation of the whole lighting system.

REALIZATION of LUXIONA Poland

Luminaries from the LUXIONA Poland offer used in PKP CARGO project

Luminary to be mounted on wall – **MERLOT LED**

Wall-mounted luminary – **VIVA LED**

In-ground luminary – **DION LED**



Realization: VIVA LED luminaries



Realization: MERLOT LED luminaries

Control systems in outdoor illumination – a way of saving or expensive toy?

The lighting control systems have more and more supporters amongst investors as well as in the lighting professional environment. What are the reasons? Is it about improving the comfort of users, or something else? How high is the probability that investment expenditure for the purchase and system configuration will ever bring any extra economical benefit for the investors?

The issue is extremely board and probably be discussed on the LUXIONA Magazine pages many times, and who knows, it may became a groundwork for further consideration and debates upon the subject in question. So to say, initializing the series of the articles in question the control system is to be discussed as the first, and it is dedicated to the outdoor illumination. The following editions will treat about indoor control systems of lighting, dedicated for particular structures, e.g. petrol stations.

The answer to questions about the needs of outdoor illumination has been frequently and widely delivered many times before. We can count the most important features of the outdoor lighting system, such as durability, energy efficiency, or attractive design. Outdoor illumination control system may be placed in the in the field of energy efficiency, but also on the field of durability of the whole system. Thus, it is not an extra toy that may become a reason to be proud of a particular place, but an important part of a lighting system that effectively helps in its the most money saving maintenance.

Passing over our previous considerations we need to see what other features of control system are important in the eyes of the potential user. It is obvious that very soon opinions like "low

price" will approach. However, it is the low price the most crucial in this case? How much the low price is a factor that determines the investor's convenience to purchase and install the system in his lighting system?

It is obvious that the total cost of the whole system constitute a significant factor, however it shall be stressed it is a cost of a lighting infrastructure which is to provide particular functioning parameters, improving the particular economical parameters, and what follows the quality of the product itself.

The other extremely crucial element, especially in already occurring system, is possibility to install the control system in the existing infrastructure. In many places, especially in urban area, but also in rural spaces all the modernization ideas derive from an assumption that all existing electric installation shall be left, as well as the remaining polls which are also the tracking polls. As it is easy to guess, the consequences of such approach are the problems with transferring all kinds of control systems since we do not have the possibility to provide some extra circuits. However, initializing the debate in the scope of expectations and needs as for the outdoor illumination control systems we shall determine what kind of communication we do require, or even what kind of communication is ideal for us.

Is dimming the light the only purpose, or maybe switching off the redundant luminaries when it is not needed? Or maybe should we touch administration of the whole monitoring system of the situation at each point of electric energy consumption that is luminaries, what would guarantee making the optimal decisions and actions? Let's make an attempt to determine the scale

Costs of electric energy consumption in lighting system of 1000 pc of luminaries of 150W power.

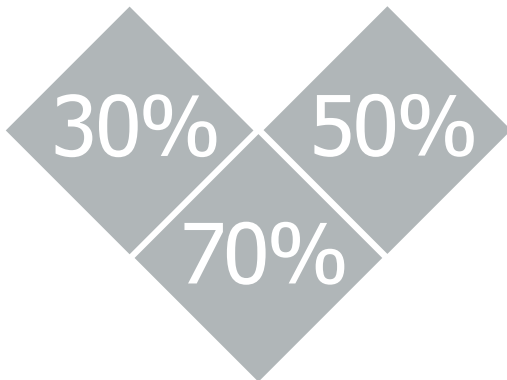
Real power consumption by a single lighting point = 170W
 Approximate cost of 1 kWh = 0,5 PLN
 Time of applying the system in particular months:

month	time [h]	electric energy consumption [kWh]	cost of electric energy consumption [PLN]
jan	434	73 780,00	36 890,00
feb	336	57 120,00	28 560,00
mar	310	52 700,00	26 350,00
apr	300	51 000,00	25 500,00
may	248	42 160,00	21 080,00
jun	180	30 600,00	15 300,00
jul	186	31 620,00	15 810,00
aug	248	42 160,00	21 080,00
sep	300	51 000,00	25 500,00
oct	310	52 700,00	26 350,00
nov	360	61 200,00	30 600,00
dec	434	73 780,00	36 890,00
TOTAL	3646	619 820,00	309 910,00

of the exploitation costs we are talking about. When we examine the potential lighting system consisted of 1000 items of outdoor luminaries, to simplify we may accept each of them is of 150W, the simplify diagram showing the energy consumption may be determine, and what follows the costs of system exploitation during the calendar year.

Conclusions arriving from our brief estimated calculation of energy consumption costs may be astonishing for the majority. With the given budget which is indispensable for lighting system functioning, its owner will surely not become uninterested. The proposed solution may let them save a part of a sum which every year with a great regularity comes from the budget and limits spending the costs for other more developing purposes. Thus, what saving levels shall be discussed at the time of applying the control system? The presented question has to be preceded by the answers to loads of additional questions about the comfort of the users of the system and its safety.

What energy consumption saving levels shall be taken into account:



The saving level we can achieve while applying illumination control system is dependent on many factors among which there are three dependent on technical solutions:

1. type of applied light sources
2. kinds of discharge systems
3. technical possibilities of control lighting system

The two first of these factors are totally independent on the control system, while the possibility of the illumination control system are largely derivatives of the two first factors.

Outdoor illumination control system, apart from its function to regulate the luminance level and adapting its value to the prevailing conditions, may monitor the whole illumination system and all individually operating luminaries in that system. The parameters data about the system include: voltage, electricity, power indicator, energy consumption, working hours of lighting, and temperature. Owing to the constant monitoring we obtain some extra savings of costs of exploitation and optimization of maintenance related to luminaries operation.

The most comfortable way to transfer information of the control system is powering line. Owing to such construction of the system there is no need to provide some extra wiring with the control function, and in the same time applying the control system is possible both in new lighting installation and in the modernized networks that have already existed.

Review of the most important components in outdoor illumination system control communicating via powering line.

The iDC data concentrator



The iDC concentrator center is management system of lighting and operates as central interface of the system general software. The product can be programmed and provided with the application programs for lighting system control operation.

The following functions are the integral part of the product: timer programs, monitoring of limit values, the alarm function and its transmission, data conversion, data registration, and electronic mail client. The concentrator is equipped with various interfaces such as SO for counter registration, the M bus for the remote counter readers, or MOD bus for expanded functions of sensors and actualizations. The iDC concentrator may be adapted to multiple control tasks.

Controller mounted in iPC lighting poll.



The iPC controller has been designed to be installed in a lighting poll. It can also be integrated with the lighting control system and does not require any additional wiring.

Technical information:

- Dimensions: length x width x height: 250 x 60 x 55 mm;
- Controlling output: DALI, or 1-10 V for maximum four electric loads
- Short circuit protection;
- Bistable relay at output: closing joint, controlling output for ECO load: 10 mA for power lowering relays;
- Connecting wire: 1 m (configurations available upon requirements);
- Storage temperature: from -25 to 85 degrees C;
- Working temperature: from -25 to 80 degrees C;
- Humidity: no condensation;
- Protection class: IP20.

●●● THE EXPERTS' ADVICE

Controller mounted in luminary

The controller was designed for installation located within the lighting source. It does not require any additional wiring and may be integrated with the lighting control system.



Technical information:

Dimensions: length x width x height: 93 x 58 x 30 mm;
 Controlling output: DALI, or 1–10 V for maximum four electric loads
 Short circuit protection;
 Bistable relay at output: closing joint, controlling output for ECO load: 10 mA for power lowering relays;
 Connecting terminals: 0,5-1,5 mm² (configurations available upon requirements);
 Storage temperature: from -25 to 85 degrees C;
 Working temperature: from -25 to 80 degrees C;
 Humidity: no condensation;
 Protection class: IP20.

The basic components included in the control system are completed by the controller of independent operation.

The iMCU controller



It was specially designed for independent operation of road and building surroundings illumination.

It is dedicated for lighting sources with magnetic load (loads of low starts, and ECO loads of low starts), as well as electronic loads with possible dimming cooperating with 1-10 voltage, or DALI interface.

The product is suitable both for new installations and the modifications of the old existing ones. The controller contributes to lowering the energy consumption, especially in case of applying LED technologies.

Depending on the given task, the product can become a substitute for one or more individual objects. It also allows controlling the conventional magnetic load from the point of bobbin without any use of other components. The LST controlling output may be used to connect the control phase, motion detector, switcher, or lighting sensor, but they can also be used for receiving the simple protocol data.

Operating units

The iMCU parameters may be set (or reset) any time by the use of various tools. The hand unit is also available (not requiring any powering source), where the installed controller can be actualized with the modified parameters.

Technical information:

Dimensions: length x width x height: 83 x 30 x 19 mm;
 Controlling output: DALI, or 1–10 V for maximum one electric load
 Short circuit protection;
 Connecting terminals: 0,5-1,5 mm²;
 Storage temperature: from -25 to 85 degrees C;
 Working temperature: from -25 to 80 degrees C;
 Humidity: no condensation;
 Stopień szczelności: IP20;
 IEC protection class: I.

Mr. Rafał Kłopotcki
The Manager of Business Development /
Outdoor Illumination
LUXIONA Poland



FASAD ODL MICRO



FASAD WALL



FASAD FLOOR



STREET PARK LED

Recommended products from LUXIONA Poland offer



KUBIK POLE / KUBIK POLE ODB

Outer luminaire to be mounted on a solid surface (concrete, sett, or substructure) equipped with highly efficient energy saving LED sources of the newest generation. Luminaire dedicated to illuminate pedestrians routes such as park alleys, parking site passages, property entrances. Its body made from aluminum which is coated by the facade powder used for outdoor activities. LED sources are placed in the upper part of the luminaire, and hidden within the construction, invisible for a potential viewer. Optical system used in the product provides asymmetric light distribution. Luminaire is hermetic (IP65) – it guarantees no dust or water penetration. It is also shockproof (IK10). Luminaire available in different colors from RAL palette upon the customer's request.



PAREO LED

Outdoor luminaire dedicated for garden and parks, equipped with highly efficient LED sources. Lighting stream is 3000lm (28 W of electric power), or 5000lm (43W). Its color temperature of diodes is 5000K. Body made from aluminum cast. Its transparent diffuser is made from polycarbonate which is highly resistant to mechanical factors – IK09. The outer cover provides a very high level of resistance to all atmospheric factors, as well as the luminaire aesthetic design during the whole exploitation process (IP45). Luminaire specially recommended to illuminate the squares, parks, and other open spaces.

Recommended products from LUXIONA Poland offer



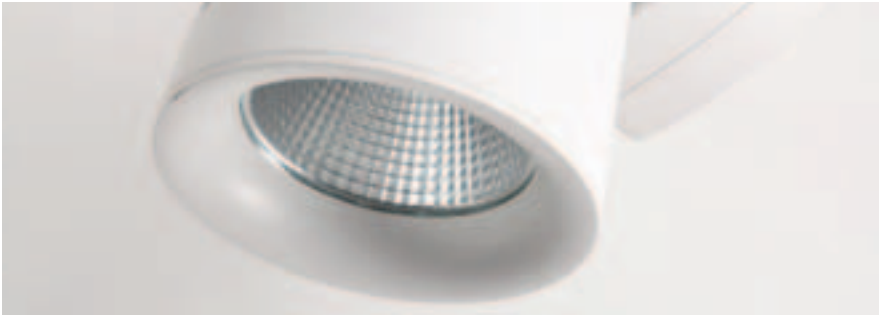
BERYL KN LED

Luminary adapted to be mounted on walls. High lighting efficiency LEDs with 2x1, 2W power were used as light sources. Optical system consists of professional lens that provide light distribution of 5° - 21° angle. Owing to the optical system solutions, the product is highly effective. Its body is made from anodized aluminum profile. It is resistant to solids, dust, and liquids penetration – IP65. This type of luminary is recommended for decorative or accent illumination, e.g. in restaurants, pubs, or cafes.



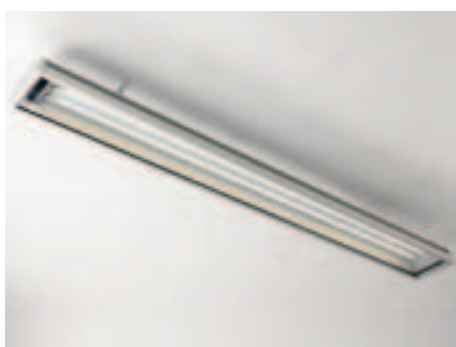
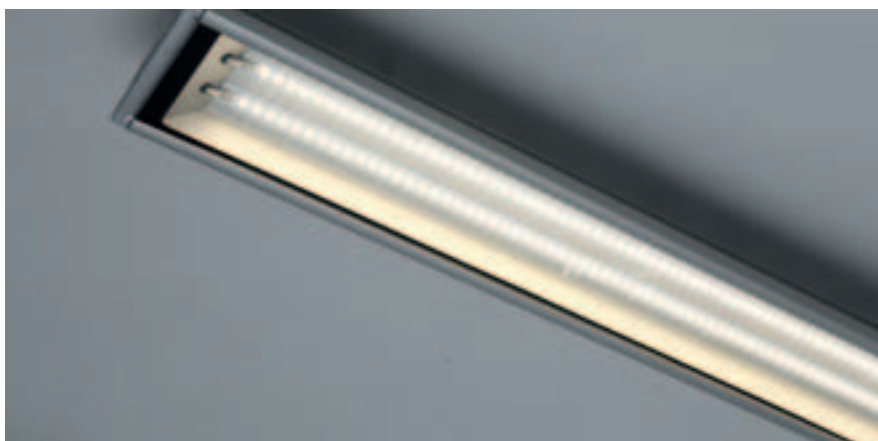
TEAR LED

Luminary equipped with highly efficient LED sources of the leading marks. TEAR LED is adapted to be mounted on a three-phase truck on a ceiling, with a use of base. This luminary is recommended to illuminate shop windows, shopping interiors, and centers of culture and art. It can be used everywhere where owing to the accent lighting we may expose a particular product.



TEAR M LED

Down light type luminary designed to illuminate shopping center areas, offices, and other structures of public use. Luminary body is made from aluminum cast. TEAR M LED is equipped with highly efficient LED sources of the leading marks. Its simplicity in shape, as well as great lighting values allow the maximum freedom in designing the illumination in various spaces.



NOVELINE LED

Luminary body made from aluminum. It is characterized by the lack of UV and IR radiation, and I65 external factors protection level. The direct current power supplier is mounted inside. It provides significant energy consumption saving (up to 85%) when compared to the standard halogen luminaires. Owing to the newest technology luminary is of a long-term durability and failure-free. It can be mounted directly on ceiling construction, or other places adapted for that kind of lighting. It is recommended to be mounted in industrial and production halls, shopping centers, and storage areas.



NEPTUN LED

Airtight ceiling luminaire which are equipped with highly efficient LED sources, they provide additional protection against foreign bodies and water streams penetration (IP65). It also protects from the accidental strikes (IK10). They are perfect to be mounted in humid and dusted places. Its lampshade and body are made from polycarbonate what provides the maximum protection against mechanical damages. The opal diffuser included. The color temperature of the applied lighting sources is 3000K or 4000K. Optionally, the luminaire can be equipped with power suppliers with possible regulation of lighting stream. The NEPTUN LED luminaires are offered with the clips included in standard version. Purpose: halls, warehouses, underground corridors, parking lots, etc.



RUBIN SPORT LED

Surface ceiling mounted luminaire dedicated to be used in sport halls, school gyms, squash rooms, etc. Its body is made from powder coated steel sheet. The micro PRM diffuser has been included in the luminaire what provides less glare effect when compared to the fluorescent lighting.

THE LUXIONA POLAND PRODUCTION PLANT IS AWARDED THE ISO 13485 MEDICAL CERTIFICATE.



CSQ

MED

ISO 13485 CERTIFICATE

SCOPE:

- designing and producing luminaries for medical purposes





metalarte

Sagelux



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