



Lighting solutions

Street lighting



Wherever you go...

Street and road luminaires of the Polish manufacturer Lena Lighting represent modern solutions, energy efficiency, durability and safety. They provide lighting which is both efficient and eye-catching.

100%

Made in Poland

We are a lighting manufacturer with over 34 years of presence on the market which is why we know everything about luminaires and lighting systems: we design, comprehensively test and manufacture them. We combine practice with modernity.

We have technologically advanced manufacturing facilities at our command, which guarantees a high level of flexibility and operational efficiency. We produce over 4 million luminaires annually, and each product leaving the Lena Lighting production line strengthens our position of the leader in the market of luminaires in the country and in the world - every day.

When designing new luminaires, we take advantage of the latest technological achievements. For years, we have co-operated with leading international manufacturers of electrotechnical components, who, in addition to providing us with their solutions, also implement individual projects of our Engineers at the Research and Development Department of Lena Lighting S.A., allowing for a significant reduction in energy consumption, while improving the quality of lighting. We are constantly enhancing our know-how using the latest global solutions in LED technology and lighting control.

34+

years of experience



Modern LED production line

Środa Wielkopolska

Astra LED family

LED road luminaire characterised by high luminous efficiency featuring an energy-saving integrated LED module.



Don't turn off, modernize!

Let's not turn the light off, but retrofit it - it simply pays off!

More and more cities and individual investors decide to turn off or limit lighting. Many face a very difficult dilemma - whether or not to save on people's safety or to get into debt?

We have a ready-made solution to these problems - reduction of power consumption. Wherever it is necessary to illuminate halls, offices, schools, kindergartens, streets, parks, recreation places - traditional lamps should be replaced with modern LED lamps with a control system.

Hundreds of lighting modernisations finalised by our customers have proven that the financial savings can reach up to 80%.

Ecological luminaire

LED lighting provided by our Astra LED road luminaire is much more efficient than traditional lighting and can deliver up to 153 lm/W. Such luminous efficiency results in much lower power consumption by the lamps and reduces the number of light points, which in turn reduces the amount of used packaging, wiring, installation and service costs. In addition to financial savings, investments of this kind bring great value to the environment, helping significantly reduce CO₂ emissions into the atmosphere.

ASTRA LED 12-24V 9-29 W 1350 - 4300 lm			
ASTRA LED	17 W	2100 - 2300 lm	50 W sodium luminaire
ASTRA LED	37 W	5350 - 5600 lm	70 W sodium luminaire
ASTRA LED	53 W	6950 - 7300 lm	100 W sodium luminaire
ASTRA LED	69 W	8650 - 9100 lm	150 W sodium luminaire
ASTRA LED	103 W	12200 - 12800 lm	

AVAILABLE OPTIONS:

- Motion sensor
- Mounting bracket with a diameter of 76 mm



Ecological luminaires



Luminaires dedicated for photovoltaics

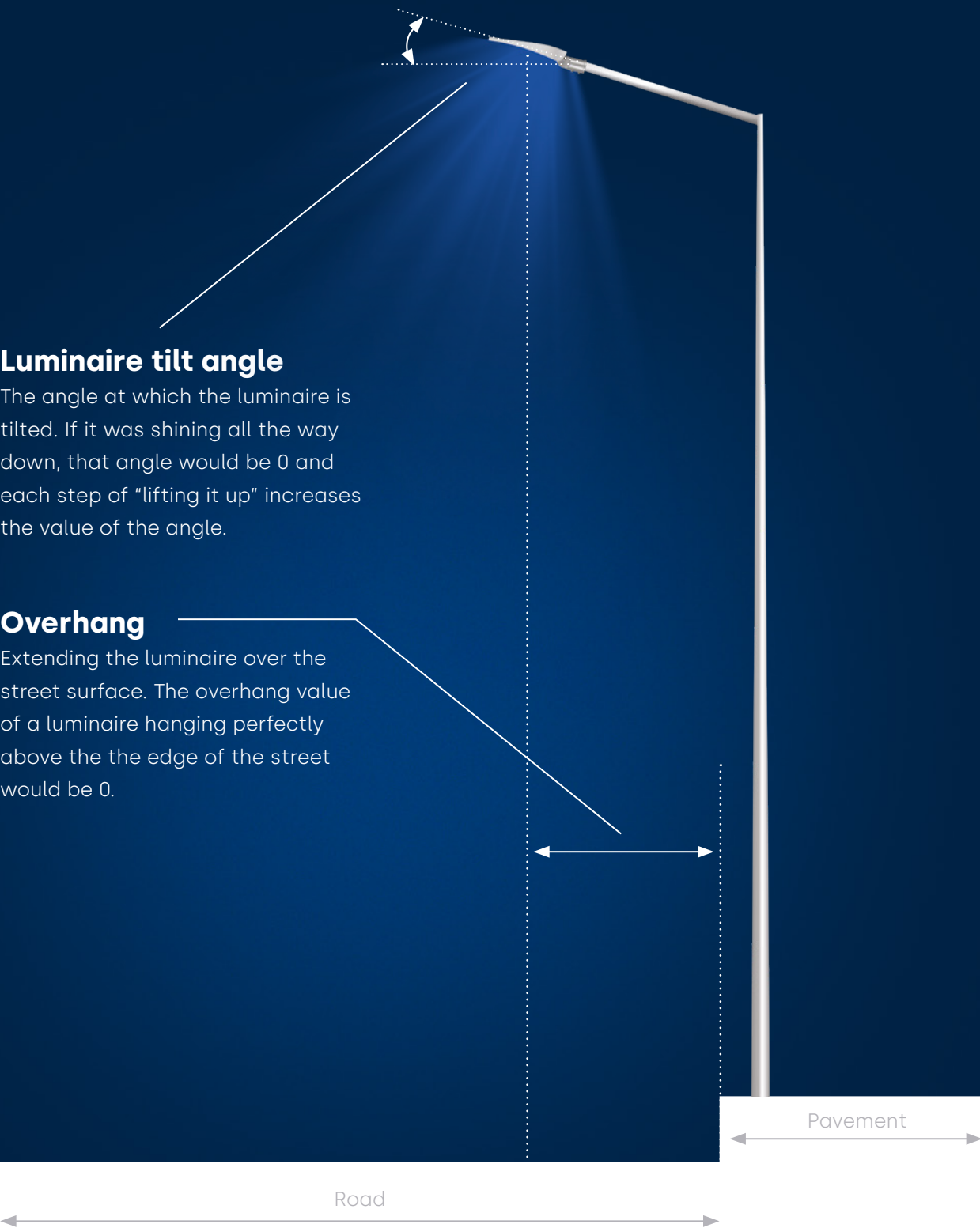
Glossary of terms

Luminaire tilt angle

The angle at which the luminaire is tilted. If it was shining all the way down, that angle would be 0 and each step of “lifting it up” increases the value of the angle.

Overhang

Extending the luminaire over the street surface. The overhang value of a luminaire hanging perfectly above the the edge of the street would be 0.



Tiara LED family

The latest and most versatile products in our offer of road luminaires.

up to
169 lm/W IP66 IK09 I, II

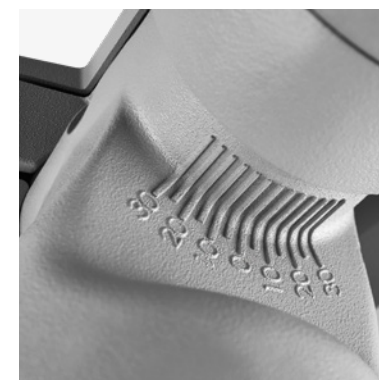
TIARA LED and TIARA 2 LED are the newest and most versatile products in Lena Lighting's offer of road luminaires.

These luminaires can be used on motorways, expressways and express roads, as well as on national, municipal, local and residential roads. With various optics available they can also be used to illuminate pedestrian crossings, pavements and bicycle paths.



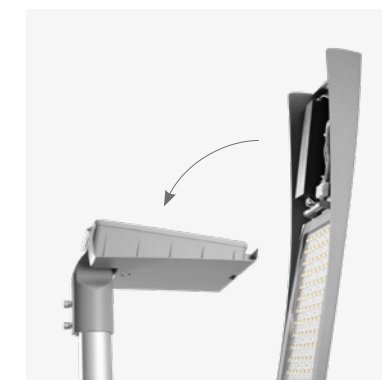
AVAILABLE OPTIONS:

- Mounting bracket with a diameter of 76 mm
- NEMA ANSI C136.41 and ZHAGA book 18 connectors
- Dusk sensor, motion sensor (RCR), remote control available
- Programming a 5-step power reduction available
- Luminaires available in I and II class of protection



Tilt adjustment

The mounting bracket is attached to the housing with two screws, by loosening these screws we can adjust the tilt of the luminaire from -15 to °+15° (Tiara LED) and from -30° to +30° (Tiara 2 LED).



Fast, innovative mounting

Easy maintenance with tool-free access to the interior of the Tiara luminaire.



More efficient LED light sources

Applying newer and more efficient LED light sources translates directly into higher energy efficiency of the luminaire.



Robust design

Tiara LED luminaires are made from the highest quality materials. They are reliable and resistant to extreme weather conditions.



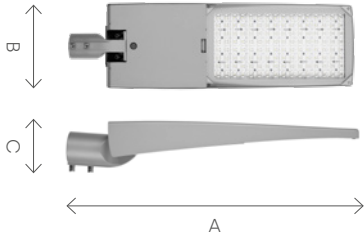
Tiara LED

up to 169 lm/W IP66 IK09 I,II

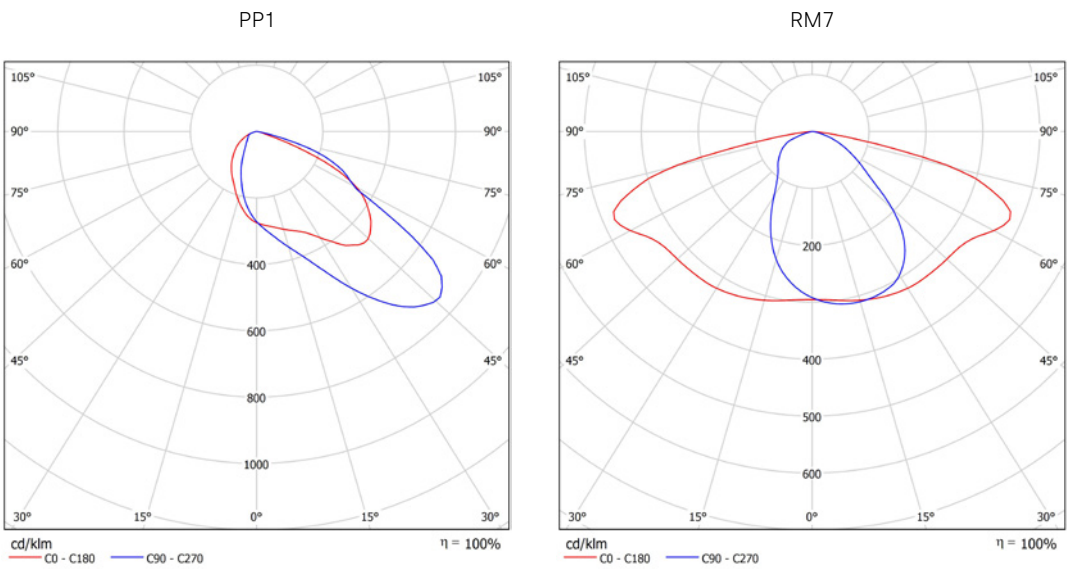
Light source:	LED module	Body material:	powder-coated high-pressure aluminium
Rated power [W]:	8 - 330	Body colour:	grey
Luminous flux [lm]:	1075 - 42275	Diffuser material:	tempered glass
Colour temperature [K]:	2200, 2700, 3000, 3500, 4000, 5700, 6500	Diffuser type:	transparent lens
Mounting method:	to the pole -5°+15° on the bracket -15°+5°	Dimensions A/B/C/ø [mm]:	870/122/262/60 (76) (L version); 665/122/262/60 (76) (M version)

Distinguishing features:

- The luminaire is ENEC, ENEC+ and CE certified
- 36 variants of light distribution
- Tool-free and quick access to the electrical equipment compartment
- Compatible with the modern CLUE CITY control system (additional NEMA and ZHAGA connectors),
- Protection against overheating of the luminaire's LED NTC module.
- Easy and quick disassembly of the optical-electrical component without the need to demount the luminaire from the pole.



Selected distribution options





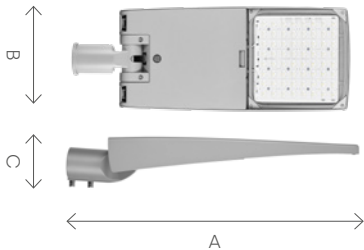
Tiara 2 LED M

up to 165 lm/W IP66 IK09 II

Light source:	LED module	Body material:	high-pressure aluminium powder coated
Rated power [W]:	8 - 175	Body colour:	grey
Luminous flux [lm]:	1075 - 22925	Diffuser material:	tempered glass
Colour temperature [K]:	2200, 2700, 3000, 4000, 5000, 5700	Diffuser type:	transparent lens
Mounting method:	to the pole -30°+30° on the bracket -30°+30°	Dimensions A/B/C [mm]:	706/265/105

Distinguishing features:

- Tool-free and quick access to the electrical equipment compartment
- compatible with the modern Clue City control system (additional NEMA and ZHAGA connectors),
- Protection against overheating of the luminaire's LED NTC module.
- Easy and quick disassembly of the optical-electrical component without the need to demount the luminaire from the pole.
- LED lifespan L90B10 100 000h



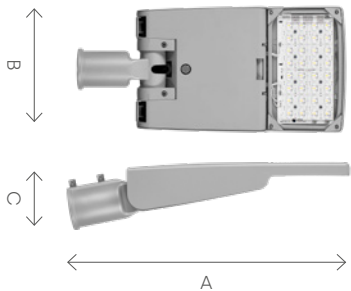
Tiara 2 LED S

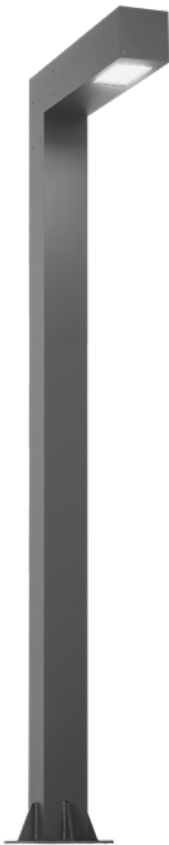
up to 158 lm/W IP66 IK09 I, II

Light source:	LED module	Body material:	high-pressure aluminium powder coated
Rated power [W]:	8 - 109	Body colour:	grey
Luminous flux [lm]:	1075 - 13200	Diffuser material:	tempered glass
Colour temperature [K]:	2200, 2700, 3000, 4000, 5000, 5700	Diffuser type:	transparent lens
Mounting method:	to the pole -30°+30° on the bracket -30°+30°	Dimensions A/B/C [mm]:	424/251/105

Distinguishing features:

- Tool-free and quick access to the electrical equipment compartment
- compatible with the modern Clue City control system (additional NEMA and ZHAGA connectors),
- Protection against overheating of the luminaire's LED NTC module.
- Easy and quick disassembly of the optical-electrical component without the need to demount the luminaire from the pole.
- LED lifespan L90B10 100 000h





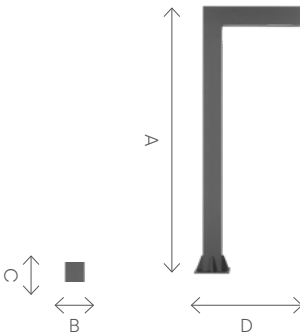
Altezzo L 150

up to 122 lm/W IP65 IK09 |

Light source:	LED module	Body material:	aluminium
Rated power [W]:	32 - 82	Body colour:	graphite
Luminous flux [lm]:	3600 - 10700	Diffuser material:	PC
Colour temperature [K]:	2700, 3000, 4000	Diffuser type:	transparent lens
Mounting method:	on a foundation	Dimensions A/B/C [mm]:	2500, 3000, 3500, 4000, 5000/150/150/800

Distinguishing features:

- A wide range of power, luminous flux and light distribution
- The luminaires are designed to work in very low and high temperatures from -30°C to +50°C and in difficult weather conditions



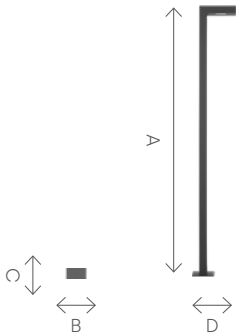
Altezzo L 100

up to 117 lm/W IP65 IK09 |

Light source:	LED module	Body material:	aluminium
Rated power [W]:	6 - 12	Body colour:	graphite
Luminous flux [lm]:	650 - 1400	Diffuser material:	PC
Colour temperature [K]:	3000, 4000	Diffuser type:	transparent lens
Mounting method:	on a foundation	Dimensions A/B/C [mm]:	600, 900, 1200, 1500/100/40/200

Distinguishing features:

- A wide range of power, luminous flux and light distribution
- The luminaires are designed to work in very low and high temperatures from -30°C to +50°C and in difficult weather conditions



— **Mitra** LED family

Park luminaires characterised
by high luminous efficiency.



up to
132 lm/W

IP66

IK07

I, II



AVAILABLE OPTIONS:

- General distribution G1 - with frosted-glass diffuser.
- Road distribution RM1 - with a transparent diffuser and directional lens matrices made of polymethyl methacrylate (PMMA).
- DALI driver.
- I, II class of protection available.



Mitra LED

up to
132 lm/W

IP66

IK07

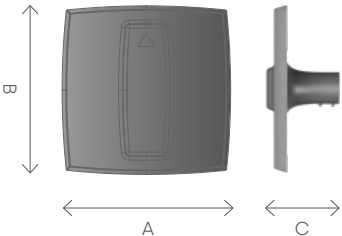
I, II

Light source:	LED module
Rated power [W]:	13 - 62
Luminous flux [lm]:	1600-7250
Colour temperature [K]:	3000; 4000
Mounting method:	top, to the pole

Body material:	PP + FG
Body colour:	grey
Diffuser material:	PC
Diffuser type:	transparent lens
Dimensions A/B/C [mm]:	398/398/175

Distinguishing features:

- Two types of diffuser - opalescent and transparent
- Very high degree of IP66 ingress protection
- IK07 mechanical impact protection
- Surge protection (SP10kV)
- H07RN-F cable, 0.6 m long
- Smooth, dirt-resistant surface
- The luminaire is CE certified
- Quick assembly due to a tight IP66 quick connector



Case study

Street and road lighting - infrastructure investment in Środa Wielkopolska

Replacing sodium vapour road luminaires with modern LED luminaires with a control system is not only a matter of aesthetics, ecology and comfort, but above all - it's the matter of **savings**. Thanks to this investment, the city will use over 50% **less electric-**

ity annually and will save almost PLN 38,000 a year. Over the period of 30 years (i.e. the service life of the new lighting), the investment will bring savings of over **PLN 1,135,000!**

Luminaires mounted:



BEFORE UPGRADE

Sodium luminaire 168 W - 161 pieces
Sodium luminaire 279 W - 13 pieces



AFTER UPGRADE

TIARA LED M CLUE 78 W - 161 pieces
TIARA LED L CLUE 184 W - 13 pieces

51%

lower electricity bills

Two priority criteria determining the choice of an offer by the Investor:

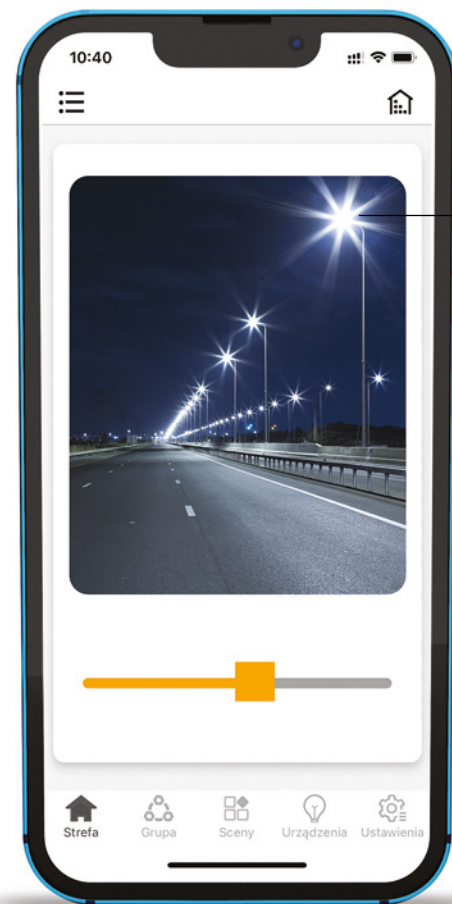
- 01 Reduced power consumption.
- 02 Possibility of using a modern control system with the CLUE CITY system.



Why did the investor choose Clue City?

- Reduced operating costs.
- Efficient use of lighting leading to reduction in power consumption.
- Providing light whenever and wherever needed.
- Convenient and intuitive management of the entire lighting from a web browser
- allowing for the assignment of proper access levels to individual administrators.
- Immediate on-line information about possible failures and needs for intervention.
- Reduced CO₂ emission.
- Increasing the safety of the city's transport system.
- Willingness to invest in modern and reputable solutions.

The intuitive and easy-to-use interface is future-proof. If the city decides to upgrade the system (even over the next few years), it will be able to use such Smart City functionalities as **e.g. traffic volume measurement or air quality measurement.**



Light under control

Clue City is a technologically advanced system that remotely manages and controls road luminaires. It helps optimise energy efficiency and monitors the status of each luminaire.

Is intuitive, reliable and secure. Provides accurate real-time control of street lighting infrastructure. The cloud-based interface is available to the administrator 24/7 from any device connected to the Internet.

Web app



Smartphone app



Clue City enables:

Remote luminaire management

Creating a luminaire operation schedule and adjusting the preferred light level in selected hourly intervals.

Creating groups of luminaires, which facilitates the management of lighting in selected areas.

Geolocation and visualisation of street luminaires on the map.

Accurate measurement of energy consumption and its recording and archiving.

Monitoring the working conditions of the light source and the driver.

Monitoring the wear of LED components. The obtained data will keep the system administrator informed about a possible need to replace a luminaire, which translates into lower maintenance costs and significantly shortens the response time.

Multi-level management of system users.





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