

Full Cycle Lighting Engineering Holding

AMIRA GROUP



Lighting Poles and Masts
Lightning Protection
Multifunctional Lighting Poles
Eco Lighting

AMIRA 30
— since 1991 — YEARS

ENGINEERING. DESIGN. INSTALLATION. SERVICE

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Full Cycle Lighting Engineering Holding **AMIRA GROUP**

Our motto is not to stop!

Here you can find the full information about the products and equipment manufactured by us. Our product range includes poles and masts of illumination, fixtures, and spotlights for external illumination, exclusive lighting complexes, autonomous lighting installations powered by solar and wind energy.

Certainly that, you have often come across our products in your daily life. Whether you are driving on a well-lit highway, are arriving at an airport, parking your car outside a shopping outlet, or walking around the city center - you can rest assured that the masts and spotlights bearing our logo will ensure a safe and comfortable



environment for you and your loved ones. We are proud that we can provide the industry with reliable high-quality equipment which enhances the daily lives of millions of people. We are also proud to have been the industry leaders for 30 years and offer turnkey solutions to our clients. We place a particular effort to ensure that every single item in our product range is developed using the latest technology enabling to ease the maintenance, energy usage and play our role in helping the world to be more sustainable.

Our industry experience helps us to execute major projects in the fields of highway and street illumination, air and sea ports, sports venues, and enterprises of oil and gas and energy complexes.

We constantly work on product improvements as to ensure that we keep satisfying the needs of our partners. In addition to the production of new equipment, our factories are also capable of conducting modifications work and tailor make existing models to the precise requirements of our clients. We are never put off from experimenting and developing new ideas and concepts.

AMIRA's 30th anniversary:

Manufactured > 800,000 lighting poles

Processed > 120,000 tons of metal

Installed > 1,300,000 lamps and spotlights

Mounted > 55,000 km of poles

Lighted > 1000 cities in Russia and abroad



Since 1991, JSC AMIRA are leading in the industry of projecting, engineering and installation of:

- Modern lighting systems (lighting poles and masts, lamps and spotlights);
- Lightning rods;
- Radio masts and cellular communications poles;
- Flagpoles;
- Towers of overhead electric lines;
- Non-standard metal constructions, etc.

The company's products are successfully operated in Russia and abroad in conditions from -50 °C to 50 °C in areas with seismic activity up to 9 points on the Richter scale.

Production capacity of JSC AMIRA

■ **Amira-StalKonstruktiv Ltd** (Saint Petersburg, Russian Federation) – metal structure factory. Its produces octagonal lighting poles and masts in height 3 up to 50 m. Capacity up to 30,000 pcs. per year.

■ **Megapolis Ltd** (Leningrad Region, Russian Federation) – metal structure factory. Its produces lighting octagonal and conical circular poles, masts and metal constructions in height 3 up to 105 m. Capacity up to 60,000 pcs. per year.

■ **Amira-SvetoTechnika Ltd** (Saint Petersburg, Russian Federation) – lighting equipment factory. Its produces lamps and lighting equipment. Capacity up to 100,000 pcs. per year.

■ **Amira-Energo Montazh Ltd** (Saint Petersburg, Russian Federation). Company specializing on design and installation of outdoor lighting systems and towers of overhead electric lines.

In 2019, the AMIRA group of companies became the exclusive supplier of lighting products to the Korean company GigaTera Lighting Inc. in Russia. The company has been manufacturing and supplying advanced lighting solutions worldwide for over 25 years. GigaTera products can be seen at the facilities prepared for the

XXIII Olympic Winter Games in Pyeongchang. JSC AMIRA is in the register of reliable partners for business of Russia and abroad of Russian Chamber of Commerce and Industry. Also, AMIRA is a member of Finnish-Russian Chamber of Commerce (FRCC).

The AMIRA group of companies received a QMS certificate for compliance with the requirements of the ISO 9001: 2015 standard (Certificate of quality management system conformity ISO 9001: 2015). and CE certificat on production.

The production processes and products of the group of companies comply with the requirements of PJSC Gazprom, which is confirmed by the certificate of the special Gazprom system.

The group of companies «AMIRA» is a full member of:

- International Lighting Association LUCI;
- Lighting Trade Association of Russian Federation;
- Association of Civil Airports of Russian Federation and CIS countries;
- Association of Sports Engineering of Russian Federation.

OUR STRATEGY

Being one of the largest and most economically stable players on the lighting poles and lighting equipment markets in Russia and the CIS, «AMIRA» understands the Corporate Social Responsibility it has to its key stakeholders including partners, customers, and employees.

Having our own production capacities and quality management systems which meet the worldwide standards and constantly enhancing our efficiency by implementing

modern technology and IT solutions enable us to be competitive in the market. Our Quality Control policy lies in the heart of our corporate strategy.

Our aim is to increase the clients base together with the production volumes and use economies of scale to enhance our efficiency while maintaining our commitment to high quality of production, as well as safeguard the social security of our employees.



The group of companies «AMIRA» is a full-cycle production holding. The **production area is 11,000 sq. m.**; warehouses 30,000 sq. m; office building - 898.57 sq.m.

Factory equipment:

- Press with a force of 1000 (length of the working area 12 meters) / Press with a force of 2000 (length of the working zone 14 meters)φ
- 4 welding lines for parts of «round» - closed section up to 350 mm
- 2 welding lines provide welding with a diameter of 0.7 to 2.0 meters.

The welding line for welding long tubular workpieces with a size of 2.0 meters is equipped with two torches and is

equipped with submerged arc welding technology with a backing electrode, which allows obtaining a high-quality longitudinal seam on products made of heavy-plate metal.

The AMIRA JSC accepts individual orders for the production of an assortment by the cold bending method «CNC» (channel, I-beam), a complex closed profile made of structural steel, including 09G2S steel.

Possible assortment dimensions:

- Length - 14,000 mm
- The thickness of the rolled products used is 25 mm
- Nominal cross-sectional diameter of the finished product - 2,000 mm

OUR HISTORY

1991 - 1999

30th of September AMIRA company was founded in Saint Petersburg (Russia).

The first branch was opened after 5 years. In Moscow AMIRA installed first masts with mobile crown in Russia.

AMIRA organized its own design bureau for making metal structures of any complexity.

ENGINEERING. DESIGN

The first AMIRA's steel structures factory was built in Saint Petersburg. The factory produces octagonal lighting poles and masts in height 3 up to 50 m. Capacity up to 30,000 pcs. per year.

The second branch was opened in Rostov-on-Don in 2003.

The second factory of production of lighting equipment was built. The factory produces lamps and lighting equipment. Capacity up to 100,000 pcs. per year.

Company specializing on design and installation of outdoor lighting systems and towers of overhead electric lines was founded.

2000 - 2006



①

“ The components of our success are following the strategy and adhering to the rules of work, having an effective reliable team and follow things through.

2015 - 2020

The third steel structures factory was built in Leningrad region.

The factory produces lighting octagonal and conical circular poles, masts and metal constructions in height 3 up to 105 m. Capacity up to 60,000 pcs. per year. One of the remarkable products of the factory is 100-meters flagpole for Finland.

AMIRA is included in the register of reliable partners of the Russian Chamber of Commerce and Industry and joined the Finnish-Russian Chamber of Commerce.

In 2019 AMIRA became an exclusive distributor of GigaTera Lighting Inc. in Russia.

INSTALLATION. SERVICE

30th anniversary!

AMIRA got an award in the category «Innovative solutions for the urban environment» Russian Business Guide. People of the Year.

AMIRA continues to develop areas of environmentally friendly light, multifunctional lighting poles, including those combined with charging devices for electric vehicles and electric buses.

2021...

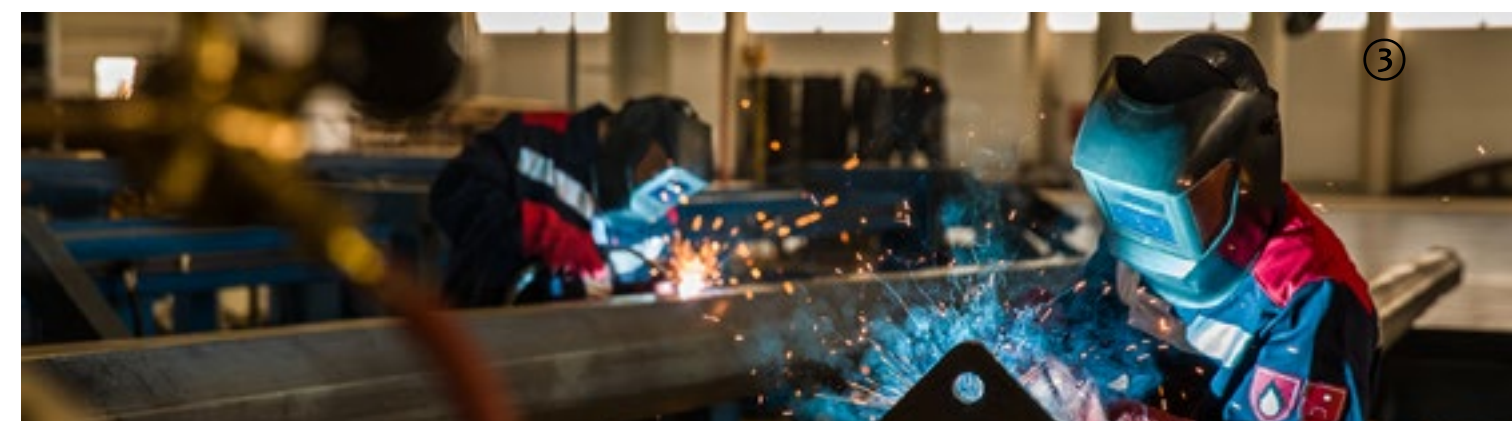


②

Installation of equipment is a painstaking and very responsible process. Especially when it comes to lighting systems, lightning protection, etc. A common problem that one has to face when performing lighting projects is difficulties with self-assembly by the customer's forces: difficulties with the order of assembling mast sections, installing and aiming floodlights, etc. These and many other issues are professionally resolved by the specialized design and construction and installation company Amira-EnergoMontazh, which is part of the AMIRA Group of Companies.

The accumulated experience allowed us to offer a new service - **maintenance of lighting equipment: periodic diagnostics of lighting equipment:**

- checking bolted connections, electrical clamps, mechanism for lowering and lifting the mobile crown, etc.;
- troubleshooting, replacement of lighting equipment;
- training of operating departments of the organization.

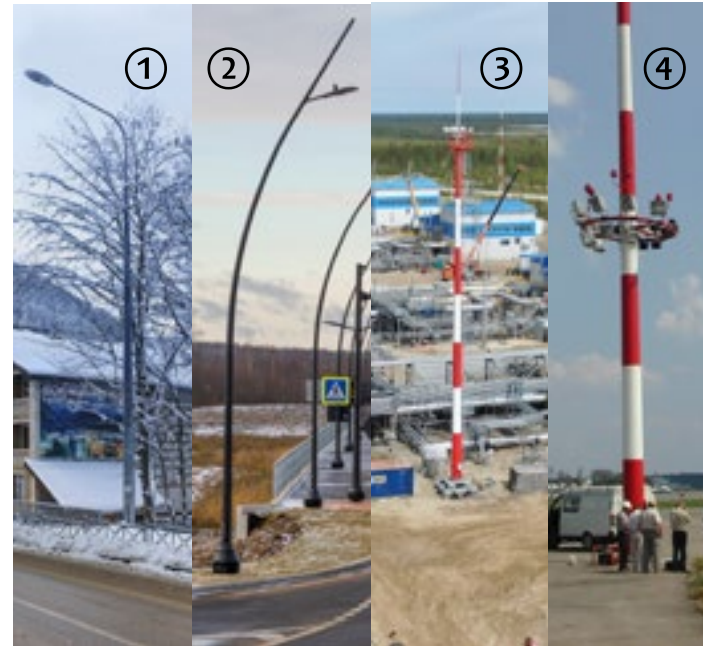


③

OUR PRODUCTS

LIGHTING POLES & MASTS

- Octagonal and conical circular poles
- Bent poles
- Hinged poles
- Heavy duty poles
- Heavy duty poles of the overhaed contact network
- High-mast poles
- High-mast pole with mobile crown
- High-mast pole with mobile crown «Sai» system
- High-mast pole with stationary crown
- Safety road-way lighting



LIGHTING POLES FOR PARKS & GARDENS

- Decorative poles
- Conical circular poles
- Reflected lighting complexes
- Decorative carved lighting pole



SPORTS LIGHTING POLES

- High-mast pole with stationary crown
- High-mast pole with mobile crown «Sai» system
- Hinged poles



NON-STANDARD STEEL STRUCTURES

- Steel structure of any geometry

POLES FOR VARIOUS PURPOSES

- Traffic lighting stands
- Cellular communication poles
- Power transmission line towers
- Lightning rods
- High-mast flagpoles
- Poles for wind turbine
- Multifunctional lighting poles for EV and electric buses



LIGHTING FIXTURES

- Lighting fixtures
- Flood lights

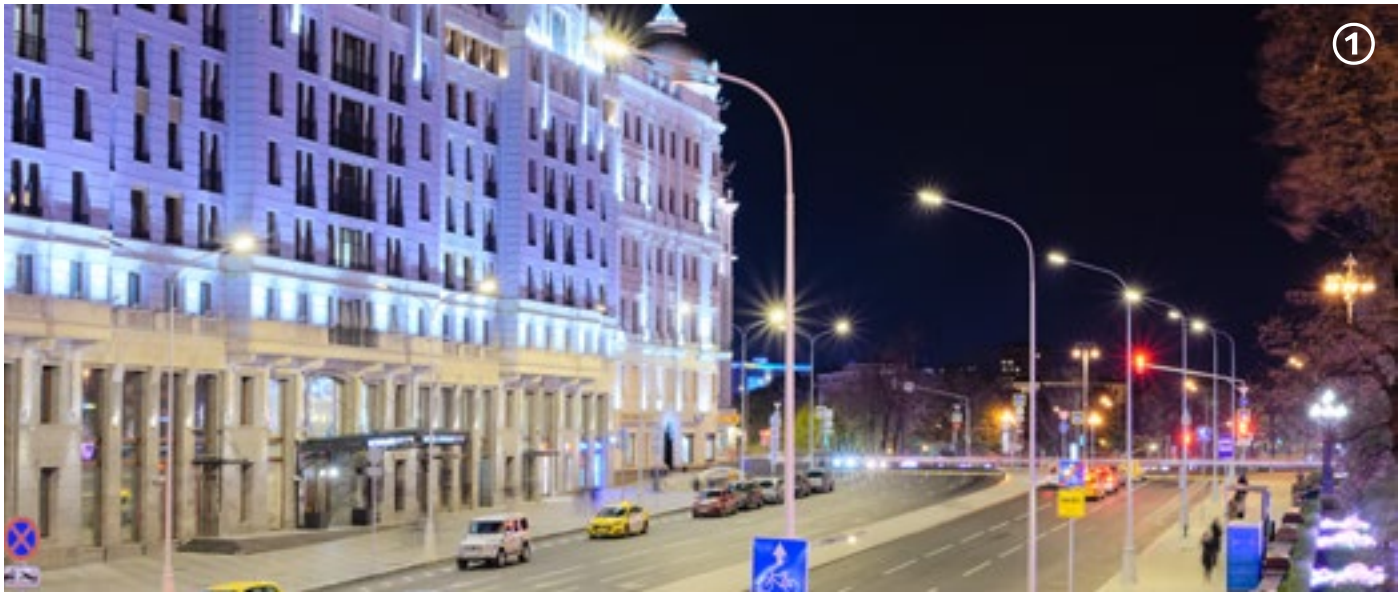


- ① Sky resort, Caucasus, Russia
- ② Road to airport, Ivanovo, Russia
- ③ Ety-Purovskoe field, Westrn Siberia, Russia
- ④ International airport Sheremetyevo, Moscow, Russia
- ⑤ Festivalny Boulevard (FIFA World Cup 2018), Kazan, Russia
- ⑥ Floodlights on at the training base of FC Zenit, St. Petersburg, Russia
- ⑦ Entrance stele, Moscow, Russia
- ⑧ Pole for wind turbine, Russia
- ⑨ Floodlighs Suva series

“ AMIRA's products are successfully operated in Russia and abroad in conditions from -50 °C to 50 °C in areas with seismic activity up to 9 points on the Richter scale.

OUR PRODUCTS

Lighting steel poles and masts with lighting fixtures



ROADWAY LIGHTING

AMIRA Group of companies is one of the largest enterprises specializing in the production of poles for the implementation of programs for quarter and main lighting, as well as lamps and projectors for each type of poles.

Some of the implemented projects of the AMIRA Group of Companies

- Moscow ring road, Central ring road, Moscow
- Ring Road and Western High-Speed Diameter, St. Petersburg
- Federal highways in Russia

- Bypass of Sochi (Sochi ring road to 2014 Winter Olympic Games)
- Bypassing Krasnoslobods, Mordovia, Russia
- Bypassing the city of Murmansk, beyond the Arctic Circle, Russia
- Bypass of Rostov-on-Don, Russia
- Bypass of Tyumen, Siberia, Russia
- Bypassing the city of Chelyabinsk
- Reconstruction of lighting in the historical center of St. Petersburg, central streets of Moscow

Bridges

- Bridge over the Angara river, Krasnoyarsk
- Bridge over the Kola Bay, Murmansk
- Bridge over the Oka river, Murom



- Bridge over the Don river,
- Aksaysky bridge, Rostov-on-Don
- Presidential across the Volga river, Ulyanovsk
- Bridge «Red Dragon» across the Irtysh river, Khanty-Mansiysk
- Palace bridge, Liteiny bridge, Tuchkov bridge, Bolshoi Obukhovsky bridge, St. Petersburg,
- Pedestrian bridge across the Urals, Orenburg
- etc.



- ① Boulevard ring, Moscow
- ② Western High-Speed Diameter, St. Petersburg
- ③ SKOLKOVO, Moscow

OUR PRODUCTS



POLES FOR URBAN ELECTRICAL TRANSMISSION

Octagonal and round-conical poles are used for the construction of contact networks for urban electric transport, functional lighting of roads and interchanges.

Poles are manufactured from sheet steel by bending with one longitudinal weld. Protected against corrosion by hot-dip galvanizing (ISO 1461). Corrosion resistance guarantee - at least 25 years. It is possible to combine a contact network and self-supporting insulated wire as well as to install cellular antennas.

Pole's Heights: 8 - 13 meters
Load: up to 3,500 kg
Anti-corrosion coating: hot zinc

Benefits:

- Easy installation and maintenance
- Aesthetic form
- Possibility of manufacturing poles according to individual parameters
- High anti-corrosion coating durability even for the maritime climate
- Long service life



①, ② Poles for tram line in Ivanovo, Russia
③ High-speed tram line for trams by Stadler Rail AG (Swiss), St. Petersburg, Russia

OUR PRODUCTS

MULTIFUNCTIONAL LIGHTING POLES WITH CHARGING STATION FOR ELECTRIC VEHICLES (EV) AND ELECTRIC BUSES

A complete solution for quickly equipping the charging infrastructure for electric vehicles and electric buses.

Lighting poles with an integrated AC electric charging station for electric vehicles or a DC charging station for electric buses are made of sheet steel by bending and protected from corrosion by hot-dip galvanizing.

Benefits:

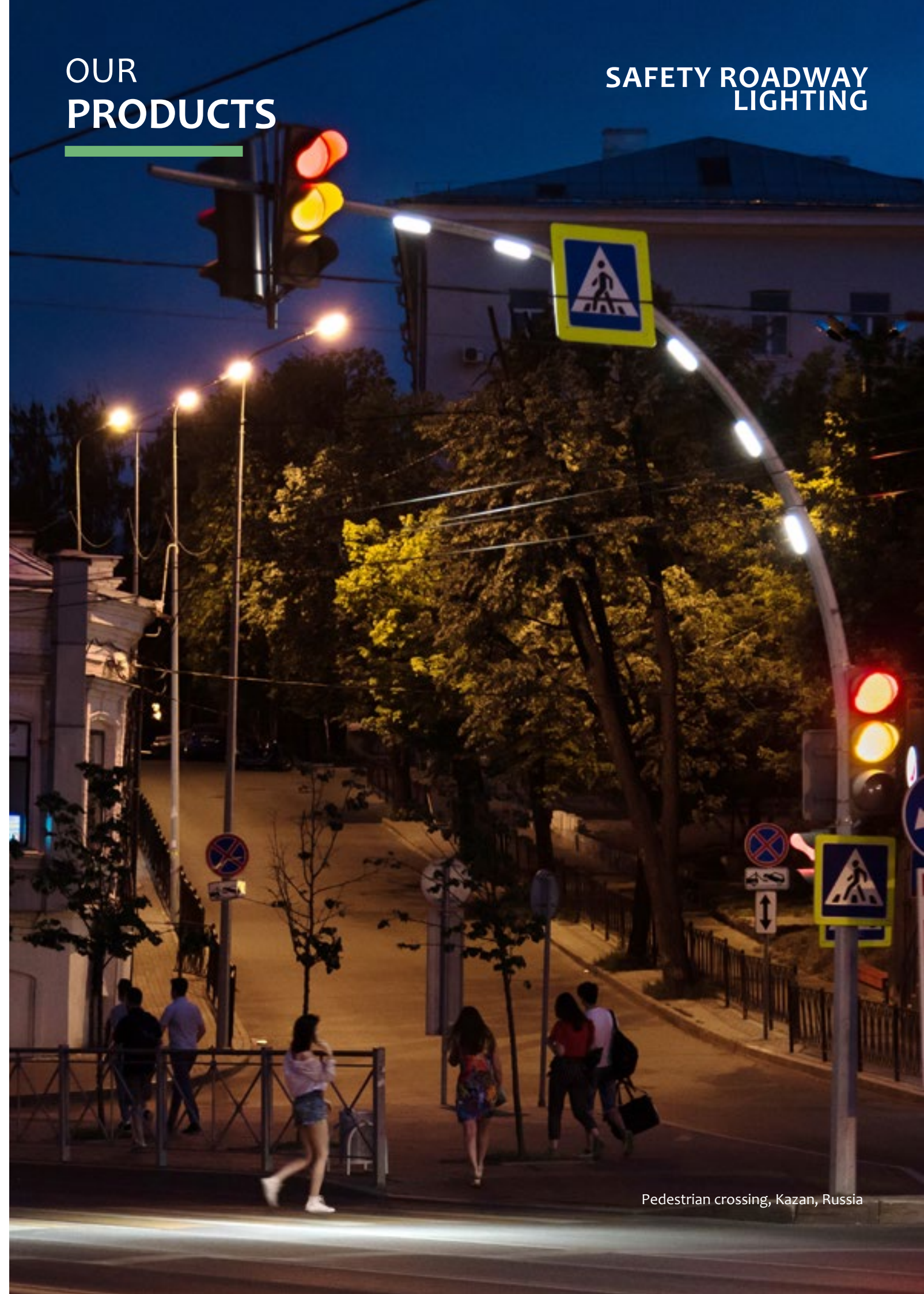
- Easy installation and maintenance
- Aesthetic form
- Possibility of manufacturing poles according to individual parameters
- High anti-corrosion coating durability even for the maritime climate
- Long service life

① Charging station next to the Regional Duma, Moscow



OUR PRODUCTS

SAFETY ROADWAY LIGHTING



Pedestrian crossing, Kazan, Russia

Solutions for the Russian national project «Safe and high-quality highways»

A new line of curved ones has been added to the usual AMIRA traffic light stands. Curved pillars themselves are a good architectural solution to decorate the city, and recessed fixtures make them more functional.

For example, in Kazan, curved conical traffic light stands (AMIRA) are installed, with LED lamps mounted in the trunk, which are triggered when a pedestrian starts to move along the crossing. Thus, drivers can see the pedestrian from afar, and as a result, he can safely cross the road.

Another non-trivial architectural solution that fits into

any urban design concept is round conical poles. Thanks to the overhead elements, the lighting pole can be transformed into «Historical» or Hi-Tech - that is, correspond to any style that must be observed in a particular area. But, most importantly, the manufacturing technology of such products excludes the use of used tubular products by unscrupulous suppliers. Conical circlarpoles are made of sheet steel by bending with one longitudinal weld.

In Ivanovo, the AMIRA Group of Companies has installed a new line of round-conical traffic light stands combined with lighting. Lamps illuminate both the passage itself and the approach to it. Again, the driver can see a pedestrian from afar, even if he is wearing dark clothes.

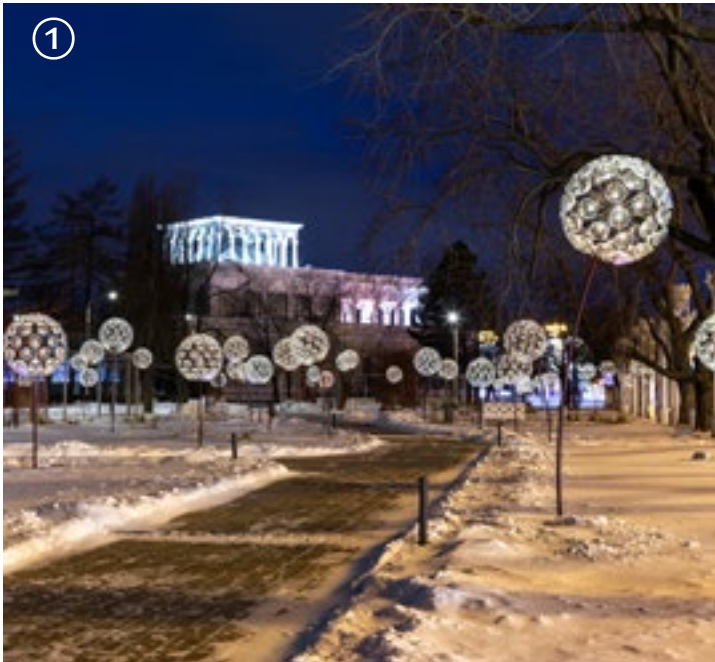
OUR PRODUCTS

GARDEN & PARK LIGHTING

AMIRA Group of Companies can offer a number of models for functional and decorative lighting of parks, embankments, alleys, boulevards, squares, cottage villages, pedestrian zones, etc.

Some of the implemented projects of the AMIRA Group of Companies

- City Park, Baghdad, Iraq
- Alexander Garden, St. Petersburg
- Festivalny Boulevard, Kazan
- Svobody Boulevard, Kolpino
- Vorontsovsky Park, Moscow
- City Garden. A.S. Pushkin Chelyabinsk
- Ekaterininsky Square, Krasnodar
- Industrial Park Maslovsky, Voronezh
- Lomonosovsky square, St. Petersburg
- Park of the 30th anniversary of October, St. Petersburg
- Park of the 40th anniversary of the Komsomol, St. Petersburg
- 850th Anniversary Park, Moscow
- Gorky Park, Moscow
- Gorky Park, Kazan
- Kapotnya Park, Moscow
- Fili Culture Park, Moscow



- Victory Park, Moscow
- Victory Park, Cherepovets
- Victory Park, Lipetsk
- Park Sosnovka, St. Petersburg
- Pionersky Park, St. Petersburg
- Sverdlovsky Garden, St. Petersburg
- Square named after Chelyuskintsev, Voronezh
- Troitsky Park, St. Petersburg
- Central Park of Culture and Leisure. Yu.A. Gagarina, Chelyabinsk



- ① Light complex «Dandelions» at VDNKh, Moscow
- ② Park Sosnovka, St. Petersburg
- ③ Park of the 850 th anniversary, Moscow
- ④ Palace Bridge, St. Petersburg



OUR PRODUCTS

Lighting steel poles and masts with lighting fixtures



Some of the implemented projects of the AMIRA Group of Companies

- Manja International Circuit, Amman, Jordan
- Republican Center for Olympic Training in Winter Sports «Raubichi», Republic of Belarus
- Slavutich-Arena (FC Metallurg), Zaporozhye, Ukraine

Objects for the XXII Winter Olympic Games-2014, Sochi:

- Iceberg Winter Sports Palace.
- Roller coaster. Nordic combined track
- Biathlon Center
- Ski resort «Rosa Khutor»

Objects for the 2017 Confederations Cup and 2018 FIFA World Cup:

- Gazprom-Arena Stadium, St. Petersburg
- Stadium «Rostov-Arena», Rostov-on-Don
- Samara-Arena Stadium, Samara
- Sports complex im. E. Lakomova, Azov
- Akhmat-Arena Stadium, Grozny

Objects for the XXIX World Winter Universiade 2019, Krasnoyarsk:

- Ice Palace «Platinum Arena»
- Ski complex «Bobrov Log»

- Karting track MAYAK (the track was designed taking into account the requirements of the International Automobile Association (FIA), Moscow Region
- Tubing park, Moscow region
- Sports complex «Luzhniki», Moscow
- Regional center of winter sports «Pearl of Siberia», Tyumen region
- Training base of the Academy of FC «Zenith», St. Petersburg

- Ski complex «Tanay», Kemerovo region
- Ski complexes «Arkhyz» and «Dombay», Karachay-Cherkessia
- and many others

SPORTS LIGHTING

For more than 20 years AMIRA Group of Companies has been engaged in lighting and lightning protection of sports facilities in Russia and abroad.

The specialists of AMIRA Group of Companies have equipped hundreds of objects with lighting equipment, including those for the XXII Winter Olympic Games in Sochi (2014), the FIFA World Cup (2018), the XXIX World Winter Universiade (2019), etc.



- ① Republican Center for Olympic Training in Winter Sports «Raubichi», Republic of Belarus
- ② International circute Manja, Amman, Jordan
- ③ Winter Sports Center «Pearl of Siberia», Tyumen region

OUR PRODUCTS

Lighting steel poles and masts with lighting fixtures



LIGHTING IN AIRPORTS

The AMIRA Group of Companies has been lighting air harbors in Russia and abroad for over 15 years.

Octagonal lighting masts with a mobile or stationary crown for the installation of lighting equipment illuminate the runways and aircraft parking areas of many airports, including those modernized and built for the 2018 FIFA World Cup, for example, Saransk and Kurumoch (Samara). Also masts are installed in Pulkovo (St. Petersburg), Balandino (Chelyabinsk), Khrabrovo (Kaliningrad), Sabetta, Pevek, Iturup, etc.

Some of the implemented projects of the AMIRA Group of Companies

International airports:

- Almaty, Republic of Kazakhstan
- Bishkek, Manas, Kyrgyzstan
- Minsk, Republic of Belarus
- etc.

International airports of Russia from Kaliningrad to Kurile Islands



- ① International airport Almaty, Republic of Kazakhstan
- ② International airport Chelyabinsk, Ural, Russia
- ③ Marine Passenger Port of St. Petersburg
- ④ Finlyandsky railway station, St. Petersburg



LIGHTING IN SEA PORTS

■ For more than 15 years, the AMIRA Group of Companies has been lighting sea and river ports in Russia and abroad, including in the Far North and abroad.

Some of the completed projects AMIRA Group of Companies:

- Port «Khazar», Turkmenistan
- Azov Sea Port, Russia
- Astrakhan Sea Port, Russia
- Vladivostok Commercial Sea Port, Far East, Russia
- Pionersky seaport, Kaliningrad region, Russia
- Port Vostochny, Nakhodka, Far East, Russia
- Port of Primorsk, Leningrad region, Russia
- Geoport Novorossiysk, Russia
- Marine Passenger Port of St. Petersburg «Marine Facade», Russia
- Ust-Luga Commercial Sea Port of the Leningrad Region, Russia
- Rostov Sea Port, Russia
- Seaport in Sabetta, Western Siberia, Russia
- Port «Taman», Taman, Russia
- Vladivostok Commercial Sea Port, Far East, Russia

RAILWAYS LIGHTING

For more than 15 years, the AMIRA Group of Companies has been cooperating with the enterprises of Russian Railways in terms of the supply and installation of high-mast lighting installations for lighting traction substations, open areas of stations on the Oktyabrskaya railway, decorative, architectural and functional lighting of the platforms of suburban electric trains on the Oktyabrskaya and Moscow railways.

Specialists by AMIRA develop energy-efficient lighting technologies for railway network facilities:

1. The use of high-mast lighting poles with high-quality galvanized and easy to maintain can reduce operating costs.
2. The introduction of LED floodlights and lamps, instead of floodlights with metal halide and mercury lamps, reduces electricity consumption by up to 40%.
3. The use of modern lighting control systems for a more rational distribution of electricity.

The main areas of application of AMIRA products at Russian Railways facilities:

- Illumination of paths with transom floodlights
- Lighting of tracks and marshalling yards with floodlights on masts
- Lighting of passenger platforms



OUR PRODUCTS

Lighting steel poles and masts with lighting fixtures
Lightning rods



INDUSTRIAL LIGHTING & LIGHTNING PROTECTION

For more than 20 years AMIRA Group of Companies has been engaged in lighting and lightning protection of industrial areas in Russia and abroad: fields, oil and gas pipelines, oil and gas processing factories, nuclear and hydroelectric power factories, etc.

Lighting poles and masts, free-standing lightning rods, air intake pipes and projectors manufactured by AMIRA are installed throughout Russia, including beyond the Arctic Circle.

Among the completed projects:

GAZPROM

- Nord Stream
- Nord Stream 2
- Power of Siberia
- Turkish Stream
- Measuring unit Chui, Republic of Kyrgyzstan

- Amur GPP, Far East, Russia
- Bovanenkovskoye field, Siberia, Russia
- Verkhne-Salymskoye field, Siberia, Russia
- Kazan field, Tomsk region, Siberia, Russia
- CS Babaevskaya, CS Gryazovets, Russia
- CS Baydaratskaya, Siberia, Russia
- CS Volkhovskaya, Pikalevskaya, Portovaya, Slavyanskaya, Leningrad region, Russia
- CS Georgievsk, Stavropol region, Russia
- CS Mikun, CS Novomikunskaya, Sosnogorskaya, Usinskaya, Chikshinskaya Komi Republic, Russia
- CS Urdomskaya, Tver region, Russia
- CS Shakhtinskaya, Rostov region, Russia
- CS Sheksninskaya, Vologda Oblast, Russia
- Kshuiskoye and Nizhne-Kvakchikskoye gas condensate field, Kamchatka region, Russia
- Messoyakhskoye field, Siberia, Russia
- Urengoy-Pur-Pe oil condensate pipeline
- Novoportovskoye field, Siberia, Russia
- Novochoerkasskaya GRES, Russia
- Omsk oil refinery, Siberia, Russia
- UGS facility Kumertau, Republic of Bashkortostan, Russia
- Urengoyevskoye field, Siberia, Russia
- Chayandinskoye field, Republic of Sakha (Yakutia), Russia

- Yamburgskoye field, Siberia, Russia
- Yamsoveyskoye field, Siberia, Russia

NOVATEK

- Arctic LNG
- LNG Vysotsk
- Yamal LNG
- Beregovoe, Siberia, Russia
- Termokarstovoye field, Siberia, Russia
- Yuzhno-Tambeyskoye field, Siberia, Russia
- Yardeyskoye field, Siberia, Russia

SIBUR

- ZapSibNeftekhim, Siberia, Russia
- ZapSib-2, Siberia, Russia

LUKOIL

- Vozeyskoye field, Komi Republic, Russia

ROSNEFT

- RN-Nakhodkanefteproduct, tank farm No. 74-101

ROSATOM

- Rooppur NPP, Bangladesh

- Balakovo NPP
- Belayarsk NPP
- Volgodonsk NPP
- Kursk NPP-2
- Leningrad NPP-2
- Novovoronezh NPP

RUSHYDRO

- Votkinskaya HPP
- Zhigulevskaya HPP (Samara Region)
- Sakhalinskaya GRES
- TPP Sovetskaya Gavan (Khabarovsk Territory)
- Chelyabinsk State District Power Factory

- Turkmenistan - China, Republic of Kazakhstan
- Shulbinskaya GRES, Republic of Kazakhstan
- and many others

- ① Ety-Purvscoe field, Western Siberia, Russia
- ② Oil Pumping station, Republic of Kazakhstan
- ③ 90-meter lightning protection complex, Siberia



OUR PRODUCTS



POLES OF CELLULAR COMMUNICATION. DUAL-PURPOSE POLES

Designed for installation of radiorepeaters for various purposes to ensure stable coverage and antennas, in particular PPC, WSDMA, GSM panel antennas.

Poles can be dual-use, carrying the load of cellular antennas, lighting and / or overhead installations.

Due to the small dimensions of the foundation and the aesthetic forms, the poles are installed in urban areas.

Some of the completed projects Cellular masts are installed in:

- Republic of Kazakhstan
- Leningrad region, Murmansk, St. Petersburg, Smolensk, Surgut
- Airport Central Saratov
- Vologda region, substation «Spark»
- Seaport Sabetta, Yamal
- Nakhodka, railway line «Nakhodka-Vostochnaya» (JSC «Russian Railways»)
- Novokuibyshevsk, Novokuibyshevsk Oils Factory and additives
- Udmurt Republic, Belkamneft, Russia
- Urengoy factory for the preparation condensate to transport (PJSC Gazprom)



- ① 39-meters cellular pole, Leningrad region
- ②, ⑤ Megafon, Kareliya, Russia
- ③ Pole with anti-aircraft system
- ④ Cellular pole in Republic of Kazakhstan

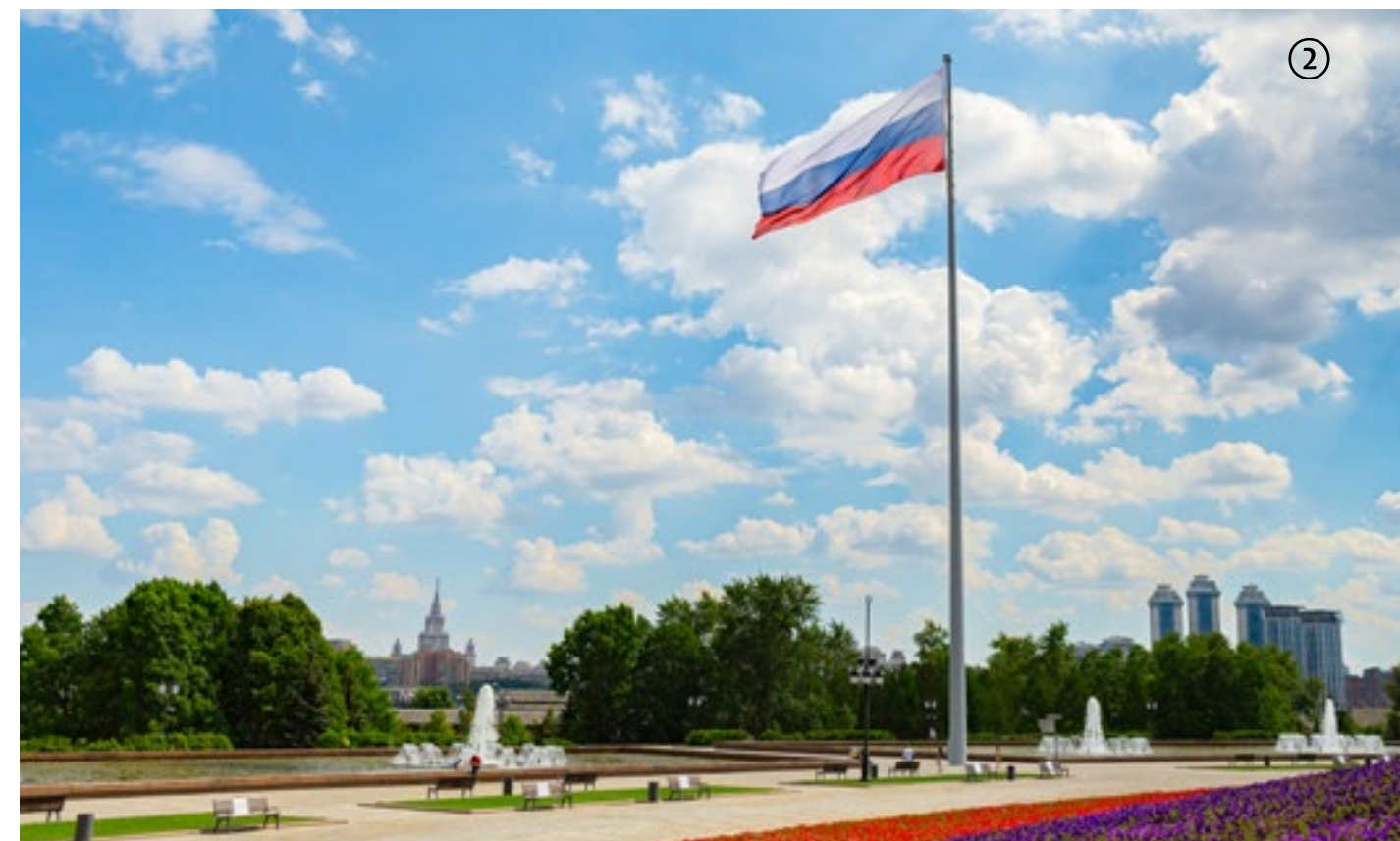
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OUR PRODUCTS

- ① 100-meters flagpole, Hamina, Finland
- ② 50-meter flagpole, Poklonnaya Gora, Moscow, Russia
- ③ 75-meter flagpole, Blagoveshchensk, Far East, Russia

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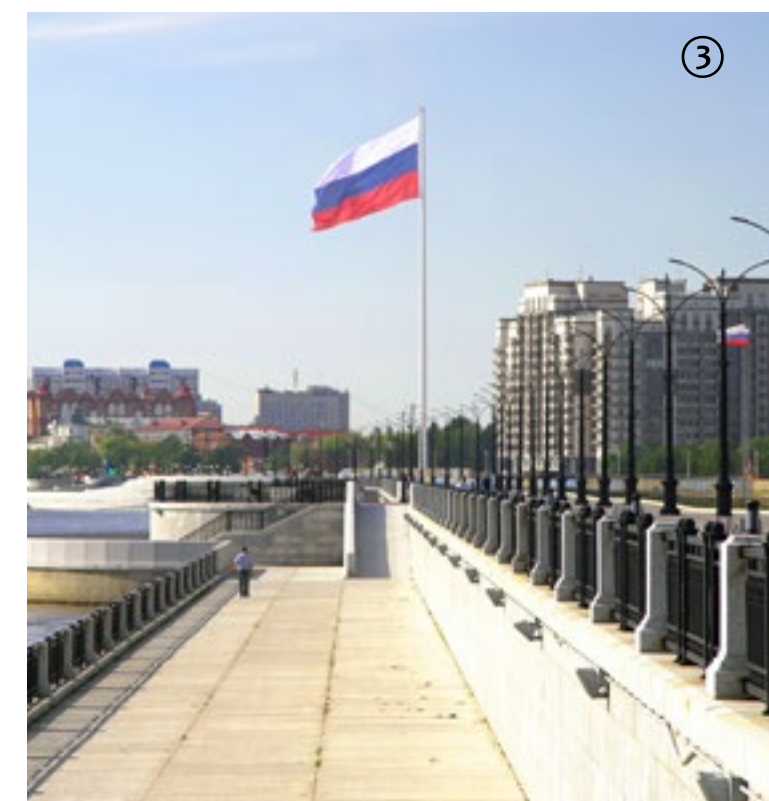


HIGH-MAST FLAGPOLES

Some of the completed projects:

- 100-meter flagpole. Highest in the European Union, Finland
- 75-meter flagpole. Highest in the Far East, Blagoveshchensk
- 50-meter flagpole. Poklonnaya Gora, Moscow
- 50-meter flagpole. Leningrad Region, the territory of the Megapolis factory (AMIRA Group of Companies)
- 40-meter flagpole. The highest in the Rostov region, Aksai
- 25-meter flagpole on the border with Estonia, Skamya village
- 16-meter flagpoles for the territory of the Samara Arena stadium (prepared for the 2018 FIFA World Cup)
- 10- and 6-meter flagpoles for PJSC Gazprom projects (Power of Siberia, GPPs, etc.)

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OUR PRODUCTS



LIGHTING ENGINEERING

The AMIRA group of companies has been dealing with lighting of roads and highways, territories of industrial facilities, airports, ports, railways, etc. for 30 years. Often people turn to the company for the development of individual solutions. So, for example, modern recessed lamps for the Western High-Speed Diameter in St. Petersburg appeared, as well as projects for the reconstruction of historical lighting.

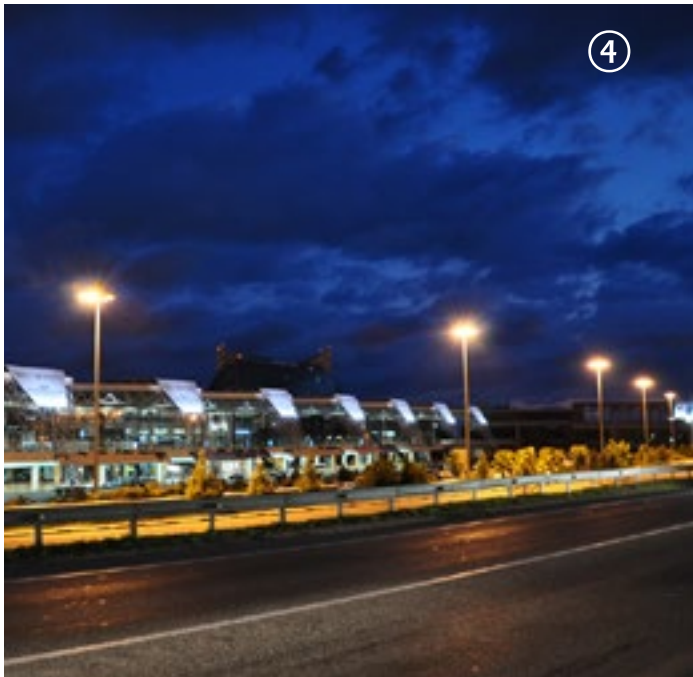
AMIRA's factory produces different types of lighting fixtures:

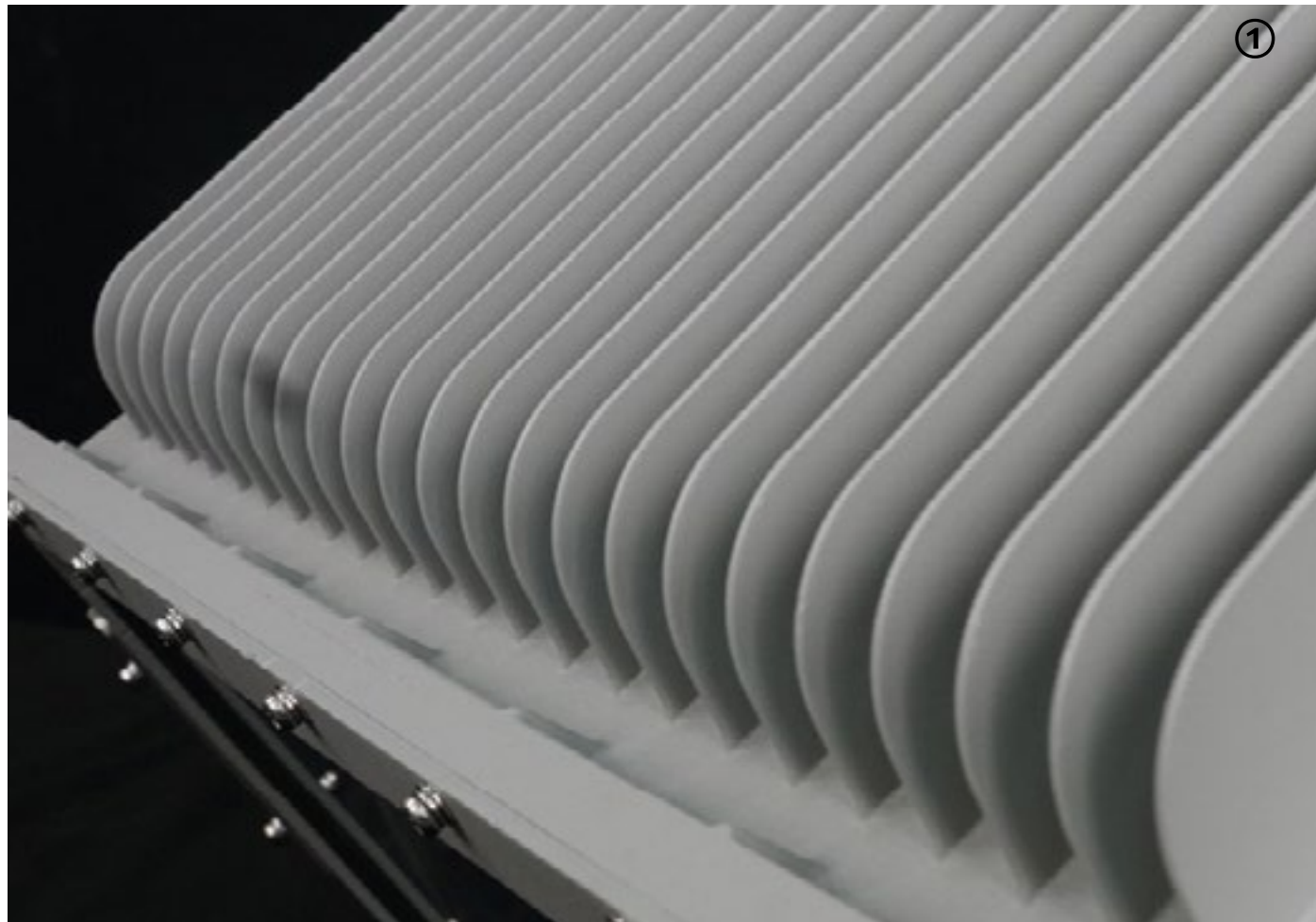
- Searchlights
- LED floodlights, including the AMIRA-GigaTera series
- Console luminaires (HID and LED)
- Pendant lamps (HID and LED)
- Floor lamps (sodium and LED)
- Special luminaires

RECONSTRUCTION OF HISTORICAL LIGHTING



- ① Bridge over the Kola Peninsula, Russia
- ② Restoration of historical gas lighting, St. Petersburg, Russia
- ③ Pestelya street, St. Petersburg
- ④ International airport Sochi (Winter Olympics 2014), Russia
- ⑤ Rostov Arena (FIFA World Cup 2018), Russia





ECO-LIGHTING GLARE-FREE LIGHTING

The Amira-GigaTera series LED floodlights, thanks to their design, are able to cut off stray light rays, thereby minimizing glare and light pollution.

The body is made of die-cast aluminum with subsequent powder painting. The design of the floodlights is developed according to the principle of natural convection; multidirectional ribs are used for cooling. Thus, the floodlight does not overheat, which is especially important in sports models used in ice arenas. Efficient heat management helps extend the life of the floodlight. A special reflector allows you to effectively cut off the beams of stray illumination, providing illumination of the desired objects without light pollution and with minimal glare.

Amira-GigaTera's optic design has a structure that features unique reflector technology which provides advanced full cut-off beam. This solution minimizes the light spill, while maximizing the useful lumens to the field. This allows workers to focus better on their jobs and provides comfort to the drivers on the roads. Furthermore, it helps to comply with the strengthened

local regulation in light pollution and psychological glare impact in neighboring area without use of baffle or visor onto the pole or luminaire. Thus, Amira-GigaTera LED flood lighting solution is the best choice to not only minimize the expense, but also minimize the concern about the pole structure and wind load in both replacement and new construction of port & railroads.

Glare Rating Requirement $< 50^\circ$ (In Simulation)
Traditional requirement is based on Viewer's Aspect up to 30° from horizontal line of sight ($\Delta \leq 30^\circ$)

Glare causes a distraction in the railroad operation, discomfort to the people in the nearby neighborhood areas, and hinders the driver's eyesight on the roads.

Floodlights SUMA series contains the sub-reflector and indirect light distribution which eliminates spill light.

- ① Floodlights Suma series
- ②, ③ Floodlights Sufa series
- ④ Birmingham University, Great Britain
(GigaTera Lighting Inc)





①

OUR PRODUCTS



②

- ① Entrance stele, Moscow
- ② Pole for wind turbine, Russia
- ③ Types of steel profiles

POLES FOR WIND TURBINE & NON-STANDARD STEEL STRUCTURES

The production facilities of the AMIRA Group of Companies allow us to make metal structures of any complexity. Our own design bureau, powerful presses, a workshop for painting and finishing products put into operation - all this allows us to take on any tasks.

Benefits:

- Perfectly equipped factory and staff of professional craftsmen and specialists
- Cooperation with the best suppliers of raw materials, a wide range of materials and technologies
- Own design bureau
- Possibility of individual development of technological processes
- The ability to manufacture metal structures according to individual parameters and paint in any color according to the RAL table
- Control system at all stages of production, availability of certificates



OUR BRANCHES



OUR GEOGRAPHY

The AMIRA Group of Companies supplies products not only to Russia, but also to the CIS countries, the European Union and the Middle East



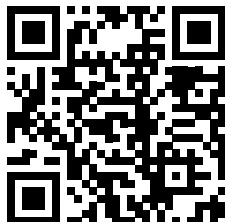
THANKS

Thank you for familiarizing yourself with our products and our services. Our **design office** can develop a metalworks of any complexity, and our **factories** are able to produce it, galvanize and paint it in any color.

Construction and installation bureau by AMIRA will carry out not only installation, but also installation supervision, as well as training the customer at the facility.

**ENGINEERING.
DESIGN**

**INSTALLATION.
SERVICE**



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