

YOM3

JOINT STOCK COMPANY "PRODUCTION ASSOCIATION
«URAL OPTICAL AND MECHANICAL PLANT»
named after E.S. Yalamov»



LIGHTING EQUIPMENT

CATALOGUE

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The Ural Optical and Mechanical Plant named after E.S. Yalamov is one of the leaders of optical branch of Russia and is the largest manufacturer of high-technology medical equipment, energy saving LED equipment, surveying equipment, measuring devices. The products of our enterprise are supplied to all regions of the country and exported to more than 80 countries of the world.

Lighting equipment of UOMP includes:

- Energy-efficient solutions for safety on the road traffic (traffic lights, road signs and modules including for railways).
- Possibility of implementation of energy service contracts and life cycle contracts regarding complex lighting of cities and objects of urban environment.

JSC "PA "UOMP" is a member of "Shvabe" Holding of the State Corporation "Rostec".

Modern optical instrument engineering



More than 400 employees in the staff of researchers and designers



Complex of modern high-tech production areas



Manufacture of about **50 000 products** annually



Full cycle of production and assembly of items

Orientation to the customer



Sales, service, information and technical support of customers all over Russia



Export to more than **80 countries** worldwide



Representation offices in Germany, Switzerland, China and Belarus



Instructions for customers. Trainings, seminars, conferences

Products quality guarantee



Russian and international certificates



Quality management system ISO 9001:2015, ISO-13485



Recommendations of experts

COMPLEX EQUIPPING WITH LIGHT PRODUCTS

JSC “PA “UOMP” and “Shvabe” Holding successfully implement the projects of complex equipping the objects of road and traffic network, urban environment and various types of rooms with illumination and light signal equipment.

Energy service contracts, life cycle contracts and complex equipping of the objects provide the following:

- Development of light planning structure
- Selection of equipment in accordance with the object specific character
- Construction and mounting works
- Equipping of rooms on “turnkey” basis
- Setting-up, adjustment of equipment and service maintenance

Energy service contract in Ulan-Ude city

Replacement of more than 10 thousands of luminaires and 172 shields of automatic control system with external illumination that provided renovation of obsolete illumination lines; increase of efficient control owing to installation of shields; economy of consumed electric power and financial expenses.

Special features of the contract are zero expenses of the Customer for the program realization.

The works are paid stage by stage at the expense of the means obtained from saving of energy resources.



Complex project of the State Government Institution of the Sverdlovsk region “Department of highways”

The works for organization of a “turnkey” basis overhaul of highways areas of the Sverdlovsk region being of regional importance (device of artificial illumination, artificial road irregularities and accesses to pedestrian crossings located near educational institutions).

126 objects are equipped under the project.

Life cycle contract “Light city” in Nizhny-Tagil city (2013-2042)

The life cycle contract provides for realization of works for design, construction and maintenance of external illumination in the city of Nizhny Tagil: development of design documents; construction of illumination networks, and also maintenance of illumination networks during 25 years.



State contract for installation of more than 6000 light diode road signs in Moscow city

The following are equipped: prospect Vernadskogo, Leninsky, Volgogradsky, Leningradsky prospects; Kashirskoye, Volokolamskoye, Dmitrovskoye highways, third hoist ring and others, in total more than 130.

Result: decrease of accident rate, increase of road traffic safety, improvement of city infrastructure.



State contract for decrease of accident sites in Moscow city

In the frames of the Federal Special Purpose Program “Safety of road traffic till the years 2020” there is implemented reconstruction of 78 intersections of the city of Moscow with replacement of road signs, traffic lights.



SAFE CITY TRAFFIC LIGHTS

- Easy operation
- Reliability of construction
- Low power consumption
- High brightness
- Compliance with GOST R 52282-200

Power efficient solutions to ensure safety on the roads

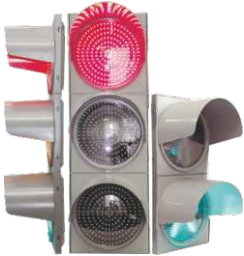


Series of DS 7 - 300 mm

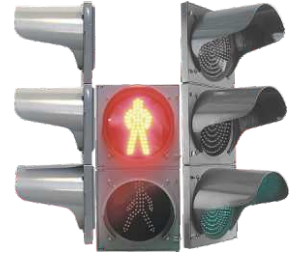
Series of DS 8 - 200 mm

DS 7

DS 8



- Transport and pedestrian traffic lights in a flat frame
- Construction from two or three light-optical components
- Side sections



DS 7-25

DS 8-25



- Transport traffic lights in a flat frame
- Two-color two-digit time reading in yellow component



DS 7-30

DS 8-30



- Pedestrian traffic lights in a flat frame
- Operation with all types of controllers
- Three-digit time reading in two sections (DS7-30)
- Two-digit time reading in two sections (DS8-30)
- Animation in green section (DS8-30)



DS 7-33



- Operation with any types of controllers
- Three-digit time reading indicator
- Absence of phantom effect

Series of DS 7 - 300 mm

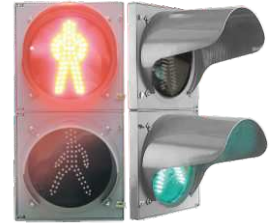
Series of DS 8 - 200 mm

DS 7-P1

DS 8-P1



- Pedestrian traffic lights in a flat frame
- Operation with any types of controllers
- Low energy consumption
- Possibility of operation in arctic zones
- Frame and glass are made from shock resistant polycarbonate



DS 7-40

DS 5-30



- Pedestrian traffic lights in a flat (DS 7-40) and classic volume frame (DS 5-30)
- Operation with any types of controllers
- Time readout: upper module – two digits, lower module (DS 7-40) – three digits
- Programming of brightness level (DS 7-40)
- Sound signal (DS7-40)
- Dynamic indication (DS 5-30)



DS 7-06

DS 8-07



- Pedestrian and transport traffic lights in a flat frame
- Easy maintenance
- Operation with any types of controllers



DS 6-25



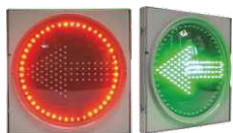
- Transport traffic lights in a classic volume frame
- Two-digit time readout by red and green diodes
- Easy maintenance
- Operation with any types of controllers

Series of DS 7 - 300 mm

Series of DS 8 - 200 mm

DS 7-13

DS 8-13

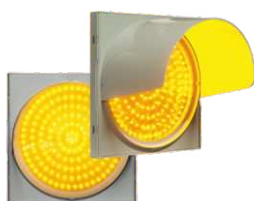


- Is used jointly with transport traffic lights (DS7-13)
- Operation with any types of controllers
- Absence of phantom effect



DS 7-07

DS 8-70



- The traffic light is used as additional equipment on unregulated pedestrian crossings
- Easy maintenance
- Mains supply ~220V



IVS 7

IVS 6



- The time indicator for informing the road traffic participants about the time left for extinction of green or red traffic lights signal
- Light aperture is 300 mm
- Operation with all types of controllers
- IVS-7 – two-digit
IVS-6 – three-digit



IVS 3

IVS 200



- The time indicator for informing the road traffic participants about the time left for extinction of green or red traffic light signal
- Light aperture is 200 mm and 300 mm
- Easy maintenance
- Operation with all types of controllers
- Lasting service life



SAFE CITY ROAD SIGNS

- High brightness
- Uniform illuminance
- Possibility of synchronization with a road illumination system
- Full range of dimension types
- Easy and comfortable fixation
- Correspondence with GOST R 52290-2004

**Efficient informing about
the road situation**



LIGHT DIODE ROAD SIGNS

ZNDS 13



- The light diode road sign is intended to ensure safety of road traffic on the streets and roads.
- The image is made from retro-reflecting film, allows to recognize the sign during the day and night time, even in case of electricity cutoff.
- Availability of a photo relay for automatic switch on and off of the sign luminance is possible.

ZNDS 14



ZNDS 13



- High economy of energy consumption.
- Uniform illuminance of light curtain.
- A mask with any image upon the Customer's request can be used.
- Power supply from alternative energy sources (storage battery + solar cell panel) is possible.

ZNDS 15



ZNDS 900



ZNDS 17



ZNDS 12



ZNDS 16



SOLUTIONS FOR RAILWAYS AUTOMATICS AND TELEMECHANICS SYSTEMS

- Absence of phantom-effect
- High vandalism resistance
- Adaptation to standard systems of railway automatics
- Wide range of operating temperatures
- Correspondence with GOST R 56057-2014

Safe regulation of railway transportations



SZHDM 1 / SZHDM 1P / ZHSM 1



- The light diode module of mast type traffic light is intended to be used in railway systems of mechanical blocking (SZhDM 1), in railway traffic lights of electrical centralization (SZhDM 1) and at access ways of industrial enterprises (ZhSM 1)



- Control and power supply of modules is adapted to the railway automatics devices



- Provision of safe switch on of the traffic lights at a distance from the electric centralization post up to 9.5 km



- Use of extra bright light diodes
- Efficient solutions as to provide anti-phantom effect
- High reliability

SZHDM 2P / ZHSM 2



- Light diode module of dwarf type traffic light is intended to be used in rail ways traffic lights of electrical centralization (SZhDM 2P) and at access ways of industrial enterprises (ZhSM 1)

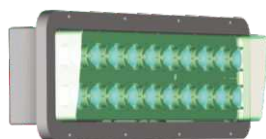


- Control and power supply of modules is adapted to the railway automatics devices

- Provision of safe switch on of the traffic lights at a distance from the electric centralization post up to 9.5 km

- Use of extra bright light diodes
- High reliability

SZHDM 3P



- The light optical light diode system “green strip”
- Installed on incoming traffic light to create a light signal in form of a green color rectangle
- Easy maintenance
- Control and power supply of modules is adapted to the railway automatics devices

LIGHT CITY

- Creating of comfort illumination
- Optimal lighting specifications
- Saving of electric power
- Resistance to temperatures differences
- Correspondence with
GOST R 54350-2015,
IEC 60598 Part 1-2003

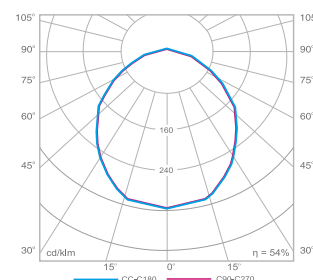
**Comprehensive illumination of urban
environment objects**



DPO 2



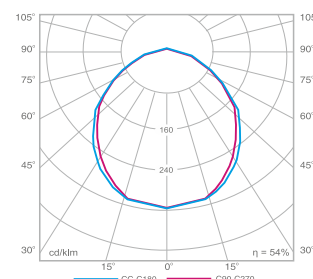
- Universal luminaire for illumination of office, trade and public rooms
- Versions of completing with diffusers of the following types: “sledged ice”, microprism and others
- Installed in a hole of suspended ceiling of “Armstrong” type
- Optimal relation of light flux and energy consumption



DPO 3



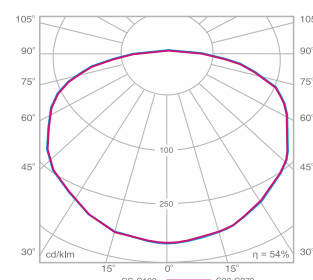
- The luminaire is intended to illuminate the trade rooms, municipal organizations, comprehensive institutions, hospitals and others
- Possibility to install the composing structures of the product proceeding from the area and configuration of the rooms
- Long-term service
- Low coefficient of pulsation



DPO 4



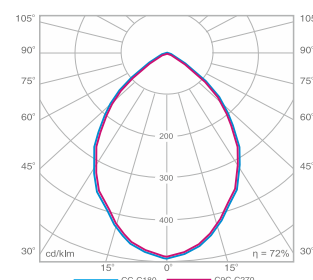
- Universal luminaire for illumination of office, trade, public rooms and others
- Superimposed luminaire with a flat frame
- High brightness
- Uniform illuminance
- Mat disperser (completing with other types is possible)



DPB 32



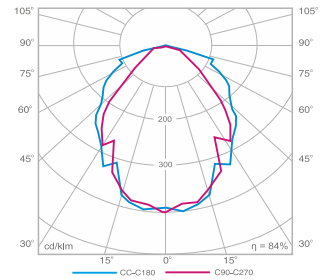
- The light is intended for illumination of living and public spaces with a flat suspended ceiling (or shed), entrances of houses and industrial buildings, storages, sports halls and offices
- High corrosion resistance
- Anti-vandal protection
- Various color range of decorative ring is possible
- Long-term service



DPB 42



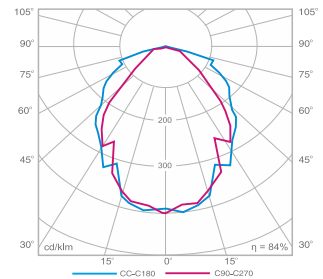
- The LED light of quick application is intended to illuminate the entrances and corridors, lift halls, staircases and others
- By option: completing with acoustic sensors
- Protective glass from polycarbonate providing uniform light dispersion
- By option: use of diodes of various power (modifications “luxury”, “standard”, “economy”)



DPB 65



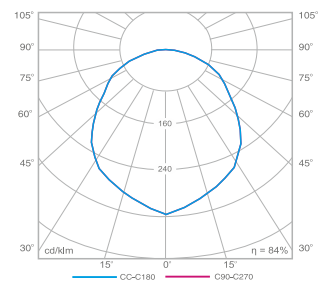
- Light diode luminaire to arrange general illumination in hardly accessible places, rooms with special environmental conditions (increased moisture, dust and smoke content and others)
- High corrosion resistance
- Degree of protection from external influences IP65



DSP 3



- Intended for internal illumination of entrances, lift halls, corridors, floor passages, warehouses, salons of mobile transport means, working areas of industrial purpose and other places
- Variable light flux from 0 to 100%
- Safe supply voltage
- High corrosion resistance
- Supply from the 27V mains



SVU 1, 2, 3, 4

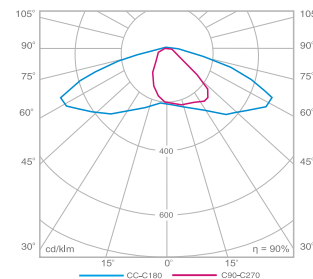


- Light indicators are intended for indication of names of streets and houses numbers in human settlements
- Provision with visibility of indicator at a long distance during the day and night
- Automatic switch on and off depending on the external illumination level (photo relay)
- Uniform illumination of information field

DKU 1



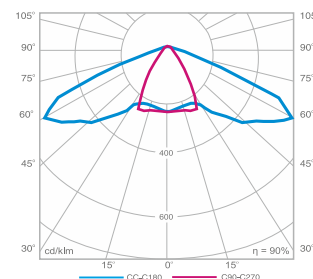
- Energy efficient lamps for illumination of highways, pathways and various objects of urban environment
- Modular construction of the light module allows to use various modifications of lamps that are identical in outward appearance
- Optimal price characteristics
- High corrosion resistance
- The lamp DKU1-01 is adapted to be used on the objects of railways net



DKU 98-120



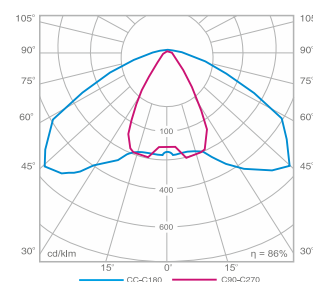
- Intended for external illumination of streets, roads, pedestrian paths, pavements, recreation zones, building surroundings and cottage territories and other open spaces (category V according to building code 23-05-95)
- Curve type – wide
- Simple and easy for installation and operation
- High corrosion resistance
- Long-term service



DKU 3000



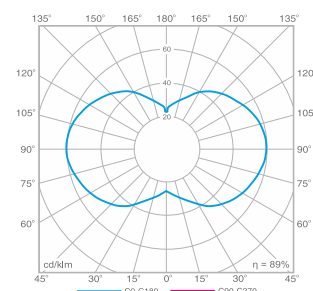
- The light is intended for external illumination of streets and roads, including building surroundings and cottage territories, pedestrian paths, sport facilities, squares and parks
- Unique built-in temperature control system
- Modern design solution
- High corrosion resistance
- Dust and moisture proof



DTU 1



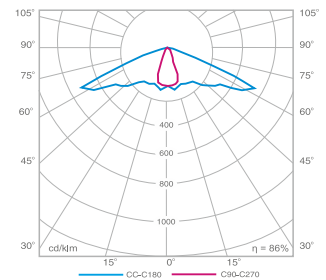
- Intended for external illumination of streets, pavements, squares, park areas and other open spaces
- Modern design solution
- Simple and easy for installation and operation
- Energy saving
- Long-term service



ZhKU of TriO series



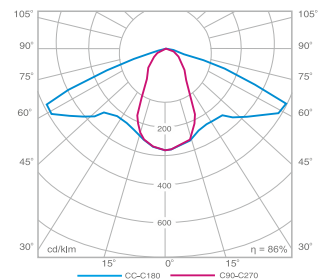
- The street lamp type luminaires are intended for illumination of highways, pedestrian areas, squares and other objects of urban environment
- Intended to be used with the arc sodium tubular lamps; by option – the arc mercury luminescent lamps and arc mercury lamps with radiant additives
- Versions of light intensity curve – large axial; large lateral; semi large
- Use of the range of modernized reflectors
- Console fixation onto the support



ZHKU 51-150/250



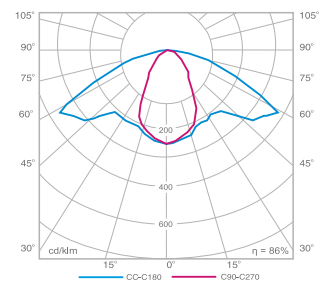
- Combination of high efficient reflector with special configuration and high pressure sodium lamp provides the required illumination at less power consumption
- Frame from aluminum alloy
- The cover and glass of luminaires are made from impact-resistant polycarbonate Macrolon
- It is possible to use the metal-halide lamp HQI-D which creates emission spectrum that is close to daylight and the arc mercury luminescent lamps



ZHKU 52-400



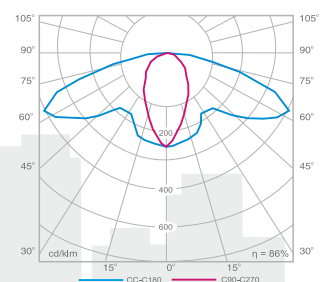
- Combination of high efficient reflector with special configuration and high pressure sodium lamp provides the required illumination at less power consumption.
- Frame from aluminum alloy.
- The cover and glass of luminaires are made from impact-resistant polycarbonate Macrolon.
- It is possible to use the metal-halide lamp HQI-D which creates emission spectrum that is close to daylight and the arc mercury luminescent lamps.



ZHKU 53-70/100/150



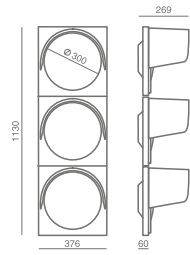
- Stationary console luminaire.
- The source of illumination – high pressure sodium lamp.
- High corrosion resistance.
- Intended for illumination of streets, roads, squares, pavements, road interchanges and other open spaces.



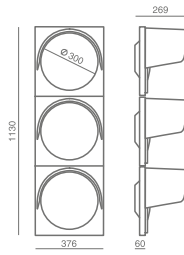
Examples of performed works



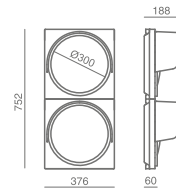
SAFE CITY. TRAFFIC LIGHTS



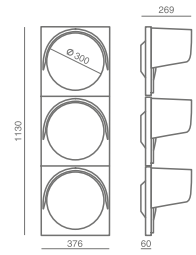
DS 7



DS 7-25

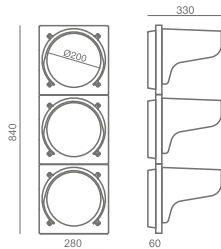


DS 7-30

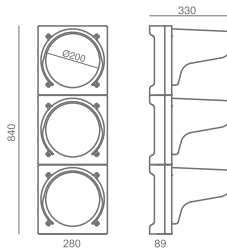


DS 7-33

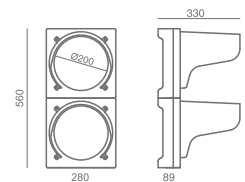
Diameter of light aperture	300 mm	300 mm	300 mm	300 mm
Light and technical parameters	In compliance with GOST R 52282-2004			
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Frame/material	Plane / Polycarbonate	Plane / Polycarbonate	Plane / Polycarbonate	Plane / Polycarbonate
Power consumption	not more than 15 W	not more than 30 W	not more than 20 W	not more than 30 W
Nominal frequency	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz
Voltage	176 - 242 V	176 - 242 V	176 - 242 V	176 - 242 V
Degree of protection	IP 54	IP 54	IP 54	IP 54
Operating temperatures range	from -60°C to +60°C	from -40°C to +60°C	from -40°C to +60°C	from -40°C to +60°C
Availability of time indicator	–	2-digit 2-color in yellow segment	3-digit in 2-sections	3-digit in 2-sections
Weight	10 kg	10 kg	7 kg	10 kg
Dimensions	1130*376*269 mm	1130*376*269 mm	752*376*188 mm	1130*376*269 mm
Period of operation	10 years	10 years	10 years	10 years



DS 8

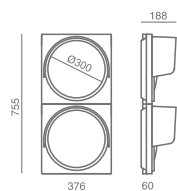
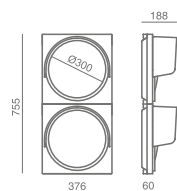
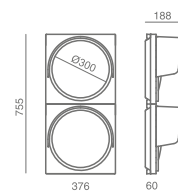
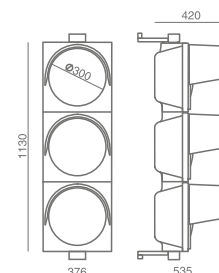


DS 8-25

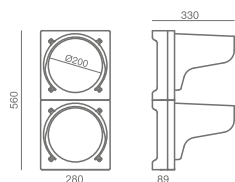
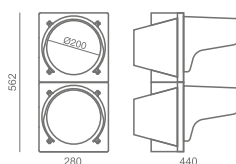
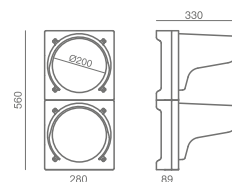


DS 8-30

Diameter of light aperture	200 mm	200 mm	200 mm
Light and technical parameters	In compliance with GOST R 52282-2004		
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes
Frame/material	Plane / Polycarbonate	Plane / Polycarbonate	Plane / Polycarbonate
Power consumption	not more than 15 W	not more than 15 W	not more than 20 W
Nominal frequency	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz
Voltage	176 - 242 V	176 - 242 V	176 - 242 V
Degree of protection	IP 54	IP 54	IP 54
Operating temperatures range	from -60°C to +60°C	from -40°C to +60°C	from -40°C to +60°C
Availability of time indicator	–	2-digit 2-color in yellow segment	2-digit in 2-sections, animation in green section
Weight	9 kg	8 kg	4,2 kg
Dimensions	840*280*330 mm	840*280*330 mm	560*280*330 mm
Period of operation	10 years	10 years	10 years

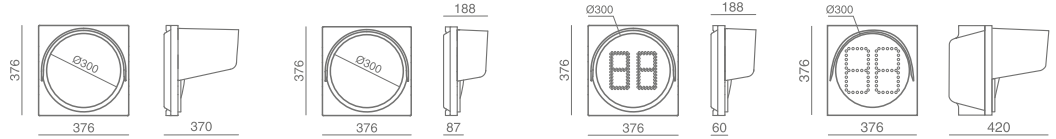

DS 7-P1

DS 7-40

DS 7-06

DS 6-25

Diameter of light aperture	300 mm	300 mm	300 mm	300 mm
Light and technical parameters	In compliance with GOST R 52282-2004			
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Frame/material	Plane / Polycarbonate	Plane / Polycarbonate	Plane / Polycarbonate	Plane / Polycarbonate
Power consumption	not more than 15 W	not more than 20 W	not more than 15 W	not more than 30 W
Nominal frequency	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz
Voltage	176 - 242 V	176 - 242 V	176 - 242 V	176 - 242 V
Degree of protection	IP 54	IP 54	IP 54	IP 54
Operating temperatures range	from -60°C to +60°C	from -40°C to +60°C	from -60°C to +60°C	from -40°C to +60°C
Availability of time indicator	–	3-digit in red signal, 2-digit in green signal	–	2-digit 2-color
Weight	8 kg	9 kg	8 kg	15 kg
Dimensions	755*376*188 mm	755*376*188 mm	755*376*188 mm	1130*376*420 mm
Period of operation	10 years	10 years	10 years	10 years

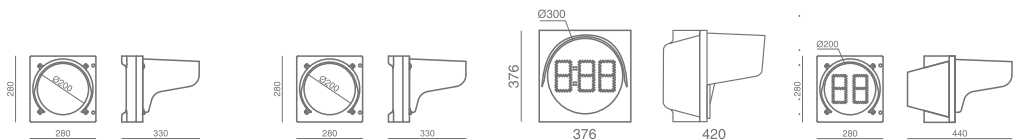

DS 8-P1

DS 5-30

DS 8-07

Diameter of light aperture	200 mm	200 mm	200 mm
Light and technical parameters	In compliance with GOST R 52282-2004		
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes
Frame/material	Plane / Polycarbonate	Volumetric / Polycarbonate	Plane / Polycarbonate
Power consumption	not more than 15 W	not more than 16 W	not more than 16 W
Nominal frequency	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz
Voltage	176 - 242 V	176 - 242 V	176 - 242 V
Degree of protection	IP 54	IP 54	IP 54
Operating temperatures range	from -60°C to +60°C	from -40°C to +60°C	from -60°C to +60°C
Availability of time indicator	–	2-digit of green signal, animation of green section	–
Weight	4,2 kg	10 kg	6,5 kg
Dimensions	560*280*330 mm	562*280*440 mm	560*280*330 mm
Period of operation	10 years	10 years	10 years

SAFE CITY. TRAFFIC LIGHTS

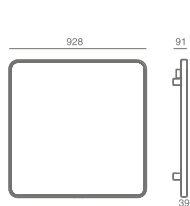


	DS 7-13	DS 7-07	IVS 7	IVS 3
Diameter of light aperture	300 mm	300 mm	300 mm	300 mm
Light and technical parameters	In compliance with GOST R 52282-2004			
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Frame/material	Plane / Polycarbonate	Plane / Polycarbonate	Plane / Polycarbonate	Volumetric / Polycarbonate
Power consumption	not more than 7 W	not more than 5 W	not more than 12 W	not more than 15 W
Nominal frequency	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz
Voltage	176 - 242 V	176 - 242 V	176 - 242 V	176 - 242 V
Degree of protection	IP 54	IP 54	IP 54	IP 54
Operating temperatures range	from -40°C to +60°C	from -40°C to +60°C	from -40°C to +40°C	from -40°C to +40°C
Availability of time indicator	–	–	2-digit	2-digit
Weight	4 kg	4 kg	3 kg	15 kg
Dimensions	376*376*269 mm	376*376*188 mm	376*376*188 mm	376*376*420 mm
Period of operation	10 years	10 years	10 years	10 years

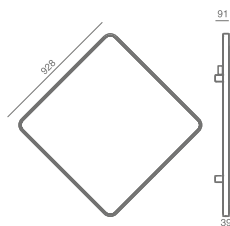


	DS 8-13	DS 8-70	IVS 6	IVS 200
Diameter of light aperture	200 mm	200 mm	300 mm	200 mm
Light and technical parameters	In compliance with GOST R 52282-2004			
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Frame/material	Plane / Polycarbonate	Plane / Polycarbonate	Volumetric / Polycarbonate	Volumetric / Polycarbonate
Power consumption	not more than 8 W	not more than 5 W	not more than 15 W	not more than 15 W
Nominal frequency	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz	50±0,5 Hz
Voltage	176 - 242 V	176 - 242 V	176 - 242 V	176 - 242 V
Degree of protection	IP 54	IP 54	IP 54	IP 54
Operating temperatures range	from -40°C to +60°C	from -40°C to +60°C	from -40°C to +40°C	from -40°C to +40°C
Availability of time indicator	–	–	3-digit	2-digit
Weight	4 kg	4 kg	6,3 kg	5 kg
Dimensions	280*280*330 mm	280*280*330 mm	376*376*420 mm	280*280*440 mm
Period of operation	10 years	10 years	10 years	10 years

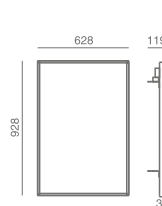
SAFE CITY. ROAD SIGNS



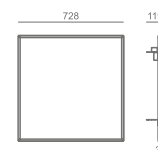
ZNDS 13



ZNDS 13

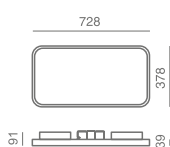


ZNDS 14

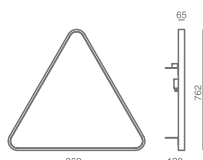


ZNDS 15

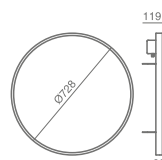
	ZNDS 13	ZNDS 13	ZNDS 14	ZNDS 15
Dimensions of luminous surface	900x900 mm	900x900 mm	900x600 mm	700x700 mm
Light and technical parameters	In compliance with GOST R 52290-2004			
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Supply voltage	100 - 260 V	100 - 260 V	100 - 260 V	100 - 260 V
Nominal frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Power consumption	not more than 35 W	not more than 35 W	not more than 25 W	not more than 20 W
Degree of protection	IP 65	IP 65	IP 65	IP 65
Class of protection from electrical shock	I	I	I	I
Operating temperatures range	from -40°C to +40°C	from -40°C to +40°C	from -40°C to +40°C	from -40°C to +40°C
Weight	15 kg	15 kg	12 kg	9 kg
Dimensions	928x928x90 mm	928x928x90 mm	628x928x90 mm	728x728x90 mm
Period of operation	10 years	10 years	10 years	10 years



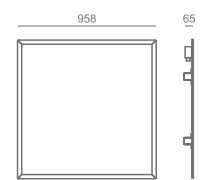
ZNDS 17



ZNDS 12



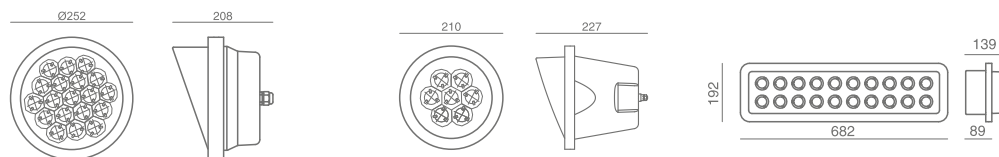
ZNDS 16



ZNDS 900

	ZNDS 17	ZNDS 12	ZNDS 16	ZNDS 900
Dimensions of luminous surface	350x700 mm	A=900 mm	700 mm	900x900 mm
Light and technical parameters	In compliance with GOST R 52290-2004			
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Supply voltage	180 - 260 V	180 - 260 V	180 - 260 V	180 - 260 V
Nominal frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Power consumption	not more than 20 W	not more than 20 W	not more than 22 W	not more than 40 W
Degree of protection	IP 65	IP 65	IP 65	IP 65
Class of protection from electrical shock	I	I	I	I
Operating temperatures range	from -40°C to +40°C	from -40°C to +40°C	from -40°C to +40°C	from -40°C to +40°C
Weight	12 kg	12 kg	13 kg	12 kg
Dimensions	378x728x90 mm	860x760x90 mm	378x728x90 mm	958x958x65 mm
Period of operation	10 years	10 years	10 years	10 years

DECISIONS FOR SYSTEMS OF RAILROADS AUTOMATICS AND TELEMCHANICS



SZHDM 1/SZHDM 1P/ ZHSM 1

SZHDM 2P/ ZHSM 2

SZHDM 3P

Dimension of light aperture	Ø204 mm	Ø160 mm	620x130 mm
Light intensity	In compliance with GOST 56057-2014		
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes
Power consumption	not more than 20 W	not more than 10 W	not more than 20 W
Supply voltage	60-80 V	30-50 V	60-80 V
Nominal consumption current	0,2 A	0,2 A	0,2 A
Maximum consumption current	0,25 A	0,25 A	0,25 A
Amount of light emitting diodes	19	7	20
Operating temperatures range	from -60°C to +60°C	from -60°C to +60°C	from -60°C to +60°C
Mode of operation	day, night	day, night	day, night
Weight	2,5 kg	2 kg	4 kg
Dimensions	Ø250x192 mm	Ø210x227 mm	682x139x192 mm
Degree of protection	IP 54	IP 54	IP 54
Period of operation	10 years	10 years	10 years

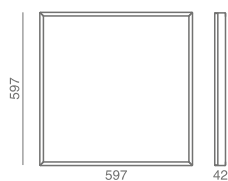
LIGHT CITY



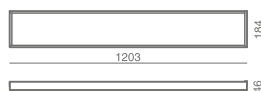
DPB 42

	Economy	Standard	Luxury	Emergency
Light flux	not less than 700 lm	not less than 900 lm	not less than 1100 lm	not less than 900 lm not less than 450 lm in emergency operation
Type of luminous intensity distribution curve	Cosine	Cosine	Cosine	Cosine
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Power consumption	not more than 8 W	not more than 11 W	not more than 13 W	not more than 18 W
Nominal frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Supply voltage	100 - 242 V	100 - 242 V	100 - 242 V	100 - 242 V
Degree of protection	Ip40	Ip40	Ip40	Ip40
Operating temperatures range	from -20°C to +50°C	from -20°C to +50°C	from -20°C to +50°C	from -20°C to +50°C
Class of protection from electrical shock	II	II	II	II
Amount of light emitting diodes	6	8	10	8
Color of light emitting diodes	White	White	White	White
Weight	0,6 kg	0,6 kg	0,6 kg	0,6 kg
Period of operation	10 years	10 years	10 years	10 years

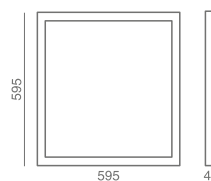
LIGHT CITY



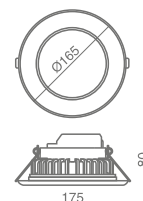
DPO 2



DPO 3

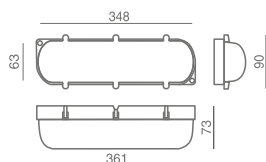


DPO 4

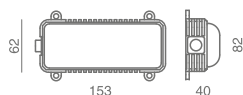


DVB 32

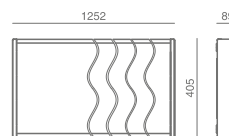
Light flux	not less than 4000 lm	not less than 5000 lm	not less than 4500 lm	not less than 480 lm
Type of luminous intensity distribution curve	Cosine	Cosine	Cosine	Deep
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Power consumption	not more than 48 W	not more than 58 W	not more than 40 W	not more than 10 W
Nominal frequency	50±0,5 Hz	50±0,5 Hz	50/60 Hz	50/60 Hz
Supply voltage	176 - 260 V	176 - 260 V	176 - 242 V	100 - 242 V
Degree of protection	Ip20	Ip20	Ip40	Ip40
Operating temperatures range	from -10°C to +40°C	from -10°C to +40°C	from -10°C to +40°C	from -20°C to +50°C
Class of protection from electrical shock	I	I	I	I
Amount of light emitting diodes	–	–	–	7
Color of light emitting diodes	White	White	White	White
Weight	3 kg	3 kg	2 kg	0,5 kg
Period of operation	10 years	10 years	10 years	10 years



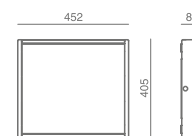
DPB 65



DSP 3



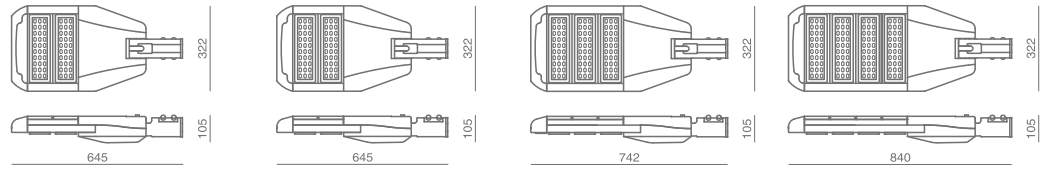
SVU 1, 2



SVU 3, 4

Light flux	not less than 800 lm	DSP 3-01 - not less than 280 lm DSP 3-02 - not less than 400 lm	–	–
Type of luminous intensity distribution curve	Cosine	Cosine	–	–
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Power consumption	not more than 15 W	not more than 8 W	not more than 20 W	not more than 10 W
Nominal frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Supply voltage	100 - 242 V	27V ±10%	220±22 V	220±22 V
Degree of protection	Ip65	Ip23	–	–
Operating temperatures range	from -20°C to +50°C	from -20°C to +40°C	–	–
Class of protection from electrical shock	II	III	–	–
Amount of light emitting diodes	10	5	100	250
Color of light emitting diodes	White	White	White	White
Weight	0,5 kg	0,5 kg	4 kg	4 kg
Period of operation	10 years	10 years	10 years	10 years

LIGHT CITY



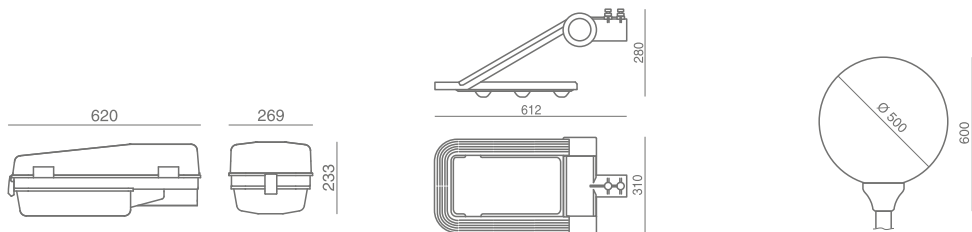
DKU 1 - 80

DKU 1 - 120

DKU 1 - 185

DKU 1 - 240

Supply voltage	176 - 264 V	176 - 264 V	176 - 264 V	176 - 264 V
Nominal frequency	50 Hz	50 Hz	50 Hz	50 Hz
Power consumption	not more than 80 W	not more than 110 W	not more than 170 W	not more than 220 W
Light efficiency	90 lm/W	100 lm/W	100 lm/W	100 lm/W
Radiation color	White	White	White	White
Color temperature	5000 °K	5000 °K	5000 °K	5000 °K
Color transfer index Ra	70	70	70	70
Coefficient of color flow pulsing	2%	2%	2%	2%
Light flux	not less than 8 000 lm	not less than 12 000 lm	not less than 18 500 lm	not less than 24 000 lm
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes	Light emitting diodes
Operating temperatures range	from -60°C to +55 °C	from -40°C to +50 °C	from -40°C to +50 °C	from -40°C to +50 °C
Degree of protection	IP 65	IP 65	IP 65	IP 65
Class of protection against current shock	I	I	I	I
Weight	7,2 kg	7,4 kg	8,4 kg	9,5 kg
Period of operation	10 years	12 years	12 years	12 years



DKU 98-120

DKU 3000

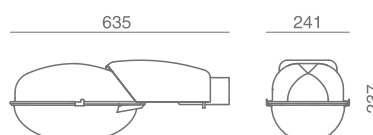
DTU 1

Light flux	not less than 10000 lm	not less than 10000 lm	not less than 3000 lm
Type of light curve in horizontal plane	Wide	Wide	Uniform
Type of light curve in vertical plane	Deep	Deep	—
Type of light source	Light emitting diodes	Light emitting diodes	Light emitting diodes
Power consumption	not more than 120 W	not more than 180 W	not more than 55 W
Nominal frequency	50/60 Hz	50/60 Hz	—
Supply voltage	176 - 242 V	100 - 242 V	—
Degree of protection	IP 54	IP 65	IP 54
Operating temperatures range	from -40°C to +40°C	from -40°C to +45°C	from -40°C to +40°C
Class of protection against current shock	I	I	I
Color of light emitting diodes	White	White	White
Power coefficient	0,95	0,94	0,9
Weight	11 kg	9 kg	7 kg
Period of operation	10 years	10 years	10 years

LIGHT CITY



	ZHKU 51-150	ZHKU 51-250	ZHKU 52-400
Type of light intensity curve in horizontal plane	Wide	Wide	Wide
Type of light intensity curve in vertical plane	Deep	Deep	Deep
Type of light source	High-pressure sodium lamp, holder E40	High-pressure sodium lamp, holder E40	High-pressure sodium lamp, holder E40
Power consumption	not more than 150 W	not more than 250 W	not more than 400 W
Nominal frequency	50 Hz	50 Hz	50 Hz
Supply voltage	220±22 V	220±22 V	220±22 V
Degree of protection	IP 54	IP 54	IP 65
Operating temperatures range	from -40°C to +40°C	from -40°C to +40°C	from -40°C to +40°C
Class of protection against current shock	I	I	I
Power coefficient	0,9	0,9	0,92
Weight	11,5 kg	11,5 kg	6,1 kg
Service life	10 years	10 years	10 years



	ZHKU 53-70	ZHKU 53-100	ZHKU 53-150
Type of light intensity curve in horizontal plane	Wide	Wide	Wide
Type of light intensity curve in vertical plane	Deep	Deep	Deep
Type of light source	High-pressure sodium lamp, holder E40	High-pressure sodium lamp, holder E40	High-pressure sodium lamp, holder E40
Power consumption	not more than 70 W	not more than 100 W	not more than 150 W
Nominal frequency	50 Hz	50 Hz	50 Hz
Supply voltage	220±22 V	220±22 V	220±22 V
Degree of protection	IP 65	IP 65	IP 65
Operating temperatures range	from -40°C to +40°C	from -40°C to +40°C	from -40°C to +40°C
Class of protection against current shock	I	I	I
Power coefficient	0,92	0,92	0,92
Weight	6,1 kg	6,1 kg	6,1 kg
Service life	10 years	10 years	10 years

