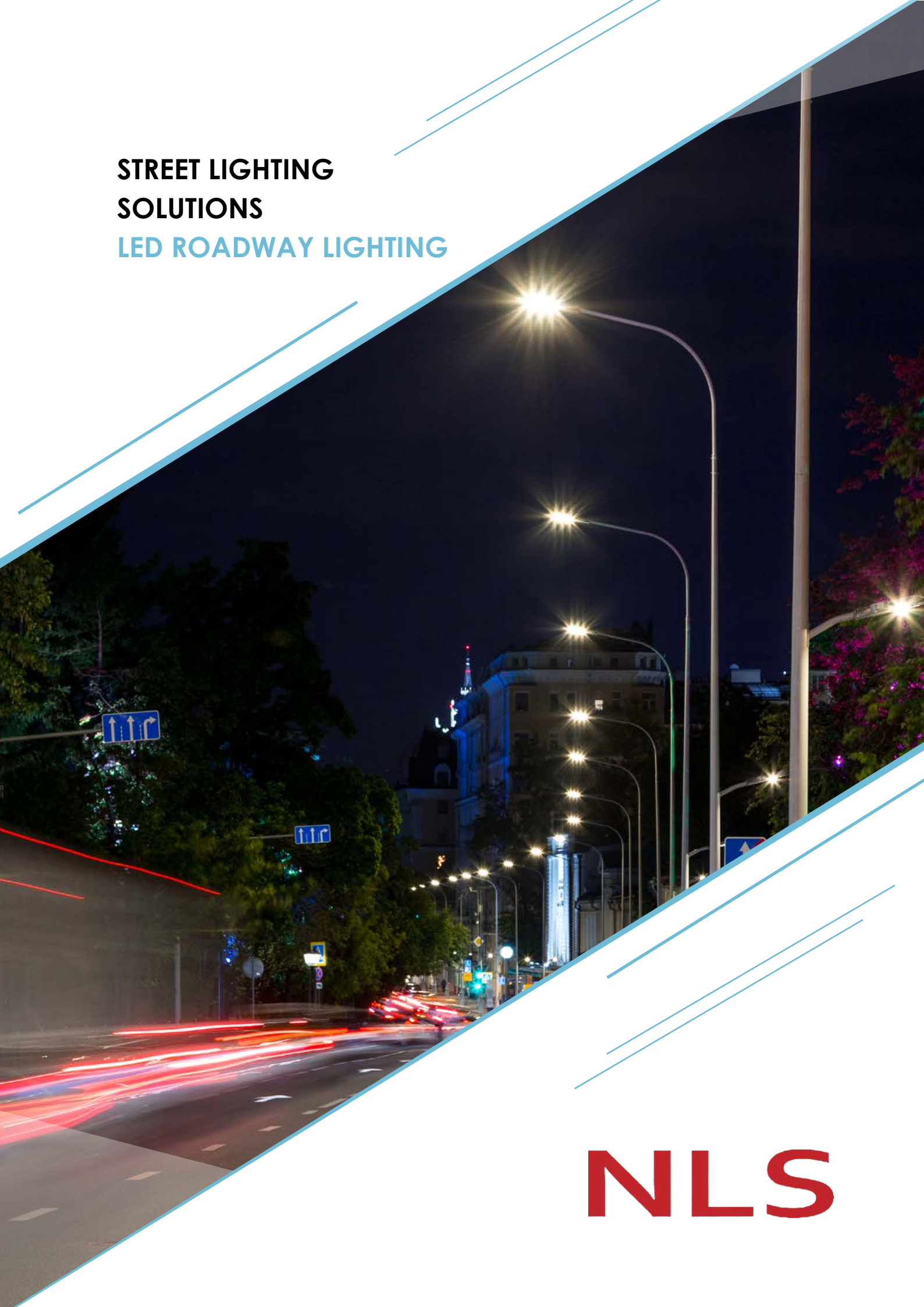
STREET LIGHTING SOLUTIONS

LED ROADWAY LIGHTING



NLS

CONTENTS

Equipment for Street Lighting

OKK CONICAL CIRCULAR POLES

THE POLE HEIGHT IS FROM 3m TO 12m

- Easy installation and maintanance
- Aesthetic appearance and the ability to install additional equipment
- High corrosion resistance of the coating, even for marinare climate
- Long service life
- Possibility of manufacturing according to individual parameters and colors in any color according to the RAL table
- Possibility of installation and service from the manufacturer

APPLICATION

Lighting of highways, traffic intersections, bridges, squares, courtyards, parks, parking lots, etc.

SPECIFICARIONS

Examples of typical versions of OKK series

Model	Figure	Weight, m	Height, H	Top diame-ter, d	Bottom di-ameter, D	Pole flange diameter, A	Hole center distance, B
OKK-3	1	26 kg	3m	60mm	92mm	240mm	160mm
OKK-4	1	35 kg	4m	60mm	103mm	240mm	160mm
OKK-5	1	46 kg	5m	60mm	114mm	300mm	200mm
	1	58 kg		76mm	141mm	300mm	200mm
	2	94 kg		128mm	193mm	450mm	320mm
OKK-6	1	58 kg	6m	60mm	125mm	300mm	200mm
	1	79 kg		76mm	154mm	370mm	240mm
	2	113 kg		128mm	206mm	450mm	320mm
OKK-7	1	76 kg	7m	60mm	136mm	370mm	240mm
	2	94 kg		76mm	167mm	370mm	240mm
	2	134 kg		128mm	219mm	450mm	320mm
OKK-8	1	92 kg	8m	60mm	146mm	370mm	240mm
	2	116 kg		76mm	180mm	450mm	320mm
	2	157 kg		128mm	232mm	470mm	340mm
OKK-9	1	107 kg	9m	60mm	157mm	370mm	240mm
	2	134 kg		76mm	193mm	450mm	320mm
	2	180 kg		128mm	245mm	470mm	340mm
OKK-10	1	122 kg	10m	60mm	168mm	370mm	240mm
	2	153 kg		76mm	206mm	450mm	320mm
	2	204 kg		128mm	258mm	470mm	340mm
OKK-11	1	145 kg	11m	60mm	179mm	450mm	320mm
	2	174 kg		76mm	219mm	450mm	320mm
OKK-12	1	162 kg	12m	60mm	188mm	450mm	320mm
	2	196 kg		76mm	230mm	470mm	340mm

DIMENSIONS

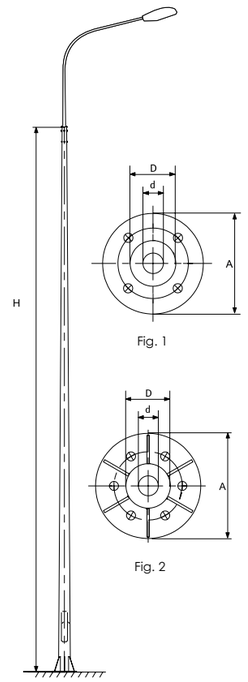


Fig. 1

Fig. 2

The table is for reference only. When placing an order, specify in the commercial units of the AMIRA group of companies the possibility of manufacturing equipment taking into account your wind region

Body	Sheet steel. The pole is made by a method of bending
Cover	Hot galvanizing (ISO 1461). The guarantee for corrosion resistance makes at least 25 years.
Finish	Paintwork by the RAL table
Wind District	up I to VII
Climatik version	I_2-II_4

Innovative Center SKOLKOVO

Installation:
conical circular poles

OGK OCTAGONAL CONICAL POLES

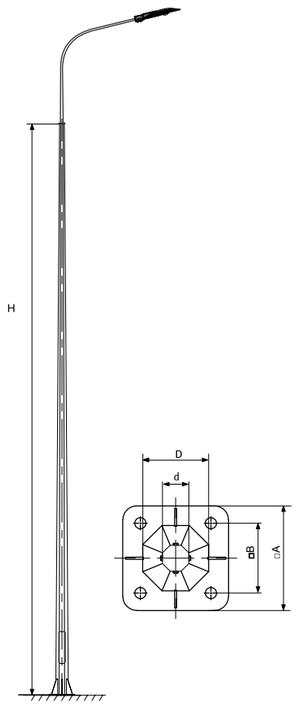
THE POLE HEIGHT IS FROM 3m TO 16m

- Easy installation and maintenance
- Aesthetic appearance and the ability to install additional equipment
- High corrosion resistance of the coating, even for marinare climate
- Long service life
- Possibility of manufacturing according to individual parameters and colors in any color according to the RAL table
- Possibility of installation and service from the manufacturer

APPLICATION

Lighting of highways, traffic intersections, bridges, squares, courtyards, parks, parking lots, etc.

DIMENSIONS



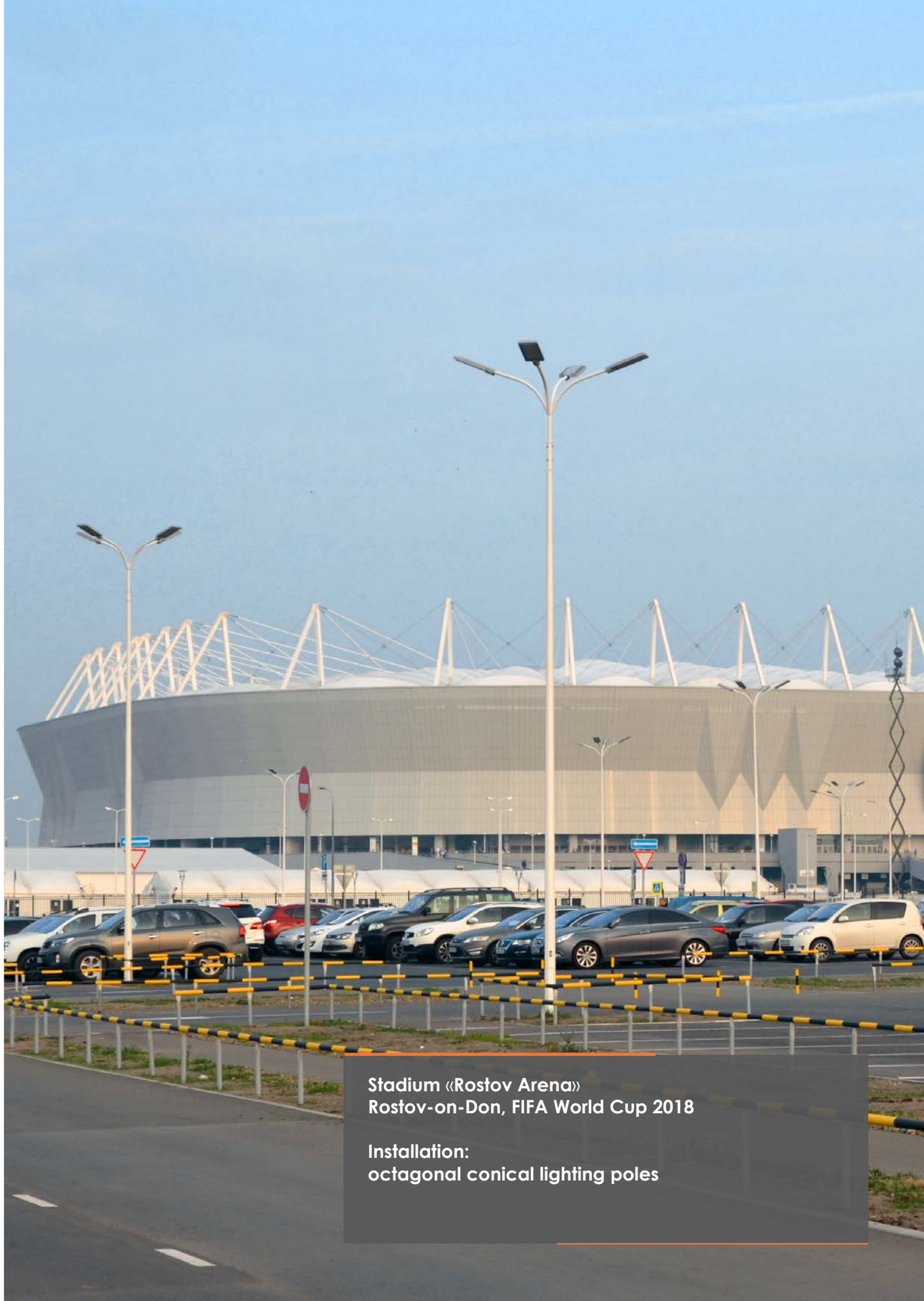
SPECIFICATIONS

Examples of typical versions of OGK series

Model	Weight, m	Height, H	Top diam-eter, d	Bottom diame-ter, D	Pole flange diameter, A	Hole center distance, B
OGK-3	26 kg	3m	60mm	132mm	250mm	160mm
OGK-4	32 kg	4m	60mm	136 мм	250 мм	160 мм
OGK-5	42 kg	5m	60mm	136 мм	250 мм	160 мм
OGK-6	48 kg	6m	60mm	136 мм	250 мм	160 мм
OGK-7	65 kg	7m	68mm	150 мм	300 мм	200 мм
OGK-8	85 kg	8m	68mm	166 мм	400 мм	300 мм
OGK-9	95 kg	9m	68mm	166mm	400mm	300mm
OGK-10(1)	133 kg	10m	68mm	166mm	400mm	300mm
OGK-10(2)	162 kg	10m	68mm	166mm	400mm	300mm
OGK-10(3)	172 kg	10m	100mm	210mm	400mm	300mm
OGK-12(1)	176 kg	12m	72mm	200mm	400mm	300mm
OGK-12(3)	185 kg	12m	90mm	200mm	400mm	300mm
OGK-16	350 kg	16m	90mm	300mm	500mm	400mm

The table is for reference only. When placing an order, specify in the commercial units of the AMIRA group of companies the possibility of manufacturing equipment taking into account your wind region

Body	Sheet steel. The pole is made by a method of bending
Cover	Hot galvanizing (ISO 1461). The guarantee for corrosion resistance makes at least 25 years.
Finish	Paintwork by the RAL table
Wind District	up I to VII
Climatik version	I_2,II_4



Stadium «Rostov Arena»
Rostov-on-Don, FIFA World Cup 2018

Installation:
octagonal conical lighting poles

OKKLI

CONICAL CIRCULAR
BENT POLE

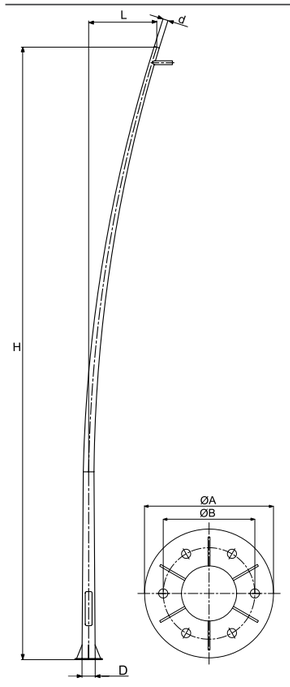
THE POLE HEIGHT IS FROM 6m to 9m

- Easy installation and maintenance
- Aesthetic appearance and the ability to install additional equipment
- High corrosion resistance of the coating, even for marinare climate
- Long service life
- Possibility of manufacturing according to individual parameters and colors in any color according to the RAL table
- Possibility of installation and service from the manufacturer

APPLICATION

Lighting of highways, streets, avenues, squares, parks, squares, pedestrian zones, etc.

DIMENSIONS



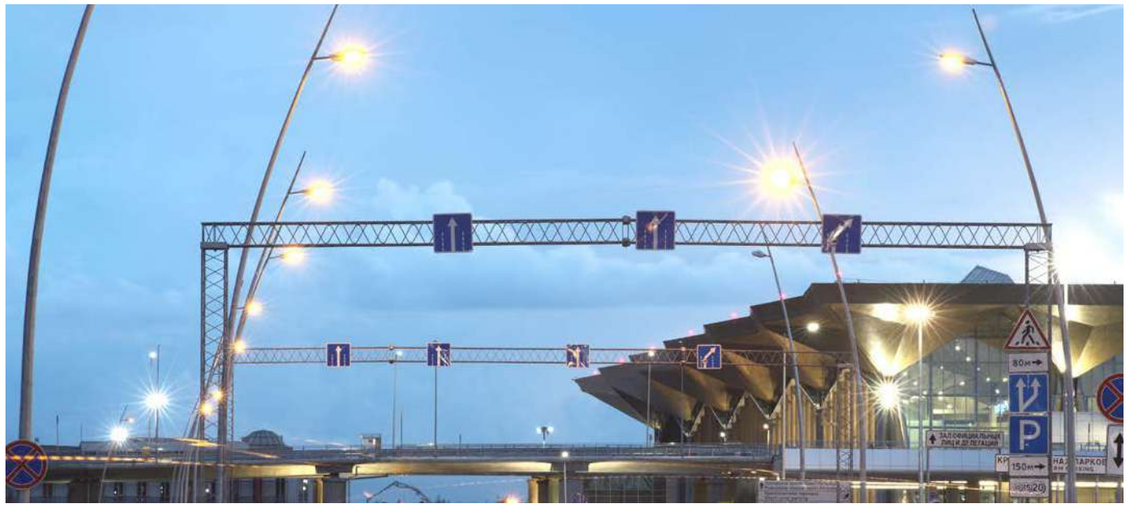
SPECIFICATIONS

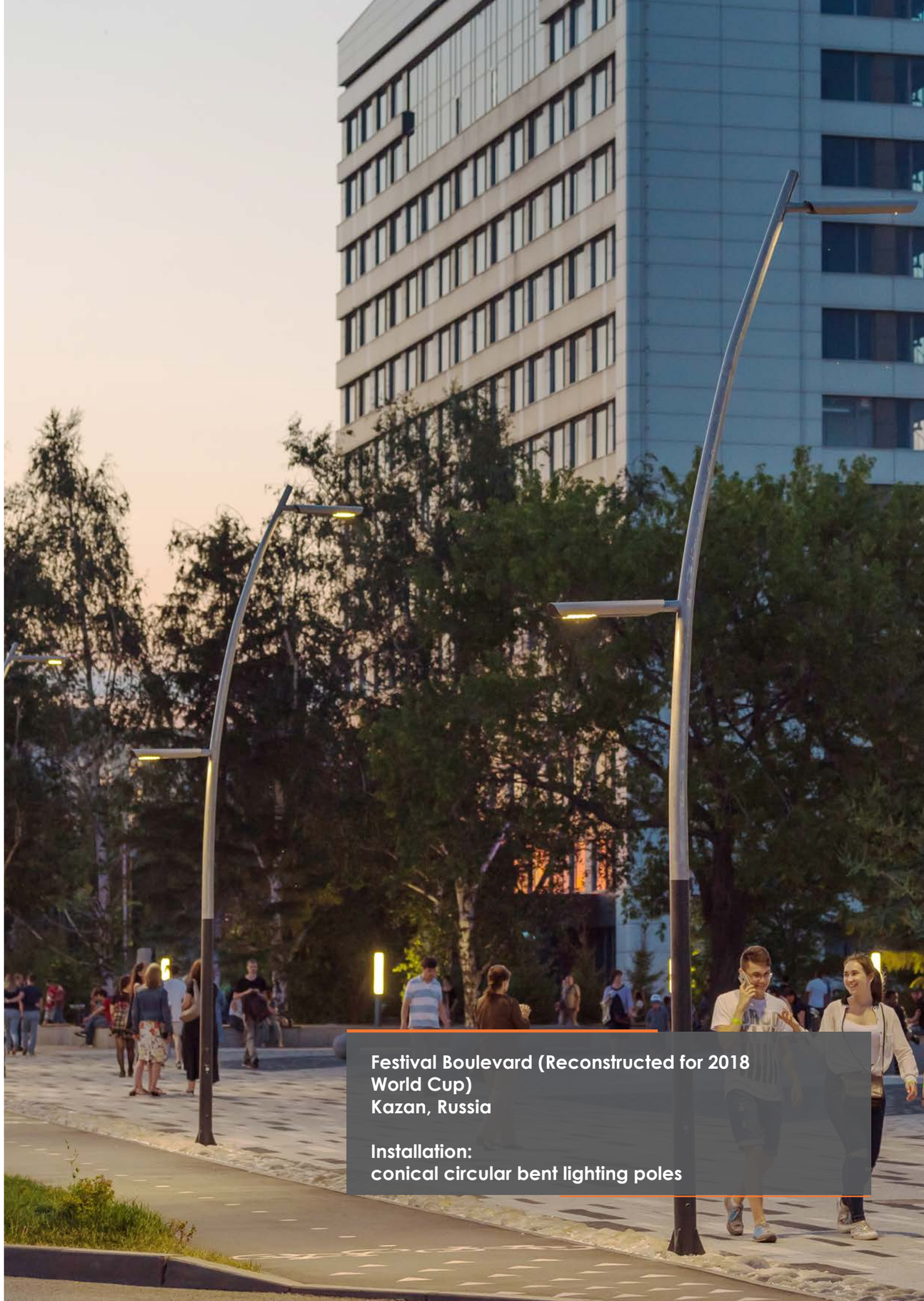
Examples of typical versions of OKKLI series

Model	Weight, m	Height, H	Console Length, L	Pole flange diameter, A	Hole center distance, B
OKKLI - 6	61kg	6m	0,8m	300mm	200m
OKKLI - 8	87kg	8m	1m	370mm	270m
OKKLI -9	134kgr	9m	1m	450mm	320m

The table is for reference only. When placing an order, specify in the commercial units of the AMIRA group of companies the possibility of manufacturing equipment taking into account your wind region

Body	Sheet steel. The pole is made by a method of bending	Finish	Paintwork by the RAL table
Cover	Hot galvanizing (ISO 1461). The guarantee for corrosion resistance makes at least 25 years.	Wind District	up I to VII
		Climatik version	I_2,II_4





Festival Boulevard (Reconstructed for 2018 World Cup)
Kazan, Russia

Installation:
conical circular bent lighting poles

OGKS OCTAGONAL CONICAL FOLDING POLE

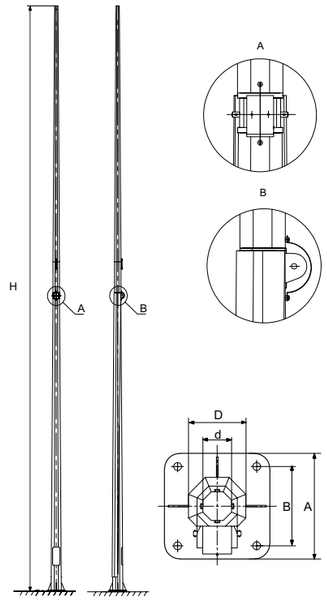
CONVENIENT FOLDING MECHANISM

- The possibility of safe maintenance of lighting devices without the involvement of special equipment, at ground level
- High corrosion resistance of the coating, even for marinare climate
- Long service life
- Possibility of manufacturing according to individual parameters and colors in any color according to the RAL table
- Possibility of installation and service from the manufacturer

APPLICATION

Installation in places that are difficult to access for installation and maintenance for lighting sports grounds, ski slopes, residential areas, alleys, etc.

DIMENSIONS



TYPE 1 - OGKS

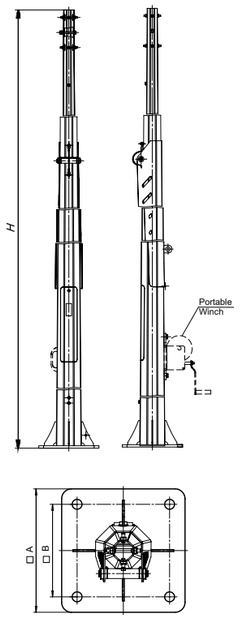
SPECIFICATIONS

Examples of typical designs of pokes OGKS series. Poles dimensions may vary. from customer specification

Model	Weight, m	Height, H	Top diameter, D	Bottom diameter, D	Pole flange diameter, A	Hole center distance, B	Lower section height, h1
OGKS-6	128 kg	6m	76mm	180mm	400mm	300mm	3,5m
OGKS-7,5	120 kg	7,5m	76mm	180mm	400mm	300mm	4,1m
OGKS-10,5	250 kg	10,5m	90mm	180mm	400mm	300mm	6,2m
OGKS-12	335 kg	12m	100mm	225mm	400mm	300mm	6,4m
OGKS-14	550 kg	14m	90mm	280mm	500mm	400mm	7,2m
OGKS-16	635 kg	16m	90mm	280mm	500mm	400mm	8,2m
OGKS-18	823 kg	18m	100mm	275mm	500mm	400mm	9,1m
OGKS-20	830 kg	20m	100mm	330mm	550mm	450mm	11m
OGKS-25	1340 kg	25m	124mm	456mm	Ø660mm	560mm	10,1m

The table is for reference only. When placing an order, specify in the commercial units of the AMIRA group of companies the possibility of manufacturing equipment taking into account your wind region

Body	Sheet steel. The pole is made by a method of bending
Cover	Hot galvanizing (ISO 1461). The guarantee for corrosion resistance makes at least 25 years.
Finish	Paintwork by the RAL table
Wind District	up I to VII
Climatik version	I_2,II_4
Mechanism	Power lock. A special hand tool is used for tilting.



TYPE 2 - OGKSI

Finland Railway Station, St. Petersburg, Russia

Installation: octagonal folding poles

VMON

High lighting pole with stationary crown with spotlights

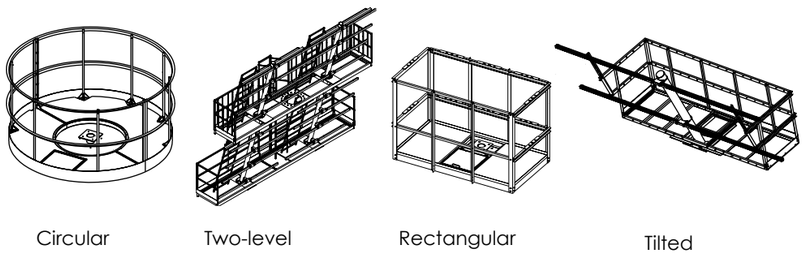
THE HEIGHT IS UP TO 50M

- Easy installation and maintanance
- High corrosion resistance of the coating, even for marinare climate
- Long service life
- Possibility of manufacturing according to individual parameters and colors in any color according to the RAL table
- Possibility of installation and service from the manufacturer
- Types of VMON series: with stairs; without stairs (serviced by a hydraulic lift); with a ladder without a fence with a safety rope

APPLICATION

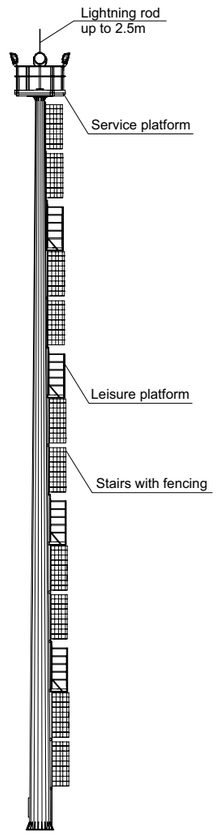
Lighting for sports facilities, large open spaces, industrial areas with limited access for maintenance of lighting installations, warehouses, airports, ports.

TYPES OF SERVICE PLATFORMS



Circular | Two-level | Rectangular | Tilted

DIMENSIONS



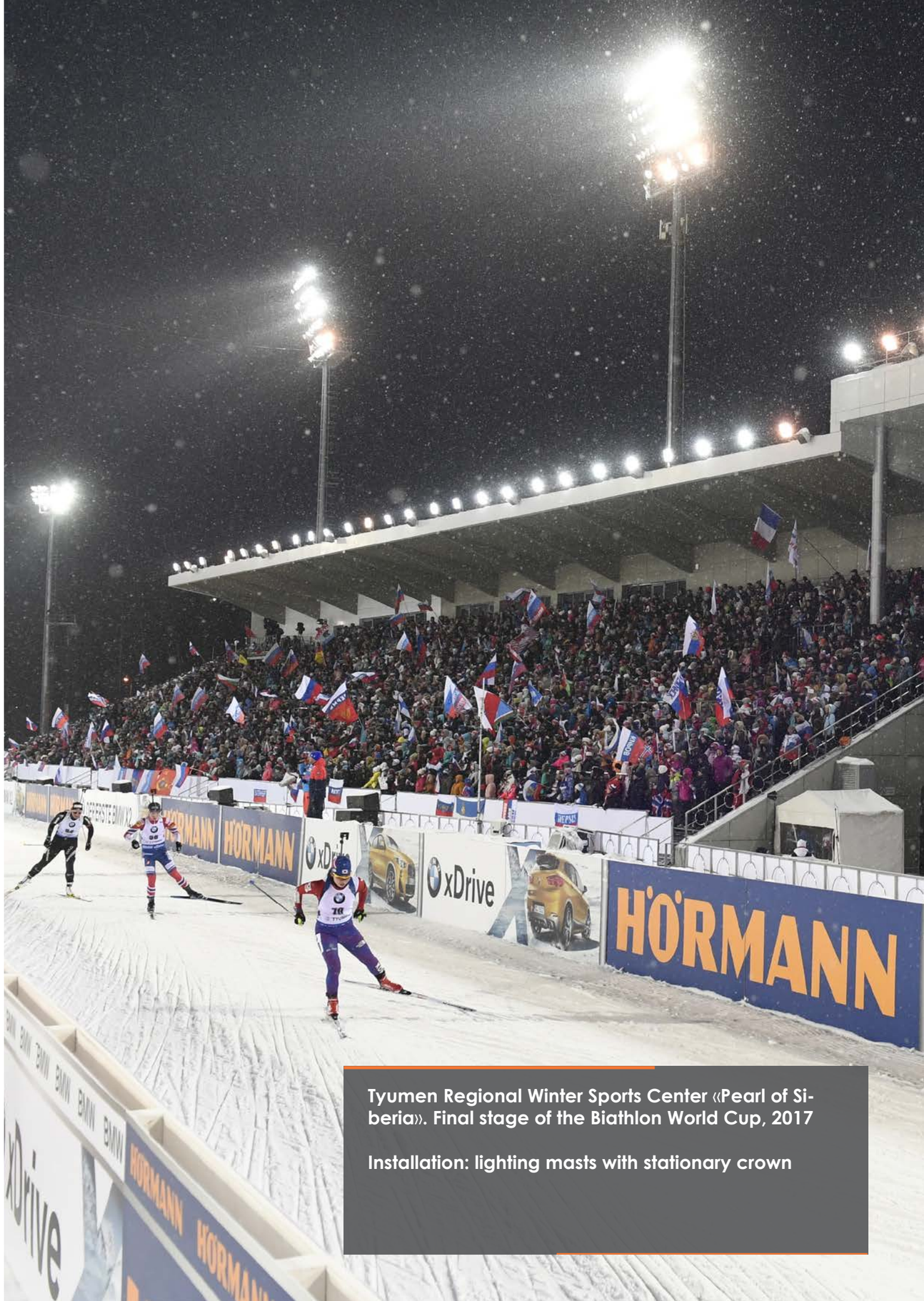
SRECIFICATIONS

Examples of typical designs of pokes VMON series. Poles dimensions may vary. from customer specification

Model	Weight, m	Height, H	Bottom diameter, D	Pole flange diameter, A	Hole center distance, B	Sections Qty, K	Luminaire Qty
VMON-16	832 kg	16m	370 мм	580mm	490mm	2	6
VMON-20	1114 kg	20m	425 мм	600mm	525mm	2	10
VMON-25	1630 kg	25m	481 мм	700mm	600mm	3	12
VMON-25	2076 kg	25m	700 мм	900mm	800mm	3	30
VMON-30	2211 kg	30m	550 мм	800mm	700mm	3	20
VMON -30	3788 kg	30m	870 мм	1130mm	1020mm	3	30
VMON-35	4000 kg	35m	850 мм	1100mm	990mm	4	30
VMON-25	3400 kg	25m	800 мм	1095mm	960mm	3	28
VMON-40	9260 kg	40m	1300 мм	1700mm	1500mm	4	60

The table is for reference only. When placing an order, specify in the commercial units of the AMIRA group of companies the possibility of manufacturing equipment taking into account your wind region

Body	Sheet steel. The pole is made by a method of bending	Wind district	up I to VII
Cover	Hot galvanizing (ISO 1461). The guarantee for corrosion resistance makes at least 25 years.	Climatik version	I_2,II_4
Finish	Paintwork by the RAL table		



Tyumen Regional Winter Sports Center «Pearl of Siberia». Final stage of the Biathlon World Cup, 2017

Installation: lighting masts with stationary crown

VMO

High lighting pole with mobile crown with spotlights

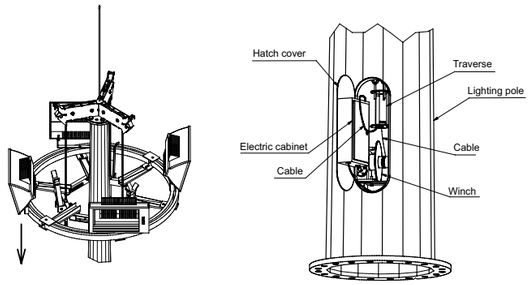
THE HEIGHT IS UP TO 50M

- Easy installation and maintanance
- Safety of service due to the mechanism of lowering and raising the mobile crown
- No special maintenance equipment required
- High corrosion resistance of the coating, even for marinare climate
- Long service life
- Possibility of manufacturing according to individual parameters and colors in any color according to the RAL table
- Possibility of installation and service from the manufacturer

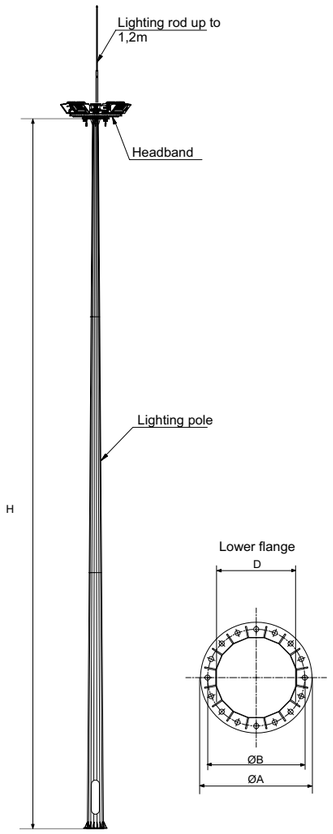
APPLICATION

Lighting for sports facilities, ski slopes, large open spaces, industrial areas with limited access for maintenance of lighting installations, warehouses, airports, ports.

CROWN LOWERING AND LIFTING MECHANISM



DIMENSIONS



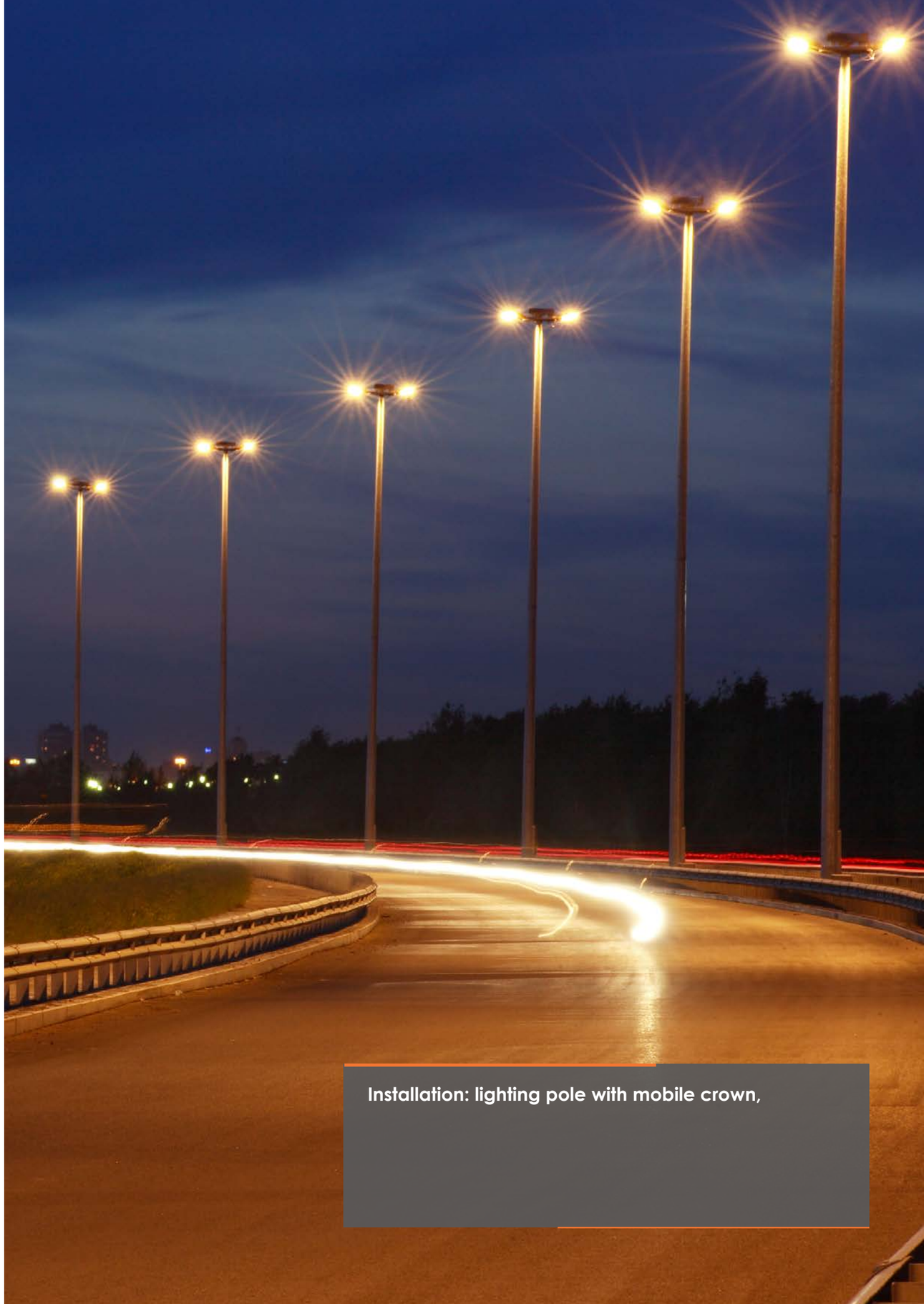
SPECIFICATIONS

Examples of typical designs of pokes VMO series. Poles dimensions may vary. from customer specification

Model	Weight, m	Height, H	Bottom diameter, D	Pole flange diameter, A	Hole center distance, B	Sections Qty, K	Luminaire Qty	Mechanical drive capacity
VMO-16	650 kg	16m	450mm	640mm	540mm	2	up to 4	330 kg
VMO-20	717 kg	20m	440mm	640mm	540mm	2	up to 4	330 kg
VMO-20	1100 kg	20m	525mm	750mm	650mm	2	up to 6	330 kg
VMO-25	1080 kg	25m	440mm	640mm	540mm	3	up to 6	330 kg
VMO-25	1124 kg	25m	565mm	780mm	680mm	3	up to 8	660 kg
VMO-30	1413 kg	30m	600mm	800mm	700mm	3	up to 6	660 kg
VMO-30	1816 kg	30m	640mm	840mm	740mm	3	up to 10	660 kg
VMO-35	2490 kg	35m	680mm	900mm	800mm	4	up to 10	660 kg
VMO-40	3360 kg	40m	780mm	1000mm	900mm	4	up to 10	660 kg
VMO-45	4300 kg	45m	780mm	1050mm	930mm	4	up to 10	660 kg
VMO-50	3000 kg	50m	780mm	1000mm	900mm	5	up to 4	660 kg

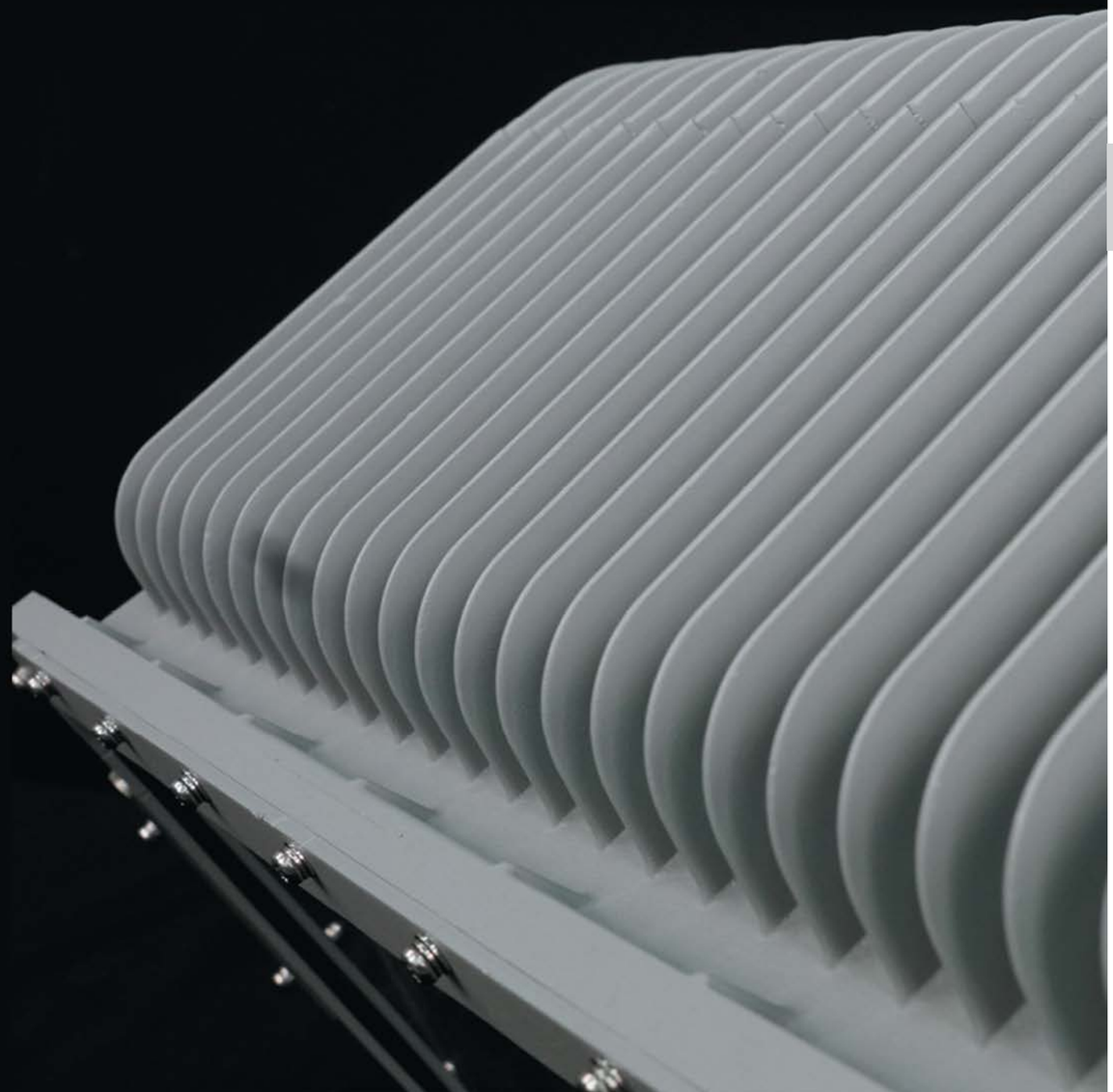
The table is for reference only. When placing an order, specify in the commercial units of the AMIRA group of companies the possibility of manufacturing equipment taking into account your wind region

Body	Sheet steel. The pole is made by a method of bending	Wind district	up I to VII
Cover	Hot galvanizing (ISO 1461). The guarantee for corrosion resistance makes at least 25 years.	Climatik version	I_2,II_4
Finish	Paintwork by the RAL table		

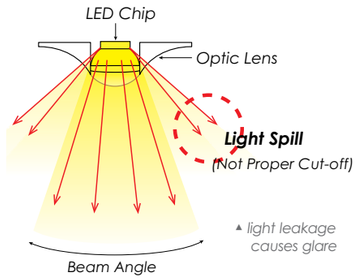


Installation: lighting pole with mobile crown,

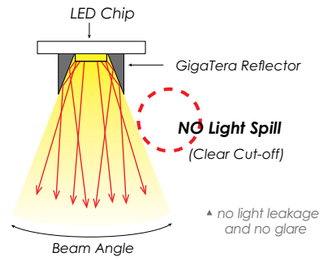
BENEFITS OF LED SPORTS LIGHTING by GigaTera



The lens method used by other companies



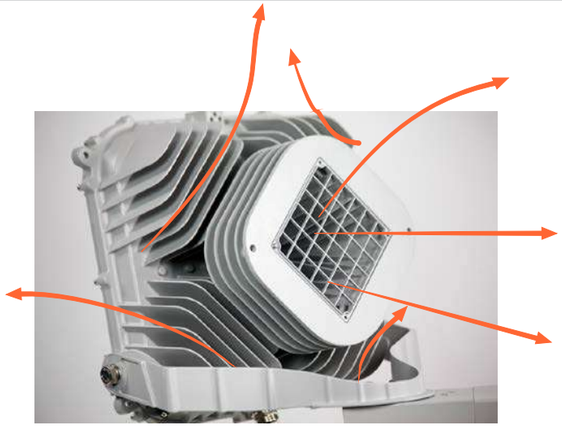
GigaTera SUFA series reflecting plate method



Minimized Glare

Metal halide lighting has a strong light which causes glare. For this reason, it makes it difficult for athletes to secure the optimal view during a competition. GigaTera's SUFA series LED lighting has a structure that features various narrow beam angles applying the reflecting plate method. This minimize the risk of glare caused by light leakage in any stadium and ensures that the athletes can improve their competitiveness and the spectators can enjoy a comfortable viewing experience. We also use an individual reflecting plate for each LED element to make sure the lights remain separated without converging and minimize the phenomenon whereby a flying ball becomes invisible in the light. Our products are thus completely optimized for sports events.

Cooling Technology



GigaTera's SUFA series sports lighting is designed with cooling fins with various structures, in horizontal/vertical directions. Using our structural design technology, we have adopted a natural convection method rather than a forced circulation method, and this solved the heat problem that has been a vulnerability of high power sports lighting. For LED lighting, effective heat management is directly correlated to the product life and therefore cooling technology is one of the most important technological resources

In the installation project cases, we can observe that conventional lighting using the HID method exhibits strong glares and partially stronger areas of light, making it impossible to see the flagpole and other structures. Once these lights were replaced with GigaTera's sports lighting products, the lights were produced in subdivided precision, thereby reducing the light deviation and minimizing glare. The result is that the flagpole and structures are far more clearly visible than they were in the previous lighting.

SET&STL SETA

IP66

HIGH EFFICIENCY 135 lm/W

- Wireless Lighting Control
- Built-in 20kV Surge Protection Device

APPLICATION

Industry complexes, Business parks, Local-ways, Alley-ways

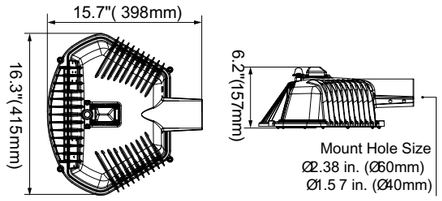
SPECIFICATIONS

Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
SET 100 STL 100	100W	135 lm/W	13 500 lm	5000K (3000K, 4000K aviable)	80Ra	4,5 kg 5,5 kg	AC100 ~ 277 V AC100 ~ 240	- 30°C ~60°C
SET 080 STL 080	80W	135 lm/W	10 800 lm		80Ra	4,5 kg 5,5 kg		

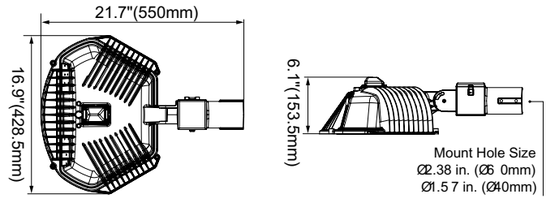
Body	Cast Aluminium	Mounting Option	Horizontal Tenon Mount
Cover	Tempered Glass 3.2T (Clear)	Light Distribution	Type II-S
Finish	Powder Coating	Control System	Wireless / Sensor (Daylight)

DIMENSIONS

• SETA



• SETA LT



MT&MTL META

IP66

HIGH EFFICIENCY 140 lm/W

- Excellent Light Distribution and Uniformity
- Wireless Lighting Control
- Built-in 20kV Surge Protection Device

APPLICATION

Expressways, Highways, Roadways, streets

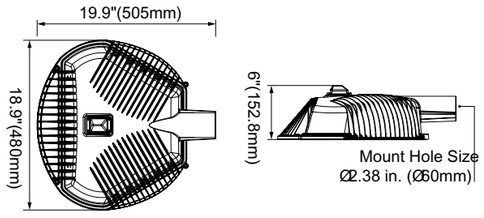
SPECIFICATIONS

Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
MT 180 MTL 180	180W	140 lm/W	25 200 lm	5000K (3000K, 4000K, 5700K aviable)	80Ra	7,9 kg 7,7kg	AC100 ~ 277 V AC100 ~ 240 V AC347 ~ 480 V	- 30°C ~60°C
MT 150 MTL 150	150W	140 lm/W	21 000 lm		80Ra	7,9 kg 7,7 kg		
MT 130 MTL 130	130W	450 lm/W	18 200 lm		80Ra	7,9 kg 7,7 kg		

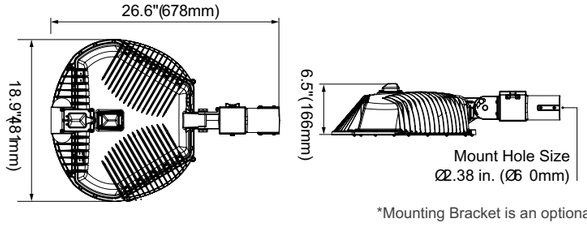
Body	Cast Aluminium	Mounting Option	Horizontal Tenon Mount
Cover	Tempered Glass 3.2T (Clear)	Light Distribution	Type III-S
Finish	Powder Coating	Control System	Wireless / Sensor (Daylight)

DIMENSIONS

• META



• META LT



*Mounting Bracket is an optional.

SFM SUFA-M

TILT AND ROTATE FOR EASY AIMING AND OPTIMIZED UNIFORMITY

- Excellent cooling structure design increases heat dissipation
- High CRI & R9 for better visibility
- Wired event lighting
- Color Tunable (4000 K ~ 5 700 K)

IP66

APPLICATION

Sports stadiums, Indoor Venues

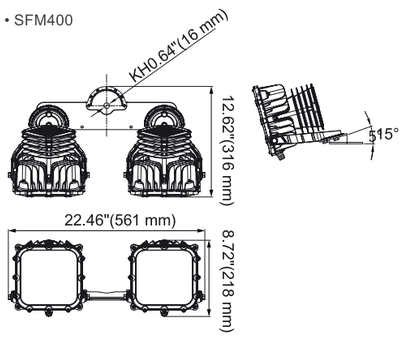
SPECIFICATIONS

Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
SFM 1K2 (200W x 6)	1200W	100 lm/W 110 lm/W 115 lm/W	120 000 lm 132 000 lm 138 000 lm	5000K (3000K, 4000K, 5700K available)	90 Ra 80 Ra 70 Ra	21,0 kg	DC100V (RED)	- 30°C ~55°C
SFM 400	400W	100 lm/W 110 lm/W 115 lm/W	40 000 lm 44 000 lm 46 000 lm		90 Ra 80 Ra 70 Ra	8,0 kg	DC100V (Power box)	
SFM 400 Warm / Cool	400W	100 lm/W 95 lm/W	40 000 lm 38 000 lm	4000K, 5000K 5700K	80 Ra	8,0 kg	DC100V (W/C Power box)	
		95 lm/W 90 lm/W	38 000 lm 36 000 lm		90 Ra			

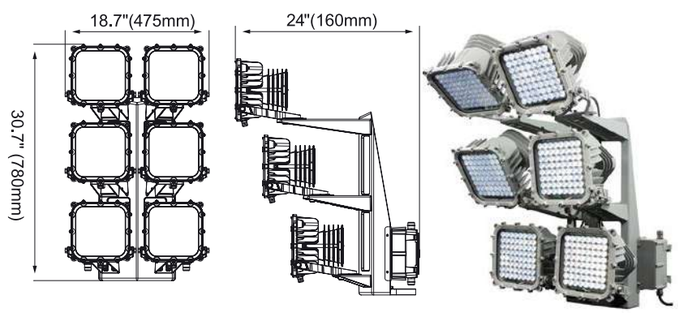
Body	Cast Aluminium	Light Distribution	15° / 30° / 45°
Cover	Tempered Glass 3.2T (Clear), Anti UV & Dust, Shatter Proof	Control System	Wired (RS-485)
Finish	Powder Coating		

DIMENSIONS

• SFM400



• SFM1K2



SFH SUFA-H

HIGH QUALITY SPORTS STADIUM LIGHTING

- No glare from Narrow beam reflector
- 1,000 fps flicker free super slow-motion (SSM)
- High CRI & R9 Content better visibility
- Wired dimming controls
- Various module combination available (1K2 : 600W x 2ea / 1K2 : 300W x 4ea/ 600W : 300W x 2ea)

IP66

APPLICATION

Sports Complex, Football Stadium, Soccer Stadium, Tennis Court, Indoor Arenas

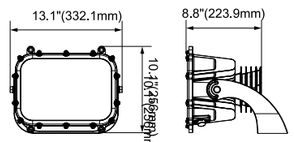
SPECIFICATIONS

Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
SFH 1K2	1200W (600W x 2) (300W x 3)	95 lm/W 105 lm/W 110 lm/W	114 000 lm 126 000 lm 132 000 lm	5000K (3000K, 4000K, 5700K available)	90 Ra 80 Ra 70 Ra	26,0 kg	DC100V (RED)	- 30°C ~55°C
SFH 600	600W	95 lm/W 105 lm/W 110 lm/W	57 000 lm 63 000 lm 66 000 lm		90 Ra 80 Ra 70 Ra	13,0 kg		

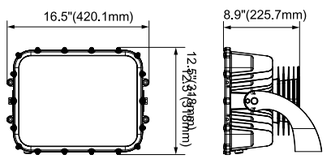
Body	Cast Aluminium	Light Distribution	15° / 20° / 30°
Cover	Tempered Glass 3.2T (Clear), Anti UV & Dust, Shatter Proof	Control System	Wired (RS-485)
Finish	Powder Coating		

DIMENSIONS

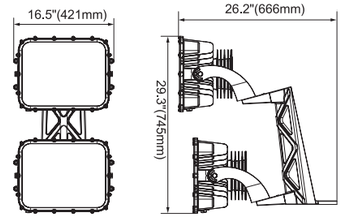
• SFH300



• SFH600



• SFH1K2



SFA SUFA-A

IP66

SPECTACULAR SPOSRTS LIGHTING COMES WITH HIGH EFFICACY AND LESS GLARE OPTIC TECHNOLOGY

- No glare from Narrow beam reflector
- Flicker free 1,000 fps ultra slow-motion
- High CRI & R9 for better visibility
- Tilt and rotate for easy aiming
- Wired event lighting control system

APPLICATION

Sports stadiums, Indoor venues, Ports

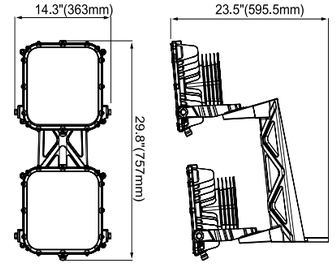
SPECIFICATIONS

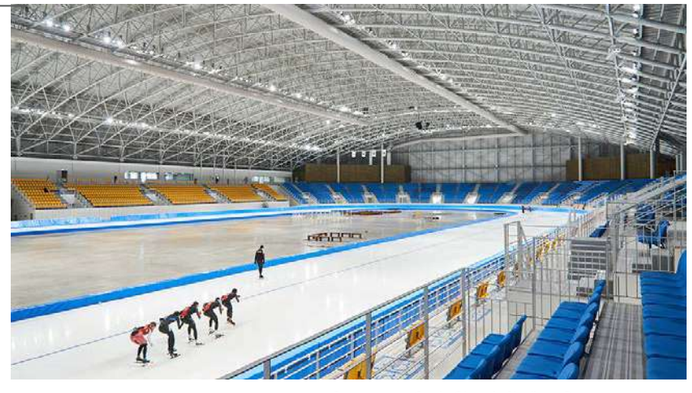
Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
SFA 1K2	1200W	100 lm/W 110 lm/W 115 lm/W	120 000 lm 132 000 lm 138 000 lm	5000K (3000K, 4000K, 5700K available)	90 Ra 80 Ra 70 Ra	18,0 kg	DC100V (built-in driver RED)	- 30°C ~55°C
SFA 1K0	1000W	100 lm/W 110 lm/W 115 lm/W	100 000 lm 110 000 lm 115 000 lm		90 Ra 80 Ra 70 Ra	18,0 kg		
SFA 800	800W	100 lm/W 110 lm/W 115 lm/W	80 000 lm 88 000 lm 92 000 lm		90 Ra 80 Ra 70 Ra	13,0 kg r	DC190V (remote driver BLU)	

Body	Cast Aluminium
Cover	Tempered Glass 3.2T (Clear), Anti UV & Dust, Shatter Proof
Finish	Powder Coating
Light Distribution	15 ° / 30 ° / 45 °
Control System	Wired (RS-485), Wireless(only 800W)

DIMENSIONS

• SFA1K2 / SFA1K0





Gangneung «Oval», Olympic Stadium, Gangneung Korea

SMA SUMA

diffused light | no light pollution

IP66

SMA600 (Built-in driver type)

SMA600 (Remote driver type)

EXCELLENT LIGHT DISTRIBUTION EVEN AT LONG DISTANCE

- High luminous efficacy 120 lm/W
- Tilting structure for optimized aiming (Upward: 10 °, Downward 20 °)
- Wired/Wireless dimming controls
- Oustanding cooling technology and durability

APPLICATION

Harbour, Airport aprons, Airplane hangars, Container terminals, Sporting facilities, Parking lots

SPACIFICATIONS

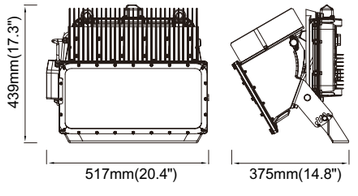
Driver Type	Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
built-in	SMA 600	600W	120 lm/W	72 000 lm	5000K (3000K, 4000K available)	70Ra	19,3 kg	AC200 ~ 277 V AC347 ~ 480 V	- 30 °C ~ +55 °C
built-in	SMA 400	400W	120 lm/W	48 000 lm		70Ra	18,6 kg		
remote	SMA 600	600W	120 lm/W	72 000 lm		70Ra	13,5 kg	DC100V (RED)	
remote	SMA 400	400W	120 lm/W	48 000 lm		70Ra	12,5 kg		

Body	Cast Aluminium
Cover	Tempered Glass 3.2T (Clear)
Finish	Powder Coating
Mounting Option	Swivel Bracket
Light Distribution	Asymmetric Wide
Control System	Remote Type: Wired (RS-485, DMX512) / Built-in Type: Wireless, NEMA-7

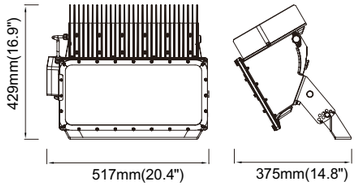
DIMENSIONS

• SMA600

[Built-in Driver type]



[Remote Driver type]



MA MAHA

UNRIVALED EFFICACY 145 LM/W

- Replacement for HID flood light
- Outstanding cooling technology and durability
- High-power LED light with middle power LED chips and reflector technology
- Excellent light distribution and thermal design for natural convection
- Dimming control using wireless

APPLICATION

Sporting facilities, Airplane hangars, Airport aprons, Parking lots, Harbour, Yard

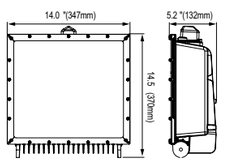
SPECIFICATIONS

Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
MA 150	150W	145 lm/W	21 750 lm	5000K (3000K, 4000K available)	80 Ra	7,5 kg	AC100 ~ 240 V AC100 ~ 277V	- 30 °C ~ +60 °C
MA 200	200W	145 lm/W	29 000 lm		80 Ra	10,0 kg	AC100 ~ 240V AC100 ~ 277V AC347 ~ 480V	- 30 °C ~ +55 °C
MA 300	300W	145 lm/W	43 500 lm		80 Ra	15,0 kg		- 30 °C ~ +55 °C
MA 400	400W	145 lm/W	58 000 lm		80 Ra	20,0 kg		- 30 °C ~ +53 °C

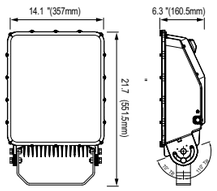
Body	Cast Aluminium	Mounting Option	Swivel Bracket / Pole Mount Bracket
Cover	Tempered Glass 3.2T (Clear)	Light Distribution	Asymmetric Wide
Finish	Powder Coating	Control System	Wireless (ZigBee) / Receptacle

DIMENSIONS

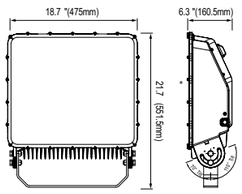
• MA150



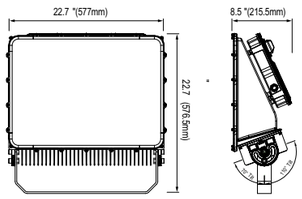
• MA200



• MA300



• MA400



RED REMOTE DRIVER

Remote Driver IP Box

DISTANCE BETWEEN LUMINAIRE AND REMOTE DRIVER IS UP TO 50 M

APPLICATION PRODUCTS

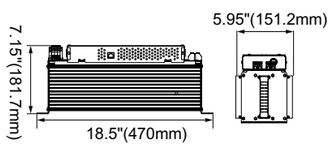
SMA400, SFH 1K2, SFM400, SFA 1K2, MAH500, MAH400

SPECIFICATIONS

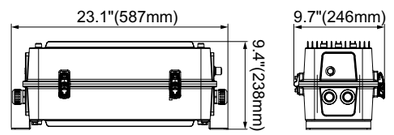
Model	Power	Input Voltage	Output Voltage	Input Current	Output Rated Current	Weight
RED 1K2	130W	AC220 ~ 277V AC200 ~ 240V AC220 ~ 240V AC347 ~ 480V	Typ. DC100V	Max. 7,6 (@220Vac) Max. 5,0 (@ 347Vac)	Max.6,5 A x 2EA	13,0 kg
RED 1K0	1100W			Max. 6,3 (@200Vac) Max. 4,4 (@347Vac)	Max.5,5 A x 2EA	13,0 kg
RED 600	650W			Max. 3,8 (@200Vac) Max. 2,5 (@347Vac)	Max.6,5 A	10,0 kg

DIMENSIONS

• RED (Remote Driver)



• RED IP BOX (Optional)



BLU REMOTE DRIVER

- The output voltage of Remote Driver is DC48V when the distance of the luminaires is less 5.0m, DC190V when over 5.0m
- Distance between luminaire and Remote driver is up to 70m

APPLICATION PRODUCTS

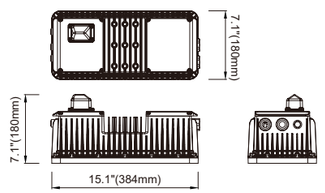
SFA800

SPECIFICATIONS

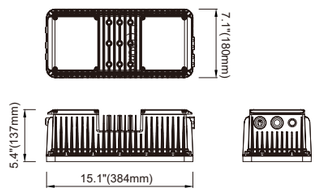
Model	Power	Input Voltage	Output Voltage	Input Current	Output Rated Current	Weight
BLU 800	855W	AC220 ~ 277V	190V	Max.5,0 (@200Vac)	Max 4,5A	10,0 kg

DIMENSIONS

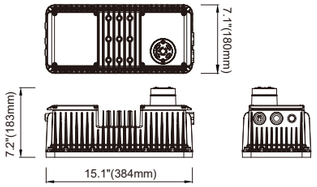
• BLU (Wireless)



• BLU (Wired)



• BLU (NEMA)



GigaTera® ecology Service System - GeSS
LIghting controle system

Nowadays, lighting is not merely about the traditional concept of “lighting up darkness.” but about controlling the intensity of lighting automatically based on the movement of people or objects, traffic, and sunshine.

There are similar requirements for the control system to save energy. In the past, simple power saving was good enough, but there is an increasing demand for a new control system considering the economical impact for energy consumption and maintenance costs to extend the system easily as well as the environmental aspect to minimize carbon emissions and light pollution.

Developed based on this trend, the GigaTera lighting control system is an eco-friendly system with minimized energy consumption and emissions. In addition, it has wireless, wired, and sensor control systems to provide the most stable and economical lighting control solutions.

GATEWAY GESS

The Gateways allows communication with command between the GeSS system and node

- This action is carried by using 2G/3G wireless connection and Ethernet
- Through wireless connection, the lighting fixtures and nide can be monitored and controlled

APPLICATION

Highway, Roadway, Street

SPECIFICATIONS

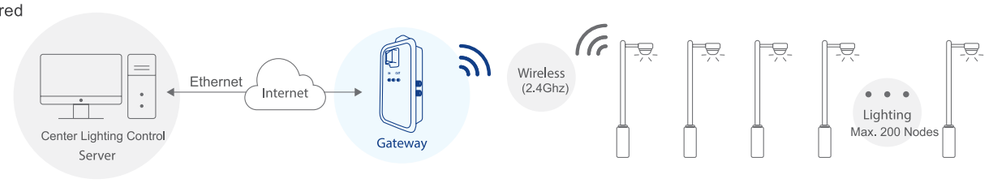
Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
MA 150	150W	145 lm/W	21 750 lm	5000K (3000K, 4000K available)	80 Ra	7,5 kg	AC100 ~ 240 V AC100 ~ 277V	- 30 °C ~ +60 °C

SYSTEM CONFIGURATION

• Wireless

*For local control only due to the distance limitation

• Wired



*** Notes** | Up to monodirectional *LOS@200M is valid between the gateway and the first node.
One gateway can be used to control up to 200 roadway lightings.

Lighting Control System

Wired / Wireless Control Device

GUI Operation Program - This is a PC operation program that allows users to manage the lighting control and settings when the lighting system is managed through a central control. The major functions include monitoring the status of the lighting device, on/off control, and brightness adjustment.

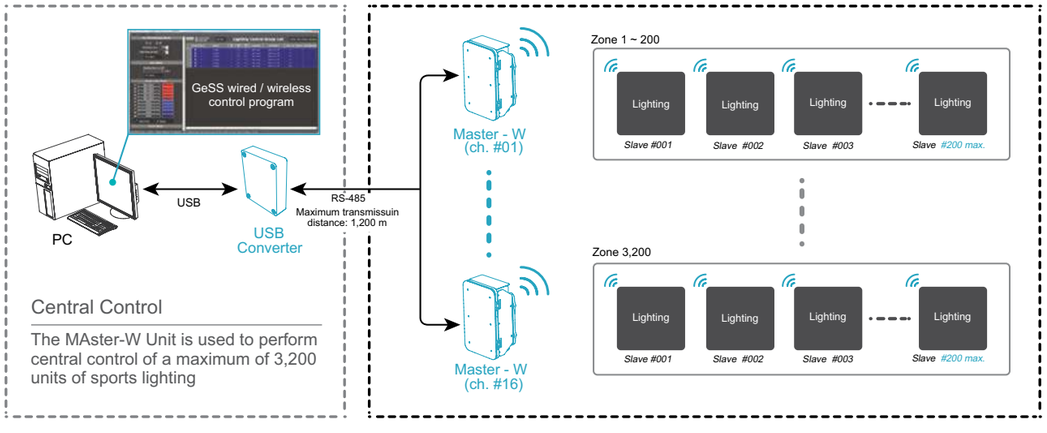
USB Converter Unit - This is connected to the PC's USB port. In this device, the received control command is converted into a RS-485 communication signal and transmitted to the master unit.

Master Unit (Master Unit-C: wired lighting control unit) - This device transmits the control command of the GUI operation program to the slave unit using a wired RS-485 signal. It can control and manage the status of a maximum of 32 slave units.
Slave Unit - This is a device that is installed on the interior of the lighting device. This is a module that analyses the control command received from the master unit and controls the lighting system.

GUI Operation Program

USB Converter Unit

Master Unit



Wireless Control Solution

The GeSS sports wireless control solution uses the GUI (Graphic User Interface) program to implement integrated wireless control functions, interlinking the wireless nodes found in the product with the master device installed in the worksite.

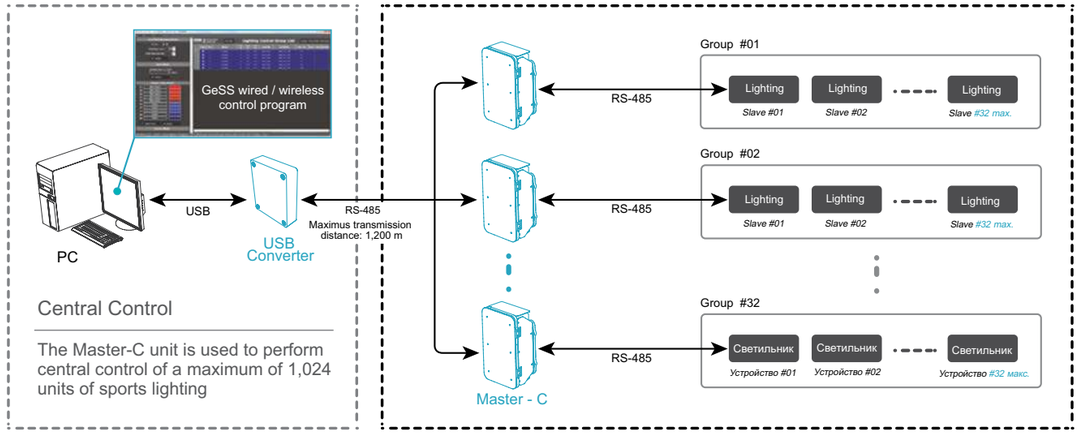
Wired Control Solution

RS-485 communication based GigaTera control solution

GeSS sports wired control solution supports the self-protocol of the RS-485 communication method.
The self-protocol can use the Multidro function to generate the network of the device that is connected to the single RS-485 serial port.
One unit of the master device can be connected with a maximum of 32 units of the slave device and can perform a maximum of 1,200m of serial communications. Also, the Daisy Chain and Ringtone Topology in the design ensure that even if a cable disconnection or communication error occurs in a specific section, the system as a whole can operate normally.

DMX - 512

The DMX-512 protocol is the standard method for connecting lighting device and lighting control modules. This protocol has been in use since 1986 and is considered to be the global standard.
Because this protocol is very simple and sturdy, it is still used widely in various lighting facilities for stage lighting or scenic lighting. It supports the lighting on/off function and even offers brightness control. Recently, it has been widely used in the sports lighting to create a range of various entertainment effects.



NLS

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