luminexence
MİTAŞ GROUP

CATALOGUE

CARPARK & COVERING STRUCTURES
STREET LIGHTS
SEATS

MİTAŞ

14/09/2022

GIANCARLO ZEMA DESIGN GROUP

The LumineXence in its vision of a sustainable future, has entrusted to the Italian architect Giancarlo Zema the design of a dream: to create a highly innovative projects of eco-urban designs in complete harmony with nature. The architect Zema always attracted by nature and its forms, creates collections very sculptural and functional art-designs, to answer in a poetic and unconsciously attractive way to the world of urban furniture with solar and eolic technology. Since 2001 Zema is Chairman of the Giancarlo Zema Design Group an architecture practice in Rome, specialized in smart eco-sustainable projects, semisubmerged architectural structures, marine parks, floating habitats, yacht and interior design.

PROFILE – INTERNATIONAL FACTORY

LumineXence is the innovative brand owned by the Turkish MITAS Group, one of the world's leading manufactures in the production of energy transmission line towers, substation steel structures and telecommunication towers. Exporting to more than 135 countries with 7 factories operating in 4 separate locations and a production capacity of 235,000 tons per year. LumineXence, founded in 2010 from the passion for design that is able to combine advanced technological content and strong aesthetic impact, has over time specialised in the production of high-design products for Smart City, able to exploit solar and wind energy.

MİTAŞ
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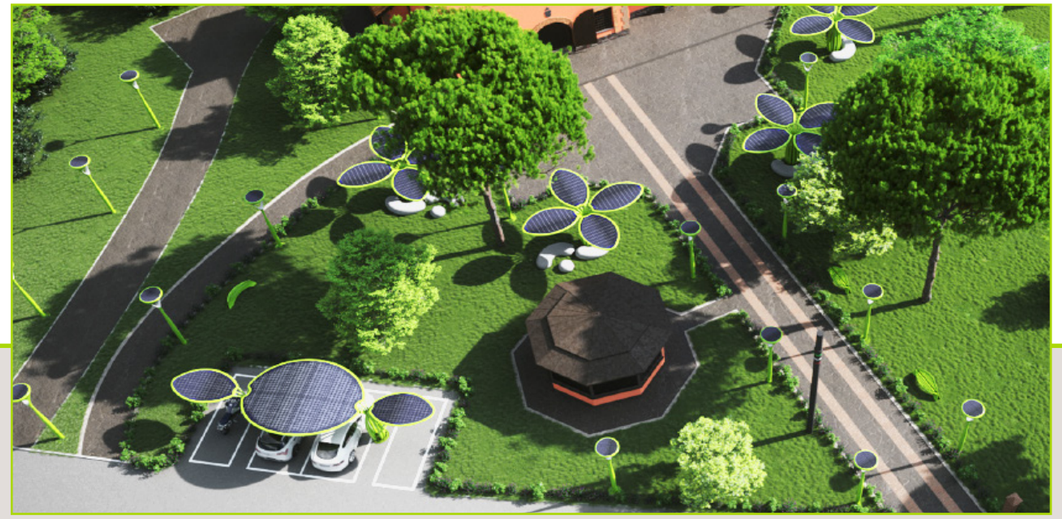
FUTURE
OUR SMART CITY VISION

THE VISION OF A CLEAN WORLD WHERE ARCHITECTURE AND DESIGN WILL MERGE WITH THE MOST SOPHISTICATED TECHNOLOGIES WITHIN A CIRCULAR ECONOMY.

PROJECTS

DEVELOPMENT STEPS



FROM THE PLAN, OUR ARCHITECTS STUDY THE LAYOUT TOGHETHER WITH THE CUSTOMER TO CREATE AN ENVIRONMENT WITH TECHNICAL AND AESTHETIC CONTENTS OF THE HIGHEST LEVEL.

WE OFFER A COMPLETE SERVICE FOR OUR CUSTOMERS, FROM CREATING THE FIRST 2D DESIGN, AND MOVING ONTO FINALIZING THE PROJECT WITH A 3D RENDER.

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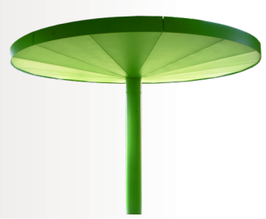
CARPARK

COVERING STRUCTURES



STREET LIGHTS

SEATS

CARPARK & COVERING STRUCTURE

LOTUS COLLECTION

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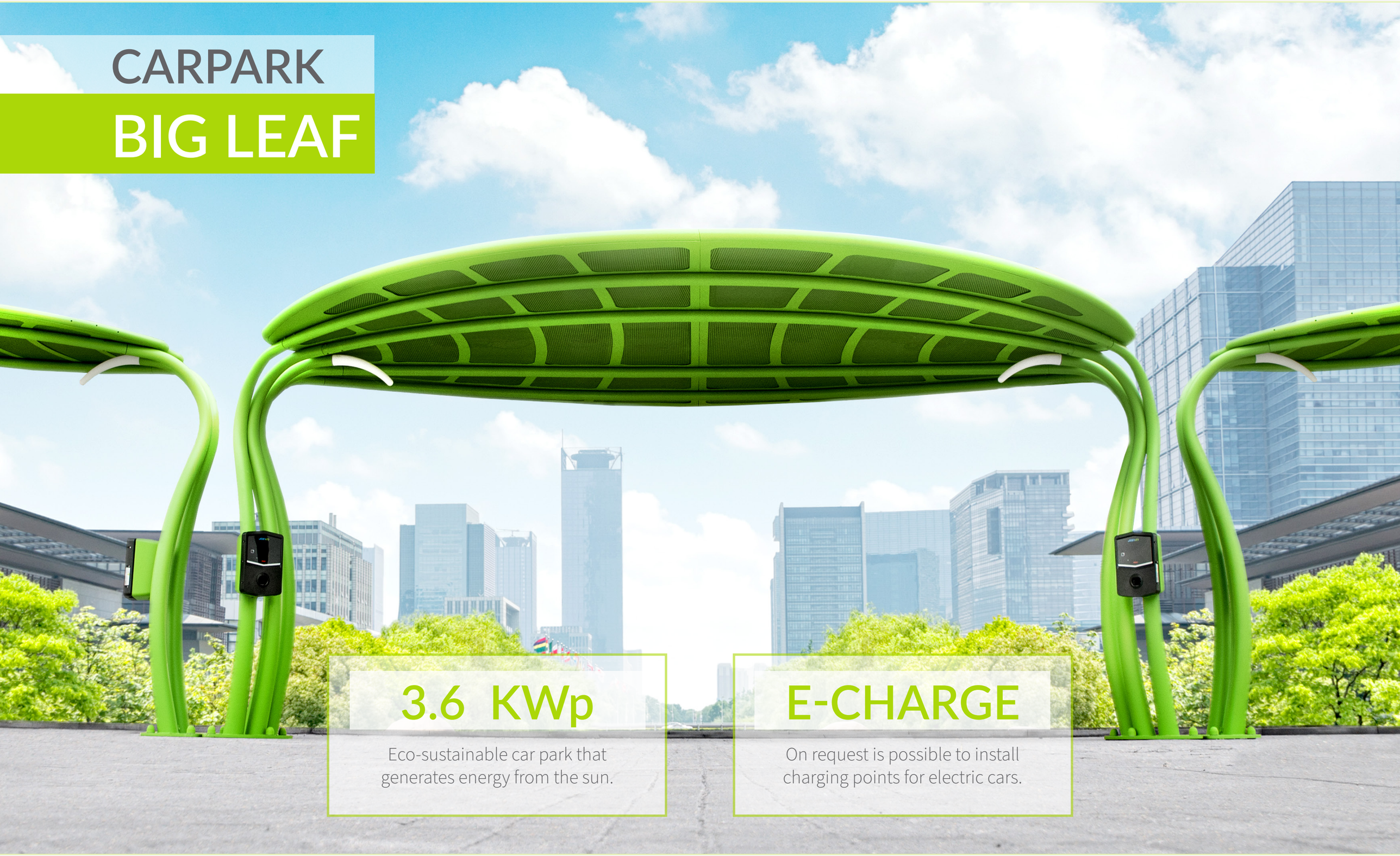
luminexence

CARPARK
BIG LEAF



3.6 KWp

Eco-sustainable car park that generates energy from the sun.

E-CHARGE

On request is possible to install charging points for electric cars.

BIG LEAF CAR PARKING

FEATURES
CAR PARKING FOR 2 CARS WITH PHOTOVOLTAIC PANELS.
DOUBLE LED LAMP. EV CHARGING STATION CAN BE ADDED AS OPTIONAL.

COMPOSITION

COVER X1	**FLMSHFO059XP000000**
BODY POLE X2	**FLMSHPABLEHPP50H00**
LED LIGHT X1	**FLMSHPI1X009XG0000**

CAR CHARGER (3.4 / 7 / 22 KW)

Light characteristics
Double LED light with 10W

* kit of anchor bolts to be ordered separately

PHOTOVOLTAIC KIT

Features
THE TOTAL POWER SUPPLIED IS 3.6 KWP
DATA REFERS TO EACH HALF SECTION.

PHOTOVOLTAIC KIT X2

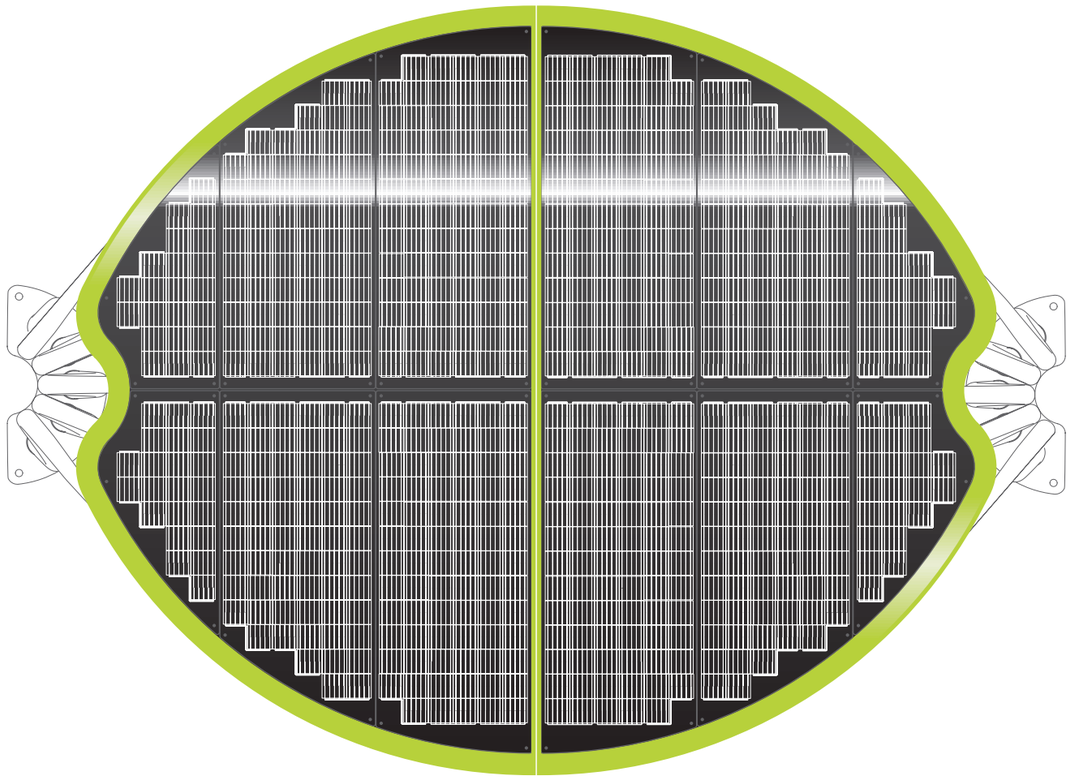
6 PHOTOVOLTAIC PANELS

1.8 KWP - VOE: 221.68 V - LSC: 10.18 A - VMP: 189.08 V - IMP: 9.69 A

22+64+ 77 + 77 +64+22 MONO CELLS

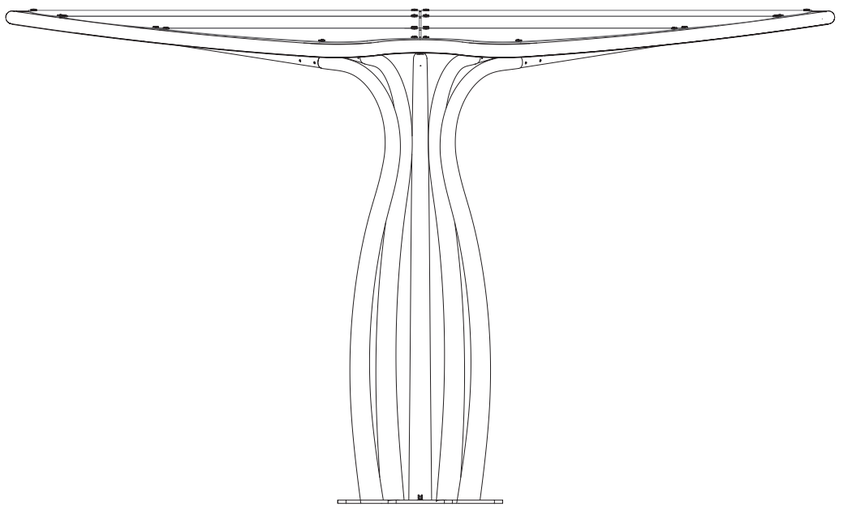
GLASS THICKNESS 4 MM

BACKSHEET : BLACK



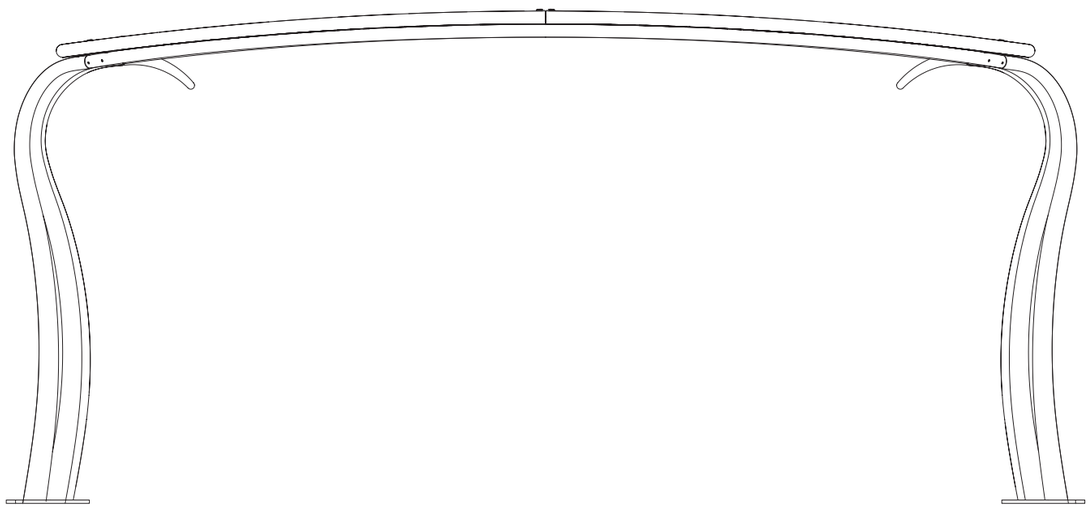
6 PHOTOVOLTAIC PANELS 1.8 kWp + 6 PHOTOVOLTAIC PANELS 1.8 kWp - Total 3.6 kWp

BIG LEAF DIMENSIONS



5 m

2,9 m



6,5 m

PISTILLO
LED LIGHT

Features
LED POWER 10 W.
290/305 V a.c. – 50/60 Hz
PF > 0,97 (PFC Active)
HI POWER LED Lumileds

ARMOR LED

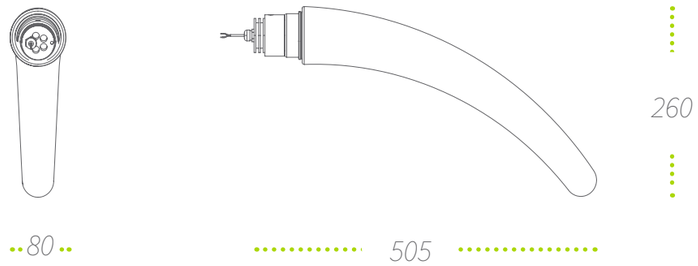
MATERIAL:

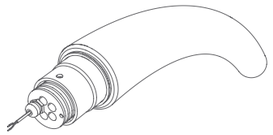
BODY IN POLYETHYLENE
INTERNAL STRUCTURE IN ALUMINIUM

PLASTIC COLORS:

SEMI-TRANSPARENT NAT.

CERTIFICATIONS



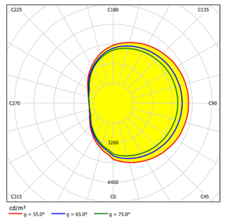


PHYSICAL CHARACTERISTICS

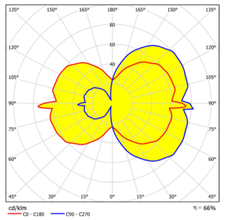
ITEM CODE 50W LED MOTOR	FLMLOAR1X050XGT001
WEIGHT	8.3 kg
DIMENSIONS	505 x 360x 224 mm
EXPOSURE TO THE WIND	Lateral: 0,03 m² | PLAIN : 0,027 m²

PHOTOMETRIC FEATURES: ROTOSYMMETRIC

R1 (Luminance diagram)



R1 (Polar diagram)



PISTILLO
TECHNICAL SHEET LED MOTOR

MAIN FEATURES	
Applications	Architectural lighting
Appliance type	LED system for PISTILLO luminaire
Series	Pistillo
Degree of protection	Optical compartment protection degree: IP20 / Electrical compartment protection degree: IP20
Impact resistance	Optical compartment resistance degree: IK08 / Electrical compartment resistance degree: IK00
Electrical Protection	E.O.S. system Protection System
Chemical Protection	V.O.C. system FREE
Effective Power	10 W
Light Source Flux	965 lm – 1.230 lm (@ Tj=85°C, If≤700 mA)
Luminous efficiency	η>120 lm/W (@ =85°C, If≤ 700 mA)
Operating Temperature	-40°C ÷ +50°C
Storage Temperature	-40°C ÷ +80°C
IR and UV radiation	Absent
Toxic Inorganic Elements	Absent
Warranty	5 year guarantee
IPEA	IPEA ≥ A ++ in accordance with DM 27/09/2017 (C.A.M.)
Reference standards	EN 60598-1 ; EN 60598-2-3 ; EN 60598-2-5 EN 62471 ; EN 55015 ; EN 61547 ; EN 61000-3-2 ; EN 61000-3-3
Trademarks and Certifications	CE, Photobiological Safety
OPTICAL FEATURES	
Photometry	Rotosymmetric
Light source	Hi Power LED
Correlated color temperature	Standard: 4.000K / Optional: 2200K, 2700K, 3000K, 5000K, 5700K
Color rendering index	Standard: CRI> 70 / Optional: CRI> 80, CRI> 90
LED modules	Modular, independent and replaceable MCPCBs
Optics	Independent and replaceable
Photometries	Ellipticals
Light source efficiency	η>140 lm/W (@ Tj=85°C, If≤ 700 mA)
Light source life	100,000 hours (L90B10 @ TJ = 85 ° C, If≤500mA).

ELECTRICAL FEATURES	
Power supply	175÷264 V a.c. – 50/60 Hz Electronic ballasts integrated in the lighting body with efficiency η> 95%.
Power supply LED	If≤700mA
Driver	Efficiency η> 95%; Power factor PF> 0.97 (Active PFC)
Insulation class	Standard: Class II / Optional: Class I
Electrical connection	Protected electrical connector
Electrical Protection	Standard: 10kV Common Mode; 6kV Differential
Ignition / re-ignition time	tA < 1sec. / tR < 1sec.
MECHANICAL CHARACTERISTICS	
Materials	HEAT SINK: Single body in aluminum.
System Dimensions and Weight	Dimensions 505 x 260 x 80 mm; Weight 1.8 kg

STREET LIGHTING FIXTURE DATASHEET 2X 25W

	ACTUAL POWER	NOMINAL LUMINOUS FLUX				N° LED	POWER SUPPLY
Product Item Code	[W]	[lm]	[lm]	[lm]	[lm]	[Pz]	[mA]
PISTILLO-10W -xxyy-zz-rr	**10**	1.230	1.160	1.115	1.050	1	700
		4070 (CCT 4.000K - CRI>70) 5070 (CCT 5.000K - CRI>70) 5770 (CCT 5.700K - CRI>70)	3070 (CCT 3.000K - CRI>70)	2270 (CCT 2.200K - CRI>70) 4080 (CCT 4.000K - CRI>80)	2270 (CCT2.200K -CRI>70)		

COVERING STRUCTURE

QUATREFOIL

4 LEAF QUATREFOIL

FEATURES
SHELTER FOR URBAN FURNITURE WITH PHOTOVOLTAIC PANELS.
LED LIGHTING.
EV CHARGING STATION AVAILABLE AS OPTIONAL.

COMPOSITION

COVER X4	**FLMSHFO030XP000000**
BODY POLE X1	**FLMSHPAQUAHPP50H00**
LED LIGHT X4	**FLMSHPI1X009XG0000**
CAR CHARGER (3.4 / 7 / 22 KW)	

Light characteristics
Four LED light with 10W

* kit of anchor bolts to be ordered separately

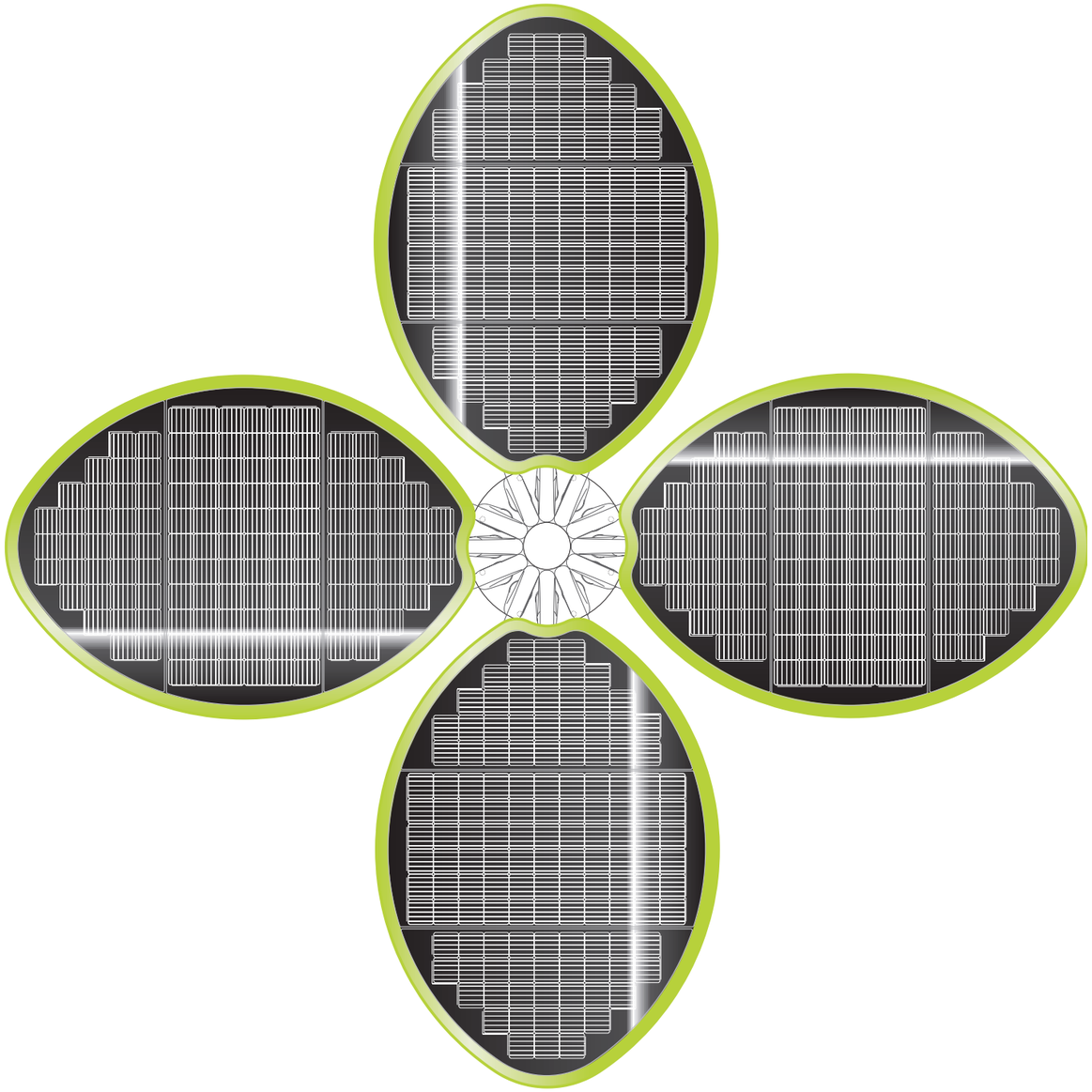
PHOTOVOLTAIC KIT

FEATURES
THE TOTAL POWER SUPPLIED IS 2.8 KWP

PHOTOVOLTAIC KIT X4

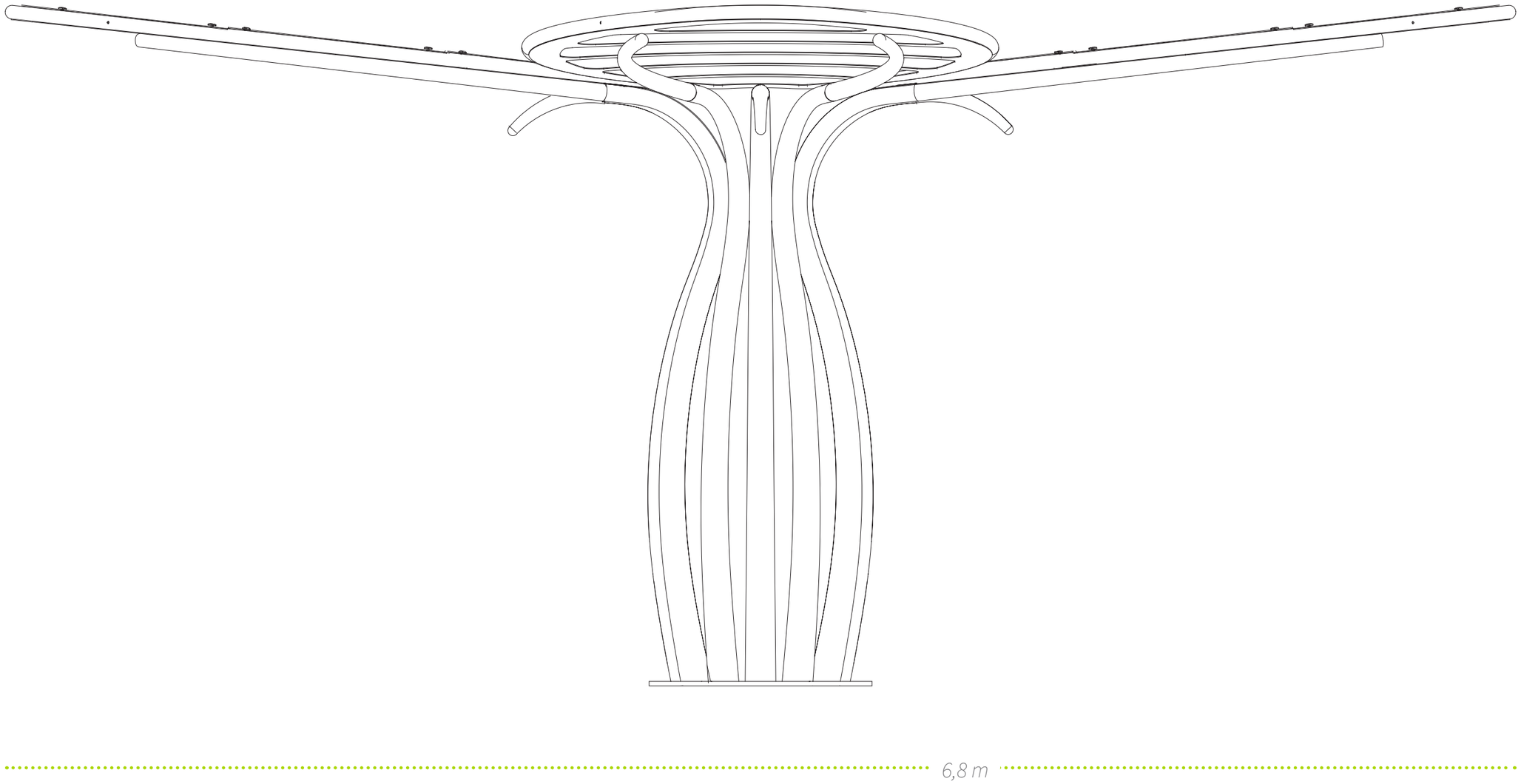
700 Wp - VOC: 88.69 V - ISC: 9.72 A - VMp: 75.49V IMP: 9.30 A
1833 X 875 mm - 33 MONO CELLS 175 Wp
2000 X 981 mm 66 MONO CELLS 350 Wp
1833 X 924 mm - 33 MONO CELLS 175 Wp
GLASS THICKNESS: 4 MM

BACKSHEET: BLACK



12 PHOTOVOLTAIC PANELS - Total 2.8 kWp

QUATREFOIL DIMENSIONS



COVERING STRUCTURE

ONE LEAF

700 Wp

Eco-sustainable covering structure generates energy from the sun.

ONE LEAF

FEATURES
MADE FROM 3 STEEL POLES FORMED ON OUR HSP MACHINES AND A STEEL FRAME TO INCLUDE THE SOLAR PANEL (MADE OF 3I NDIVIDUAL SOLAR PANELS).
THIS SHELTER IS DESIGNED TO INCLUDE A CAR CHARGER TO SUPPLY POWER TO PARKING AREAS SUCH AS HOTELS, MALLS, OFFICE COMPLEXES, ETC..

COMPOSITION

COVER X1	**FLMSHFO030XP000000**
BODY POLE X1	**FLMSHPASLRHPP50H00**
LED LIGHT X1	**FLMSHPI1X009XG0000**

CAR CHARGER (3.4 / 7 / 22 KW)

Light characteristics
Single LED light with 10W

* kit of anchor bolts to be ordered separately

PHOTOVOLTAIC KIT

FEATURES
THE TOTAL POWER SUPPLIED IS 700 Wp

PHOTOVOLTAIC KIT X1

3 PHOTOVOLTAIC PANELS

700 WP - VOC: 88.69 V - ISC: 9.72 A - VMP: 75.49V IMP: 9.30 A

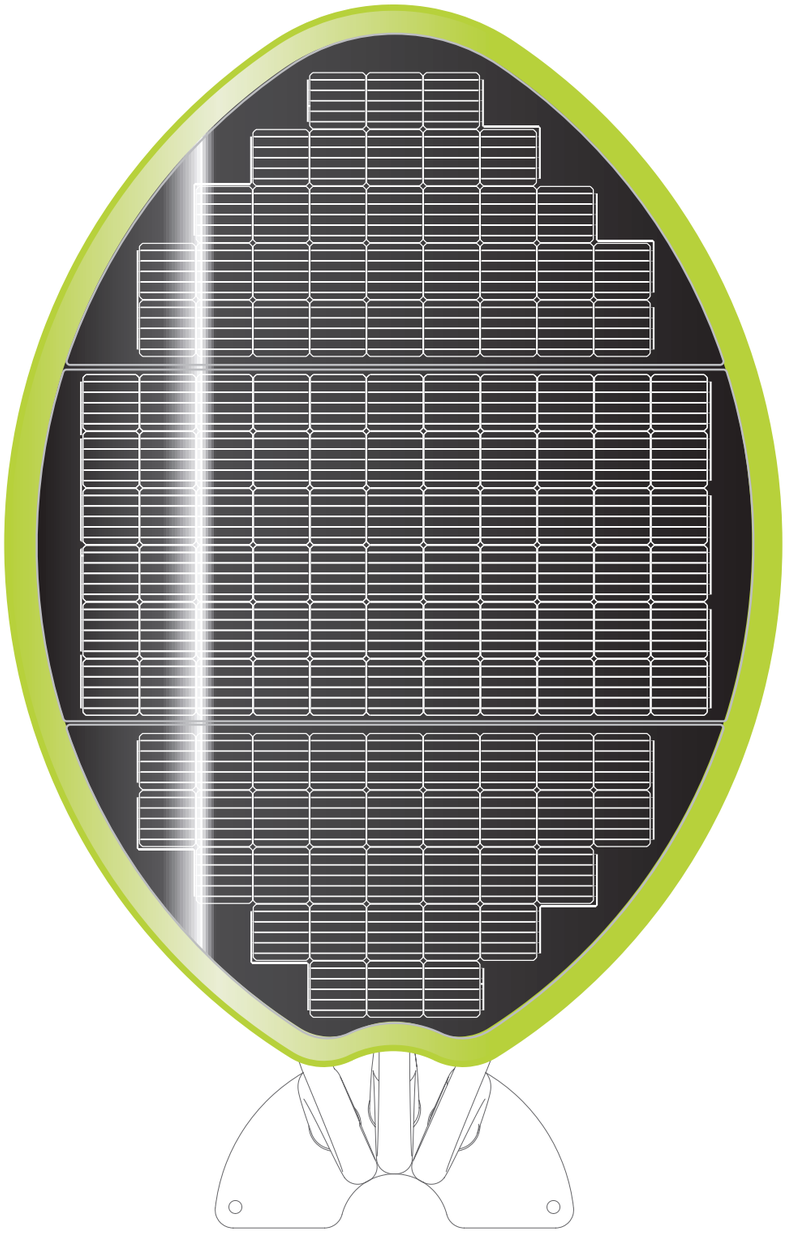
1833 X 875 mm - 33 MONO CELLS 175 WP

2000 X 981 mm - 66 MONO CELLS 350 WP

1833 X 924 mm - 33 MONO CELLS 175 WP

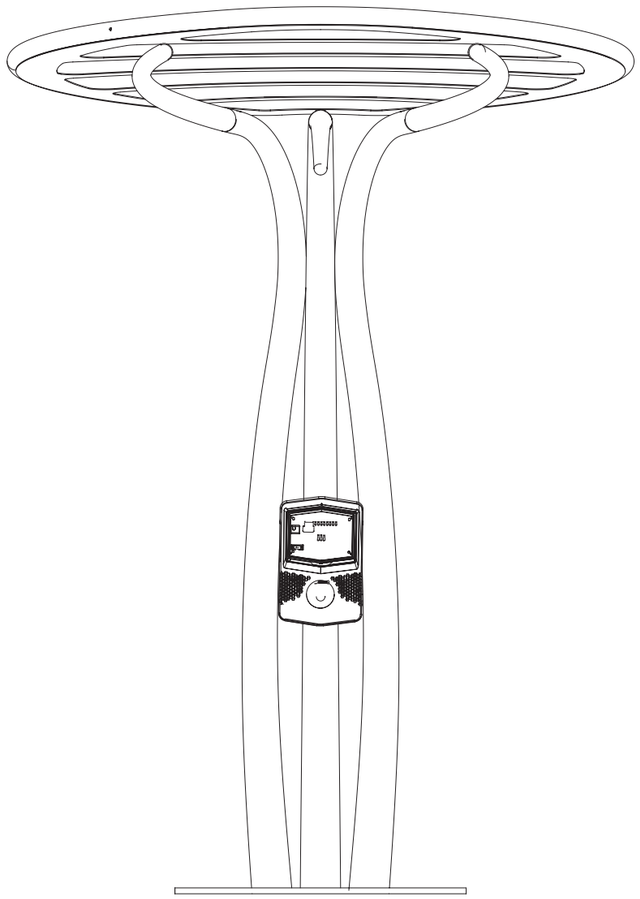
GLASS THICKNESS: 4 MM

BACKSHEET: BLACK



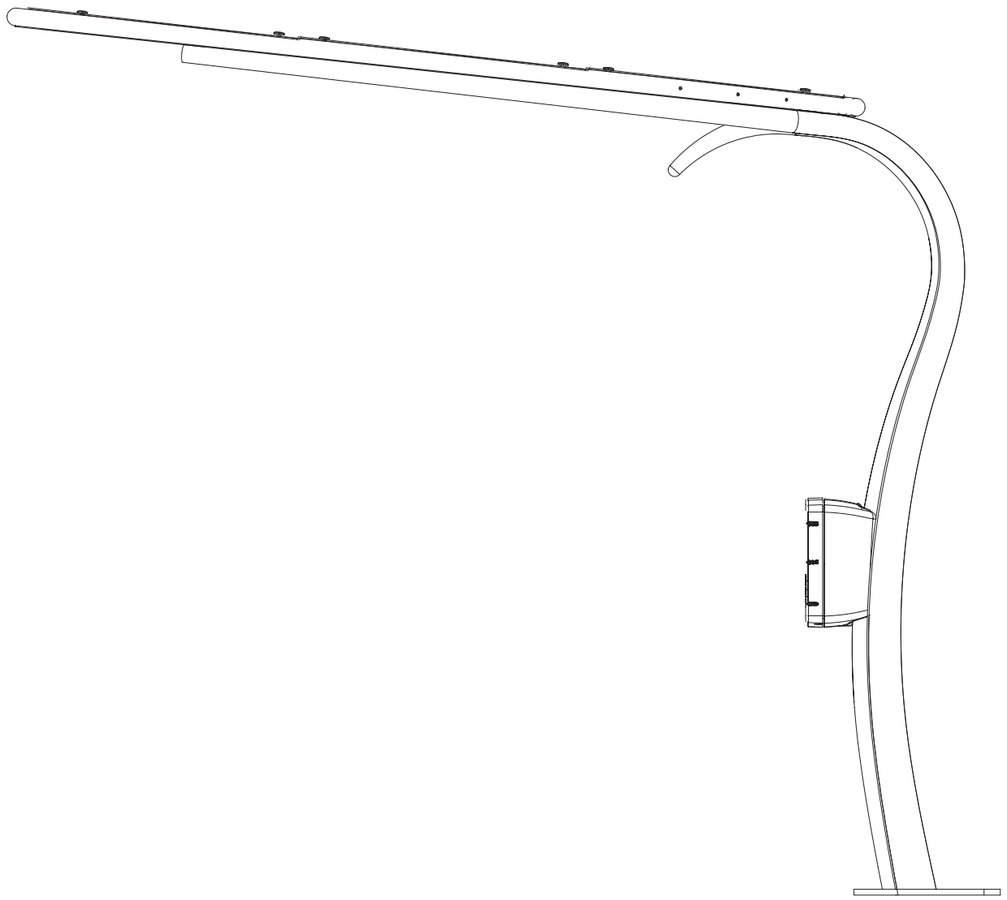
3 PHOTOVOLTAIC PANELS - Total 700 Wp

ONE LEAF DIMENSIONS



3 m

2,2 m



3,4 m

COVERING STRUCTURE

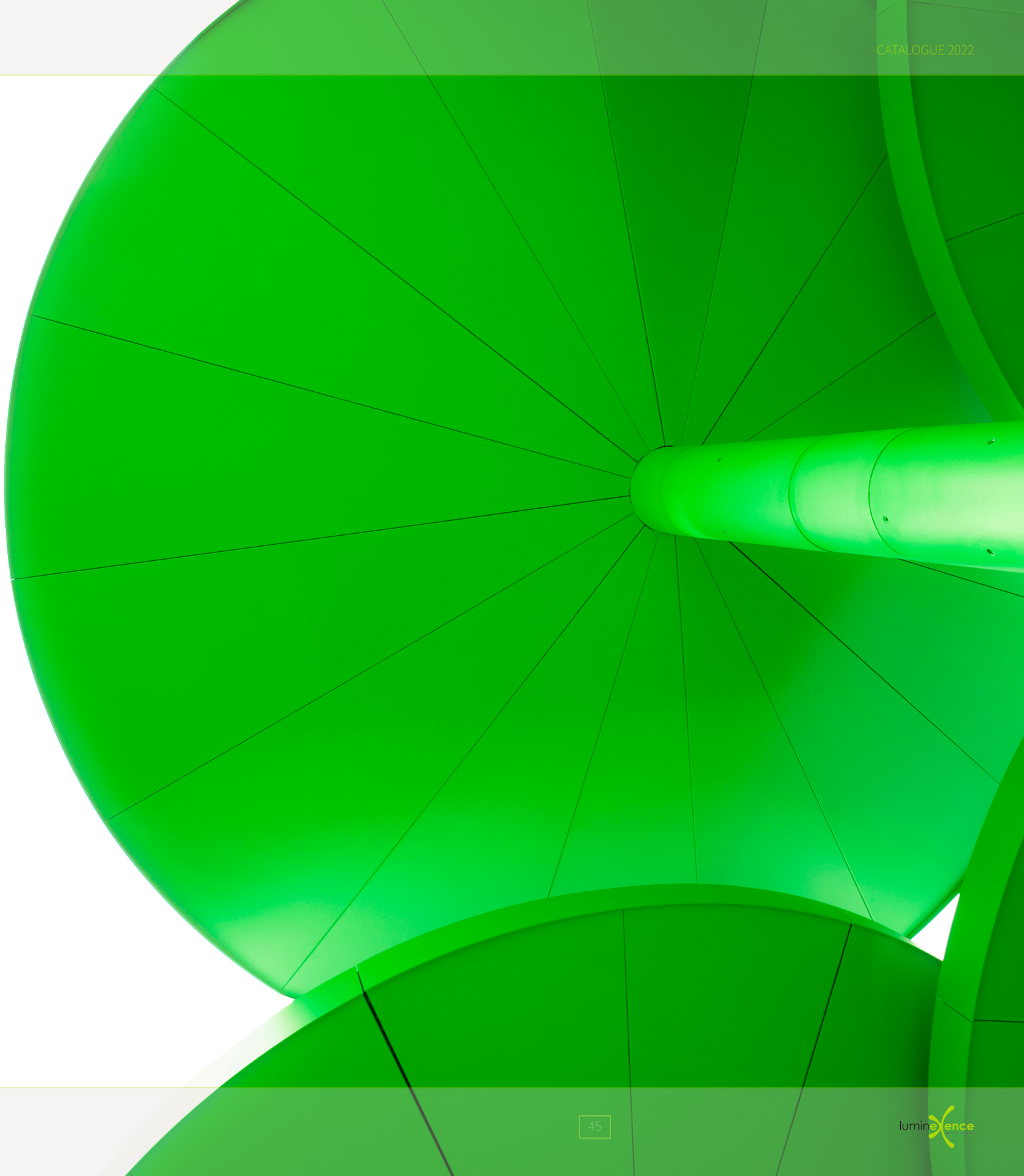
NINFEA

NINFEA

FEATURES
SHELTER FOR URBAN FURNITURE WITH PHOTOVOLTAIC PANELS
AVAILABLE IN DIFFERT HIGHTS.

COMPOSITION

COVER X8	**FLMNIFO040XP000000**
BODY POLE X1	**FLMNIST037LPI63M00**



PHOTOVOLTAIC KIT

PHOTOVOLTAIC KIT X2

8 PHOTOVOLTAIC PANELS

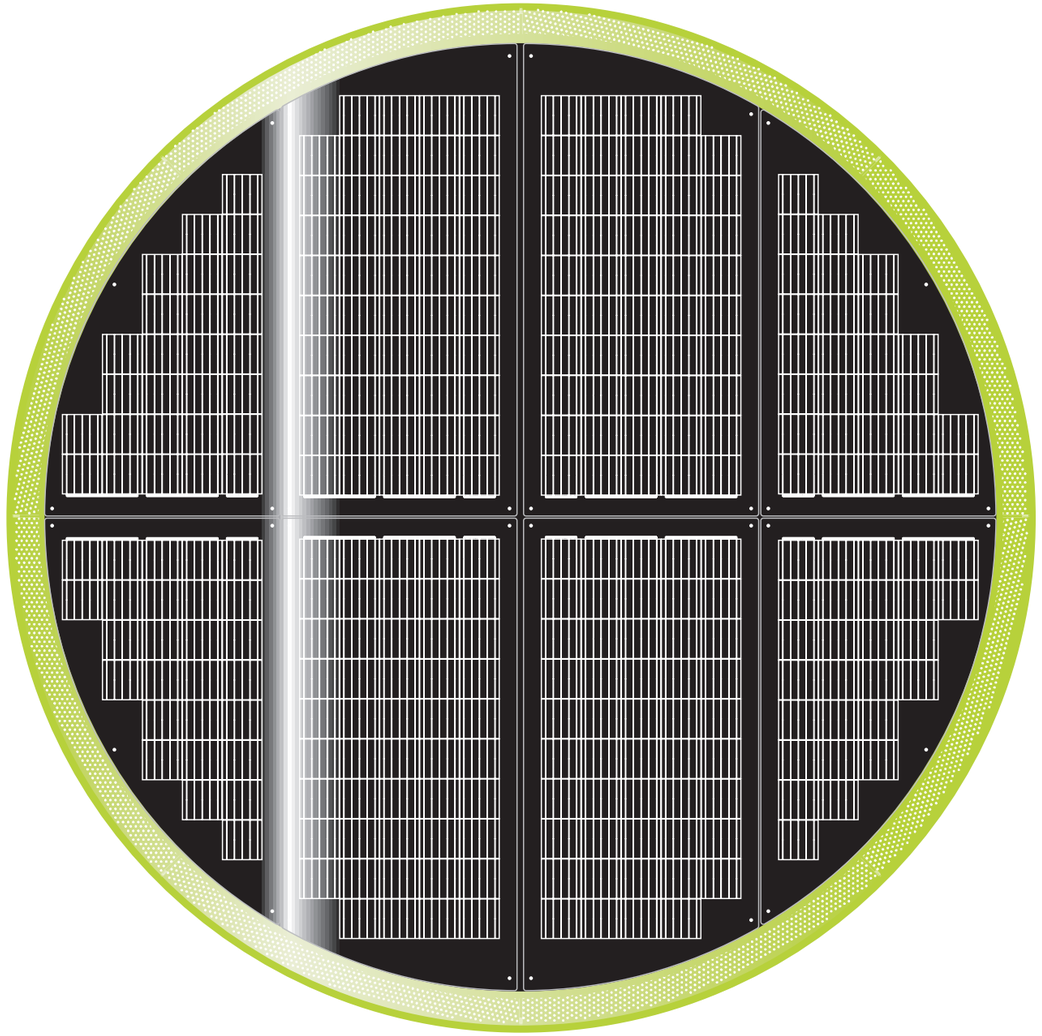
1450 WP - VOC: 88.69 V - ISC: 9.72 A - VMP: 75.49V IMP: 9.30 A

1628 X 942 mm - 27 MONO CELLS 135 WP - N°4 Pcs

1894 X 942 mm - 49 MONO CELLS 245 WP - N°4 Pcs

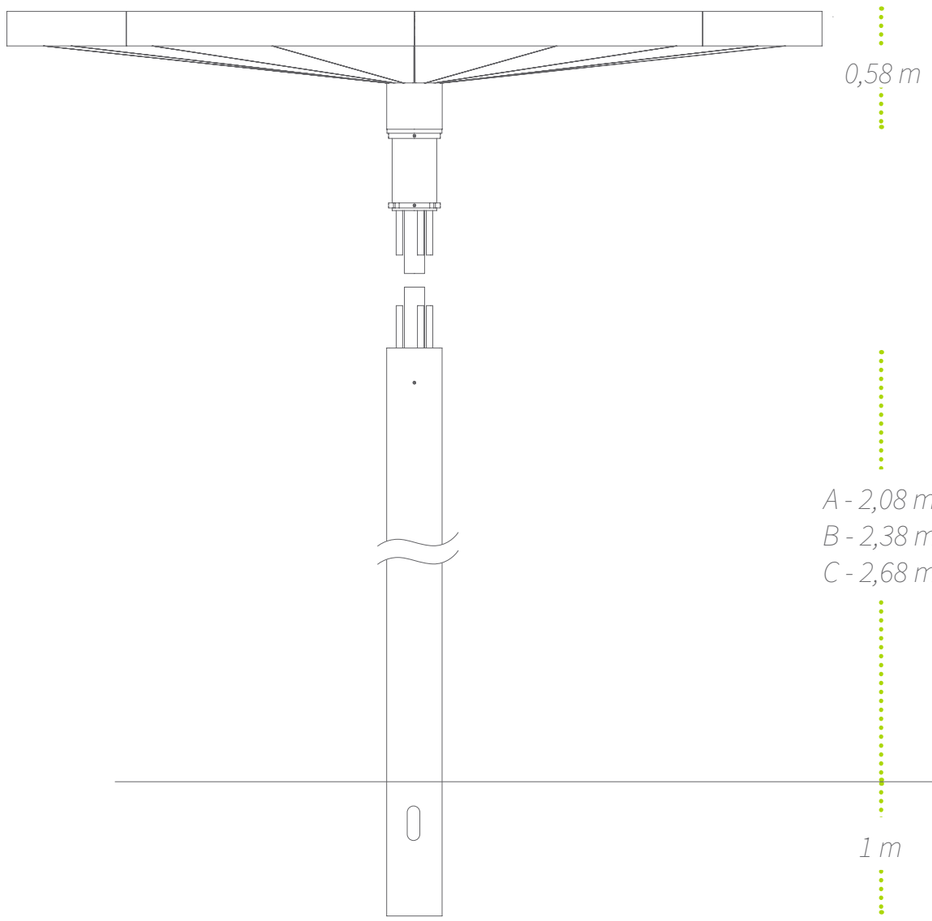
GLASS THICKNESS: 4 MM

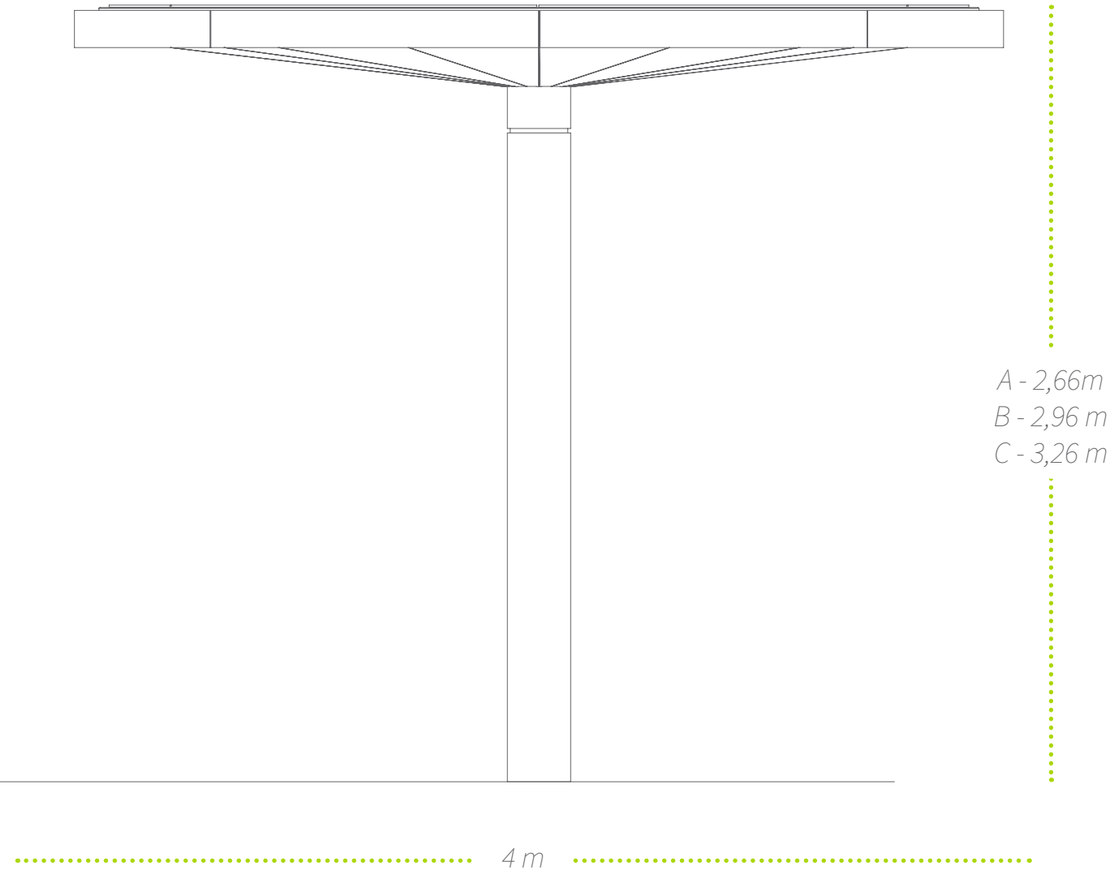
BACKSHEET: BLACK



8 PHOTOVOLTAIC PANELS - Total 1.45 kWp

NINFEA DIMENSIONS





SMART POLE

LOTUS / POD COLLECTIONS

STREET LIGHTING

VIDEO SURVEILLANCE

PHOTOVOLTAIC LEAF

STREET LIGHTING SYSTEM

LOTUS

STEEL POLE WITH STREET LIGHTING & PHOTOVOLTAIC PANEL

LOTUS COLLECTION

Inspired by the leaves of the lotus flower, the Lotus collection grows in the Smart Cities of the future to generate lighting in an eco-sustainable way, obtaining from the sun the energy necessary to work.
The steel structure with variable sections accommodates photovoltaic leaves on top of 1.5 sqm capable of generating 265 W each.

LOTUS - SOLAR STREET LIGHT POLE

FEATURES
ON GRID SYSTEM FOR STREET LIGHTING
WITH 265 W PHOTOVOLTAIC PANEL.
AVAILABLE IN DIFFERENT HEIGHTS.

**SMART POLE
WITH ADJSTABLE
PHOTOVOLTAIC LEAF
1/2 STREET LIGHTS**

LOTUS - SOLAR STREET LIGHT POLE

FEATURES
LIGHTING BODY HEIGHT 6/8/10 METERS,

SINGLE LIGHT

DOUBLE LIGHT

POLES CODES:

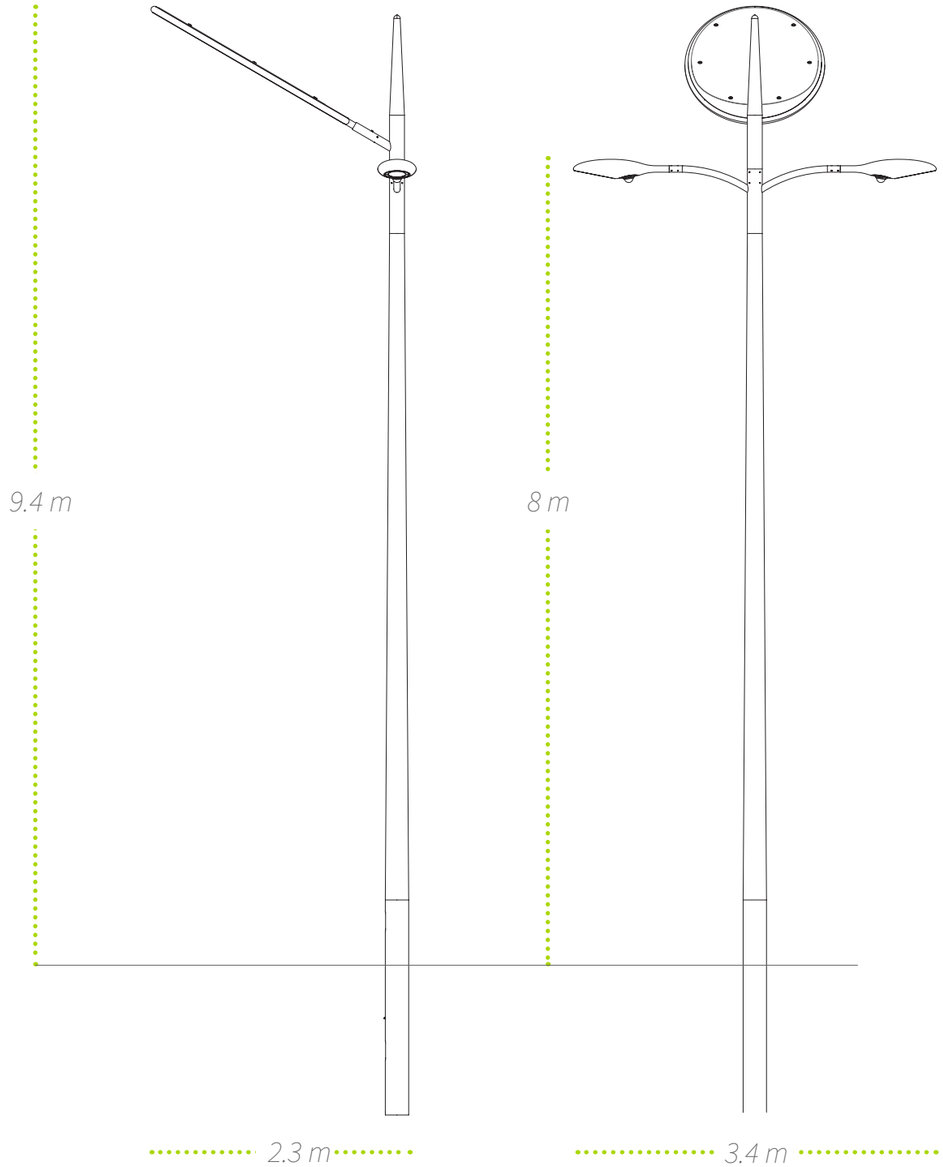
POLE 6 METERS	**FLMLOPA068HPI50LMS08**
POLE 8 METERS	**FLMLOPA088HPI50LMS08**

POLES CODES:

POLE 6 METERS	**FLMLOPA068HPI50LMD08**
POLE 8 METERS	**FLMLOPA088HPI50LMD08**

LEAF STRUCTURE FOR PHOTOVOLTAIC : FLMLOFO021XP000000
LEAF SHELF WITH TIP FLMLOME014XPSF0000

COLORS:
POLE AND LEAF HOT DIP GALVANIZED AND POWDER COATED: RAL 6018 / RAL COLORING



LOTUS
STREET LIGHT

FEATURES
OUTSIDE BODY PLASTIC .
INSIDE SUPPORTS ALUMINIUM.
THERMAL SINK OF THE LED MOTOR IN DIE-CASTING OF ALUMINIUM.
VERSION AVAILABLE WITH VIDEOSURVELAINCE

POWER OF THE LIGHTING
50W / 75W.
PROGRAMMABLE
OPERATING TIME.

STREET LIGHT

FEATURES

50 / 75 W LED motor

ARMOR LED

ARMOR LED WITH CAMERA

MATERIAL:

BODY IN POLYETHYLENE

INTERNAL STRUCTURE IN ALUMINIUM

PLASTIC COLORS:

GREEN P 657, GREY P 611, BLACK P 210

PLASTIC PAINTED COLORS:

ALLS RAL COLORATION ON REQUEST

CAMERA

DH-SD22404T-GN

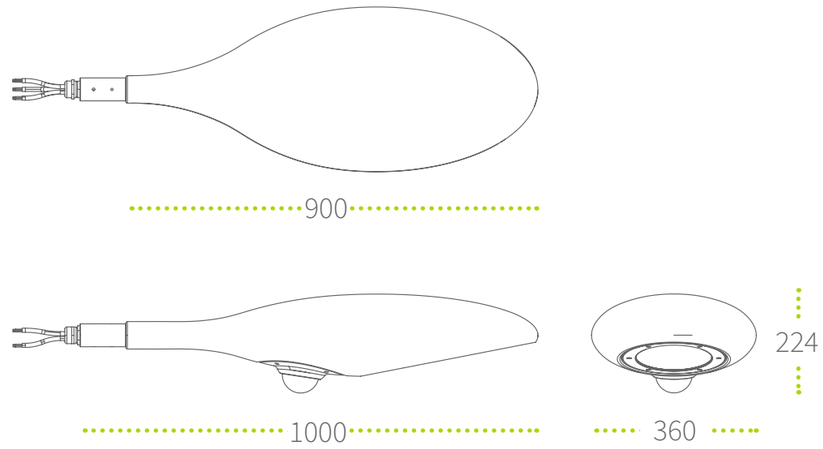
4MP 4x PTZ Network Camera

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, the camera provides a wide monitoring range and great detail.

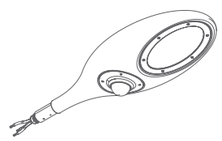
The camera delivers 4MP resolution at 25/30fps.

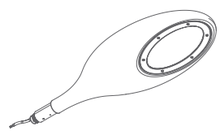
The camera is equipped with smooth control, high quality image, and good protection, meeting compact size demands of video surveillance applications

CERTIFICATIONS



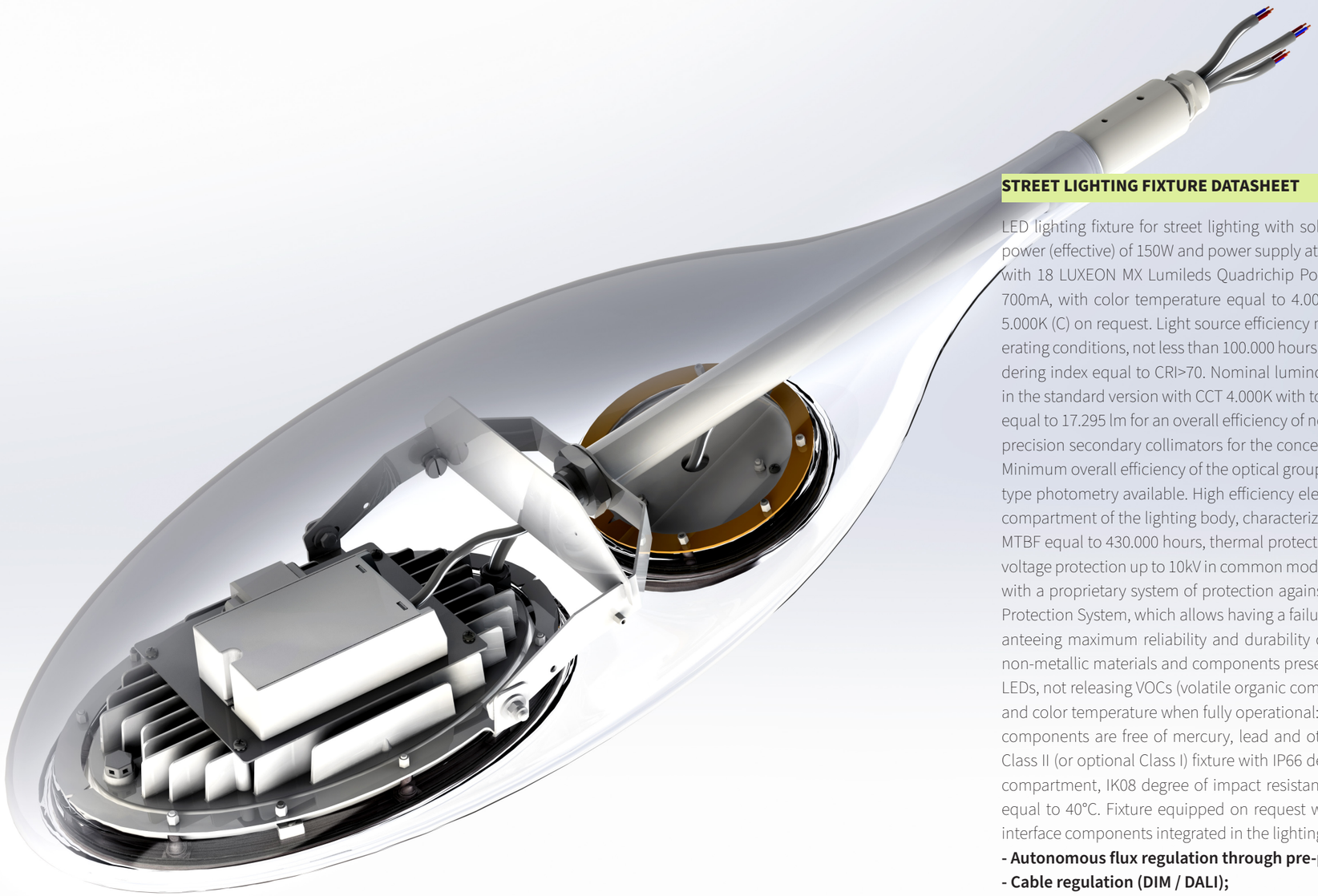
PHYSICAL CHARACTERISTICS





	ARMOR LED WITH CAMERA	ARMOR LED
ITEM CODE 50W LED MOTOR	FLMLOAR1X050XGT001	FLMLOAR1X050XG0001
ITEM CODE 75W LED MOTOR	FLMLOAR1X075XGT001	FLMLOAR1X075XG0001
WEIGHT	8.3 kg	7.2 kg
DIMENSIONS	900 x 360x 224 mm	900 x 360x180mm
EXPOSURE TO THE WIND	Lateral: 0,11 m^2 | PLAIN : 0,22 m^2	

LOTUS - STREET LIGHT

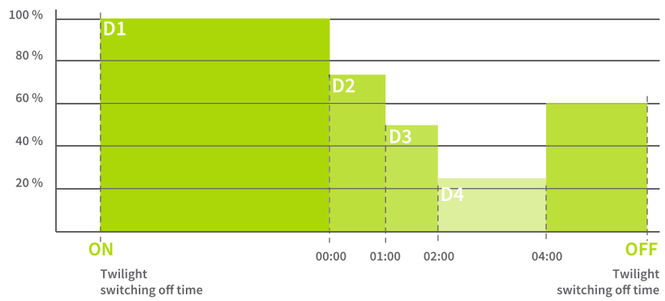


STREET LIGHTING FIXTURE DATASHEET

LED lighting fixture for street lighting with solid state technology, with maximum absorbed power (effective) of 150W and power supply at 220 / 240V a.c. - 50 / 60Hz. Luminaire equipped with 18 LUXEON MX Lumileds Quadrichip Power LEDs, powered by constant current up to 700mA, with color temperature equal to 4.000K (N) in the standard version, or 3.000K (W), 5.000K (C) on request. Light source efficiency not less than 150lm/W; duration, in optimal operating conditions, not less than 100.000 hours (L90B10 - LED@700mA - Tj=85°C) and color rendering index equal to CRI>70. Nominal luminous flux with Tj=85°C equal to 22.172lm (150W) in the standard version with CCT 4.000K with total luminous flux emitted by the lighting fixture equal to 17.295 lm for an overall efficiency of not less than 115 lm/W. LEDs equipped with high precision secondary collimators for the concentration of the light beam, with high efficiency. Minimum overall efficiency of the optical group not less than 78%. Different asymmetric street type photometry available. High efficiency electronic ballasts integrated in the power supply compartment of the lighting body, characterized by a power factor (PF) greater than 0,98 and MTBF equal to 430.000 hours, thermal protection, short-circuit protection and standard overvoltage protection up to 10kV in common mode, 6kV in differential mode. Luminaire equipped with a proprietary system of protection against electrical overstresses, called Advanced EOS Protection System, which allows having a failure rate among the lowest in the sector, so guaranteeing maximum reliability and durability over time. From a chemical point of view, the non-metallic materials and components present in the product are fully compatible with the LEDs, not releasing VOCs (volatile organic compounds) that affect their performance, stability and color temperature when fully operational: thus the fixture results in being “VOC FREE”. All components are free of mercury, lead and other toxic substances, and are fully recyclable. Class II (or optional Class I) fixture with IP66 degree of protection of the optical and electrical compartment, IK08 degree of impact resistance, maximum operating ambient temperature equal to 40°C. Fixture equipped on request with optional devices for Remote Control, with interface components integrated in the lighting body, available in the following versions:

- Autonomous flux regulation through pre-programming (PRG);

- Cable regulation (DIM / DALI);

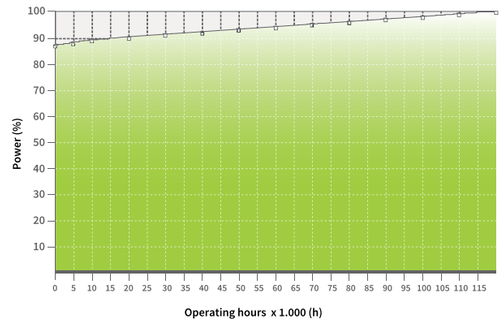


PRG

The Automatic Regulation (PRG) is managed by a luminous flux self-regulator, integrated in the lighting body and contained in the power supply compartment, suitable for controlling and reducing the luminous flux of the lighting fixture from 10% up to 100% in its maximum value, without using dedicated cables. The device is equipped with a fully programmable micro-controller, capable of managing the power supply section of the device, with LED sources of any wattage. The pperation is based on the ability to define, through user-defined programming, from 1 to 5 brightness levels on a time basis set via the configuration software. The system calibrates the "Midnight point" considering the period of time in which the device is powered and, over this, enables the various periods at reduced speed, considering the settings selected via software. The systems have the following functionality:

- Power on;
- Power off;
- Testing of proper functioning;
- Luminous flux regulation.

The PRG module allows to control and reduce the luminous flux of the lighting fixture from 10% to 100% of the maximum value, without the use of dedicated cables.	
D1: Time frame ON - 23:59	Power 100%
D2: Time frame 00:00 - 00:59	Power 75%
D3: Time frame 01:00 - 01:59	Power 50%
D4: Time frame 02:00 - 03:59	Power 25%
D5: Time frame 04:00 - OFF	Power 60%



DIM/DALI

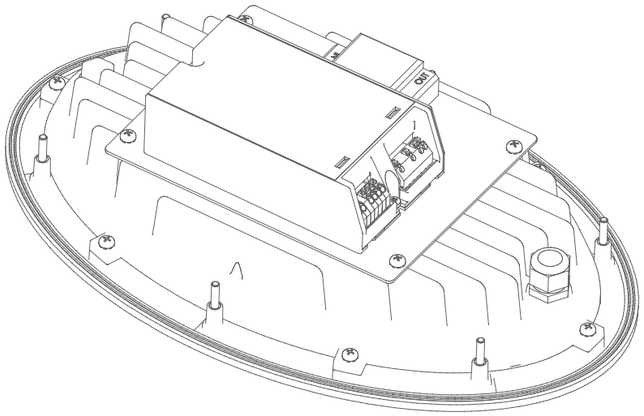
The Cable regulation (DIM/DALI) takes place through the use of dedicated cables:
using the DALI interface module, intelligent light management is possible according to the specific needs of the environment to be illuminated. DALI is a digital communication protocol for adjustable electronic ballasts. This new interface standard represents a system with distributed intelligence. This means that the light emission values of different lighting scenarios and the grouping of the different light sources are stored inside the electronic ballasts. The control system only has the function of recalling a specific scenario and the electronic power supply, which knows its light emission level and acts accordingly. It is also possible to recall each individual power supply. To guarantee the interchangeability between the DALI components of different manufacturers, the DALI interface has been included as appendix E of the IEC 929 standard, thus becoming a non-proprietary standard capable of meeting all the requirements of modern light control.

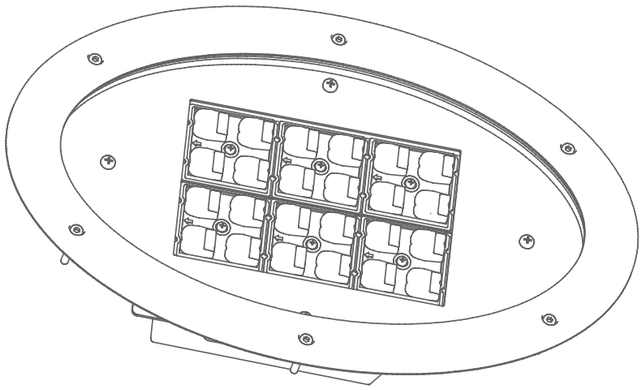
Power and control systems

LP **Lite programmable**	**FP** **Full programmable**	**SR** **Full programmable sensor ready**
PRG5: 5-profile automatic control	PRG5: 5-profile automatic control	PRG5: 5-profile automatic control
DIM: 1-10V analog control	DALI: DALI digital control	DALI: DALI 2.0 digital control
CLO LITE: 1-profile constant lighting control during the lifetime	CLO FULL: 20-profile constant lighting control during the lifetime	CLO FULL: 20-profile constant lighting control during the lifetime
	PLV: Voltage control	AUX: Auxiliary command 24V / 3W
	DCE: Interface for centralized emergency lighting	DCE: Interface for centralized emergency lighting

The **CLO function** allows to gradually increase the level of light output over time from a lower initial luminous flux up to 100%, thus compensating the luminous flux degradation of the LED module during the lighting fixture entire lifetime. It can also serve as a means to reduce energy consumption.

LOTUS - STREET LIGHT





STREET LIGHTING FIXTURE DATASHEET

	ACTUAL POWER	NOMINAL LUMINOUS FLUX				N° LED	POWER SUPPLY
Product Item Code	**[W]**	**[lm]**	**[lm]**	**[lm]**	**[lm]**	**[Pz]**	**[mA]**
LOTUS-35W-xxyy-zz-rr	**35**	6.515	6.210	5.720	5.340	24	240
LOTUS-40W-xxyy-zz-rr	**40**	7.300	6.955	6.390	5.965	24	270
LOTUS-45W-xxyy-zz-rr	**46**	8.315	7.930	7.280	6.790	24	310
LOTUS-50W-xxyy-zz-rr	**51**	9.055	8.630	7.920	7.400	24	340
LOTUS-55W-xxyy-zz-rr	**55**	9.395	8.955	8.220	7.680	24	360
LOTUS-60W-xxyy-zz-rr	**62**	10.750	10.250	9.400	8.780	24	410
LOTUS-65W-xxyy-zz-rr	**65**	10.930	10.420	9.560	8.920	24	425
LOTUS-70W-xxyy-zz-rr	**71**	12.200	11.630	10.640	9.930	24	470
LOTUS-75W-xxyy-zz-rr	**75**	12.460	12.050	11.025	10.290	24	485
		4070 (CCT 4.000K - CRI>70) 5070 (CCT 5.000K - CRI>70) 5770 (CCT 5.700K - CRI>70)	3070 (CCT 3.000K - CRI>70)	2270 (CCT 2.200K - CRI>70) 4080 (CCT 4.000K - CRI>80)	2270 (CCT 2.200K - CRI>70) 2780 (CCT 2.700K - CRI>80) 3080 (CCT 3.000K - CRI>80) 5790 (CCT 5.700K - CRI>90)		

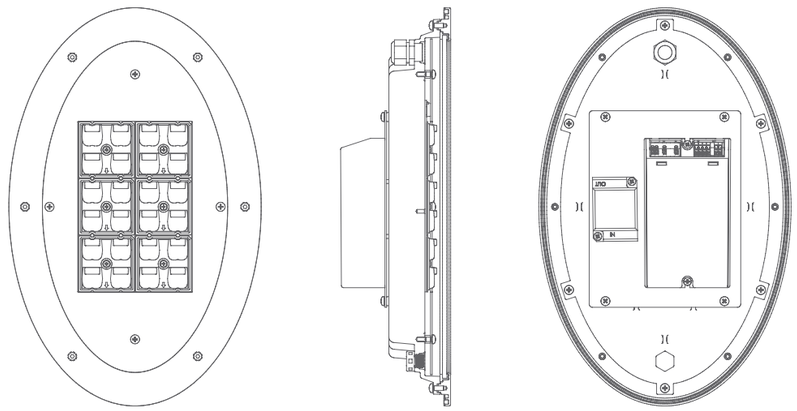
LOTUS TECHNICAL SHEET LED MOTOR

MAIN FEATURES	
Applications	Street and urban lighting
Appliance type	LED system for LOTUS luminaire
Series	Lotus
Degree of protection	Optical compartment protection degree: IP66 / Electrical compartment protection degree: IP20
Impact resistance	Optical compartment resistance degree: IK08 / Electrical compartment resistance degree: IK00
Electrical Protection	E.O.S. system Protection System
Chemical Protection	V.O.C. system FREE
Effective Power	25W - 75 W
Light Source Flux	3.980 lm - 12.460lm (@ Tj=85°C, If≤500 mA)
Luminous efficiency	η>140 lm/W (@ =85°C, If≤ 500 mA)
Operating Temperature	-40°C ÷ +50°C
Storage Temperature	-40°C ÷ +80°C
IR and UV radiation	Absent
Toxic Inorganic Elements	Absent
Warranty	5 year guarantee
IPEA	IPEA ≥ A ++ in accordance with DM 27/09/2017 (C.A.M.)
Reference standards	EN 60598-1 ; EN 60598-2-3 ; EN 60598-2-5 EN 62471 ; EN 55015 ; EN 61547 ; EN 61000-3-2 ; EN 61000-3-3
Trademarks and Certifications	CE, Photobiological Safety

OPTICAL FEATURES	
Photometry	Standard: Asymmetric / Optional: Elliptical, Rotosymmetric, Symmetrical
Light source	Hi Power LED
Correlated color temperature	Standard: 4.000K / Optional: 2200K, 2700K, 3000K, 5000K, 5700K
Color rendering index	Standard: CRI> 70 / Optional: CRI> 80, CRI> 90
LED modules	Modular, independent and replaceable MCPCBs
Optics	Modular, independent and replaceable PMMAs
Photometries	Standard: Asymmetrical Optional: Elliptical, Right Asymmetric, Left Asymmetric, Rotosymmetric
Light source efficiency	η>150 lm/W (@ Tj=85°C, If≤ 500 mA)
Light source life	100,000 hours (L90B10 @ TJ = 85 ° C, If≤500mA).

ELECTRICAL FEATURES	
Power supply	175÷264 V a.c. – 50/60 Hz Electronic ballasts integrated in the lighting body with efficiency η> 95%.
Power supply LED	If≤500mA
Driver	Efficiency η> 95%; Power factor PF> 0.97 (Active PFC)
Insulation class	Standard: Class II / Optional: Class I
Electrical connection	Protected electrical connector
Electrical Protection	Standard: 10kV Common Mode; 6kV Differential Mode With SPD device: 10kV Common Mode; Differential mode 10kV
Ignition / re-ignition time	tA < 1sec. / tR < 1sec.
Optional remote controls	Automatic control with programming up to 5 PRG5 profiles, Automatic control with programming during the CLO and CLO-LITE useful life. Cable control with 1-10V, DALI, DALI2.0 protocol, Voltage control with LPL module, Powered wave control with LPL module, Control in emergency light mode with DCE module

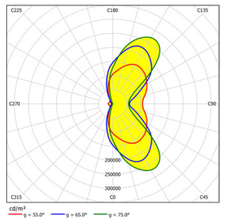
MECHANICAL CHARACTERISTICS	
Materials	HEAT SINK: Single body in die-cast aluminum. SCREEN: Flat tempered glass, minimum thickness 4 mm.
Color	HEAT SINK: White color RAL 9010 / FRAME: White color RAL 9010
System Dimensions and Weight	Dimensions 355 x 225 x 98 mm; Weight 3.7 kg



Photometric features

Asymmetric

A1 (Luminance diagram)



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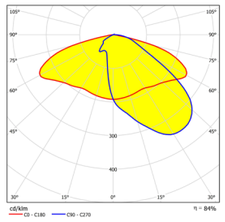

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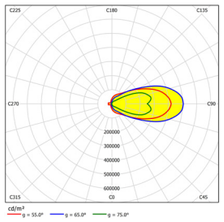

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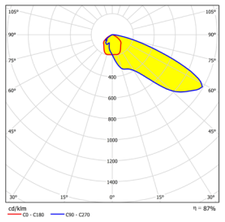

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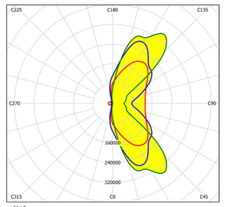

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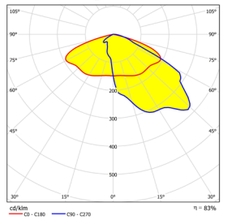

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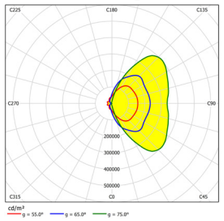

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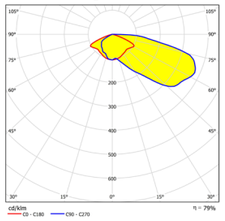

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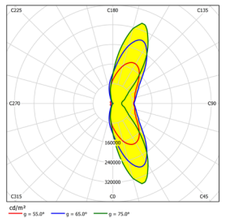

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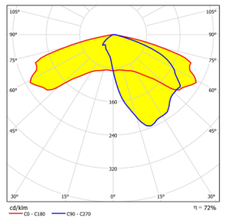

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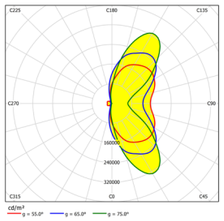

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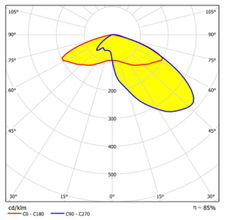
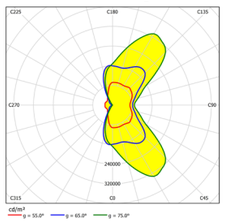


More photometries are available on request

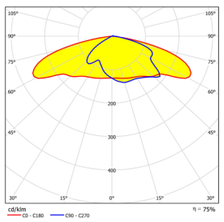
Photometric features

Asymmetric

A10 (Luminance diagram)



A10 (Polar diagram)



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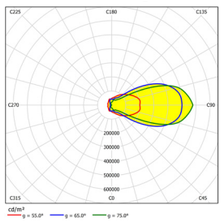

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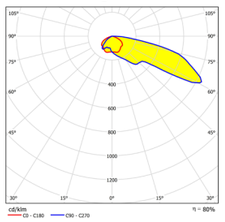

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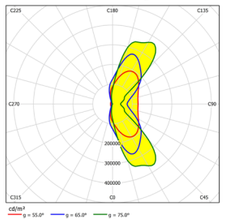
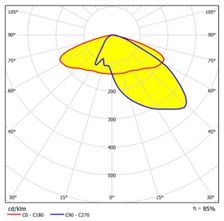
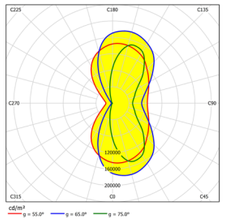


A15 (Polar diagram)

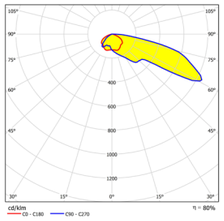


Elliptical

E3 (Luminance diagram)



E3 (Polar diagram)



More photometries are available on request

LOTUS CAMERA

FEATURES
4 MEGAPIXEL CMOS
PTZ MODE

VIDEO SURVEILLANCE

PTZ CAMERA

DH-SD22404T-GN

1/3” 4 Megapixel CMOS
Powerful 4x optical zoom
WDR, Day/Night(ICR), Ultra DNR
Max. 25/30fps@4M/3M
IVS
Support PoE
IP66, IK10

H.265 | WDR | ICR D/N | IP66 | Vandal-proof | PoE

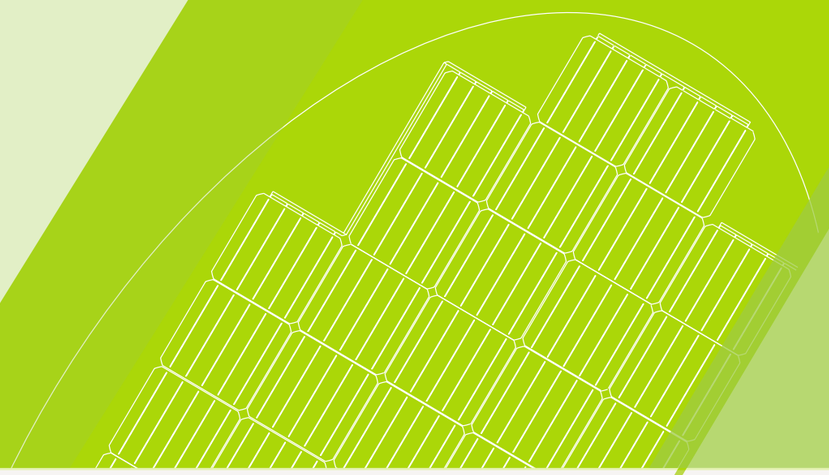
Powered by Dahua

CAMERA TECHNICAL SHEET LED MOTOR

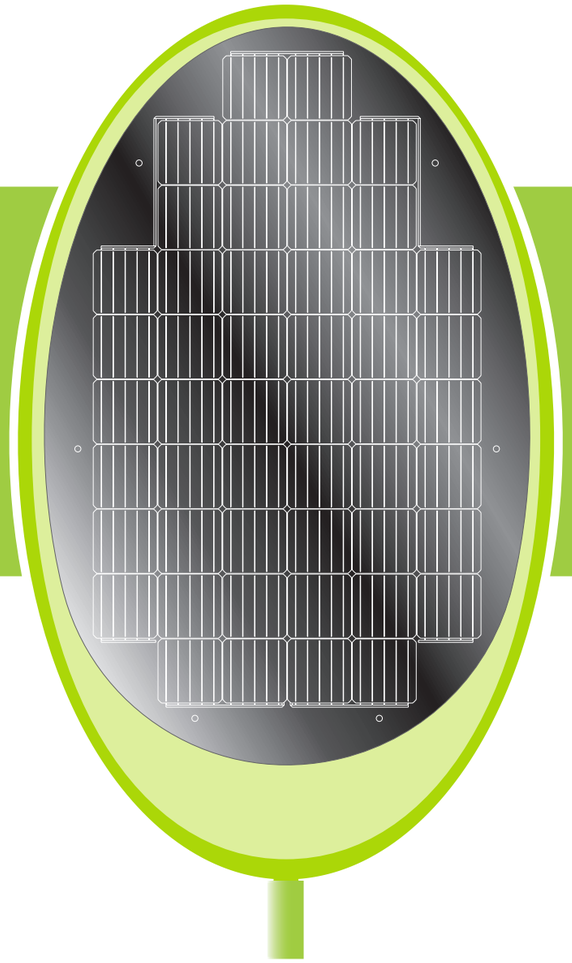
CAMERA	**Image Sensor**	1/3” CMOS Sensor
	Effective Pixels	2592(H) x 1520(V), 4 Megapixels
	RAM/ROM	256M/128M
	Minimum Illumination	Color: 0.05Lux@F1.6; B/W: 0.005Lux@F1.6
	IR Distance	Support
LENS	**Focal Length**	2.7mm~11mm
	Max. Aperture	F1.6 ~ F2.8
	Angle of View	H: 112.5° ~ 30°
	Optical Zoom	4x
	Focus Control	Auto/Manual
PTZ	**Pan/Tilt Range**	H.264
	Manual Control Speed	Pan: 0.1° ~100° /s; Tilt: 0.1° ~60° /s
	PTZ Mode	8 Tour(up to 32 preset per tour)
	Protocol	DH-SD
INTELLIGENCE	**Event Trigger**	Motion detection, Video tampering, Network disconnection, IP address conflict, Illegal access, Storage anomaly
	IVS	Tripwire, Intrusion,Abandoned/Missing
VIDEO	**Compression**	H.265/H.264
	Streaming Capability	3 Streams
	Resolution	4M(2592×1520)/3M(2304×1296)/1080P(1920×1080)/720P(1280×720)/ D1(704×576/704×480)/CIF(352×288/352×240)
	Day/Night	Auto(ICR) / Color / B/W
	Motion Detetion	Support
	Digital Zoom	16x
NETWORK	**Ethernet**	RJ-45 (10XBase-T/100Base-TX)
	Power Supply	DC 12V/1.5A, PoE(802.3af)
	Power Consumption	10W
	Ingress Protection	IP66
	Dimensions	Φ122 (mm) x 89 (mm)
	Net Weight	0.66kg(1.46lb)

LOTUS PHOTOVOLTAIC LEAF

FEATURES
CUSTOMIZED PHOTOVOLTAIC PANEL



POWER 265 Wp



NS6WL
ULTRA-EFFICIENT

PHOTOVOLTAIC PANEL KIT

265 WP - VOC: 33.60 V - ISC: 9.72 A - VMP: 28.60 V IMP: 9.30 A

DIMENSIONS

1190 X 1800 mm - 50 MONO CELLS 265 Wp

GLASS THICKNESS: 4 MM

BACKSHEET: BLACK

FEATURES

- Ultra-Efficient solar cells with an anisotropically etched surface
- Silicon nitride anti-reflection coating
- Silver front contact bars and aluminum local back surface field

Packaging

- Minimize the risk of broken cells with special design
- Label with product information

LOTUS - PHOTOVOLTAIC LEAF

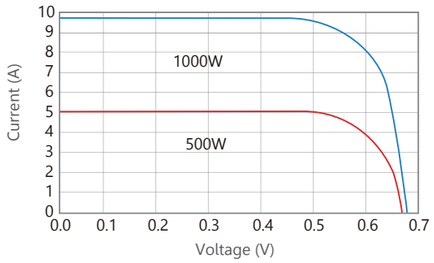
Performance and Quality

- Proper handling from incoming inspection through production, outgoing inspection and packaging
- 100% checked for reverse current and visual appearance
- Calibrated against Fraunhofer ISE
- RoHS compliance
- **100% PID Resistance**

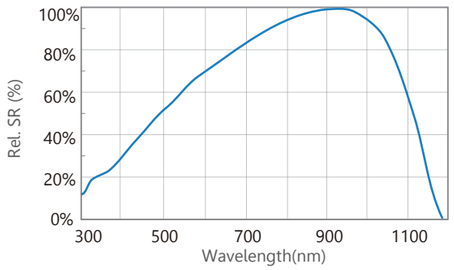
Physical Characteristics

• Dimension	156.75 mm x 156.75 mm ± 0.25 mm
• Cell's Thickness (si)	180 µm ± 30 µm
• Front Side (-)	Silicon nitride anti-reflection coating 0.7 mm silver busbar
• Back Side (+)	Aluminum local back surface field 1.5 mm (silver) discontinuous soldering pads

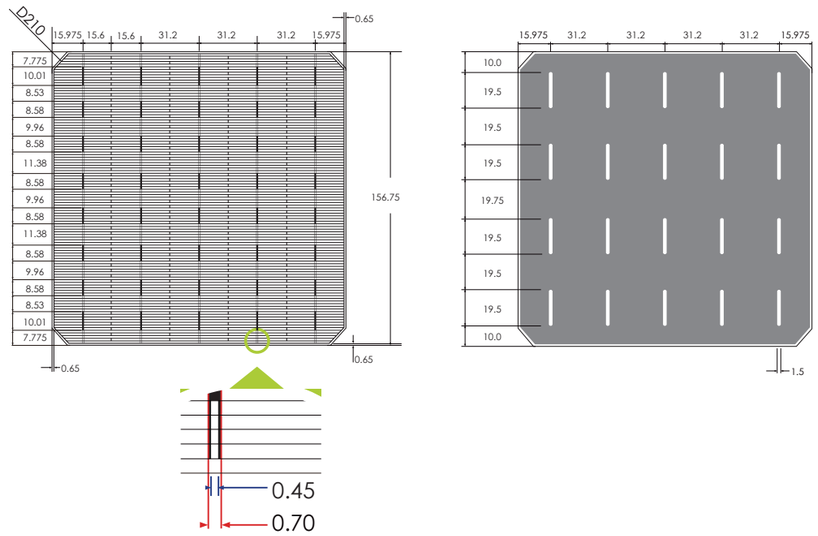
IV-Curve



Spectral Response



PHOTOVOLTAIC CELL DRAWING



Black21 Seris Mono-Crystalline Solar Cell

Electrical Characteristics

Class	Efficiency Range (%)	Rated Power (Wp)	*Maximum Power Current (A)	*Short Circuit Current (A)	*Maximum Power Voltage (V)	*Open Circuit Voltage (V)
210	21.0-21.1	5.131	9.039	9.642	0.568	0.668
211	21.1-21.2	5.155	9.073	9.652	0.568	0.669
212	21.2-21.3	5.180	9.106	9.662	0.569	0.669
213	21.3-21.4	5.204	9.139	9.673	0.569	0.670
214	21.4-21.5	5.228	9.173	9.683	0.570	0.670
215	21.5-21.6	5.253	9.206	9.693	0.571	0.671
216	21.6-21.7	5.277	9.239	9.704	0.571	0.671
217	21.7-21.8	5.302	9.272	9.714	0.572	0.672
218	21.8-21.9	5.326	9.305	9.724	0.572	0.672
219	21.9-22.0	5.351	9.338	9.735	0.573	0.673

Test condition : 1000 W / m2 , AM 1.5, 25°C - Power measuring tolerance: ±1.5% rel.

Temperature coefficients

Current (%/K)	0.0400
Voltage (%/K)	-0.2889
Power (%/K)	-0.3632

Light Intensity Dependence

Intensity [W/m²]	Vmpp	Impp
1000	1.000	1.000
900	0.998	0.899
500	0.977	0.497
300	0.955	0.297
200	0.936	0.197

STREET LIGHTING SYSTEM

POD

STEEL POLE WITH STREET LIGHTING & PHOTOVOLTAIC PANEL

POD COLLECTION

An intelligent solar-powered urban lighting system. The large photovoltaic panel covering is able to generate over 85 wp, enough to power the double high-power led lighting with specific concentric lenses. In addition, an HD camera for video surveillance is also integrated into the body.

POD - SOLAR STREET LIGHT POLE

FEATURES
ON GRID SYSTEM FOR STREET LIGHTING
WITH 85 W PHOTOVOLTAIC PANEL.

SMART POLE
WITH PHOTOVOLTAIC
DOUBLE LED LIGHTS

LOTUS - SOLAR STREET LIGHT POLE

FEATURES
LIGHTING BODY HEIGHT 4 METERS

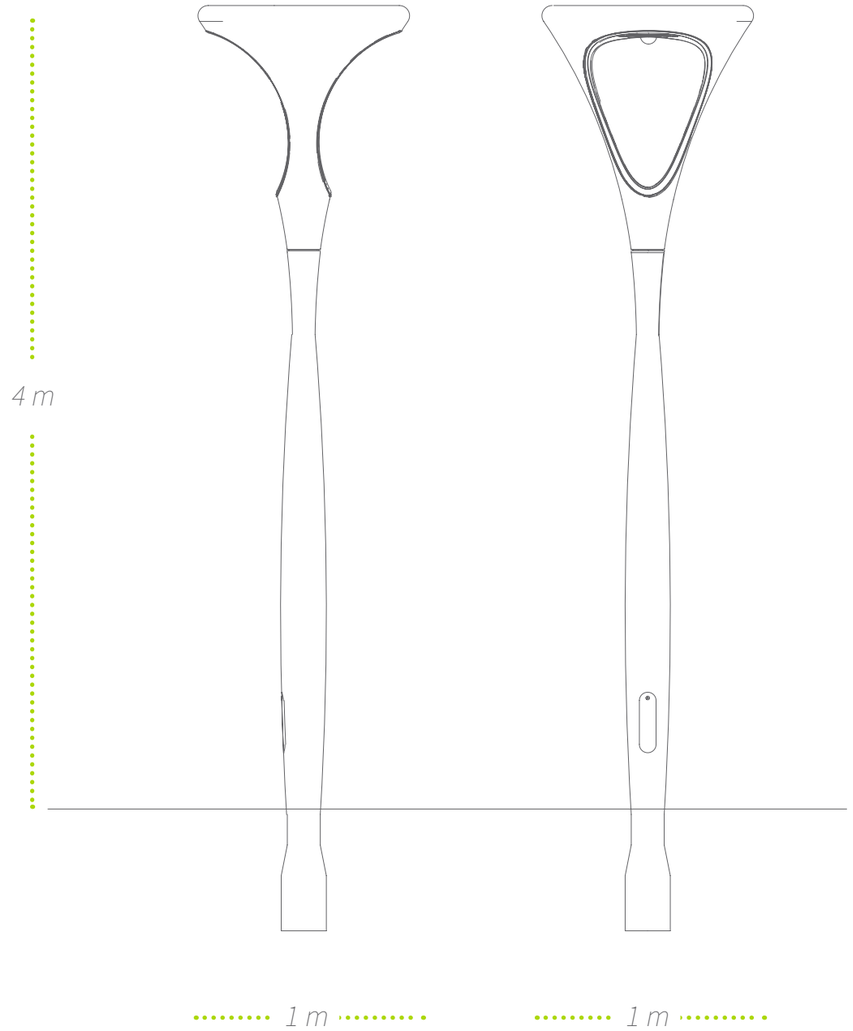
SINGLE LIGHT

POLES CODES:

LAMP WITH CAMERA	**FLMPOAR2X025XPT000**
POLE 4 METERS	**FLMPOPA040HPP40J00**

COLORS:

POLE AND LEAF HOT DIP GALVANIZED AND POWDER COATED:
RAL 6018 / RAL COLORING



STREET LIGHT

FEATURES
2 LED MOTORS, 25 W LED EACH

ARMOR LED

ARMOR LED WITH CAMERA

MATERIAL:

BODY IN POLYETHYLENE

INTERNAL STRUCTURE IN ALUMINIUM

PLASTIC COLORS:

GREEN P 657, GREY P 611, BLACK P 210

PLASTIC PAINTED COLORS:

ALLS RAL COLORATION ON REQUEST

CAMERA

DH-SD22404T-GN

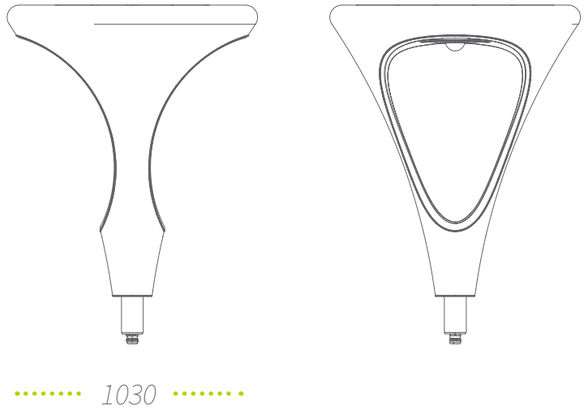
4MP 4x PTZ Network Camera

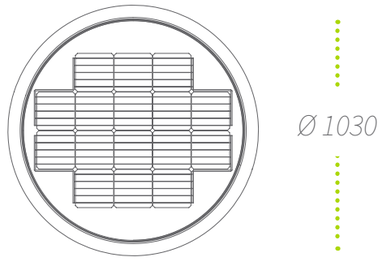
Featuring powerful optical zoom and accurate pan/tilt/zoom performance, the camera provides a wide monitoring range and great detail.

The camera delivers 4MP resolution at 25/30fps.

The camera is equipped with smooth control, high quality image, and good protection, meeting compact size demands of video surveillance applications

CERTIFICATIONS

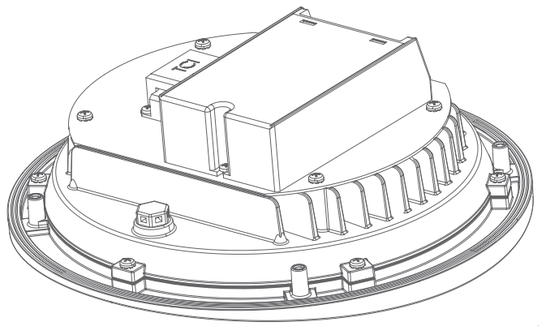


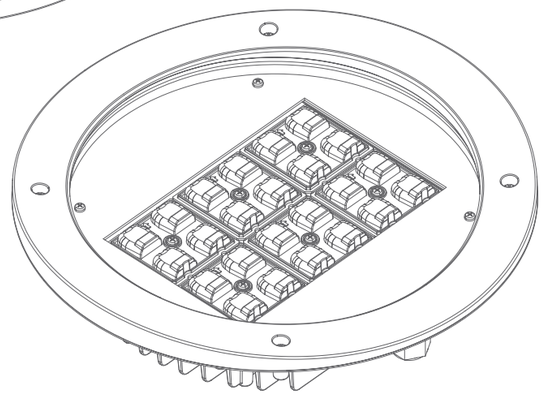


PHYSICAL CHARACTERISTICS

	ARMOR LED WITH CAMERA	ARMOR LED
ITEM CODE 25W x2 LED MOTOR	FLMPOAR2X025XPT000	FLMPOAR2X025XP0000
WEIGHT	60 kg	61 kg
DIMENSIONS	Ø 1030 X 1400 mm	Ø 1030 X 1400 mm
BOX DIMENSIONS	1200 X 1200 X 1400 mm	
EXPOSURE TO THE WIND	Lateral: 0,42 m^2 | Plain: 0,83 m^2 | Front: 0,34 m^2	

STREET LIGHTING FIXTURE DATASHEET 2X 25W



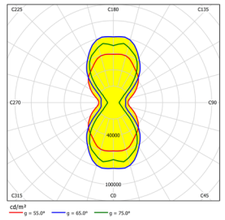


	ACTUAL POWER	NOMINAL LUMINOUS FLUX				N° LED	POWER SUPPLY
Product Item Code	[W]	[lm]	[lm]	[lm]	[lm]	[Pz]	[mA]
LOTUS-50W-xxyy-zz-rr	**50**	9.700	9.300	8.540	7.960	48	175
		4070 (CCT 4.000K - CRI>70) 5070 (CCT 5.000K - CRI>70) 5770 (CCT 5.700K - CRI>70)	3070 (CCT 3.000K - CRI>70)	2270 (CCT 2.200K - CRI>70) 4080 (CCT 4.000K - CRI>80)	2270 (CCT 2.200K - CRI>70) 2780 (CCT 2.700K - CRI>80) 3080 (CCT 3.000K - CRI>80) 5790 (CCT 5.700K - CRI>90)		

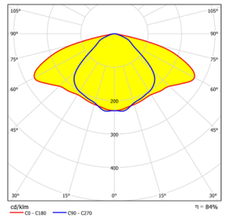
POD Photometric features (each module can be equipped with a different photometry)

Elliptical

E1 (Luminance diagram)



E1 (Polar diagram)



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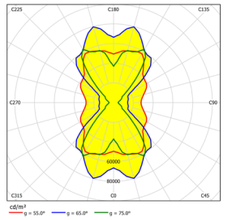

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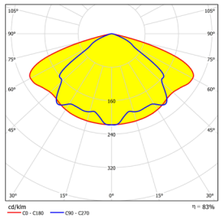

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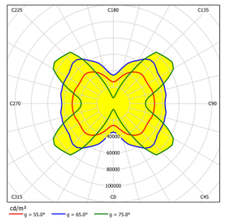

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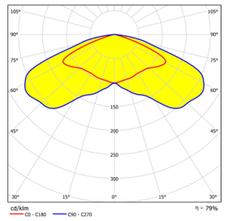

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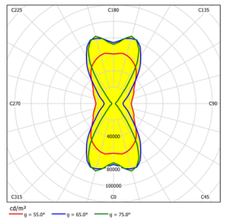

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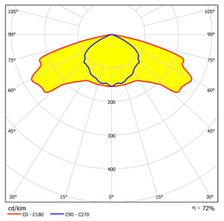

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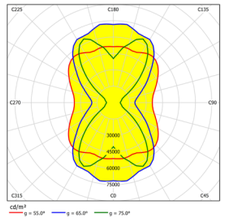

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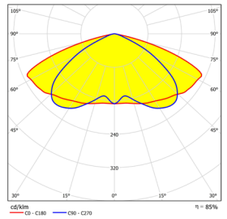
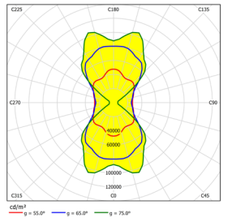


E10 (Luminance diagram)



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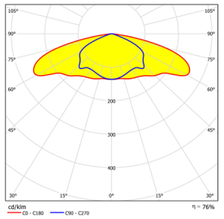

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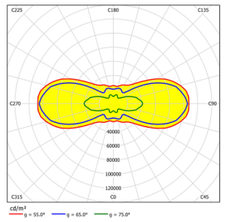

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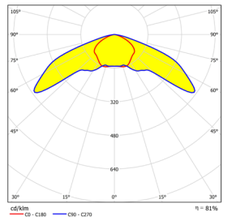

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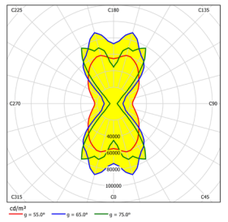
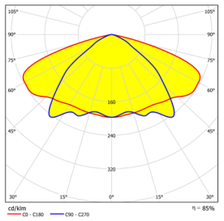


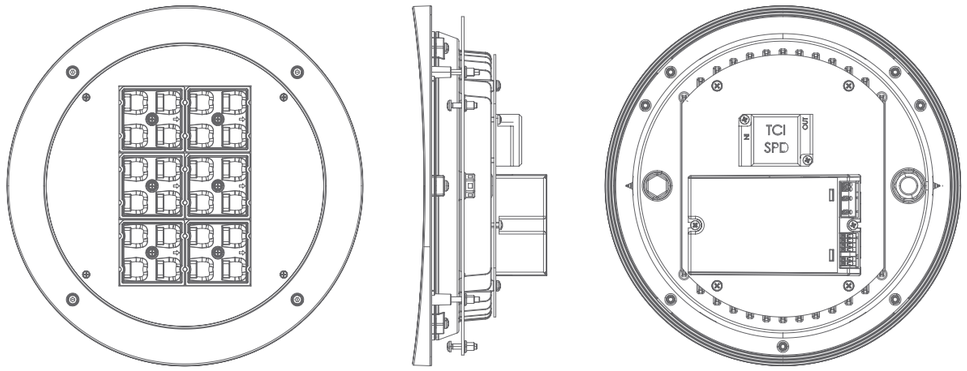
E15 (Polar diagram)



POD TECHNICAL SHEET LED MOTOR

MAIN FEATURES	
Applications	Street and urban lighting
Appliance type	LED system for POD luminaire
Series	Pod
Degree of protection	Optical compartment protection degree: IP66 / Electrical compartment protection degree: IP20
Impact resistance	Optical compartment resistance degree: IK08 / Electrical compartment resistance degree: IK00
Electrical Protection	E.O.S. system Protection System
Chemical Protection	V.O.C. system FREE
Effective Power	25W
Light Source Flux	3.980 lm - 12.460lm (@ Tj=85°C, If≤500 mA)
Luminous efficiency	η>140 lm/W (@ =85°C, If≤ 500 mA)
Operating Temperature	-40°C ÷ +50°C
Storage Temperature	-40°C ÷ +80°C
IR and UV radiation	Absent
Toxic Inorganic Elements	Absent
Warranty	5 year guarantee
IPEA	IPEA ≥ A ++ in accordance with DM 27/09/2017 (C.A.M.)
Reference standards	EN 60598-1 ; EN 60598-2-3 ; EN 60598-2-5 EN 62471 ; EN 55015 ; EN 61547 ; EN 61000-3-2 ; EN 61000-3-3
Trademarks and Certifications	CE, Photobiological Safety
OPTICAL FEATURES	
Photometry	Elliptical, Rotosymmetric, Symmetrical
Light source	Hi Power LED
Correlated color temperature	Standard: 4.000K / Optional: 2200K, 2700K, 3000K, 5000K, 5700K
Color rendering index	Standard: CRI> 70 / Optional: CRI> 80, CRI> 90
LED modules	Modular, independent and replaceable MCPCBs
Optics	Modular, independent and replaceable PMMAs
Photometries	Standard: Asymmetrical Optional: Elliptical, Right Asymmetric, Left Asymmetric, Rotosymmetric
Light source efficiency	η>150 lm/W (@ Tj=85°C, If≤ 500 mA)
Light source life	100,000 hours (L90B10 @ TJ = 85 ° C, If≤500mA).

ELECTRICAL FEATURES	
Power supply	175÷264 V a.c. – 50/60 Hz Electronic ballasts integrated in the lighting body with efficiency η> 95%.
Power supply LED	If≤500mA
Driver	Efficiency η> 95%; Power factor PF> 0.97 (Active PFC)
Insulation class	Standard: Class II / Optional: Class I
Electrical connection	Protected electrical connector
Electrical Protection	Standard: 10kV Common Mode; 6kV Differential Mode With SPD device: 10kV Common Mode; Differential mode 10kV
Ignition / re-ignition time	tA < 1sec. / tR < 1sec.
Optional remote controls	Automatic control with programming up to 5 PRG5 profiles, Automatic control with programming during the CLO and CLO-LITE useful life. Cable control with 1-10V, DALI, DALI2.0 protocol, Voltage control with LPL module, Powered wave control with LPL module, Control in emergency light mode with DCE module
MECHANICAL CHARACTERISTICS	
Materials	HEAT SINK: Single body in die-cast aluminum. SCREEN: Flat tempered glass, minimum thickness 4 mm.
Color	HEAT SINK: White color RAL 9010 / FRAME: White color RAL 9010
System Dimensions and Weight	Dimensions Ø 275 x 104 mm; Weight 3.0 kg



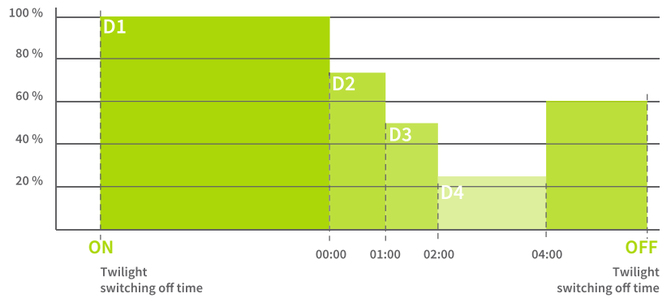
POD - STREET LIGHT

STREET LIGHTING FIXTURE DATASHEET

LED lighting fixture for street lighting with solid state technology, with maximum absorbed power (effective) of 50W and power supply at 220 / 240V a.c. - 50 / 60Hz. Luminaire equipped with 18 LUXEON MX Lumileds Quadrichip Power LEDs, powered by constant current up to 700mA, with color temperature equal to 4.000K (N) in the standard version, or 3.000K (W), 5.000K (C) on request. Light source efficiency not less than 150lm/W; duration, in optimal operating conditions, not less than 100.000 hours (L90B10 - LED@700mA - Tj=85°C) and color rendering index equal to CRI>70. Nominal luminous flux with Tj=85°C equal to 22.172lm (150W) in the standard version with CCT 4.000K with total luminous flux emitted by the lighting fixture equal to 17.295 lm for an overall efficiency of not less than 115 lm/W. LEDs equipped with high precision secondary collimators for the concentration of the light beam, with high efficiency. Minimum overall efficiency of the optical group not less than 78%. Different asymmetric street type photometry available. High efficiency electronic ballasts integrated in the power supply compartment of the lighting body, characterized by a power factor (PF) greater than 0,98 and MTBF equal to 430.000 hours, thermal protection, short-circuit protection and standard overvoltage protection up to 10kV in common mode, 6kV in differential mode. Luminaire equipped with a proprietary system of protection against electrical overstresses, called Advanced EOS Protection System, which allows having a failure rate among the lowest in the sector, so guaranteeing maximum reliability and durability over time. From a chemical point of view, the non-metallic materials and components present in the product are fully compatible with the LEDs, not releasing VOCs (volatile organic compounds) that affect their performance, stability and color temperature when fully operational: thus the fixture results in being “VOC FREE”. All components are free of mercury, lead and other toxic substances, and are fully recyclable. Class II (or optional Class I) fixture with IP66 degree of protection of the optical and electrical compartment, IK08 degree of impact resistance, maximum operating ambient temperature equal to 40°C. Fixture equipped on request with optional devices for Remote Control, with interface components integrated in the lighting body, available in the following versions:

- Autonomous flux regulation through pre-programming (PRG);
- Cable regulation (DIM / DALI);

POD - STREET LIGHT

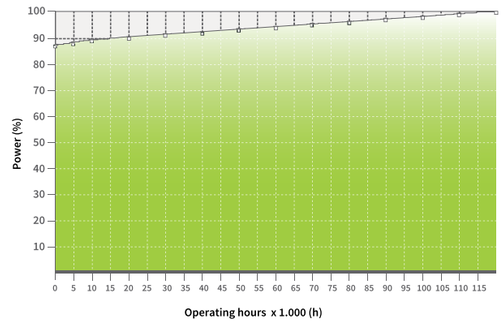


PRG

The Automatic Regulation (PRG) is managed by a luminous flux self-regulator, integrated in the lighting body and contained in the power supply compartment, suitable for controlling and reducing the luminous flux of the lighting fixture from 10% up to 100% in its maximum value, without using dedicated cables. The device is equipped with a fully programmable micro-controller, capable of managing the power supply section of the device, with LED sources of any wattage. The pperation is based on the ability to define, through user-defined programming, from 1 to 5 brightness levels on a time basis set via the configuration software. The system calibrates the "Midnight point" considering the period of time in which the device is powered and, over this, enables the various periods at reduced speed, considering the settings selected via software. The systems have the following functionality:

- Power on;
- Power off;
- Testing of proper functioning;
- Luminous flux regulation.

The PRG module allows to control and reduce the luminous flux of the lighting fixture from 10% to 100% of the maximum value, without the use of dedicated cables.	
D1: Time frame ON - 23:59	Power 100%
D2: Time frame 00:00 - 00:59	Power 75%
D3: Time frame 01:00 - 01:59	Power 50%
D4: Time frame 02:00 - 03:59	Power 25%
D5: Time frame 04:00 - OFF	Power 60%



DIM/DALI

The Cable regulation (DIM/DALI) takes place through the use of dedicated cables:
using the DALI interface module, intelligent light management is possible according to the specific needs of the environment to be illuminated. DALI is a digital communication protocol for adjustable electronic ballasts. This new interface standard represents a system with distributed intelligence. This means that the light emission values of different lighting scenarios and the grouping of the different light sources are stored inside the electronic ballasts. The control system only has the function of recalling a specific scenario and the electronic power supply, which knows its light emission level and acts accordingly. It is also possible to recall each individual power supply. To guarantee the interchangeability between the DALI components of different manufacturers, the DALI interface has been included as appendix E of the IEC 929 standard, thus becoming a non-proprietary standard capable of meeting all the requirements of modern light control.

Power and control systems

LP **Lite programmable**	**FP** **Full programmable**	**SR** **Full programmable sensor ready**
PRG5: 5-profile automatic control	PRG5: 5-profile automatic control	PRG5: 5-profile automatic control
DIM: 1-10V analog control	DALI: DALI digital control	DALI: DALI 2.0 digital control
CLO LITE: 1-profile constant lighting control during the lifetime	CLO FULL: 20-profile constant lighting control during the lifetime	CLO FULL: 20-profile constant lighting control during the lifetime
	PLV: Voltage control	AUX: Auxiliary command 24V / 3W
	DCE: Interface for centralized emergency lighting	DCE: Interface for centralized emergency lighting

The **CLO function** allows to gradually increase the level of light output over time from a lower initial luminous flux up to 100%, thus compensating the luminous flux degradation of the LED module during the lighting fixture entire lifetime. It can also serve as a means to reduce energy consumption.

POD CAMERA

FEATURES
4 MEGAPIXEL CMOS
PTZ MODE

VIDEO SURVEILLANCE

PTZ CAMERA

DH-SD22404T-GN

1/3” 4 Megapixel CMOS
Powerful 4x optical zoom
WDR, Day/Night(ICR), Ultra DNR
Max. 25/30fps@4M/3M
IVS
Support PoE
IP66, IK10

H.265 | WDR | ICR D/N | IP66 | Vandal-proof | PoE

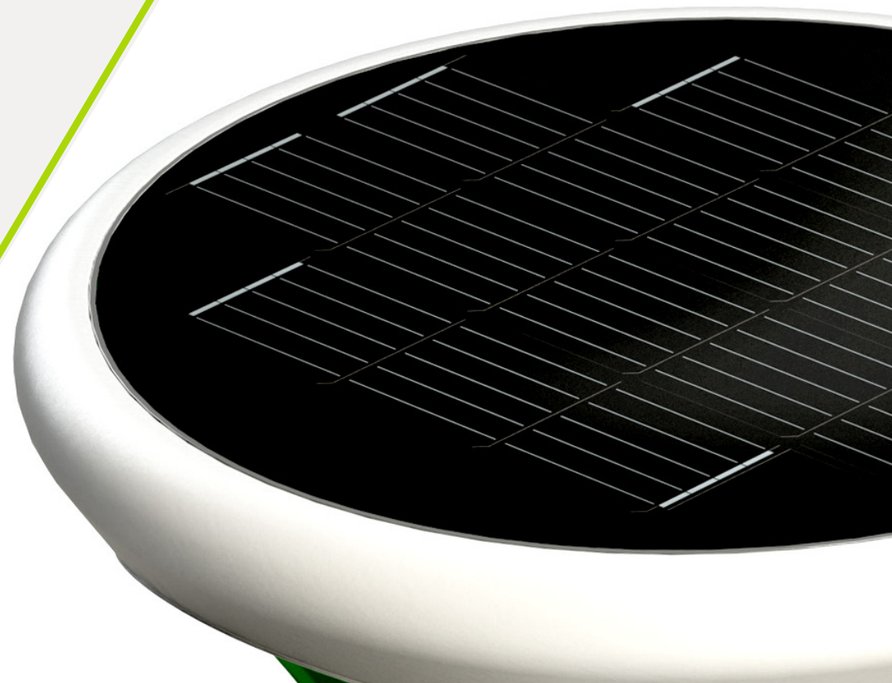
Powered by Dahua

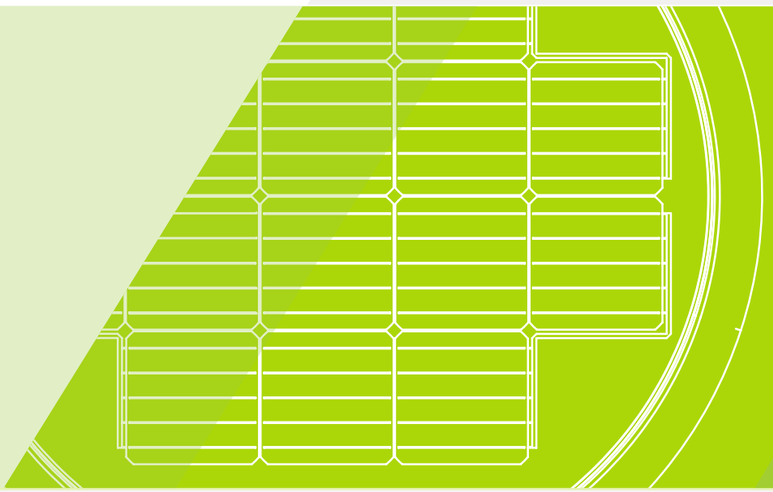
CAMERA TECHNICAL SHEET LED MOTOR

CAMERA	**Image Sensor**	1/3” CMOS Sensor
	Effective Pixels	2592(H) x 1520(V), 4 Megapixels
	RAM/ROM	256M/128M
	Minimum Illumination	Color: 0.05Lux@F1.6; B/W: 0.005Lux@F1.6
	IR Distance	Support
LENS	**Focal Length**	2.7mm~11mm
	Max. Aperture	F1.6 ~ F2.8
	Angle of View	H: 112.5° ~ 30°
	Optical Zoom	4x
	Focus Control	Auto/Manual
PTZ	**Pan/Tilt Range**	H.264
	Manual Control Speed	Pan: 0.1° ~100° /s; Tilt: 0.1° ~60° /s
	PTZ Mode	8 Tour(up to 32 preset per tour)
	Protocol	DH-SD
INTELLIGENCE	**Event Trigger**	Motion detection, Video tampering, Network disconnection, IP address conflict, Illegal access, Storage anomaly
	IVS	Tripwire, Intrusion,Abandoned/Missing
VIDEO	**Compression**	H.265/H.264
	Streaming Capability	3 Streams
	Resolution	4M(2592×1520)/3M(2304×1296)/1080P(1920×1080)/720P(1280×720)/ D1(704×576/704×480)/CIF(352×288/352×240)
	Day/Night	Auto(ICR) / Color / B/W
	Motion Detetion	Support
	Digital Zoom	16x
NETWORK	**Ethernet**	RJ-45 (10XBase-T/100Base-TX)
	Power Supply	DC 12V/1.5A, PoE(802.3af)
	Power Consumption	10W
	Ingress Protection	IP66
	Dimensions	Φ122 (mm) x 89 (mm)
	Net Weight	0.66kg(1.46lb)

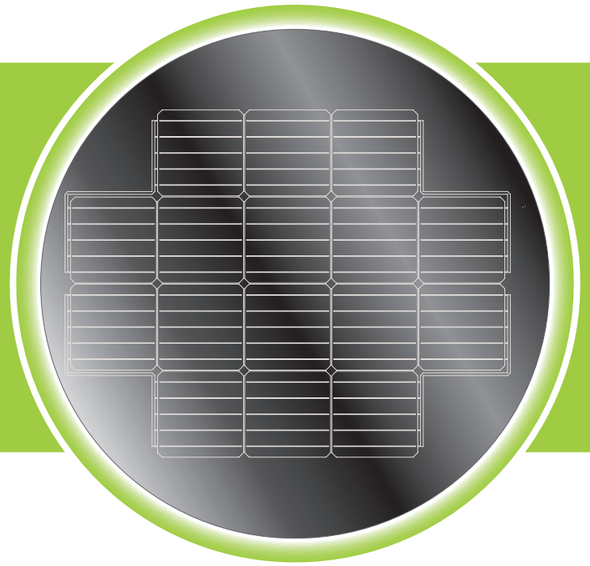
POD PHOTOVOLTAIC

FEATURES
CUSTOMIZED PHOTOVOLTAIC PANEL





POWER 85 Wp



NS6WL ULTRA-EFFICIENT

PHOTOVOLTAIC PANEL KIT

85 Wp - VOC: 10.75 V - ISC: 9.72 A - Vmp: 9.15V IMP: 9.30 A

DIMENSIONS

Ø 900 mm - 16 MONO CELLS 85 Wp

GLASS THICKNESS: 4 MM

BACKSHEET: BLACK

FEATURES

- Ultra-Efficient solar cells with an anisotropically etched surface
- Silicon nitride anti-reflection coating
- Silver front contact bars and aluminum local back surface field

Packaging

- Minimize the risk of broken cells with special design
- Label with product information

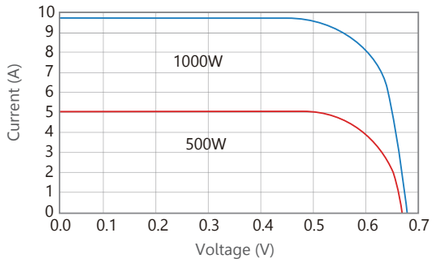
Performance and Quality

- Proper handling from incoming inspection through production, outgoing inspection and packaging
- 100% checked for reverse current and visual appearance
- Calibrated against Fraunhofer ISE
- RoHS compliance
- **100% PID Resistance**

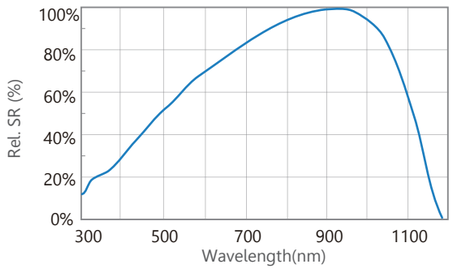
Physical Characteristics

• Dimension	156.75 mm x 156.75 mm ± 0.25 mm
• Cell's Thickness (si)	180 µm ± 30 µm
• Front Side (-)	Silicon nitride anti-reflection coating 0.7 mm silver busbar
• Back Side (+)	Aluminum local back surface field 1.5 mm (silver) discontinuous soldering pads

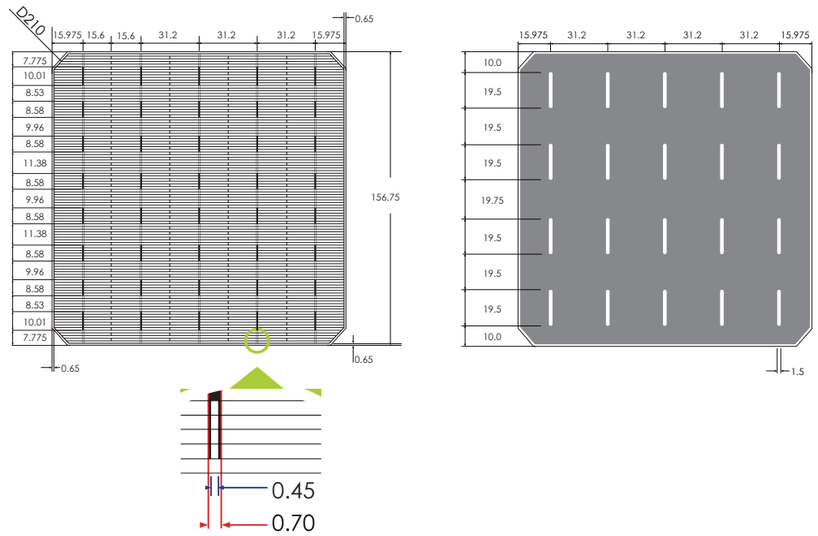
IV-Curve



Spectral Response



PHOTOVOLTAIC CELL DRAWING

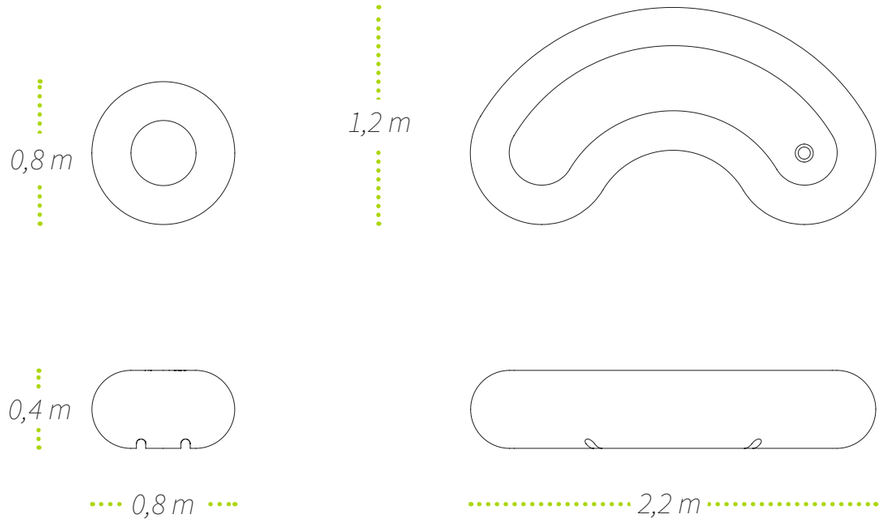


SEATS & BENCHES

STONE & STELL

STONE COLLECTION BENCH & PUFF

Features
Outdoor stone bench, made of UHPFRC / Ductal NaW3 FO cement,
available in the bench and puff versions.
The bench can be customized with the added wireless smartphone charger.



Single seat

FLMHSSE077XGS00000

Double seat

FLMHBSE220XGS00000

Colors

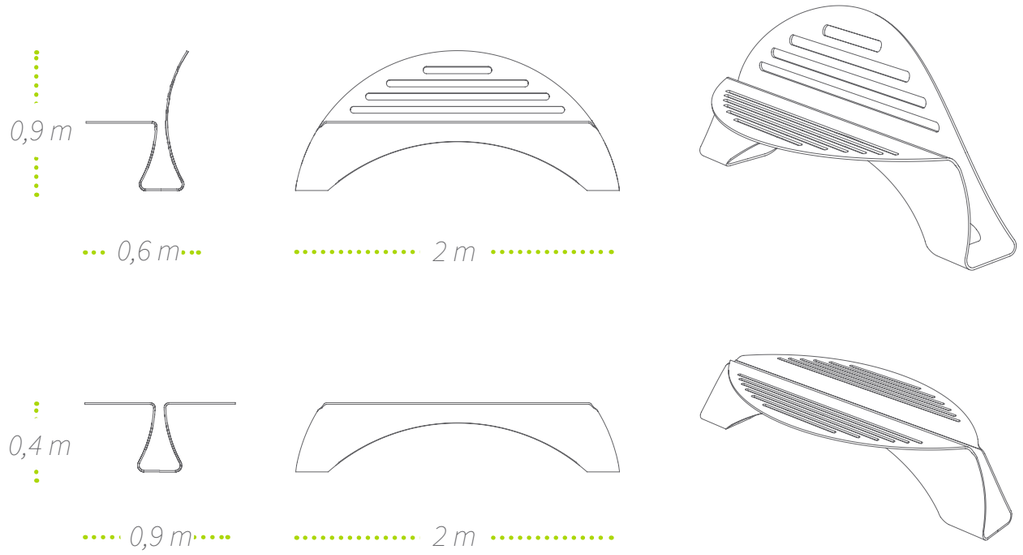
White concrete

Wireless phone charging
Technical Information
Input Voltage range 10-30V DC (12/24 V system)
Input current max 1,5 A
12/24 V Output Power 5 W (5V, 1A)
Standby current draw < 0,03 W
Waterproof rating IPX6 front and back
Certifications Qi, CE, FCC, ROHS

Customizable graphics

LOTUS COLLECTION STEEL BENCHES

Features
Steel bench S275JR (FE430) UNI EN 10025
molded in single and double versions.



Single seat

FLMSBSE200XPS00000

Double seat

FLMSBSE200XPD00000

Colors

Hot dip galvanized and powder coated: RAL 6018 / Ral coloring

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