SOLAR INNOVA GREEN TECHNOLOGY, S.L.
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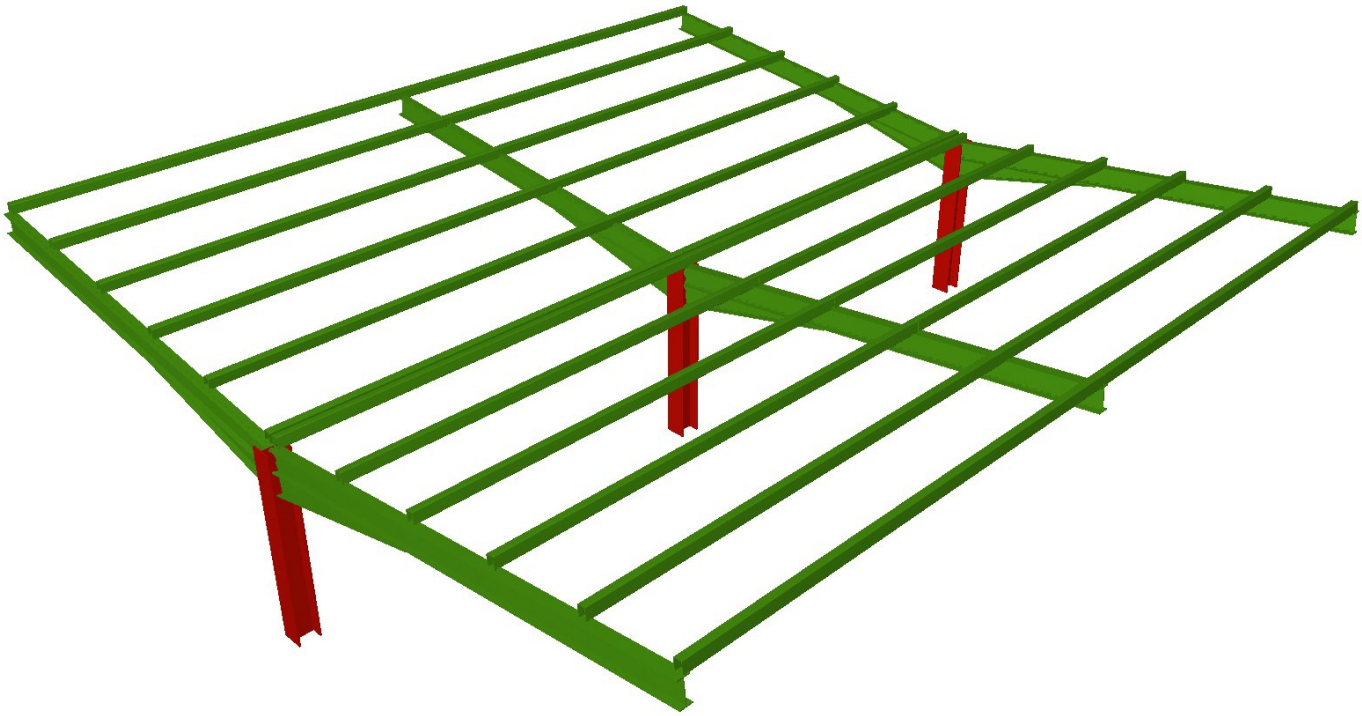
PHOTOVOLTAIC SOLAR ENERGY

MOUNTING - PARKING - SI-ESF-S-PARKING-8C-2X-60P



Photovoltaic technology (PV) has a great potential for integration in public spaces and is especially suitable for urban furniture.

Solar Innova has developed a Photovoltaic Parking solution that consists of a structure where a photovoltaic solar installation guarantees on-site power generation.

The installation of photovoltaic solar panels on this car park allows multiple functions such as creating shade, protection against rain, hail and snow, as well as significant energy savings.

This design is based on a parking for several vehicles with a photovoltaic integration on the roof, inclined 7º with respect to the horizontal, with a variable orientation with respect to the azimuth, depending on the specific needs of each plot.

A sloping roof has been designed that is able to evacuate rainwater without problems and that is polyvalent in any orientation at the same time.

The structure of this photovoltaic parking has an extraordinary flexibility in the design, since it allows to customize the photovoltaic modules to be installed (opaque, transparent, colored, etc.).

This photovoltaic parking structure also offers the possibility of integrating different services, such as the charging of electric vehicles, the incorporation of lighting or the option of including advertisements, among others.

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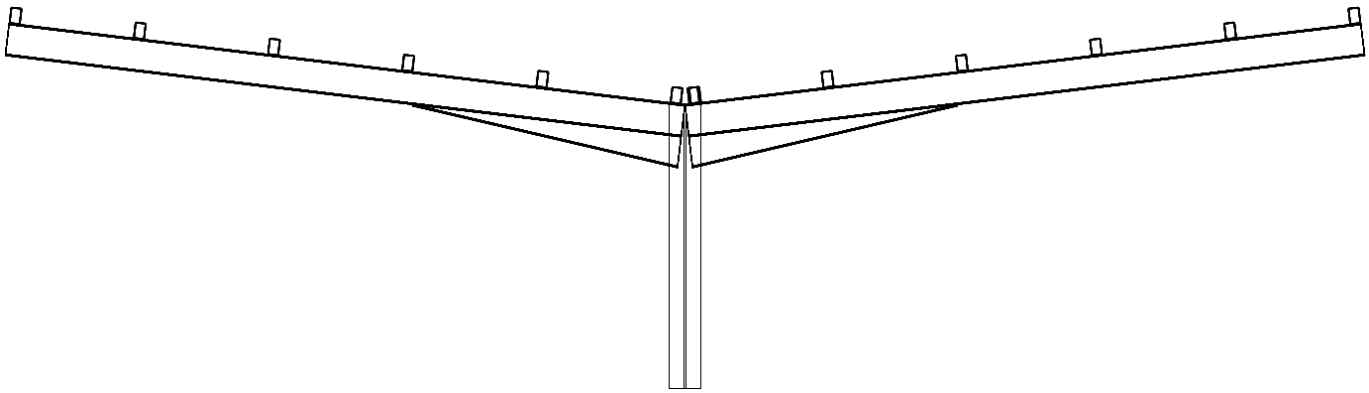
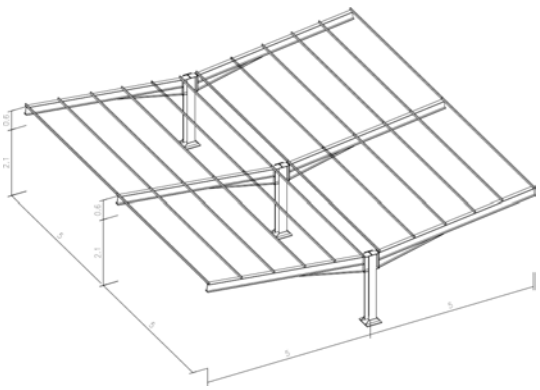
SUPPORT STRUCTURE

CHARACTERISTICS		
Materials	Structure	Steel
	Screws	Galvanized steel
Finish	Type	Lacquered in color to choose or galvanized
Warranty	Time	15 years
Occupied area	Dimensions	10 x 10 m
Occupied area	Dimensions	100 m2
Distance between corbels	Dimensions	5 m
Parking places	Quantity	8
Height	Minimum	2.10 m
	Maximum	2.70 m
Inclination	Angle	7º
Maximum load	Wind	105 km/h
Photovoltaic modules	Orientation	Vertical
	Matrix	6 x 10 = 60 units
Power	Total	280 Wp x 60 units = 16,800 Wp

NORMATIVE	
Rolled steel and reinforced	CTE-DB-SE-A
	ISO 1461:1999
Foundation	EHE 98-CTE
Wind	CTE-DB-SE-A
Snow	CTE-DB-SE-A
Earthquake	NCSE-02
Eurocode 1	Norm UNE-ENV 1991-2-4:1998. Project bases and actions in structures. Part 2-4: Actions in structures. Wind actions
Basic building rule	Steel structures in buildings (NBE/EA-95)
	Actions in the building (NBE/AE-88)
Technological Regulation of the building	Structures. Wind loads (NTE ECV)





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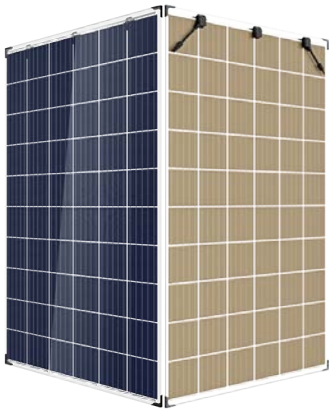
PHOTOVOLTAIC MODULES

ELECTRICAL CHARACTERISTICS (STC)		
Maximum power (Pmpp)	Wp	280
Tolerance	Wp	0 ~ + 5
Voltage at maximum power (Vmpp)	Volts	32.20
Current at maximum power (Impp)	Amperes	8.70
Open circuit voltage (Voc)	Volts	38.20
Short circuit current (Isc)	Amperes	9.51
Maximum system voltage (Vsyst)	Volts	600 (UL) / 1,500 (IEC)
Diodes (By-pass)	Quantity	6
Maximum series fuse	Amperes	15
Efficiency (ηm)	%	17.2
Form Factor	%	≥ 73

MECHANICAL CHARACTERISTICS			
Size	Height	1,665 mm	65.55 inches
	Width	1,000 mm	39.37 inches
	Thickness	40 mm	1.57 inches
Weight	Net	23 kg	50.71 lbs
Frame	Material	Anodized aluminum AL6063-T5, minim 15 µm	
Front	Material	High transmissivity toughened glass	
	Thickness	2.5 ± 0,2 mm	0.13 inches
Cells	Type	Polycrystalline	
	Quantity	6 x 10 units	
	Size	156.75 x 156.75 mm	5 inches
Serial connection	Quantity	60 units	
Parallel connection	Quantity	1 unit	
Encapsulation	Material	EVA	
	Thickness	0.50 ± 0.03 mm	0.020 ± 0.0012 inches
Back-Sheet	Material	Tempered glass	
	Thickness	2.5 ± 0.2 mm	0.13 inches
Junction box	Material	PVC	
	Protection	IP67	
	Isolation	Versus humidity and inclement weather	
Cables	Type	Polarized and symmetric in length	
	Length	450 mm	17.72 inches
	Section	4 mm^2	0.006 $inches^2$
	Features	Low contact resistance	
		Minimal losses for voltage drop	
Connectors	Material	PVC	
	Type	MC4	
	Protection	IP67	



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