

# New energy, a whole new story

Flexible, light and resilient,  
resisting the harshest  
environmental conditions.  
Solbianflex photovoltaic modules  
are made using cells with up to  
24% conversion of sunlight into  
electricity.

**All the energy to live your  
passions without limits.**

**SOLBIAN**  
FREEDOM POWERED BY THE SUN

  
MADE IN ITALY

[SOLBIAN.EU](https://solbian.eu)





# Many good reasons for choosing Solbian

Product quality, durability and maximum performance, always.

- ✓ Because we guarantee the quality of the product and its duration in time.
- ✓ Because our panels are very resilient, thin and extraordinarily flexible, able to adapt to curved surfaces, such as the deck of a boat.
- ✓ Because our panels are ultra-lightweight: only 2.1 kg per square meter, compared to 12 kg and more of traditional panels.
- ✓ Because we manufacture the SP series, with the most efficient solar cells on the market: high power even in very small dimensions.
- ✓ Because the ease of installation, both permanent and removable, is one of the strengths of Solbian: from structural adhesive to steel eyelets, all the different fixing methods provide easy installation.
- ✓ Because we offer a wide range of accessories, designed and manufactured for the marine industry.
- ✓ Because Solbian panels have been tested in extreme conditions by great heroes of sailing: Giovanni Soldini, Sébastien Roubinet, Alessandro Di Benedetto and many others.
- ✓ Because our products are certified according to IEC 61215, IEC 61730 and IEC 61701 (salt mist). Solbian has also obtained ISO 9001 Quality, OHSAS 18001 Safety and ISO 14001 Environmental certifications.





# Something new under the Sun SOLBIANFLEX

No task is too hard for Solbianflex, with a wide range of power available. Three different series using three different technologies: SP, SR and SX. All with crystalline silicon cells, the most efficient and proven on the market, and using lightweight and flexible encapsulation materials.

**Three levels of power, all winners**

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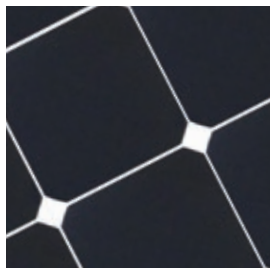
Photo: The Sense of Wood, winning project at the Bois Lab Workshop on the short wood supply-chain, organized by the Province of Turin and the Polytechnic of Turin. Francesco Zannier.

Power at the highest level.

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## SP Series

SP series is at the top of the range, thanks to the use of selected SunPower™ monocrystalline silicon cells, reaching a record 24% conversion of sunlight into electricity and with a pleasant appearance thanks to back-contact technology which hides the electrical contacts. SunPower™ cells represent the most advanced technology on the market, and make the SP Solbian panels the highest-efficiency flexible panels.



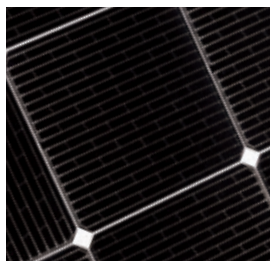
	SP 144	SP 130	SP 118 L	SP 118 Q	SP 104	SP 78	SP 52 L	SP 52 Q
<b>Power (W)</b>	144	130	118	118	104	78	52	52
<b>Length (mm)</b>	1490	1363	1236	855	1109	855	1109	601
<b>Width (mm)</b>	546	546	546	800	546	546	292	546
<b>Thickness (mm)</b>	2	2	2	2	2	2	2	2
<b>Weight (kg)</b>	1.9	1.7	1.6	1.6	1.4	1.1	0.8	0.8
<b>N. of cells</b>	4x11 (44)	4x10 (40)	4x9 (36)	6x6 (36)	4x8 (32)	4x6 (24)	2x8 (16)	4x4 (16)

Super Rugged Series.

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## SR Series

The monocrystalline high efficiency SR cells are sandwiched by two patented metallic grids. The grid on the front is carefully tailored to optimize the current harvesting, while the one behind the cell offers strong mechanical support. The grids essentially form a double shield that acts as a conducting reinforcement to the solar cell. Extreme crack and bend tolerance are built in, enabling novel crystalline silicon architectures. A guaranty of high efficiency and unmatched durability in flexible solar panels.



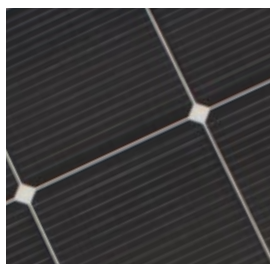
	SR 216	SR 160 L	SR 160 Q	SR 144	SR 108	SR 72 L	SR 72 Q	SR 62
<b>Power (W)</b>	216	160	160	144	108	72	72	62
<b>Length (mm)</b>	1364	1523	1046	1364	1046	1364	728	1205
<b>Width (mm)</b>	996	683	996	683	683	365	683	365
<b>Thickness (mm)</b>	2	2	2	2	2	2	2	2
<b>Weight (kg)</b>	3	2.4	2.4	2.1	1.7	1.2	1.2	1.1
<b>N. of cells</b>	6x8 (48)	4x9 (36)	6x6 (36)	4x8 (32)	4x6 (24)	2x8 (16)	4x4 (16)	2x7 (14)

Aesthetics, reliability and price.

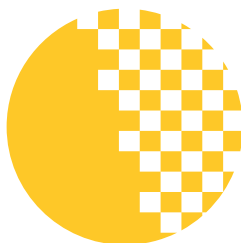
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## SX Series

In the SX series the monocrystalline solar cells are electrically connected using ultra-thin copper wires that form a very fine mesh on the cell surface, resulting in thousands of contact points. This alternative to the standard bus-bar method allows a higher module power and increases the energy yield. A technology optimally suited to flexible modules, due to its intrinsic insensitivity to micro-cracks, that are the most common cause of energy loss in solar modules. Another advantage is a reduced sensitiveness to shading, pushed to the extreme in the Guardian (G) models where several bypass diodes are inserted thanks to an innovative cell layout. The new connection technology, together with the use of high efficiency silicon cells, make SX panels especially powerful and reliable.



	SX 216	SX 160 L	SX 160 Q	SX 160 G	SX 144	SX 108	SX 108 G	SX 72 L	SX 72 Q	SX 62
<b>Power (W)</b>	216	160	160	160	144	108	108	72	72	62
<b>Length (mm)</b>	1364	1523	1046	1046	1364	1046	726	1364	728	1205
<b>Width (mm)</b>	996	683	996	996	683	683	996	365	683	365
<b>Thickness (mm)</b>	2	2	2	2	2	2	2	2	2	2
<b>Weight (kg)</b>	3	2.4	2.4	2.4	2.1	1.7	1.7	1.2	1.2	1.1
<b>N. of cells</b>	6x8 (48)	4x9 (36)	6x6 (36)	6x6 (36)	4x8 (32)	4x6 (24)	6x4 (24)	2x8 (16)	4x4 (16)	2x7 (14)

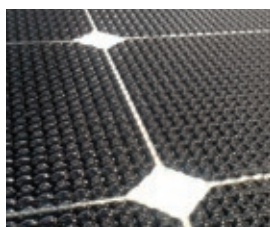


Where quality meets beauty

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## Invisible Solar Power (ISP) option

The top SP series can be offered with a completely new look. Thanks to different masking technologies a rich portfolio of graphics will change your idea of solar panel. Solid colors, materials, geometric patterns; the ISP option broadens the meaning of customization in the solar field.



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Embed solar in your structure

## Surface Mounting (SM) option

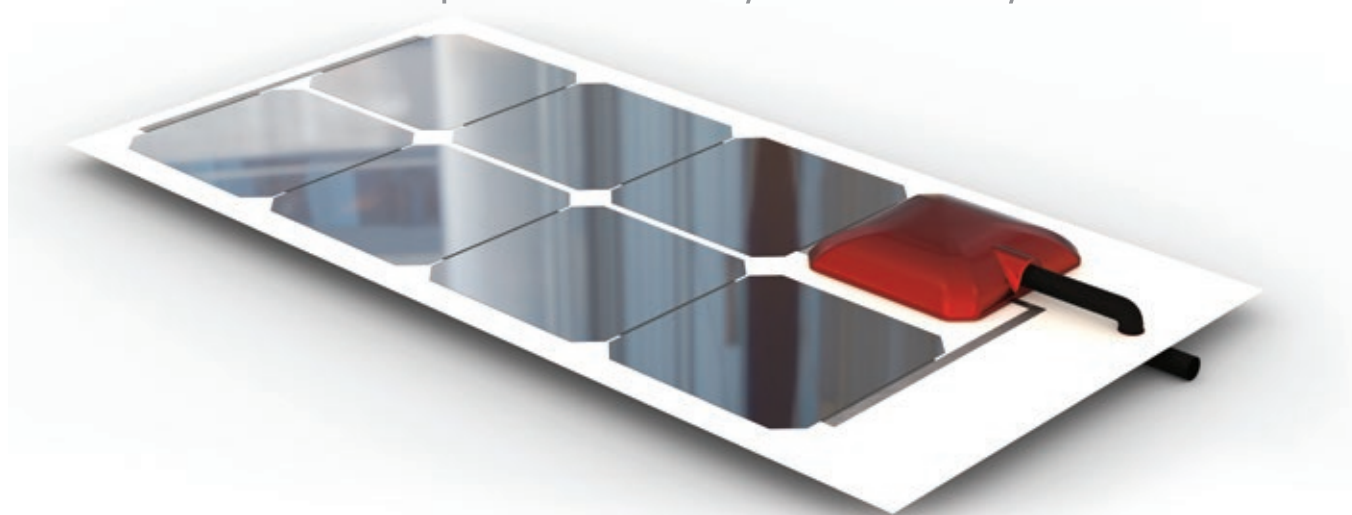
Solbianfex<sup>SM</sup> panels will become part of your boat deck, of your caravan roof or your golf cart hard-top. The SM option consists of a textured surface and of a safe and durable electrical connection via moisture-resistant cables. A custom-made grommet offers a perfect sealing of the electrical contacts and avoids chafing of the cables. SM panels are offered with ready-to-use structural adhesive.

Design your panel, ask for custom solutions.

It's never been so easy to get  
the most out of the Sun

# ALLinONE series

Just connect the output cable to your battery.



The ALLinONE series: solar panel + charge controller. To make solar energy simpler, suitable for the enthusiast as well as the professional user. All the electronics you need are already packed into the rugged waterproof box: a sophisticated MPPT controller capable of boosting the voltage to match with your battery pack.

	Power (W)	Battery voltage (V)	Max current (A)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	N. of cells
SP 60 AiO	60	12/24	5/2.5	728	546	15	1.1	19
SP 47 L AiO	47	12/24	4/2	1109	292	15	0.9	15
SP 47 Q AiO	47	12/24	4/2	601	546	15	0.9	15
SP 23 AiO	23	12/24	2/1	600	292	15	0.6	7
SR 104 AiO	104	12/24	8.6/4.3	1046	683	15	1.7	23
SR 68 L AiO	68	12/24	5.6/2.8	1364	365	15	1.3	15
SR 68 Q AiO	68	12/24	5.6/2.8	728	683	15	1.3	15
SX 104 AiO	104	12/24	8.6/4.3	1046	683	15	1.7	23
SX 68 L AiO	68	12/24	5.6/2.8	1364	365	15	1.3	15
SX 68 Q AiO	68	12/24	5.6/2.8	728	683	15	1.3	15

From the smallest 23 W model, ideal to keep your battery charged, to more than 100 W, with enough power to supply the refrigerator on your caravan or boat. The ALLinONE models can be combined simply by connecting each of them directly to your battery, each panel being completely independent from the others, thanks to the integrated charge controllers.



# Charge controllers

Optimal solar energy management in all conditions.



Solbian offers some of the most advanced charge controllers of the market, for optimal solar power management in all conditions. The golden rule for marine applications suggests “one panel, one controller”, but it can be achieved only with a perfect match between the solar generator and the battery to be recharged.

By using our selected DC/DC converters with MPPT optimization system (Maximum Power Point Tracking) you will have all the freedom in choosing panel size and configuration, **and no matter what battery you need to charge (12, 24, 48 V... lead acid or lithium), the charge controller will take care of your needs.**

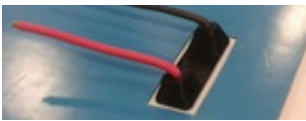
CTEK, GENASUN, WESTERN CO. and VICTRON. Four renowned international brands, the same controllers chosen and tested by professional sailors and by several automotive companies, to harvest as much energy as possible from the sun.

# Connections and fixing options



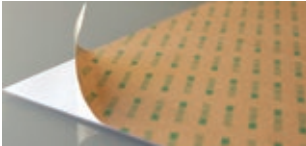
## Junction Box

Solbianflex panels can be supplied with the junction box to allow connection with the charge controller. Solbian provides a complete kit with cables and connectors for easy installation.



## Surface Mounting solution

When gluing panels to a solid surface, the electrical connections can be made by means of the rear-side wires of the panels with the SM option. Holes must be drilled in the support material. Cables are then extended through the holes and routed to the charge controller. The wiring is thus protected and invisible.



## Structural adhesive

The flexible Solbianflex panels can become an integral part of the boat by means of a special double-sided structural adhesive. The electrical connection can be made via the junction box or by direct connection to the positive and negative poles of the panels (Surface Mounting solution).



## LOXX snap fasteners

Snap fasteners, a special kind of eyelets, make the attachment and removal of the panels easier. They are suitable for installation on canvas as well as on hard surfaces.



## Stainless steel eyelets

They can be fixed on the edges of the panels to allow easy installation and removal. This solution allows you to fix the panel with ropes or screws.



## Zipper

A zipper can be sewn onto the panel, allowing a removable installation, especially on the bimini.

## Contents of a photovoltaic kit



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