

looking for the future



CATALOGUE
BIPV
INSTALLATIONS







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**Solar Innova** is a global company in the Renewable Energy sector, mainly in the solar field of Photovoltaic Energy, enabling our customers to improve efficiency facilities and energy while reducing environmental impact.

Technology plays a key role in Solar Innova.

We develop products with advanced technologies that allow us to be more competitive and to respect the environment. We are committed to providing our customers high quality services to meet your expectations and guarantee your complete satisfaction.

We have a distribution network in constant growth, to provide a service with maximum quality and speed.

We want to be present in all areas where is the development of alternative energy, offering added value to our products and services such as:

- √ Advice
- √ Competitiveness
- √ Sustainability
- √ Professionalism
- √ Service quality
- √ Certified by internationally recognized laboratories









# PHOTOVOLTAIC INSTALLATION TYPES















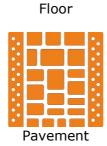




**Noise Barriers** 









Roofs



Greenhouses



Pergolas



**Parapets** 



Windows





#### PHOTOVOLTAIC VENTILATED FACADES



The integration of photovoltaic modules in buildings can be carried out in very different ways and gives rise to a wide range of solutions.

The facades provide a first view of the building to the visitor. It is the means that architects and designers usually use to convey the idea of the building and the wishes of the client through a language of shapes and colors. If you are interested in projecting a futuristic, sophisticated and ecological image, photovoltaic materials will greatly help.

The Solar Innova modules of photovoltaic integration technology used in the BIPV installations are multifunctional. That is, in addition to generating electricity, they also meet all the requirements demanded by conventional facades: protection against weather agents, heat and acoustic insulation. On the other hand, they suppose an innovation of aesthetic character with respect to the conventional facades.

The function of the coating of ventilated curtain wall systems is to provide protection against the weather and serve as an architectural design element. This outer cladding is fixed to a rear load bearing wall with a fastening system (staples and / or rails).

An air layer between the load-bearing wall (or the insulation layer attached to it) and the building envelope vents the solar modules from the rear and can be used for the placement of the electrical components and sockets.

Different materials, such as plaster, ceramic tiles, bricks, glass or metals can be used for this type of construction. In this way, facades can be created using a wide variety of material combinations, together with photovoltaic modules. Above all, the systems of ventilated curtain walls are considered in projects for the renovation of energy efficient façades.





#### PHOTOVOLTAIC COLD FACADES



The integration of photovoltaic modules in buildings can be carried out in very different ways and gives rise to a wide range of solutions.

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The Solar Innova modules of photovoltaic integration technology used in the BIPV installations are multifunctional. That is, in addition to generating electricity, they also meet all the requirements demanded by conventional facades: protection against weather agents, heat and acoustic insulation. On the other hand, they suppose an innovation of aesthetic character with respect to the conventional facades.

It is possible to configure the facade of the building using the photovoltaic modules as building material. The panels become an integral part of the building structure and as such, they have to provide the necessary resistant characteristics and protect them from external agents.

With regard to architectural design, the facade acquires a very neat and tidy aesthetic, thanks to the perfect assembly achieved between the panels, an uncommon design difficult to achieve with other materials.





# **PHOTOVOLTAIC ROOFTOPS**



Our panels are integrated in many applications in the form of a glazed ceiling.

Solar Innova photovoltaic glasses integrate perfectly in the buildings, preserving their aesthetics. This is thanks to the great variety of configurations possible in size, color, transparency, shape, etc.

By incorporating existing roofs, energy saving levels can only be achieved by new buildings.

In photovoltaic roofs, ecology blends with habitability and efficiency, resulting in environmentally friendly buildings that take care of the people who inhabit them.





#### PHOTOVOLTAIC SKYLIGHTS



Skylights are ideal places in buildings to integrate photovoltaic systems, given their location on deck and horizontal or slightly inclined layout, which allows to have important surface free of obstacles that can cast shadows to the panels, being able to maximize incident solar radiation , at the same time that they fulfill a double function of illumination and of the interior spaces.

The photovoltaic systems that are preferably used in this type of applications are semitransparent, since these, apart from providing electricity and protection against external agents, allow the passage of light inside the building.

With the Solar Innova modules of integration in skylights, impressive effects are achieved in addition to adopting a remarkable sense of spaciousness, by adding natural light to any room.

As semitransparent cover serve as thermal, solar, anti-glare and weather protection, in addition to providing a selective use of natural light. Large surfaces with optimized inclination angles also ensure high solar yields.

The Solar Innova skylights will allow you to obtain extraordinary results in any building, dazzling spaces and environments with great visual strength. The use of BIPV systems in skylights also provides a touch of exclusivity and elegance.





#### PHOTOVOLTAIC BALCONY



Photovoltaic balconies allowed to take full advantage of this part of the surface of an apartment or a building exposed to sunlight and at the same time, are a way to improve their appearance.

It is often characterized by an exceptional elegance, for which they become architectural elements that try to emphasize instead of hiding the cells that produce energy.

The photovoltaic module is a component element of the bottom of the balcony railing. We use photovoltaic laminate safety glass having the same physical and structural characteristics than a traditional panel, but with almost unlimited design possibilities, applicable to both new buildings and balconies and balconies of apartments or existing buildings.

To make the balconies and balustrades we use transparent photovoltaic glass or semi-transparent colored cells, typically mono or polycrystalline.





#### **PHOTOVOLTAIC GREENHOUSES**



The greenhouses are enclosures in which temperature, humidity and other environmental factors are kept help to promote agricultural crops. They are always located in open areas where they receive large amounts of direct solar radiation.

The greenhouses commonly used in agriculture, have an arc section and are located longitudinally north-south to reduce excessive radiation during mid-day. The overall result in a cultivation system is characterized by an optimal temperature profile avoiding peaks that may be harmful.

Solar Innova greenhouses are calculated and constructed to resist both the weight of its own roof with photovoltaic modules and other loads such as rain, wind and snow.

The metallic structure in Solar Innova greenhouses is obtained by repeating a base module whose floor and elevation dimensions have been designed specifically so that the installation of the photovoltaic system is completely fit. Its crystal and metal structure is perfect for the integration of solar panels and from an aesthetic point of view it does not have any impact in the surrounding environment.

We have several possibilities to meet different needs:

- Multi-shed roof: This structure is specially indicated for large surfaces, it avoids diminishing the greenhouse effect and brings the possibility of producing electricity, maximizing the productivity of crops.
- One-side roof: This model allows the total coverage of the surface for the installation of the photovoltaic system and, therefore, it permits to obtain a great production of electricity. Shed roof: Similar to the previous one but with one of the sides of the cover without covering to allow greater luminosity in case it is necessary for the crops.





#### PHOTOVOLTAIC PARKINGS



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 7° 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.





#### PHOTOVOLTAIC NOISE BARRIERS



PhotoVoltaic Noise Barriers are physical obstructions with photovoltaic panels designed to produce renewable energy and also to lower noise levels between noise sources and sensitive receptors, such as hospitals, schools and residential areas.

Traffic noise has been recognised by the World Health Organization as a major factor contributing to environmental pollution. Besides causing annoyance, it has significant negative health impacts on populations living close to road infrastructure.

The sounds emerging from the roads are considered among the most annoying. According to studies carried out, the acceptable level of sound coming from the communication channels during the day is approximately  $L=50-65\,$  dB, depending on the type of building in the area. The noise level emitted by the existing communication routes should be limited to this range.

Acoustic screens or anti-noise screens allow reducing noise levels in residential, urban and industrial areas thanks to the attenuation of noise pollution from roads, railways or industries.

Solar Innova performs an acoustic study to find the optimal solution for each problem, adapting the acoustic screens to each situation both within the urban environment and in the industry.

The photovoltaic acoustic barriers of Solar Innova are manufactured with semitransparent photovoltaic panels, thus reducing the visual impact produced by other types of conventional barriers.





The advantages of this type of barriers are: the remarkable power of soundproofing, the excellent light transmission, very good resistance to weathering, to UV rays, are fully recyclable and simultaneously generate renewable energy.

Our designs not only radically reduce the noise pollution but also adapt to the environment due to its aesthetics, minimizing the aesthetic and environmental impact.

The maintenance of our system is minimal since the material does not suffer any type of deterioration neither in its structure nor in the photovoltaic modules, being able to guarantee a durability of more than 30 years.

All the metallic elements that form the acoustic barrier are conveniently protected against oxidation.

In addition to helping reduce greenhouse gas emissions into the atmosphere, the adoption of PVNB also provides other positive economic, social and environmental benefits.

# Areas of application:

- Transparent and opaque acoustic screens for railway infrastructures and road transport.
  - Acoustic insulation protections.
  - Industries that require anti-noise acoustic screens and with a visual control of the area
  - in which the noise emission source is located.
  - Architecture, urbanism.
  - Special glazing.





#### **PHOTOVOLTAIC PERGOLAS**



Photovoltaic pergolas are an alternative way to replace the materials traditionally used in construction to generate shadows.

One of the great advantages of photovoltaic glass BIPV Solar Innova is acting as a filter for ultraviolet and infrared radiation, both harmful to health, in addition to providing buildings clean and free energy from the sun.

These facilities have several aspects:

- To contribute to the awareness of the public broadcasting the commitment to the use and promotion of renewable energies.
  - The integration of renewable energies in urban areas.
  - Capitalize unused areas.
  - Demonstrate that the rational use of energy can be made profitable economically.





#### **PHOTOVOLTAIC EAVES**



Solar Innova offers products and solutions adapted to the needs of the construction sector, providing Architects and Engineers the possibility of incorporating the photovoltaic installation into the aesthetics of the building.

BIPV photovoltaic panels are a perfect solution for use in the formation of eaves, since they constitute a range of active technological glasses that have the property of generating electrical energy and can be used both in new buildings and in renovations.

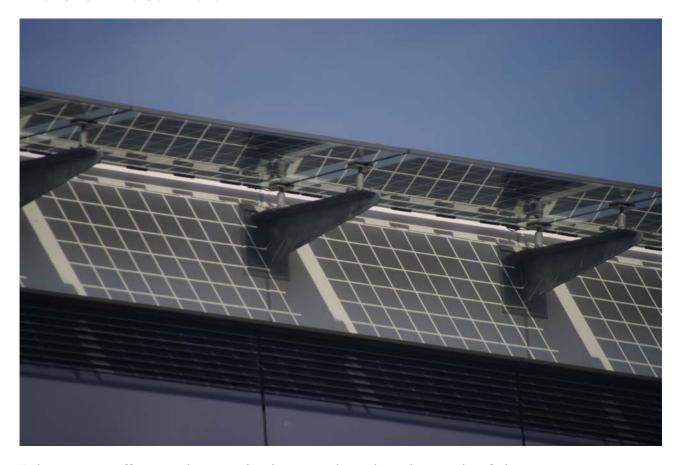
These types of solutions are perfect to unite design and functionality, thus merging design and electrical installation. The eaves are transformed thanks to the panels into integral elements of the building's electrical installation.

The use of BIPV panels in the formation of eaves, allows not only to achieve the desired effect with the glass, but also simultaneously a solar control and an electrical production is carried out.





#### **PHOTOVOLTAIC CORNICES**



Solar Innova offers products and solutions adapted to the needs of the construction sector, providing Architects and Engineers the possibility of incorporating the photovoltaic installation into the aesthetics of the building.

BIPV photovoltaic panels are a perfect solution for use in the formation of cornices, since they constitute a range of active technological glasses that have the property of generating electrical energy and can be used both in new buildings and in renovations.

These types of solutions are perfect to unite design and functionality, thus merging design and electrical installation. The cornices are transformed thanks to the panels into integral elements of the building's electrical installation.

The use of BIPV panels in the formation of cornices, allows not only to achieve the desired effect with the glass, but also simultaneously a solar control and an electrical production is carried out.





#### **PHOTOVOLTAIC PARAPETS**



Solar Innova offers products and solutions adapted to the needs of the construction sector, providing Architects and Engineers the possibility of incorporating the photovoltaic installation into the aesthetics of the building.

BIPV photovoltaic panels are a perfect solution for use in the formation of parapets, since they constitute a range of active technological glasses that have the property of generating electrical energy and can be used both in new buildings and in renovations.

These types of solutions are perfect to unite design and functionality, thus merging design and electrical installation. The parapets are transformed thanks to the panels into integral elements of the building's electrical installation.

The use of BIPV panels in the formation of parapets, allows not only to achieve the desired effect with the glass, but also simultaneously a solar control and an electrical production is carried out.





#### PHOTOVOLTAIC RAILINGS



Solar Innova offers products and solutions adapted to the needs of the construction sector, providing Architects and Engineers the possibility of incorporating the photovoltaic installation into the aesthetics of the building.

BIPV photovoltaic panels are a perfect solution for use in the formation of handrails, since they constitute a range of active technological glasses that have the property of generating electrical energy and can be used both in new buildings and in renovations.

These types of solutions are perfect to unite design and functionality, thus merging design and electrical installation. The rails are transformed thanks to the panels into integral elements of the building's electrical installation.

The use of BIPV panels in the formation of railings, not only allows to achieve the desired effect with the glass, but also simultaneously a solar control and an electrical production is carried out.





#### PHOTOVOLTAIC FLOOR



With the photovoltaic floor, sustainability and architecture come together to create unique spaces where we can generate free electricity without sacrificing the useful space it occupies.

The possibilities for integration are multiplied by being able to personalize this product with a multitude of colors and textures.

The photovoltaic floor is passable and non-slip, complies with the anti-slip regulations, supports 400 kg in the punctual load tests and offers an efficiency similar to the rest of constructive solutions.

The photovoltaic floor is very attractive, can be integrated into any project, without sacrificing design or aesthetics, while combining passive elements (avoiding CO2 emissions) with active elements (power generation) considerably reducing the impact of the building on the environment.

The solutions of Solar Innova are multifunctional since they combine active and passive properties, giving numerous advantages to the buildings that incorporate them.





#### **PHOTOVOLTAIC WINDOWS**



Solar Innova offers products and solutions adapted to the needs of the construction sector, providing Architects and Engineers the possibility of incorporating the photovoltaic installation into the aesthetics of the building.

BIPV photovoltaic panels are a perfect solution for use in the formation of windows, since they constitute a range of active technological glasses that have the property of generating electrical energy and can be used both in new buildings and in renovations.

These types of solutions are perfect to unite design and functionality, thus merging design and electrical installation. The windows are transformed thanks to the panels into integral elements of the building's electrical installation.

The use of BIPV panels in the formation of windows, allows not only to achieve the desired effect with the glass, but also simultaneously a solar control and an electrical production is carried out.





#### **PHOTOVOLTAIC CANOPY**



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 Canopy solution that consists of a structure where a photovoltaic solar installation guarantees on-site power generation.

The installation of photovoltaic solar panels on this 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 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 canopy has an extraordinary flexibility in the design, since it allows to customize the photovoltaic modules to be installed (opaque, transparent, colored, etc.).

This photovoltaic canopy 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.





#### **PHOTOVOLTAIC PAVEMENT**



With the photovoltaic pavement, sustainability and architecture come together to create unique spaces where we can generate free electricity without sacrificing the useful space it occupies.

The possibilities for integration are multiplied by being able to personalize this product with a multitude of colors and textures.

The photovoltaic floor is passable and non-slip, complies with the anti-slip regulations, supports 400 kg in the punctual load tests and offers an efficiency similar to the rest of constructive solutions.

The photovoltaic pavement is very attractive, can be integrated into any project, without sacrificing design or aesthetics, while combining passive elements (avoiding CO2 emissions) with active elements (power generation) considerably reducing the impact of the building on the environment.

The solutions of Solar Innova are multifunctional since they combine active and passive properties, giving numerous advantages to the buildings that incorporate them.









**Solar Innova** is constituted by a team of highly qualified and specialized in renewable energy commitment to the implementation of clean energy to enable sustainable growth and a better future for all, not forgetting the fair return on its investors and customers.

The main advantage that report **Solar Innova** services comes from its professional and specialized management, which allows obtaining higher and safer returns, reducing risks, optimizing and streamlining processes and, above all, avoiding hassles and concerns to their clients. Have the same advantage, any company or person with a small investment, you will have access to investments in renewable energy, inexhaustible and clean.

**Solar Innova**, born with the firm purpose of contributing to a more sustainable future. Energy saving is the first way to combat the changes that are happening on our planet.

Alternative energy, now fully consolidated as a viable way to preserve the environment, is the only solution for eliminating pollution and CO2.

The world needs systems based on solar power with improved quality and efficiency. This is the definitive answer to a paradigm shift cleaner energy, sustainable and economically.

Besides thinking about how to produce clean energy, we must learn to make rational use of energy as a priority.

Full customer satisfaction is our commitment, and he devoted one hundred percent of our time and effort. We monitor daily performance and quality in products and services.

We have a rigorous internal quality control in order to offer the customer the best service.









We want to make sure your solar experience is fully satisfactory. This is why we have selected highly skilled dealers and installers around the world. Our Official Dealers and Installers will provide you with a professional installation job and a high-level customer service.

Consistent with our commitment of pushing forward existing quality requirements, we have drafted a Quality Charter for dealers and installers, that defines a series of rules aimed at guaranteeing the best quality of service to homeowners choosing Solar Innova products. Having signed our Quality Charter, Official Dealers and Installers prove to share the same vision of quality as us, and take responsibility for providing their clients with a better service.

Our Official Dealers and Installers have gone one step further, formalized by the signature of Solar Innova Letter of Commitment. Having your Solar Innova products installed by an Official Installer, you can enjoy the benefits of your home photovoltaic system with absolute peace of mind.

We want solar energy to be recognized as a prime choice for the generation of electricity and we believe the satisfaction of each and every of our customers is the best way to reach this goal.











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