AELIUS
Energy Generating Aesthetic Surfaces

BIPV

Product Brochure

AELIUS
Energy Generating Aesthetic Surfaces

Aelius Turbina LLP

www.aeliusturbina.com

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@aeliusturbina

Our Founder

Mr. Ankit Modi holds a Master's degree in Renewable Energy and Architecture from Nottingham University, UK, and a Bachelor's degree in Construction Engineering.

With over 15 years of experience in the renewable energy sector, he is a recognized expert and a member of several prestigious organization, including BREEAM (UK), IGBC, and GRIHA AP.

Additionally, he is a certified Low Carbon Consultant with CIBSE (UK)

Introduction

At AELIUS, we fuse innovation with design to turn buildings into power-generating masterpieces.

Our cutting-edge BIPV solutions — custom facades to rooftop systems — offer unmatched aesthetics, advanced tech, and high energy performance.

Empowering architects, developers, and homeowners to build a greener, stylish future.
It's not just solar. It's an architectural energy revolution.

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OUR JOURNEY

2019 — Inception

2020

- Gujarat's largest Roof Top Solar Project - 2MWp
- India's first Solar-as-a-Roof

2021

- Runner's up in the International "Innovative Solar Applications" by MNRE & Germany
- PM Modi inaugurates 1 MW Carport

2022

- Dubai Expo showcasing BIPV
- Best Green Energy Startup
- Most Promising Tech-Startups in Gulf News, Dubai

2023

- BIPV Innovation at World Economic Forum, Davos
- Filed Patent for Insulated Solar Board
- Panellist & Curator of the first Indian BIPV Report by MNRE, CSIR & SUPSI
- Finalist in Maharashtra State innovation Challenge

2024

- India's first fully automatic manufacturing BIPV Line
- 20 MWp Solar Park in Maharashtra

2025

- 15 MWp Solar Park in Gujarat
- Part of BIPV taskforce in India led by MNRE, NISE, GIZ

GRIHA IGBC

Accredited member

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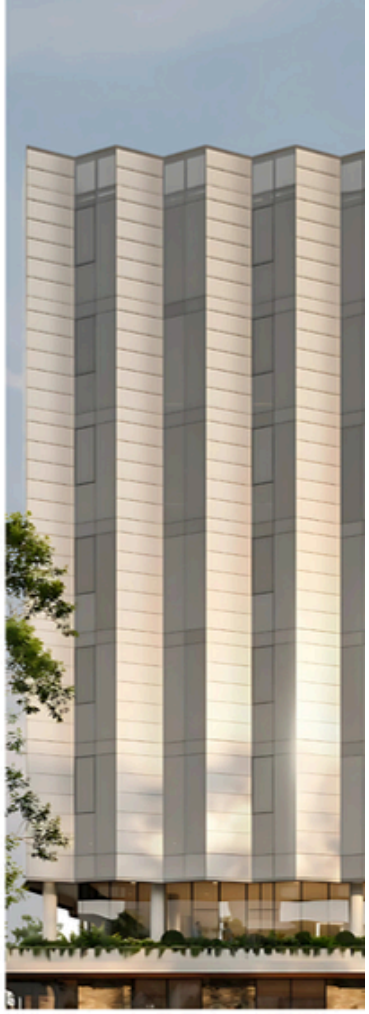
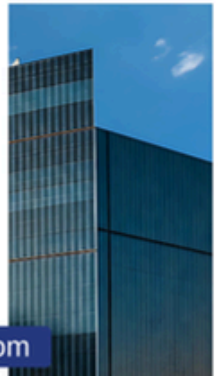
About Us

Aelius is a leading BIPV manufacturer and innovator, combining advanced solar technology with contemporary architecture to deliver energy-efficient and visually striking building designs. Our team dives deep into the specifics of your project, ensuring every solar façade and BIPV solution is custom-tailored to meet your unique vision and performance goals.





Mission

Making renewable energy accessible to all

Vision

Energising surfaces aesthetically

Core values

Innovation,
Customer centricity,
Transparency

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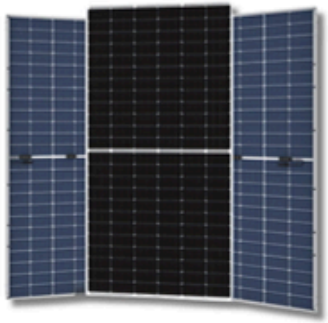
Manufacturing

- Factory area spread over 5 acres
- 300MWp capacity of standard Solar modules
- 3 million sq. ft. capacity of BIPV modules
- India's first fully automatic BIPV line
- IGBC Green Factory certified
- Located at Halol, Gujarat; 50kms from Vadodara Airport
- Tailor made solutions for Architects, Developers, EPC contractors and Home owners



180 to 740 Wp modules

Colored Facades

Designer

Customised

BIS Certified

IS 14286 : 2023

IEC 61730 -1 : 2016
IEC 61730 -2 : 2016

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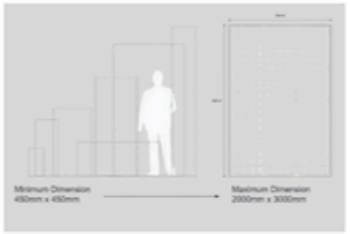
Designing with BIPV

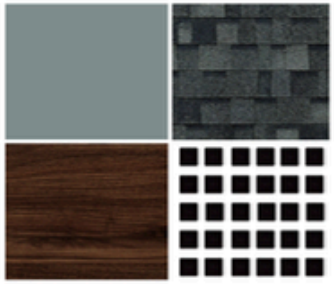
Sizes



Solar panels come in various sizes to suit different architectural needs—from compact to large formats. Standard sizes include 457x457, 1200x457, 1200x900, 1800x1200, and 2400x1200 mm, with custom dimensions available on request for a perfect design fit.

Designs

Designer solar refers to solar panels or systems crafted with aesthetics in mind, blending renewable energy technology with stylish design elements. These systems, which can include customized colors, textures, or patterns, allow architects and homeowners to incorporate solar power seamlessly into a building's appearance.



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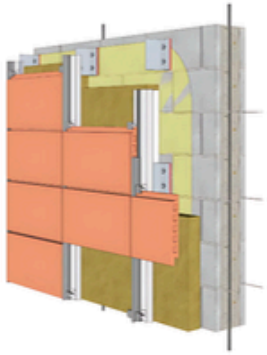
Installation

Rainscreen



BIPV panels are mounted on a ventilated substructure, creating an air gap between the panels and the building's insulation layer. This air cavity facilitates natural ventilation, reducing heat buildup and improving the efficiency of the photovoltaic modules. Additionally, it allows any moisture that penetrates the outer layer to evaporate, preventing water ingress into the building.

Cladding

BIPV cladding involves integrating solar panels into the building façade, replacing traditional wall materials. Installed using a rainscreen approach, these panels generate clean energy while providing weather protection, thermal insulation, and aesthetic appeal.

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Invisible Energy, Visible Elegance

Balcony Solar

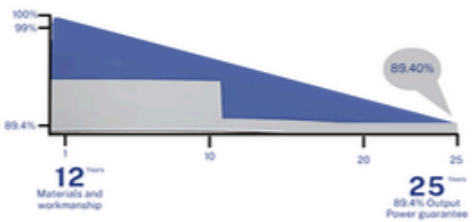
Balcony Solar refers to solar panels mounted on balcony railings or structures. These retrofittable systems generate renewable energy while providing shading, reducing heat gain, and enhancing building aesthetics. They offer an efficient solar solution without requiring major structural modifications.

ATLBS430G12

430 Watt

G12 210mm Half cut cells all Black N Type TopCon

Aelius Linear Warranty



- Half Cut N Type Solar Cells
- Resists 35mm hail Withstands 12-grade winds
- 25-year waterproof and Rooftop safety guarantee
- Lower summer indoor Temperatures by 5-8°C
- Reduce energy consumption By 10%
- Modular design with standardized prefabricated construction

BIS Certified

IS 14286 : 2023

IEC 61730 -1 : 2016
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Facade

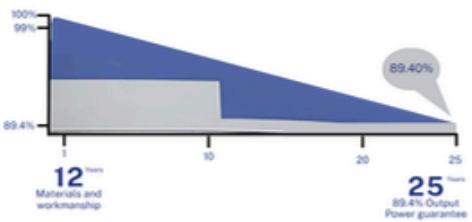
A solar facade is a building's outer wall integrated with solar panels to generate renewable energy. This design optimizes vertical space for energy production, especially in urban areas, while adding insulation and enhancing aesthetics. An ideal BIPV product for spandrel areas and glazing if no visibility is required. DGU or SGU options available.

ATLSPXXXG12

XXX Watt

Heterojunction (HJT) 210mm Half cut cells. Panel Wattage depends on size.

Aelius Linear Warranty



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Rooftile

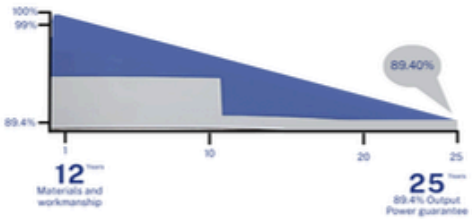
A solar rooftile is a roofing material embedded with photovoltaic cells, allowing roofs to generate electricity while maintaining a traditional look. These tiles provide an integrated, aesthetically pleasing way to produce renewable energy without separate panels. Different colors like black, brown, blue possible.

ATLRT120G12

120 Watt

G12 210mm Half cut cells N
Type TopCon or HJT.
Panel size - 1200 x 457 mm

Aelius Linear Warranty



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Cladding

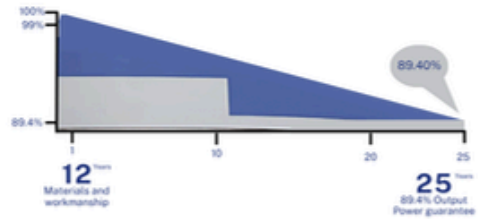
Solar cladding is an exterior wall covering with built-in solar panels that generate electricity from sunlight. It combines energy production with building insulation, making walls more energy-efficient while adding a modern look to the structure. Different colors available on request.

ATLCLXXXG12

XXX Watt

G12 210mm Half cut cells N
Type TopCon or HJT available

Aelius Linear Warranty



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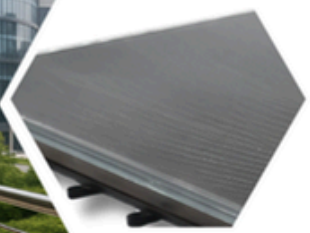


Floortile

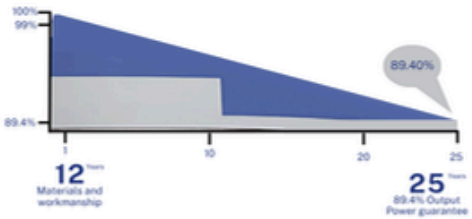
A solar floor tile is a durable, walkable surface embedded with photovoltaic cells, enabling it to generate electricity from sunlight even in high-traffic areas. These tiles can be installed in outdoor spaces like sidewalks, plazas, and pathways, turning underutilized surfaces into energy-generating assets.

ATLFT40G12

40 Watt

G12 210mm Half cut cells all
Black N Type TopCon or HJT.
Panel size - 457 x 457 x 17 mm

Aelius Linear Warranty



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Actual site - Lodha Villa Royale

Designer Solar

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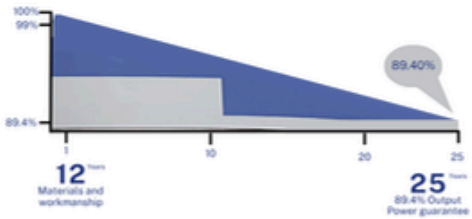
ATLDSXXXG12

XXX Watt

G12 210mm Half cut cells N
Type TopCon or HJT available

Aelius Linear Warranty



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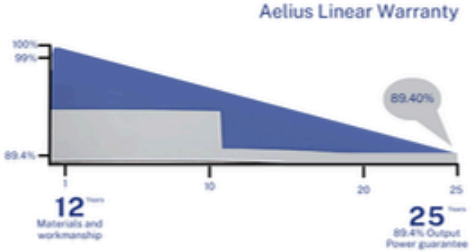
Louvers

PV Louvers are integrating photovoltaic cell (PV) into louvers blades. The system is designed to reduce heat gains and glare while generating electricity. PV louvers can be installed either vertically or horizontally on building facades or roofs, and they can be fixed or controllable to optimize natural daylight and energy efficiency.

ATLLVXXXG12

XXX Watt

G12 210mm Half cut cells N
Type TopCon or HJT available



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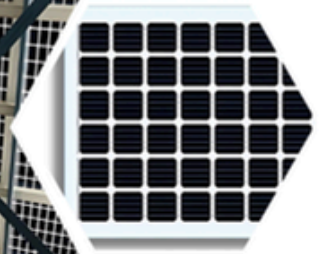


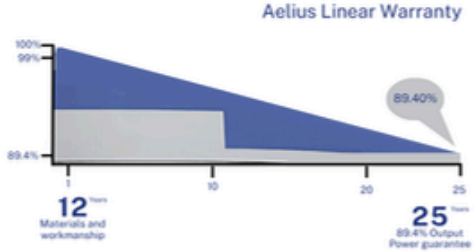
Solar-as-a-Roof

A solar-as-a-roof system integrates solar panels directly into the roof structure, replacing traditional roofing materials with clean energy solutions. With our proprietary leak-proof mounting structure, enjoy dual benefit of roof and solar in one solution.

ATLSR720G12

720 Watt

G12 210mm Half cut cells all
Black N Type TopCon



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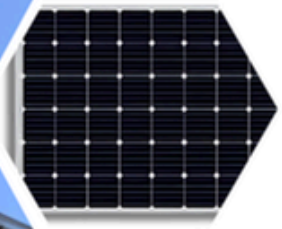


Awnings

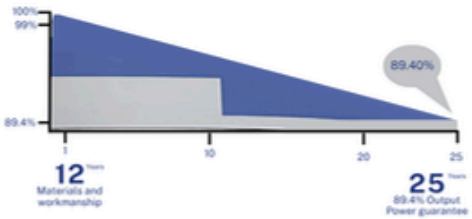
A solar awning is a canopy with integrated solar panels that generates electricity while providing shade. Installed above windows or doors, it reduces indoor temperatures, lowers energy costs, and harnesses sunlight in an efficient, space-saving way.

ATLAWXXXG12

XXX Watt

G12 210mm Half cut cells N
Type TopCon or HJT available

Aelius Linear Warranty



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Fins

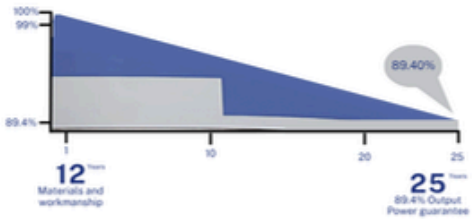
BIPV Fins are architectural elements integrated with Building-Integrated Photovoltaic (BIPV) technology. They enhance aesthetics, generate solar energy, and provide shading. Installed on façades, balconies, or shading structures, they optimize energy capture while reducing glare and improving cooling, making them ideal for modern, sustainable buildings.

ATLFNXXXG12

XXX Watt

G12 210mm Half cut cells N
Type TopCon or HJT available

Aelius Linear Warranty



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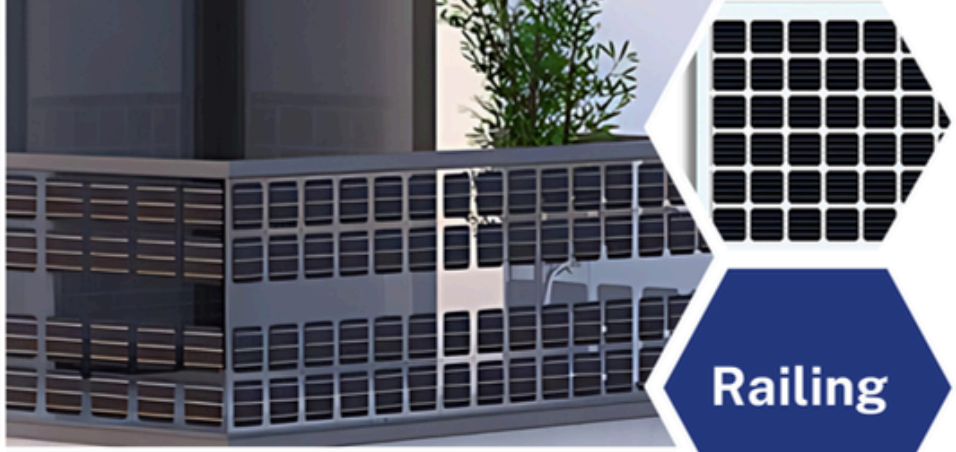


Railing

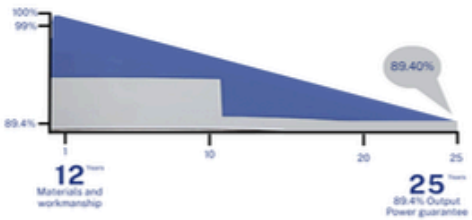
A solar railing is a balcony or terrace railing that has built-in solar panels to generate electricity from sunlight. It's a smart way to create energy in small spaces while keeping the area safe and looking stylish.

ATLRLXXXG12

XXX Watt

G12 210mm Half cut cells N
Type TopCon or HJT available

Aelius Linear Warranty



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Pergola

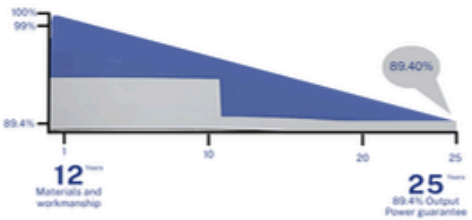
From elegant pergolas and carports to canopies, skylights, and atriums, our solar solutions redefine roofing with beauty and purpose, delivering both sustainability and style.

ATLPG660G12

660 Watt

G12 210mm Half cut cells N
Type TopCon

Aelius Linear Warranty



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Noise barrier

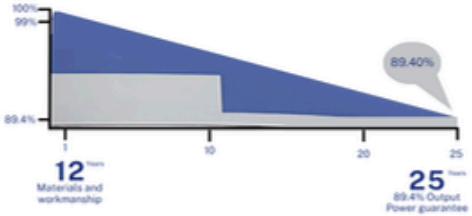
A solar noise barrier is a dual-purpose structure that combines sound insulation with solar energy generation. It typically consists of noise-reducing panels integrated with photovoltaic (PV) modules, installed along highways, railways, or industrial zones. These barriers serve the dual function of reducing noise pollution and generating renewable electricity.

ATLNB660G12

660 Watt

G12 210mm Half cut cells N
Type TopCon

Aelius Linear Warranty



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Battery Energy Storage Systems (BESS)

BESS stores excess solar energy for use during nighttime or power outages, ensuring uninterrupted power and energy independence.
Our advanced storage solutions enhance grid stability, improve energy efficiency, and support a cleaner, more reliable power supply (service provider only).

Micro Inverters

Micro inverters optimize the performance of each solar panel individually, ensuring maximum energy output even in shaded or complex roof conditions.
They enhance system reliability, offer real-time monitoring, and simplify installation—making your solar setup smarter and more efficient (service provider only)

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