

Victoria



Mellieha

FEASIBILITY STUDIES

DISCOVER DIFFERENT CONSTRUCTIVE SOLUTIONS IN MALTA

Valletta

Zabbar

Zebbug

Marsascal

Zejtun

36°00'N

36°00'

FEASIBILITY STUDY VALLETTA

HIDDEN PV IN WHITE COLOR

	INTENSE GREEN 100 W/M ²
	WHITE 110 W/M ²
	MARBLE BROWN 115 W/M ²
	DEEP BLUE 160 W/M ²

CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	110 Wp per m ²
Visible light transmittance	0%

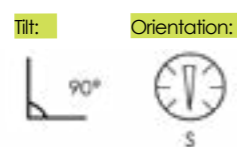
ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	3.345 KWh per m ²
Kg of CO ₂ avoided	2.143 Kg per m ²
Kilometres driven in an electric car	19.032 Km per m ²
Light points fed	6,5 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	737 € per m ²
Return on investment	30 times
Internal rate of return (IRR)	97 %
Payback time	2 years
Building's value increase**	501 € per m ²

DATA CONSIDERED FOR CALCULATIONS



PV FAÇADE / BALCONY

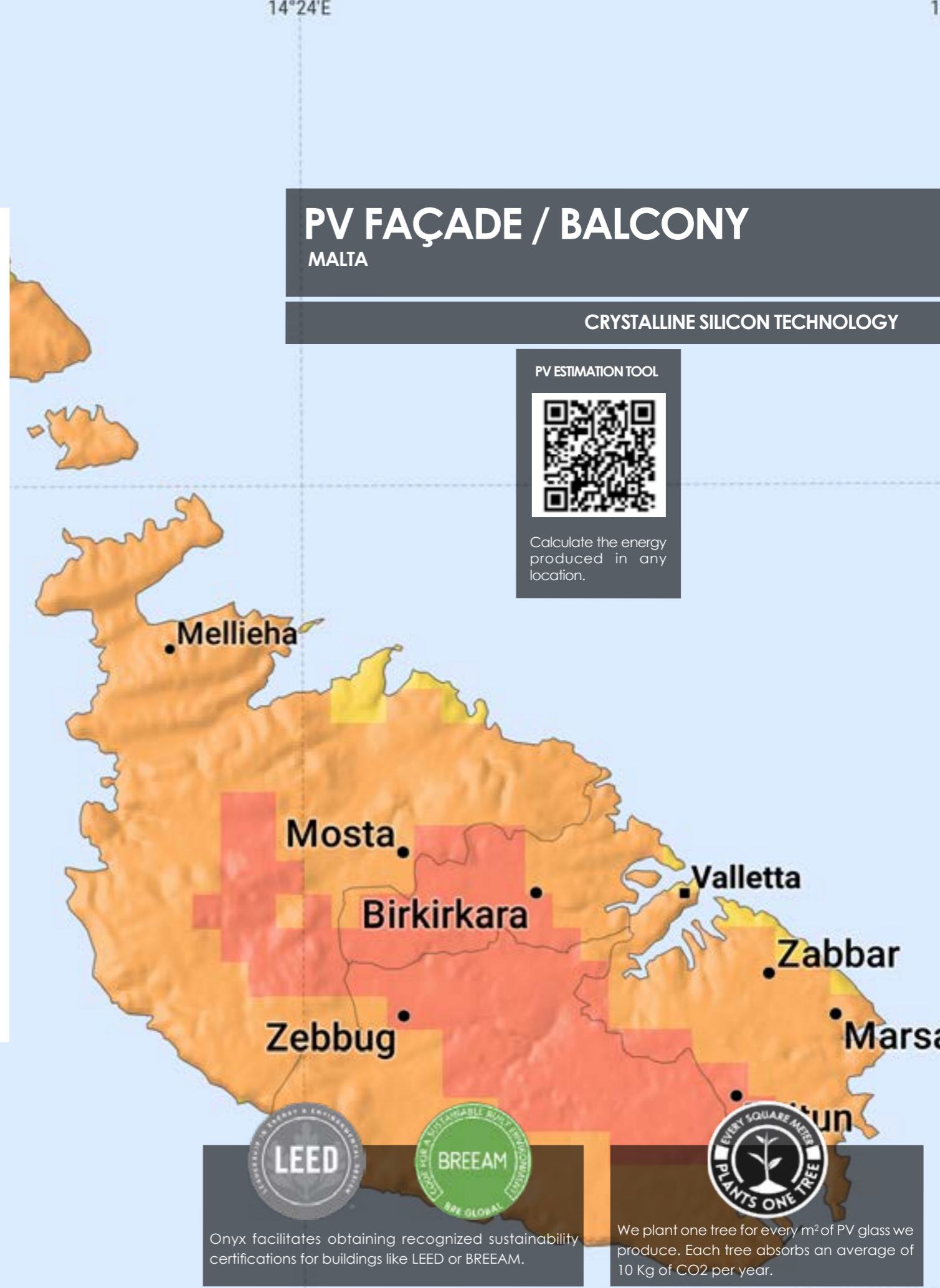
MALTA

CRYSTALLINE SILICON TECHNOLOGY

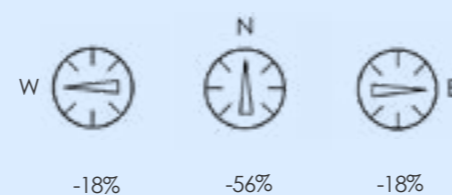
PV ESTIMATION TOOL



Calculate the energy produced in any location.



ENERGY LOSSES PER ORIENTATION



Onyx facilitates obtaining recognized sustainability certifications for buildings like LEED or BREEAM.

We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

Data Calculated for a 35-year useful life.

* The prices considered are merely indicative and may vary depending on the installed glass surface. The data provided in this feasibility study in no case involves a contractual obligation.

** According to the US Department of Energy & Environment a sustainable building will obtain an increase of value between 10 and 20 USD for every USD generated by renewable energy.



FEASIBILITY STUDY VALLETTA

HIDDEN PV IN WHITE COLOR

- INTENSE GREEN
100 W/M²
- WHITE
110 W/M²
- MARBLE BROWN
115 W/M²
- DEEP BLUE
160 W/M²

CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	110 Wp per m ²
Visible light transmittance	0%

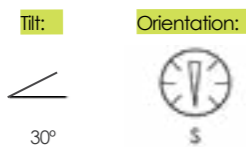
ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	2,346 KWh per m ²
Kg of CO ₂ avoided	1,446 Kg per m ²
Kilometres driven in an electric car	13,478 Km per m ²
Light points fed	5,6 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	548 € per m ²
Return on investment	5,1 times
Internal rate of return (IRR)	13 %
Payback time	6 years
Building's value increase**	279 € per m ²

DATA CONSIDERED FOR CALCULATIONS



HIDDEN PV ROOF

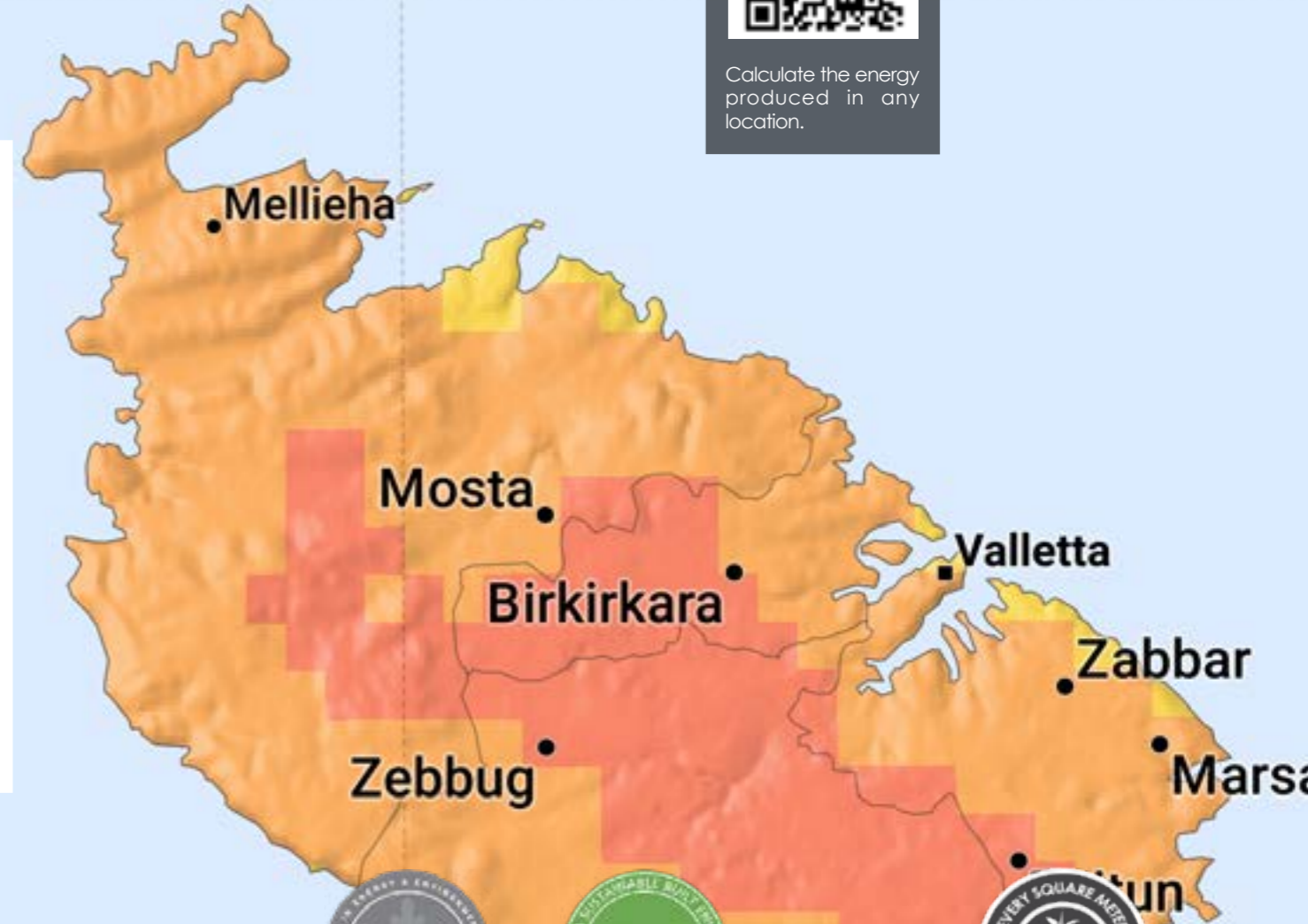
MALTA

CRYSTALLINE SILICON TECHNOLOGY

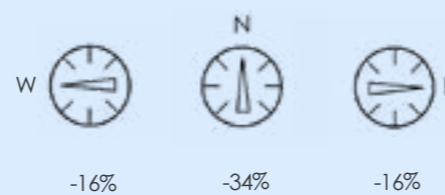
PV ESTIMATION TOOL



Calculate the energy produced in any location.



ENERGY LOSSES PER ORIENTATION



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Data Calculated for a 35-year useful life.

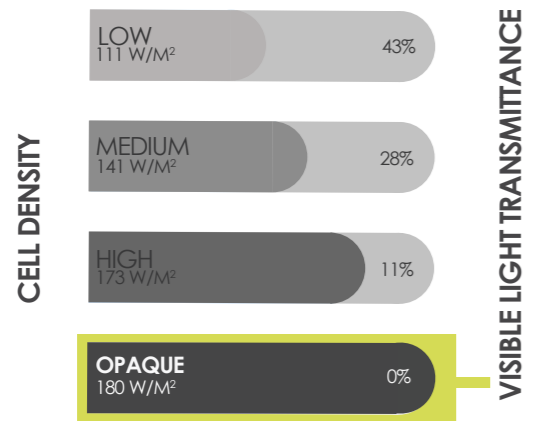
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FEASIBILITY STUDY VALLETTA

OPAQUE PV GLASS



CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	180 Wp per m ²
Visible light transmittance	0%

ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	3.709 kWh per m ²
Kg of CO ₂ avoided	2.403 Kg per m ²
Kilometres driven in an electric car	21.329 Km per m ²
Light points fed	7,3 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	829 € per m ²
Return on investment	5,6 times
Internal rate of return (IRR)	11,8 %
Payback time	9 years
Building's value increase**	343 € per m ²



PV DOUBLE SKIN / SPANDREL

MALTA

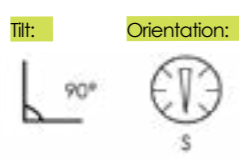
CRYSTALLINE SILICON TECHNOLOGY

PV ESTIMATION TOOL

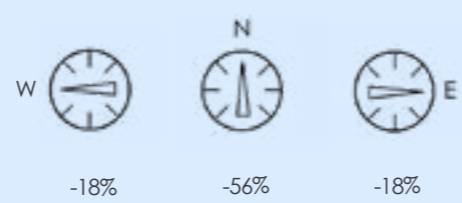
Calculate the energy produced in any location.



DATA CONSIDERED FOR CALCULATIONS



ENERGY LOSSES PER ORIENTATION



Onyx facilitates obtaining recognized sustainability certifications for buildings like LEED or BREEAM.

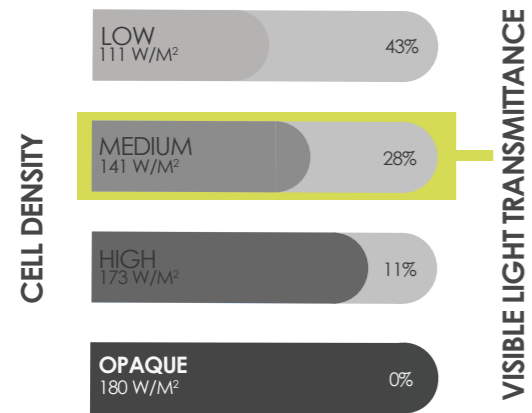
We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

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FEASIBILITY STUDY VALLETTA

MEDIUM CELL DENSITY PV GLASS



CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	141 Wp per m ²
Visible light transmittance	28%

ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	2.905 kWh per m ²
Kg of CO ₂ avoided	1.882 Kg per m ²
Kilometres driven in an electric car	16.708 Km per m ²
Light points fed	5,7 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	650 € per m ²
Return on investment	3,3 times
Internal rate of return (IRR)	8 %
Payback time	13 years
Building's value increase**	268 € per m ²



PV CURTAIN WALL

MALTA

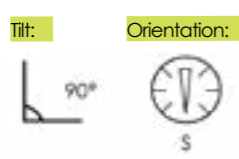
CRYSTALLINE SILICON TECHNOLOGY

PV ESTIMATION TOOL

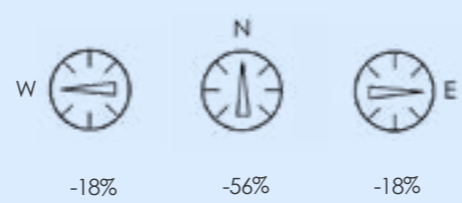
Calculate the energy produced in any location.



DATA CONSIDERED FOR CALCULATIONS



ENERGY LOSSES PER ORIENTATION



Onyx facilitates obtaining recognized sustainability certifications for buildings like LEED or BREEAM.

We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

Data Calculated for a 35-year useful life.

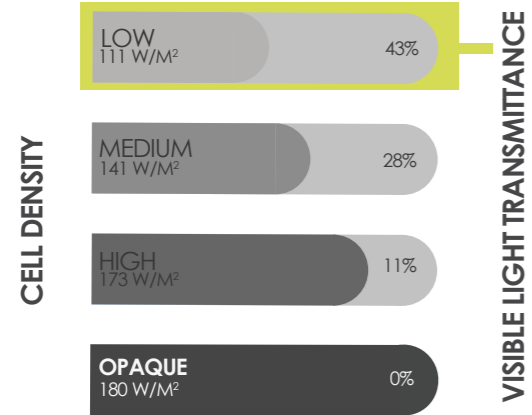
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FEASIBILITY STUDY VALLETTA

LOW CELL DENSITY PV GLASS



CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	111 Wp per m ²
Visible light transmittance	43%

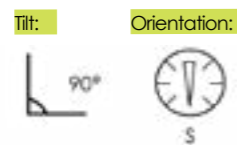
ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	2.287 KWh per m ²
Kg of CO ₂ avoided	1.482 Kg per m ²
Kilometres driven in an electric car	13.153 Km per m ²
Light points fed	4,5 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	511 € per m ²
Return on investment	3 times
Internal rate of return (IRR)	7,1 %
Payback time	14 years
Building's value increase**	211 € per m ²

DATA CONSIDERED FOR CALCULATIONS



PV BALUSTRADE / BALCONY

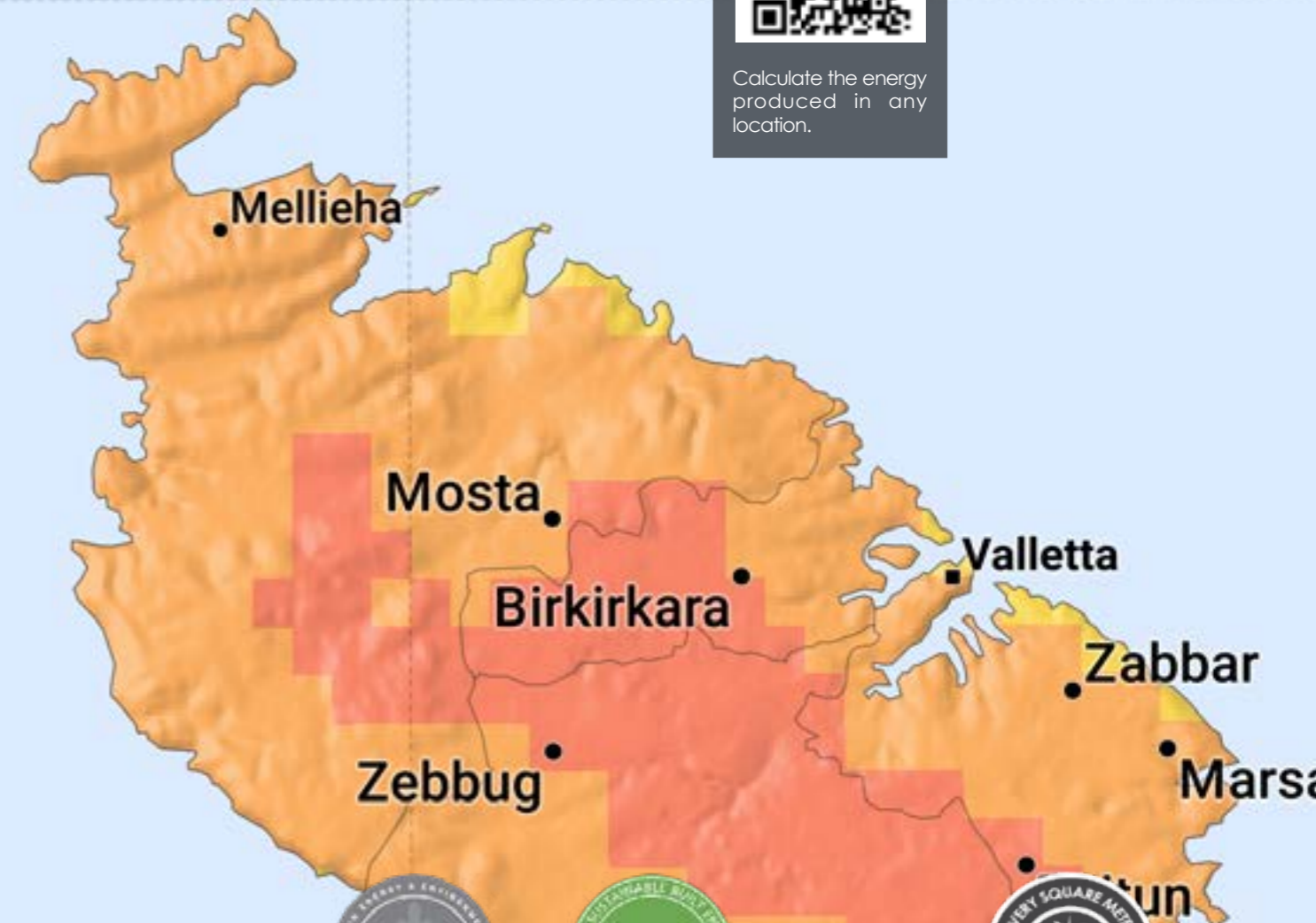
MALTA

CRYSTALLINE SILICON TECHNOLOGY

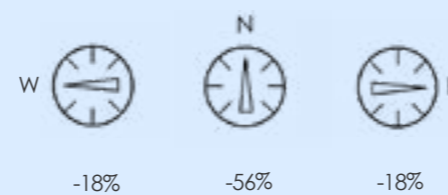
PV ESTIMATION TOOL



Calculate the energy produced in any location.



ENERGY LOSSES PER ORIENTATION



Onyx facilitates obtaining recognized sustainability certifications for buildings like LEED or BREEAM.

We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

Data Calculated for a 35-year useful life.

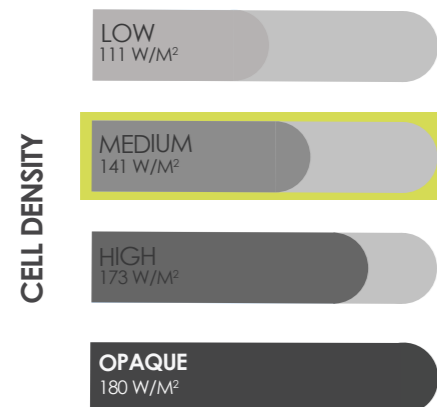
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FEASIBILITY STUDY VALLETTA

OPAQUE PV GLASS



CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m²)
Visible light transmittance

140 Wp per m²
0%

ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated
Kg of CO₂ avoided
Kilometres driven in an electric car
Light points fed

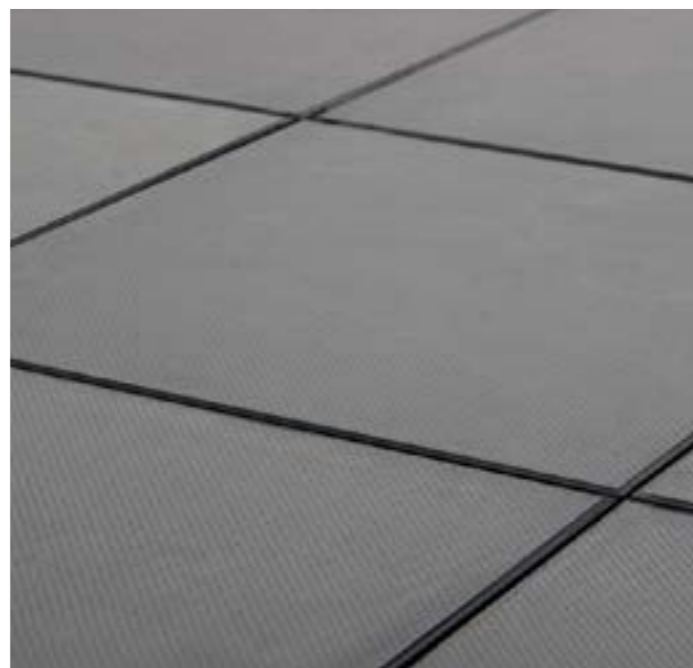
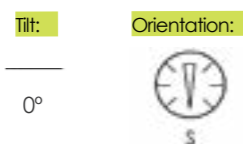
4.564 KWh per m²
2.957 Kg per m²
26.247 Km per m²
9 per m²/day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated
Return on investment
Internal rate of return (IRR)
Payback time
Building's value increase**

1.020 € per m²
3,7 times
9 %
12 years
422 € per m²

DATA CONSIDERED FOR CALCULATIONS



WALKABLE PV FLOOR

MALTA

CRYSTALLINE SILICON TECHNOLOGY

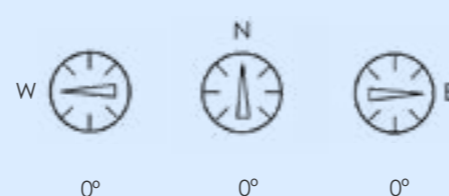
PV ESTIMATION TOOL



Calculate the energy produced in any location.



ENERGY LOSSES PER ORIENTATION



Onyx facilitates obtaining recognized sustainability certifications for buildings like LEED or BREEAM.

We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

Data Calculated for a 35-year useful life.

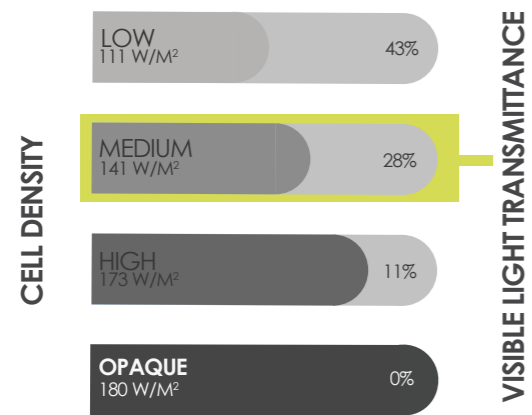
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FEASIBILITY STUDY VALLETTA

MEDIUM CELL DENSITY PV GLASS



CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	141 Wp per m ²
Visible light transmittance	28%

ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	5.027 KWh per m ²
Kg of CO ₂ avoided	3.257 Kg per m ²
Kilometres driven in an electric car	28.906 Km per m ²
Light points fed	9.88 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	1.124 € per m ²
Return on investment	4 times
Internal rate of return (IRR)	18,3 %
Payback time	13 years
Building's value increase**	464 € per m ²



PV SKYLIGHT MALTA

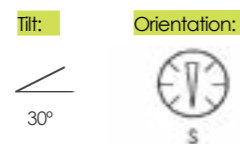
CRYSTALLINE SILICON TECHNOLOGY

PV ESTIMATION TOOL

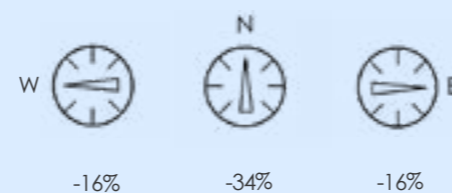
Calculate the energy produced in any location.



DATA CONSIDERED FOR CALCULATIONS



ENERGY LOSSES PER ORIENTATION



Onyx facilitates obtaining recognized sustainability certifications for buildings like LEED or BREEAM.

We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

Data Calculated for a 35-year useful life.

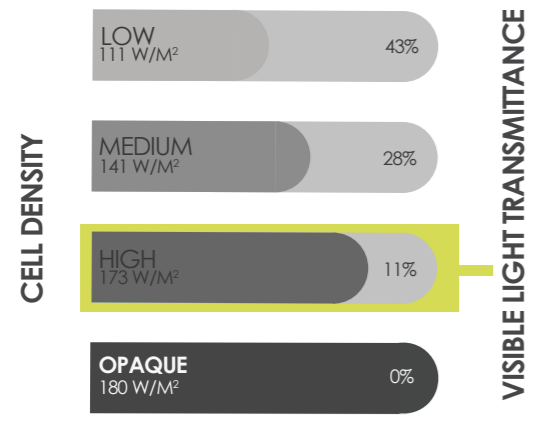
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FEASIBILITY STUDY VALLETTA

HIGH CELL DENSITY



CHARACTERISTICS OF THE GLASS

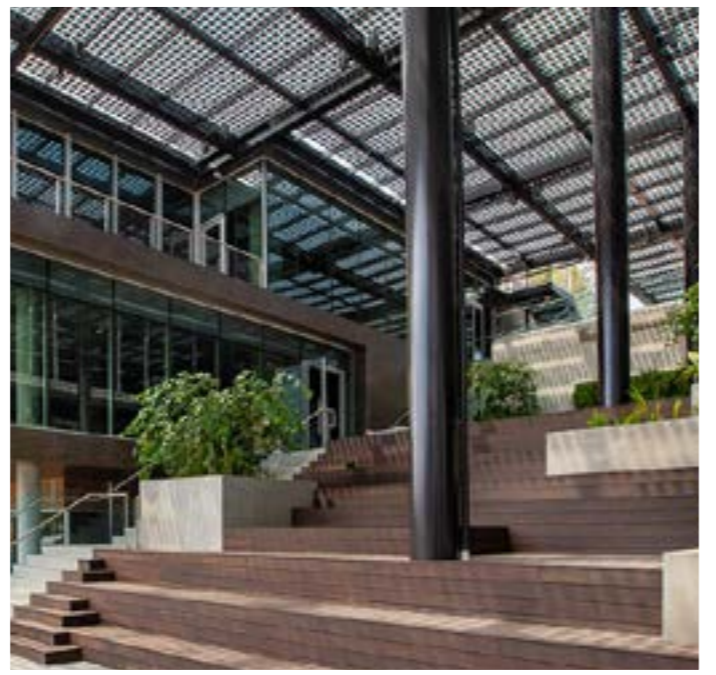
Peak Power (Wp/m ²)	173 Wp per m ²
Visible light transmittance	11%

ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	5.600 KWh per m ²
Kg of CO ₂ avoided	3.629 Kg per m ²
Kilometres driven in an electric car	32.204 Km per m ²
Light points fed	11 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	1.252 € per m ²
Return on investment	9 times
Internal rate of return (IRR)	20 %
Payback time	6 years
Building's value increase**	517 € per m ²



PV CANOPY

MALTA

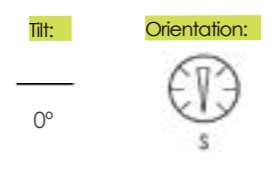
CRYSTALLINE SILICON TECHNOLOGY

PV ESTIMATION TOOL

Calculate the energy produced in any location.



DATA CONSIDERED FOR CALCULATIONS



ENERGY LOSSES PER ORIENTATION



Onyx facilitates obtaining recognized sustainability certifications for buildings like LEED or BREEAM.

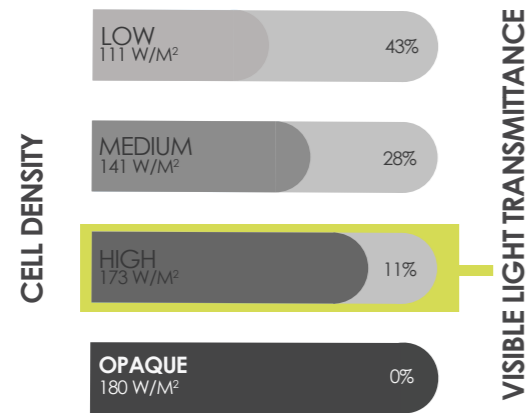
We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

Data Calculated for a 35-year useful life.
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FEASIBILITY STUDY VALLETTA

HIGH CELL DENSITY PV GLASS



CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	173 Wp per m ²
Visible light transmittance	11%

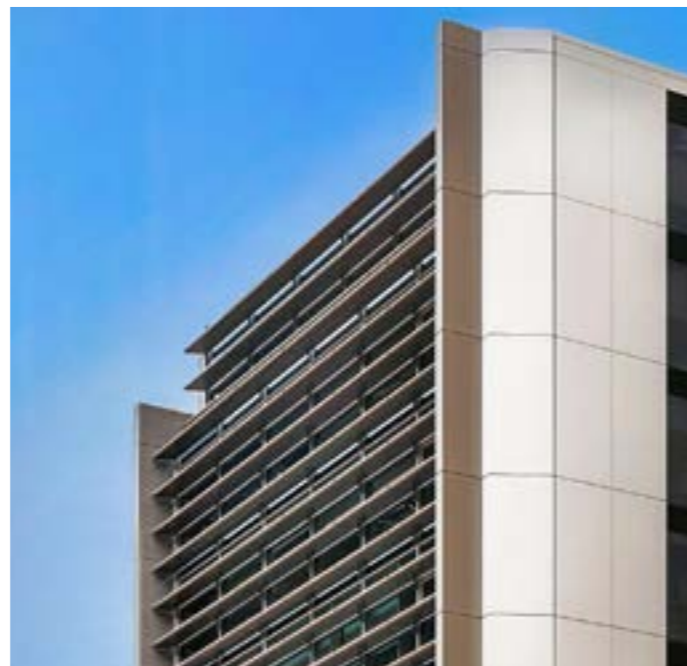
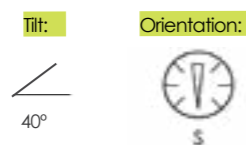
ENVIRONMENTAL BENEFITS VALLETTA

Renewable energy generated	6.168KWh per m ²
Kg of CO ₂ avoided	3.997 Kg per m ²
Kilometres driven in an electric car	35.467 Km per m ²
Light points fed	12.12 per m ² /day

ECONOMIC BENEFITS VALLETTA*

Value of the renewable energy generated	1.379 € per m ²
Return on investment	15,2 times
Internal rate of return (IRR)	21,55 %
Payback time	5 years
Building's value increase**	570 € per m ²

DATA CONSIDERED FOR CALCULATIONS



PV BRISE SOLEIL

MALTA

CRYSTALLINE SILICON TECHNOLOGY

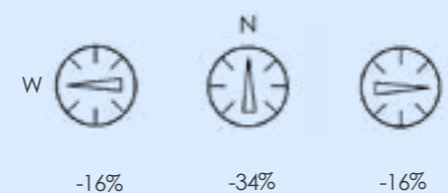
PV ESTIMATION TOOL



Calculate the energy produced in any location.



ENERGY LOSSES PER ORIENTATION



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We plant one tree for every m² of PV glass we produce. Each tree absorbs an average of 10 Kg of CO₂ per year.

Data Calculated for a 35-year useful life.

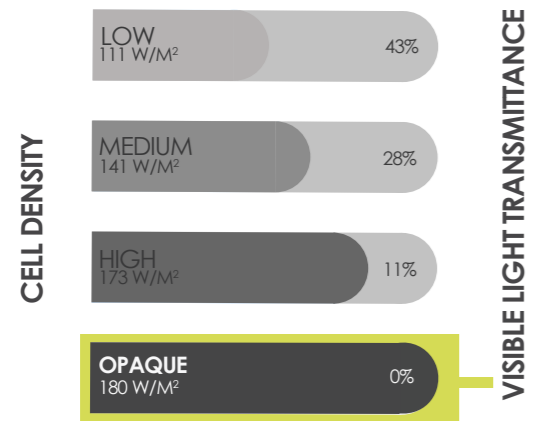
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FEASIBILITY STUDY VALLETTA

OPAQUE PV GLASS



CHARACTERISTICS OF THE GLASS

Peak Power (Wp/m ²)	180 Wp per m ²
Visible light transmittance	0%

ENVIRONMENTAL BENEFITS VALLETTA

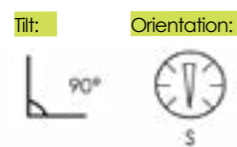
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Kg of CO ₂ avoided	2.403 Kg per m ²
Kilometres driven in an electric car	21.329 Km per m ²
Light points fed	7,3 per m ² /day

ECONOMIC BENEFITS VALLETTA*

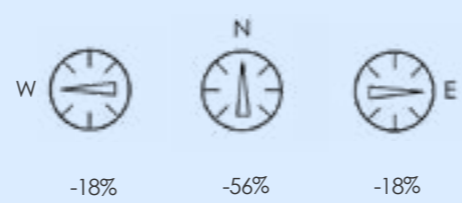
Value of the renewable energy generated	829 € per m ²
Return on investment	5 times
Internal rate of return (IRR)	11,8 %
Payback time	9 years
Building's value increase**	343 € per m ²



DATA CONSIDERED FOR CALCULATIONS



ENERGY LOSSES PER ORIENTATION



PV NOISE BARRIER

MALTA

CRYSTALLINE SILICON TECHNOLOGY

PV ESTIMATION TOOL



Calculate the energy produced in any location.



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GLOBAL EPD

SCAN THE QR TO DOWNLOAD OUR EPD



GlobalEPD
A VERIFIED ENVIRONMENTAL DECLARATION



Environmental
Product
Declaration

EN ISO 14025:2010
EN 15804:2012+A2:2019

AENOR

**CRYSTALLINE PHOTOVOLTAIC
SOLAR GLASS**

GiGM07244
GiGM07211
GiGM03644
GiGM1608A

First publication date: 31-01-2024
Expiry date: 30-01-2029

The declared validity is to registration and publication on www.aenor.es

GlobalEPD Code: GlobalEPD EN15804-063

The Environmental Product Declaration (EPD) is a certified document that provides our clients with reliable, verified, and transparent information regarding the environmental impact throughout the life cycle of a product. This information is based on a **Life Cycle Analysis (LCA)** study conducted in accordance with the Product Category Rules (PCR) developed by the Eco-labeling Program. In our specific case, the study has been carried out under the **Product Category Rule for Construction Products UNE EN 15804:2012+A2**.



ECO PLATFORM & AENOR
ECO Platform is a European Association made up of DAP Verification Program Administrators, industrial associations, and life cycle analysis experts, which guarantees the quality and conformity of environmental declarations of construction products in accordance with ISO 14025 and EN 15804 Standards. ECO Platform represents a common pan-European framework for DAPs. The Programs commit to common quality and verification criteria, which are regularly audited.

AENOR is a founding member of ECO Platform and passed audits in 2014 to issue Environmental Declarations with the ECO Platform EPD EN 15804 VERIFIED™ logo, being one of the first four European Administrators along with International EPD System (Sweden), IBU (Germany) and BAU EPD (Austria).



» ISRAEL



» ESPAÑA



» EEUU



» DUBAI



» FRANCIA



» ESLOVAQUIA



» ESPAÑA



» ESPAÑA



» ARABIA SAUDITA



» MEXICO



» NIGERIA



» PAÍSES BAJOS



» EEUU



» ESPAÑA



» EEUU



» DUBAI



» DINAMARCA



» EEUU



» EEUU



» EEUU

UNLOCKING THE POWER OF PHOTOVOLTAIC GLASS:

Are you curious about the potential of photovoltaic (PV) glass for your project? Our team at Onyx Solar is here to guide you through the process and help you harness the benefits of this innovative technology.

WHAT DOES PV GLASS BRING TO YOUR PROJECT?

- ✓ **Energy Generation:** PV glass generates clean electricity from sunlight, reducing your reliance on traditional power sources.
- ✓ **Aesthetic Integration:** Say goodbye to bulky solar panels! PV glass blends seamlessly with architectural designs, enhancing the visual appeal of your building.
- ✓ **Environmental Impact:** By using PV glass, you contribute to reducing carbon emissions. Imagine the positive impact on our planet!

HOW ONYX SOLAR CAN ASSIST YOU

Our technical team offers free feasibility studies tailored to your project. Here's what we provide:

- **Product Datasheets:** Detailed information about our PV glass products, including technical specifications.
- **Shop Drawings:** Visual representations to aid in your design process.
- **Energy Estimates:** Understand the potential energy output based on your installation.
- **CO₂ Emissions Prevented:** Quantify the environmental benefits of using PV glass.
- **Cost Analysis:** Get a clear picture of the investment required.
- **Payback and ROI:** Evaluate the financial returns over time.
- **Tax Credits and Incentives:** Explore available incentives to make an informed decision.



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