

THE MOST AESTHETIC BIPV SOLUTIONS

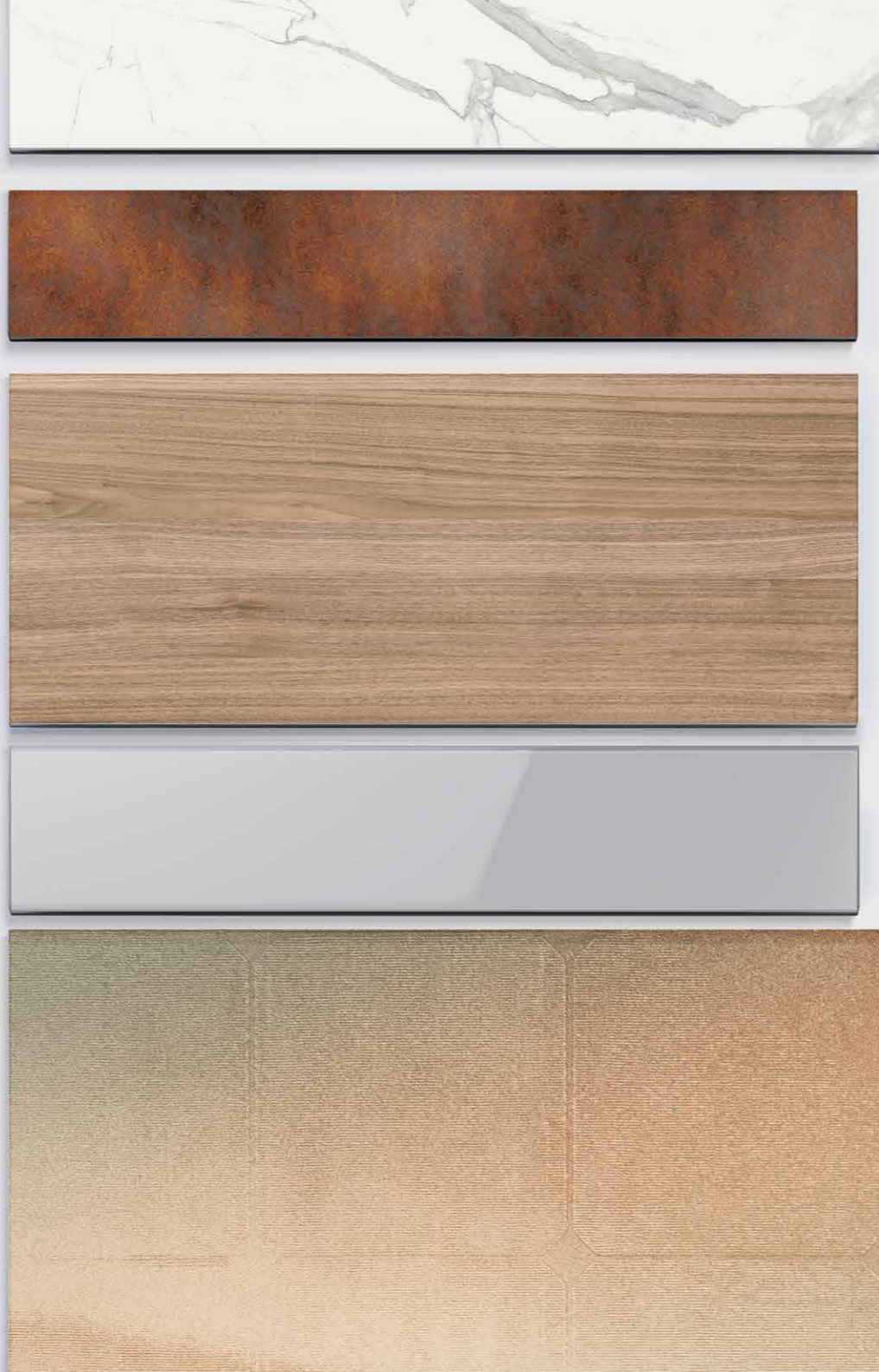


TEL: +886 3 5601958
info@heliartec.com

HELIARTEC.COM



Heliartec Solutions Corporation, Ltd. (Taiwan)
4F., No 245, Dong Sec. 1, Guangming 6th Rd.,
Zhubei City, Hsinchu County 30244, Taiwan



2024 COLLECTION





Introducing SpectroVirtu®, the groundbreaking BIPV brand from Heliartec Solutions Co., Ltd (Taiwan). With SpectroVirtu®, we're revolutionizing solar energy aesthetics by mastering the characteristics of the solar spectrum.

Unlock the unlimited possibilities of BIPV with our bespoke design and manufacturing services. SpectroVirtu® is set to redefine the value proposition of BIPV, leading the way in shaping the next generation of net-zero energy buildings.

Achieve nearly zero-energy buildings (nZEB) through solar facade solutions

40%
Energy Consumption

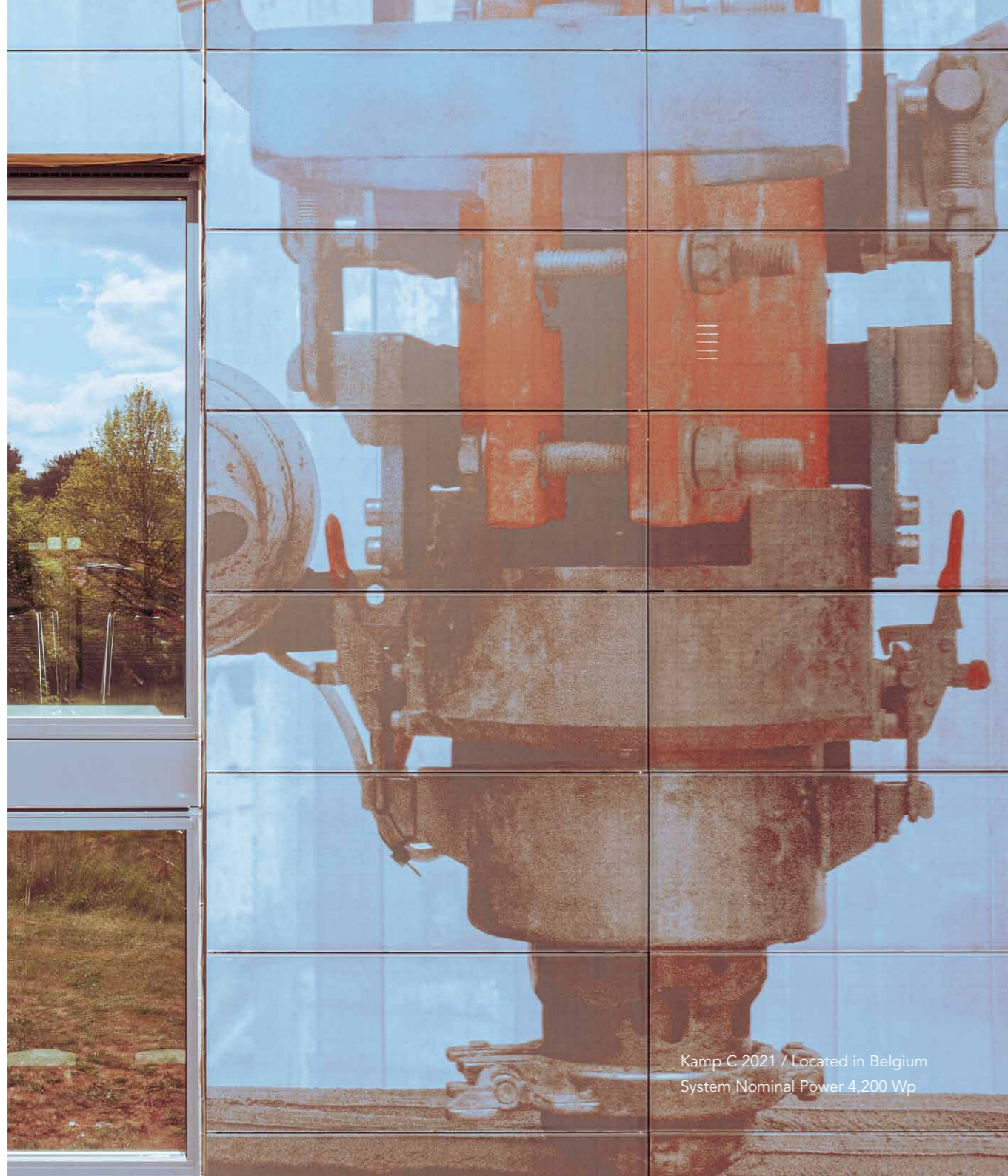
36%
CO₂ Emissions

Buildings are responsible for 40% of the EU's total energy consumption and 36% of CO₂ emissions. Facing the challenge of climate change, the EU has announced the sustainable goal that the building sector must achieve the target of a 60% reduction in greenhouse gas (GHG) emissions by 2030 in comparison to 2015 and become fully climate-neutral by 2050.

We expect to actively contribute to the achievement of nearly zero-energy consumption buildings (nZEB), in order to achieve the sustainable goal. Our solar façade solutions can become an integral part of Building Integrated Photovoltaics (BIPV), which is both aesthetically pleasing and energy-efficient, enabling sustainable development of the environment.

Cooperating with architects, designers, and builders, we strive to provide innovative and sustainable solar facade panels for the building envelope, and become a promoter leading the aesthetics and performance of solar facades.

Modular House 2021 / Located in Belgium
System Nominal Power 8,500 Wp



Kamp C 2021 / Located in Belgium
System Nominal Power 4,200 Wp

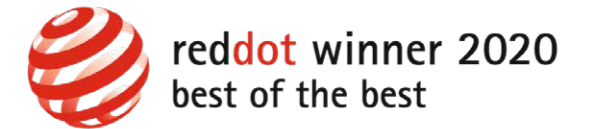
Believe that they are solar panels

We offer four product series of solar panels: Design, Color, Black, and Clear. Equipped with a scientific perspective and advanced technology, we implement the design concept of green building aesthetics and functionality, and plan a series of complete solutions to seamlessly integrate AEP - Aesthetic Energy Panel products into every corner of the building.

In renovation and new-build cases, we listen to customer demands and transform drawings into reality, creating a variety of architectural designs that incorporate with solar panels. In our highly

customizable Design and Color series, hundreds of styles are already offered for architects and designers.

We look forward to seeing that BIPV will play an important role in the future of sustainability, and everyone can have their own customized unique solar facade.



Spectro **DESIGN**Series



Spectro **COLOR**Series



Spectro **BLACK**Series



Spectro **CLEAR**Series



Strive for the excellence of printing technology

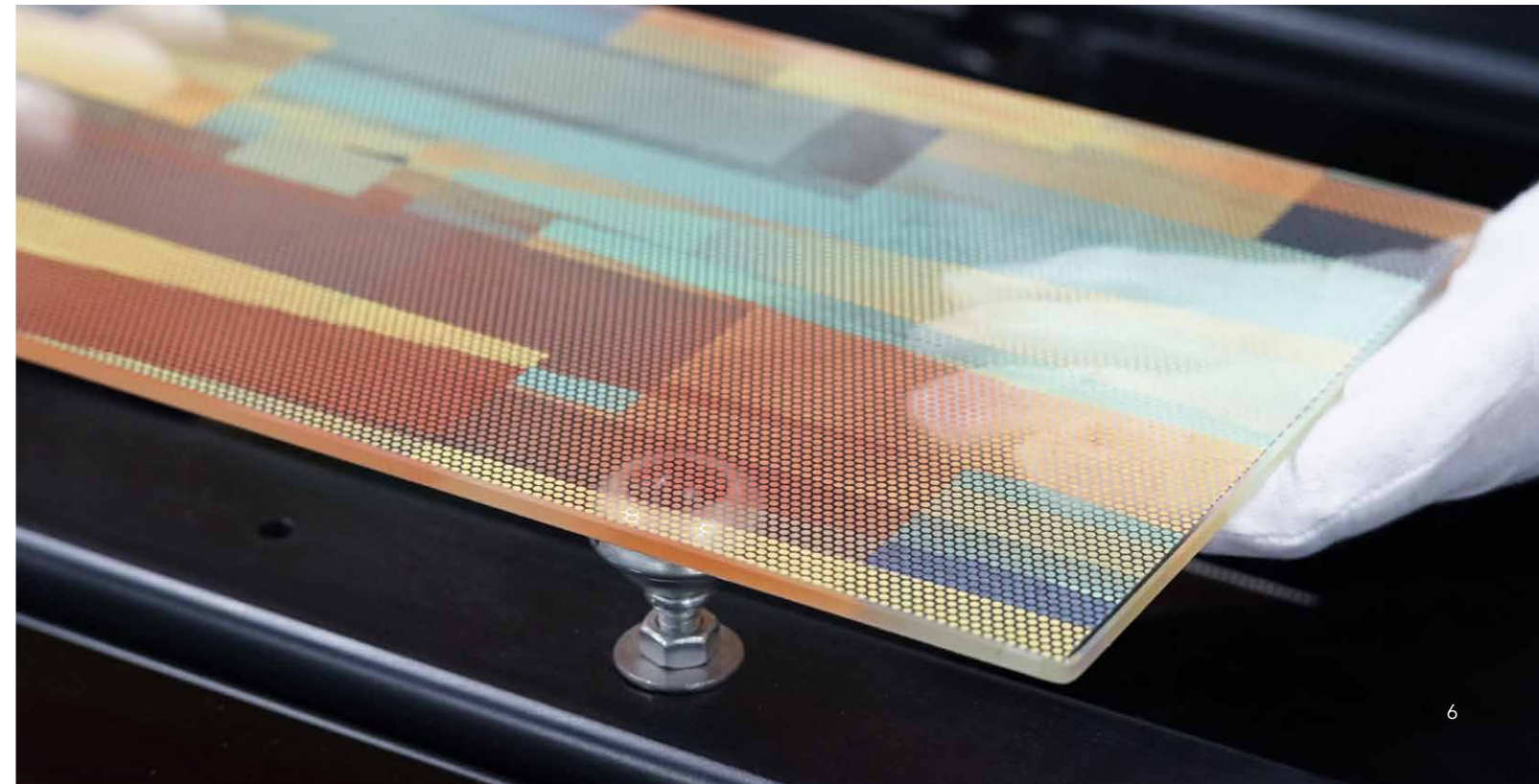


AEP - Aesthetic Energy Panel uses the most advanced digital printing technology with excellent precision to present vividly colorful images on solar facades. By fusing ceramic color ink on tempered glass at above 600 °C (1112 °F) high temperature, the ceramic ink becomes part of the front glass after cooling, and delivers high-quality luster and color saturation. With the ink printed on the back side of the front glass, the color firmness and vividness of the ceramic ink can be maintained for more than 50 years, which is consistent with the general lifespan of a building.

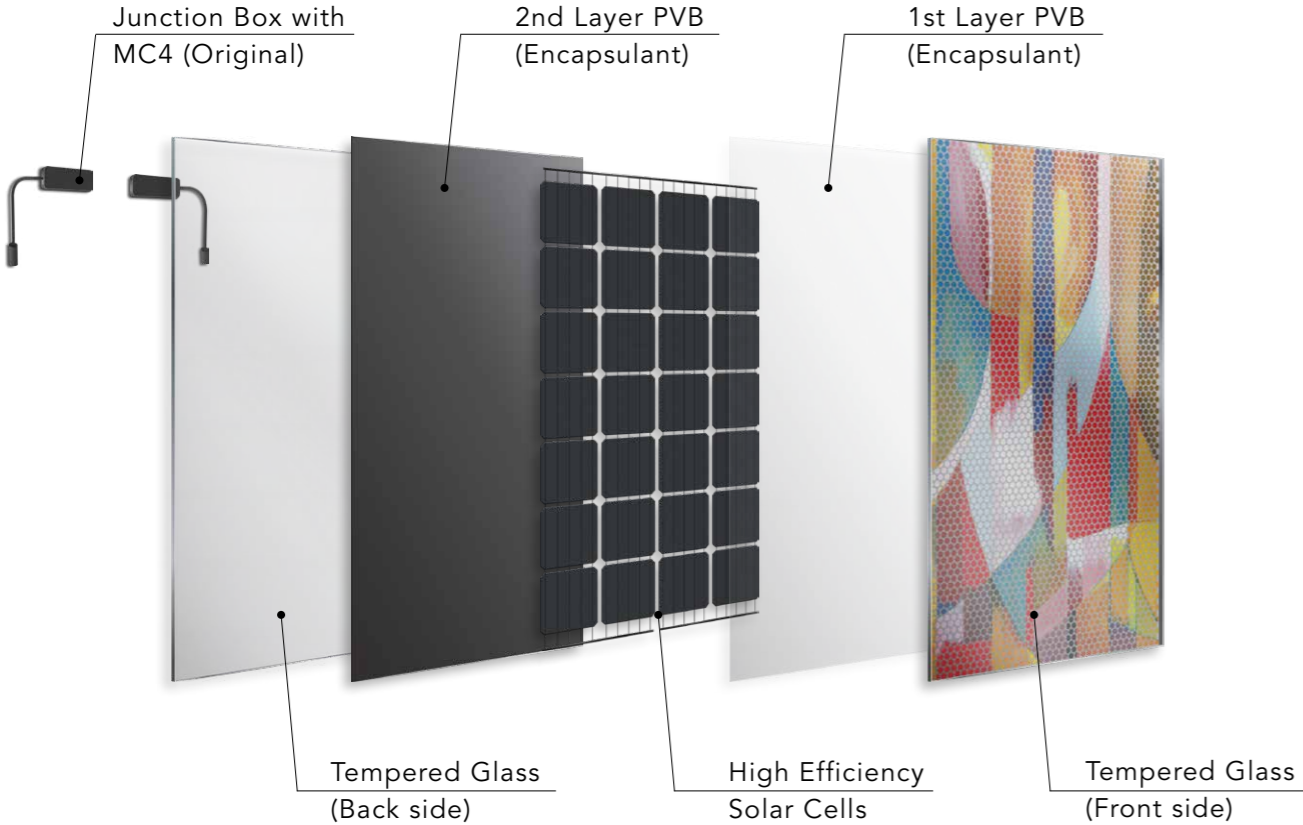
We can also easily simulate various textures on our solar panels with this digital technology process.

In order to find the perfect balance between color aesthetics and power generation performance, our patented dotted printing treatment allows sufficient sunlight to pass evenly and activate the solar cells without the risk of damaging the cells caused by hot spots.

To meet the required power generation efficiency, we offer multiple options for dotted matrix printing to harmonize color saturation by making adjustment of ceramic ink and coverage.



Build up the most robust and reliable structure



AEP - Aesthetic Energy Panel features a laminated safety glass structure with impact-resistant tempered glass, and its exclusive interlayer material includes highly transparent PVB film.

The double-glass structure not only provide better reliability and thus longer product life, but also achieve Class B(s1, d0) in Reaction to Fire test under EN13501-1 standard, therefore qualified to be used as envelope materials in building facades.

PVB has long been trusted by the building industry as the encapsulation layer for laminated glass. PVB provides enhanced reliability as well as safety, compared with EVA used in standard solar PV panels.

Our proprietary enhanced lamination process enables AEP to achieve Class 1B1 in Resistance Against Impact test under EN12600-1 with 2x5mm thickness, rather than 2x6mm in traditional laminated safety glass, thereby reducing panel weight and carbon emission during manufacturing process.

AEP has received the following certifications related to solar photovoltaic, construction, and green energy:

CE CPR EN14449

EU Construction Products Regulation for laminated safety glass

TÜV IEC61215/ IEC61730

EU Electrical Regulations for Solar Modules

RoHS 2.0 Compliant

Environmentally friendly green energy label

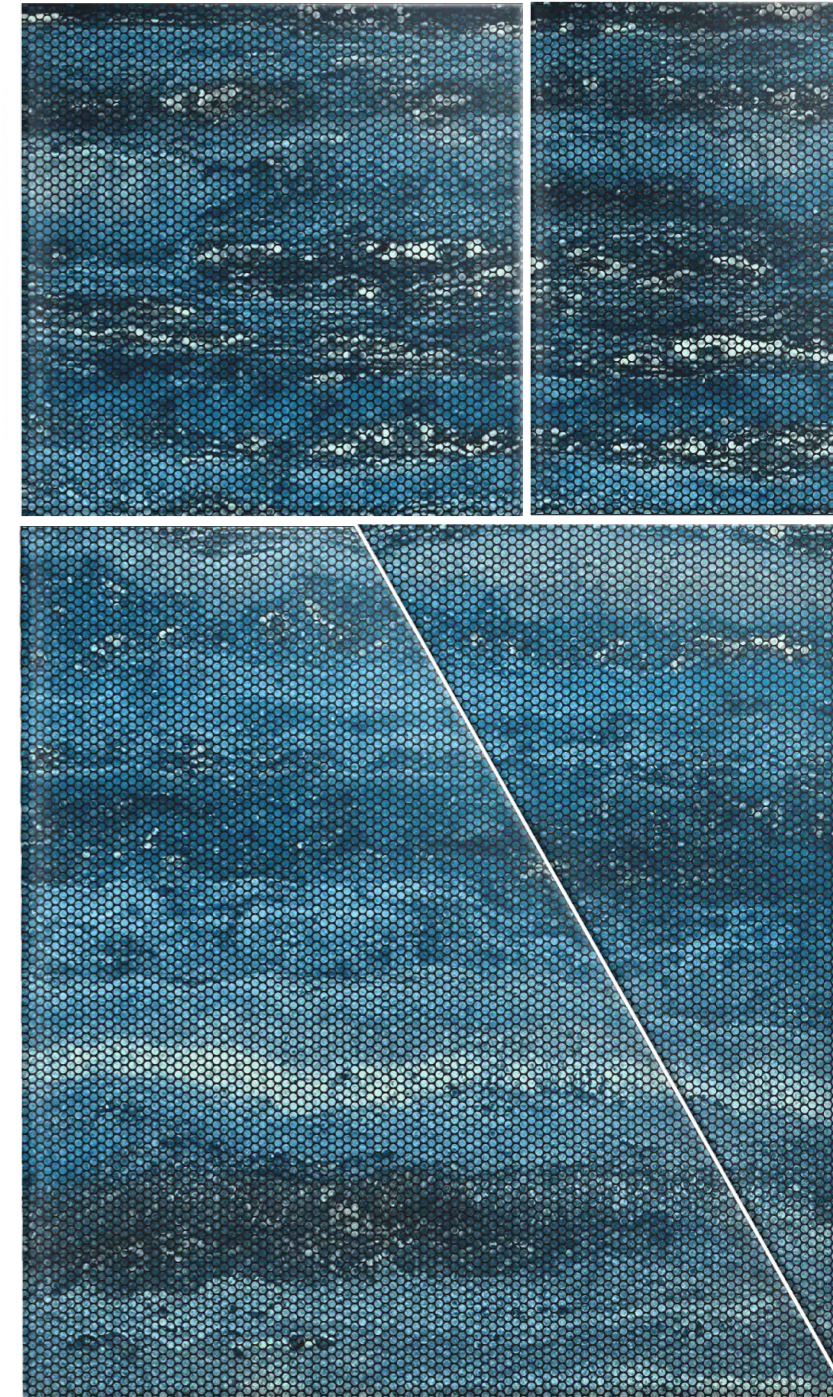




Fit seamlessly
into any shape
or design

AEP - Aesthetic Energy Panel products can be totally customized in respect of sizes and shapes, in order to conform to different design ideas. We also provide services for planning the façade as well as cell layout. Besides being suitable for any new construction, our tailor-made solar panels can also be incorporated into existing buildings for renovation.

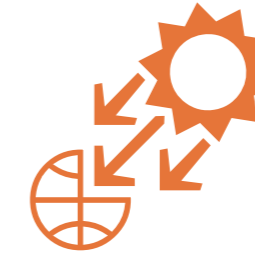
Our solar panels can be designed in unique forms to suit various application scenarios. From exterior walls, railings, and curtain walls to fences, sound barriers, public facilities, and outdoor furniture, we can provide planning services, using our patented cell layout methodology to achieve maximum power generation efficiency in particular sizes. This allows designers and developers to give free rein to their imagination and creativity.



Realize your imagination

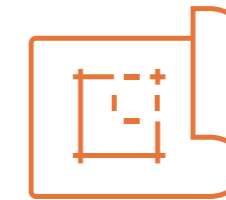


Sauna House 2019 / Located in Netherlands
System Nominal Power 2,700 Wp



Project Estimation

We can estimate the annual energy yield based on the site information provided and historical solar irradiance data. Then, we will provide the initial quotation and shipping cost. Saving time for you to plan solar panels is our intention.



Design & Layout

We will help you confirm the installation area of solar panels by reviewing the elevation drawings. The technical panel drawing will be executed, which includes the cell layout, junction box, dimensions, and electrical information, ensuring that your solar panel system is optimally designed to meet your specific needs.



Manufacturing & Production

We provide an extensive range of options for solar panel production lines, offering the freedom to customize your glass panel type, cell type, design, and color completely free of charge. Our team of experts can even design and produce a sample to ensure your vision becomes a reality.



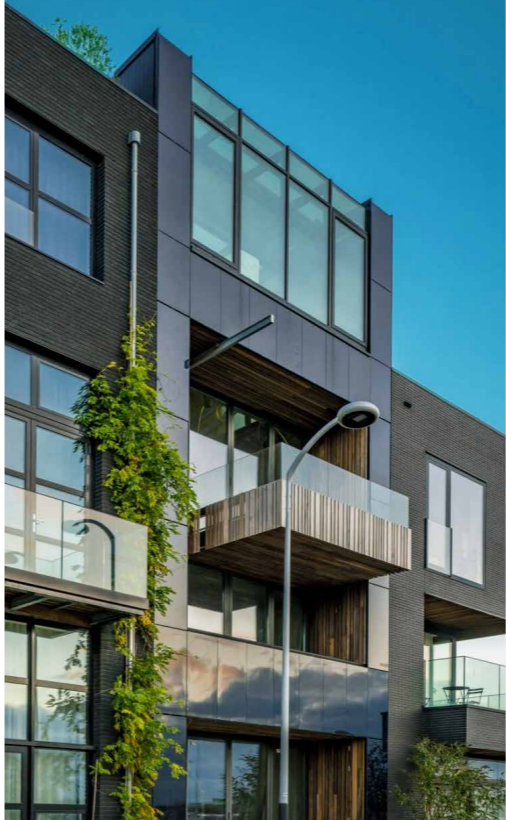
Installation & Construction

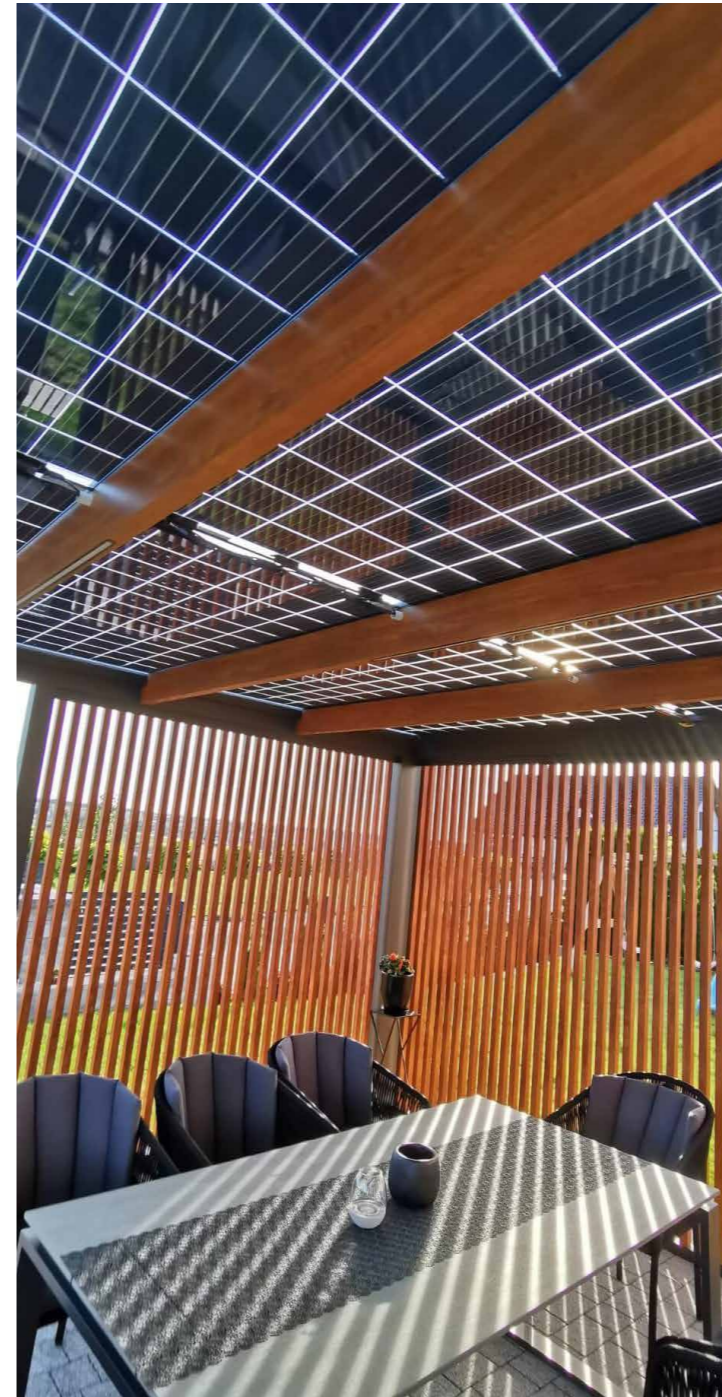
In Europe, we have established partnerships with various teams to provide exceptional local installation and construction services. Our R&D team has over 10 years of experience and expertise, offering professional insights and comments to ensure the highest quality results.

Application



- Facade
- Curtain Wall
- Spandrel
- Modular/Pre-fab
- Advertising



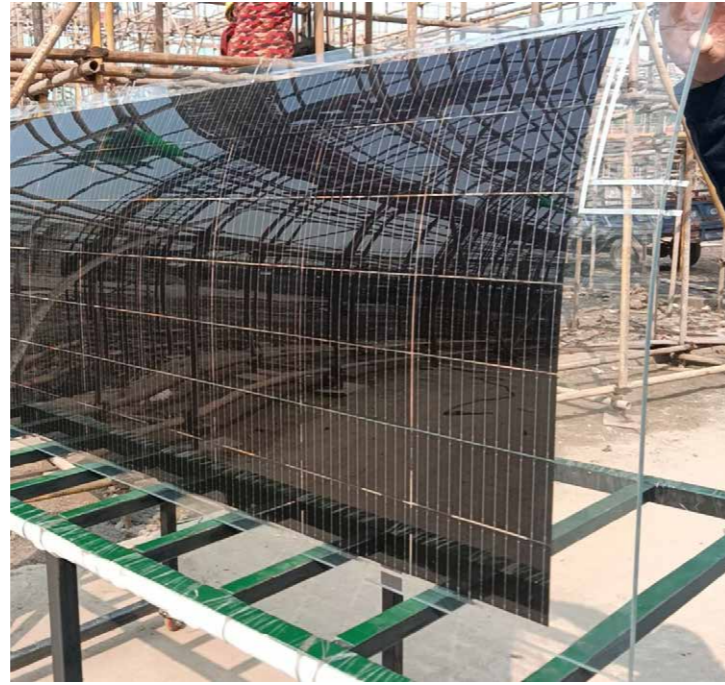


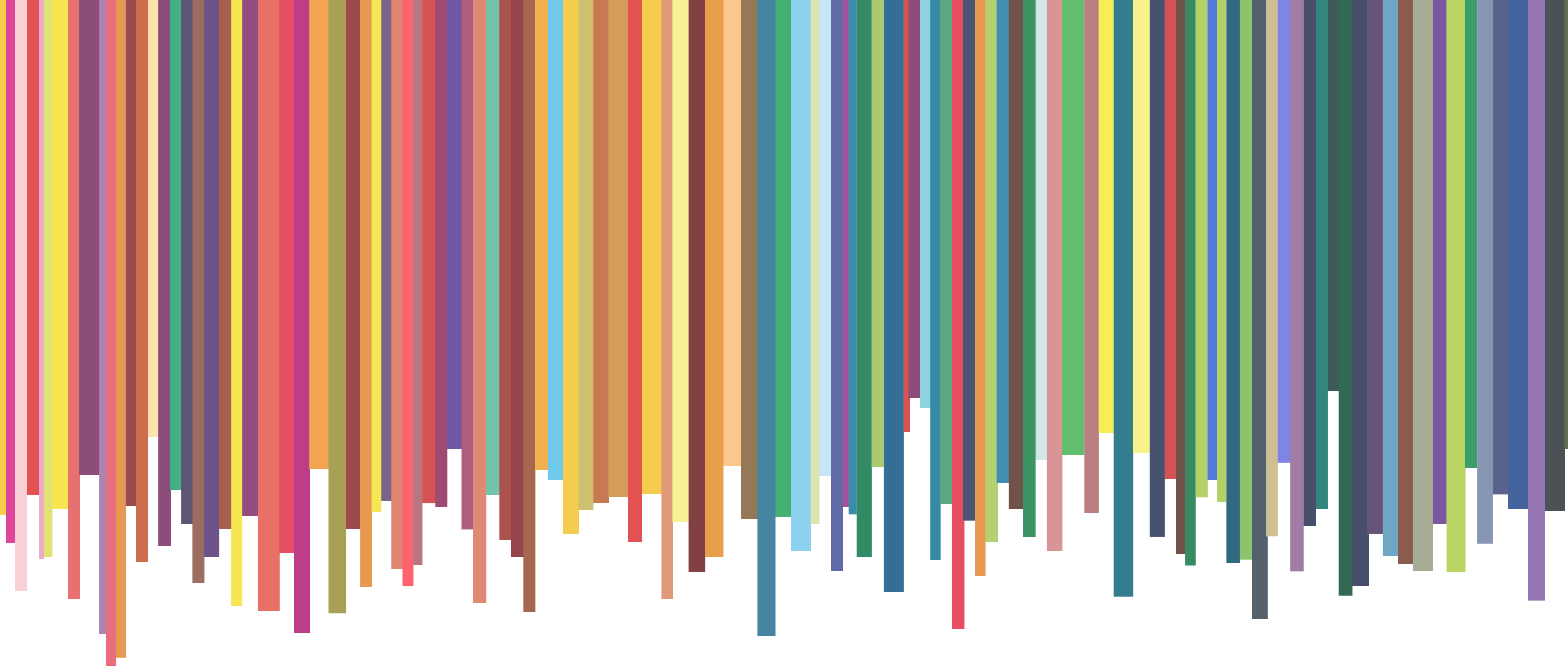
Application



- Skylight
- Canopy
- Atrium

Balcony Railing
Sound Barriers
Fences

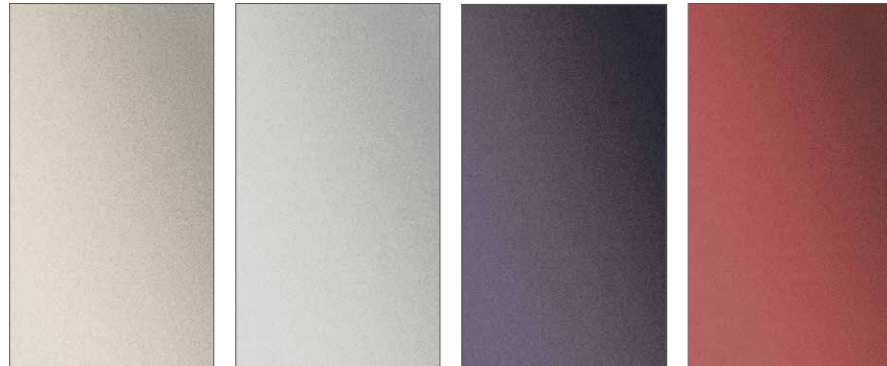




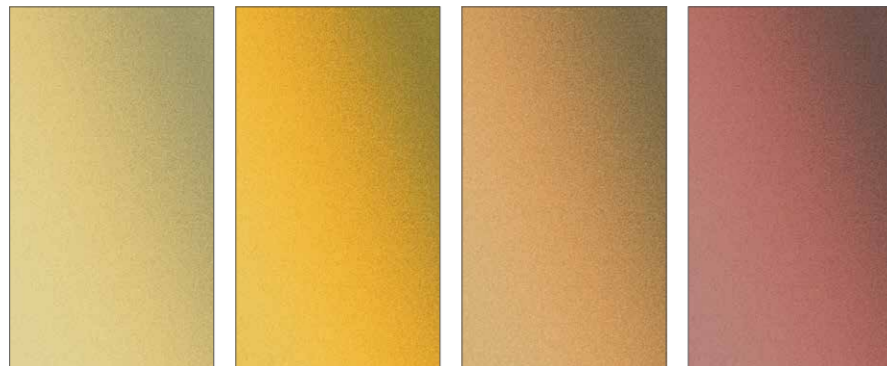
PATTERN COLLECTION

Chromatic Charm

Spectro
COLOR SERIES Metallic

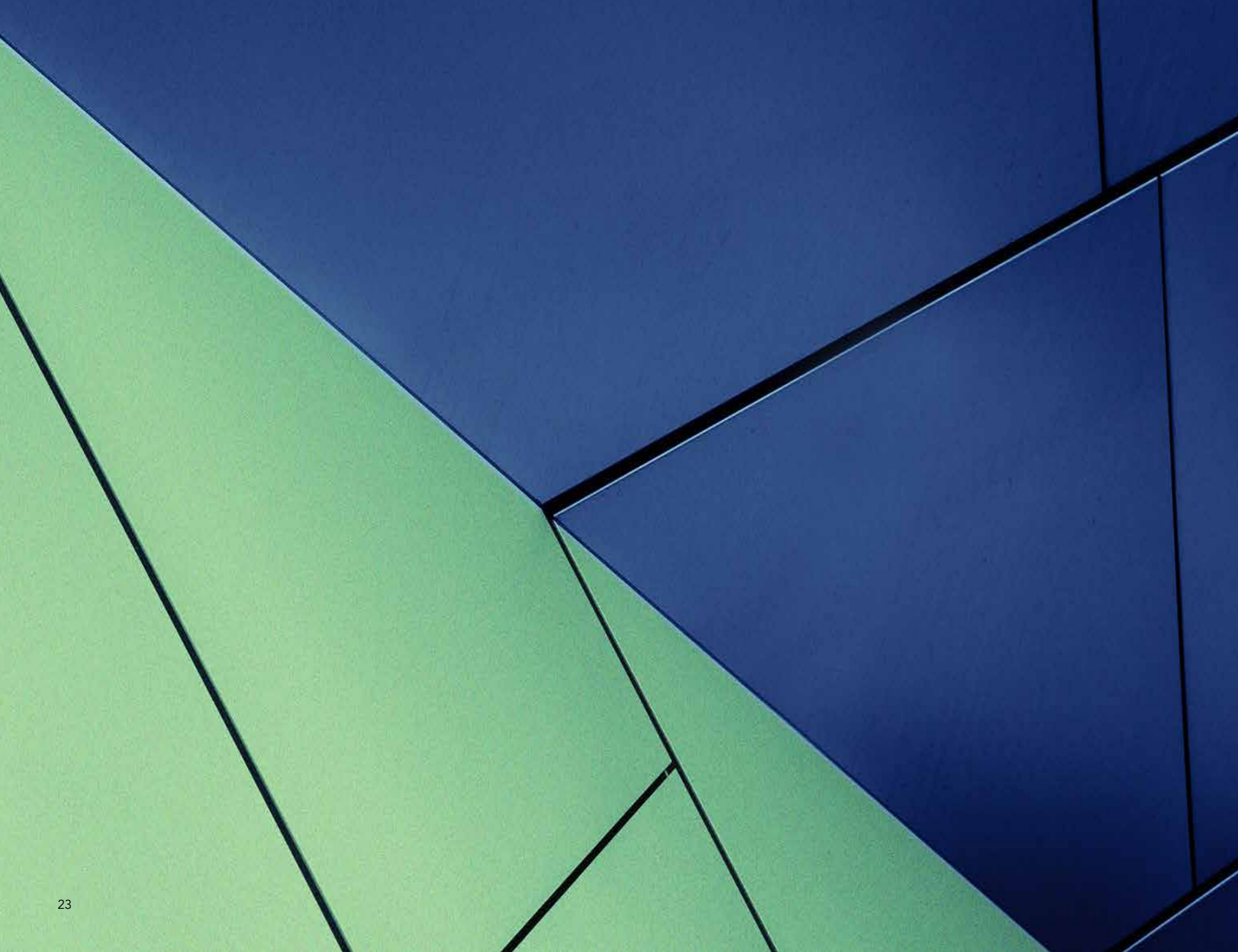


HS 7040(M) Window Grey - 125 Wp/m² **HS 7047(M)** Telegrey 4 - 130 Wp/m² **HS 7015(M)** Slate Grey - 135 Wp/m² **HS 8029(M)** Pearl Copper - 115 Wp/m²



HS 1000(M) Green Beige - 120 Wp/m² **HS 1027(M)** Curry - 130 Wp/m² **HS 1036(M)** Pearl Gold - 135 Wp/m² **HS 3015(M)** Light pink - 140 Wp/m²





Chromatic Charm



Spectro
COLOR SERIES Metallic



HS 5003(M)
Sapphire Blue - 140 Wp/m²



HS 5010(M)
Gentian Blue - 135 Wp/m²



HS 5024(M)
Pastel Blue - 140 Wp/m²



HS 6000(M)
Patina Green - 125 Wp/m²



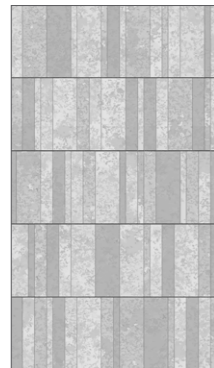
HS 6011(M)
Reseda Green - 140 Wp/m²



HS 6036(M)
Moss Green - 150 Wp/m²

Urban Mosaic

Spectro
DESIGN SERIES Urban



UM01
Ivory Intricacies - 130 Wp/m²



UM02
Earthy Elements - 115 Wp/m²



UM03
Saddle Brown - 115 Wp/m²



UM04
Hazelnut Hues - 110 Wp/m²



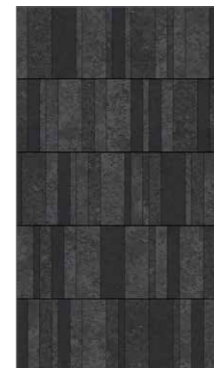
UM05
Oxford Grey - 115 Wp/m²



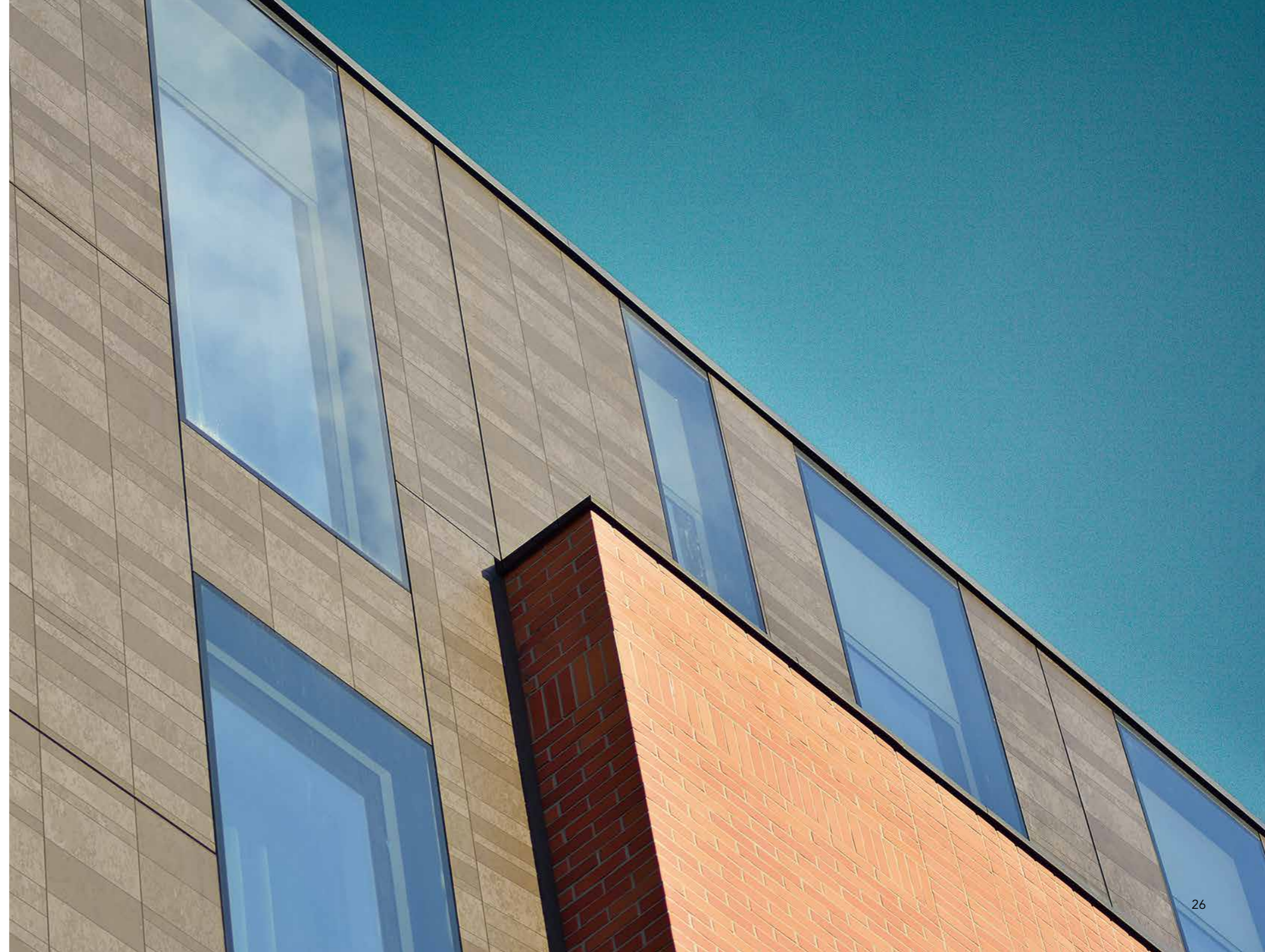
UM06
Seaside Splendor - 115 Wp/m²

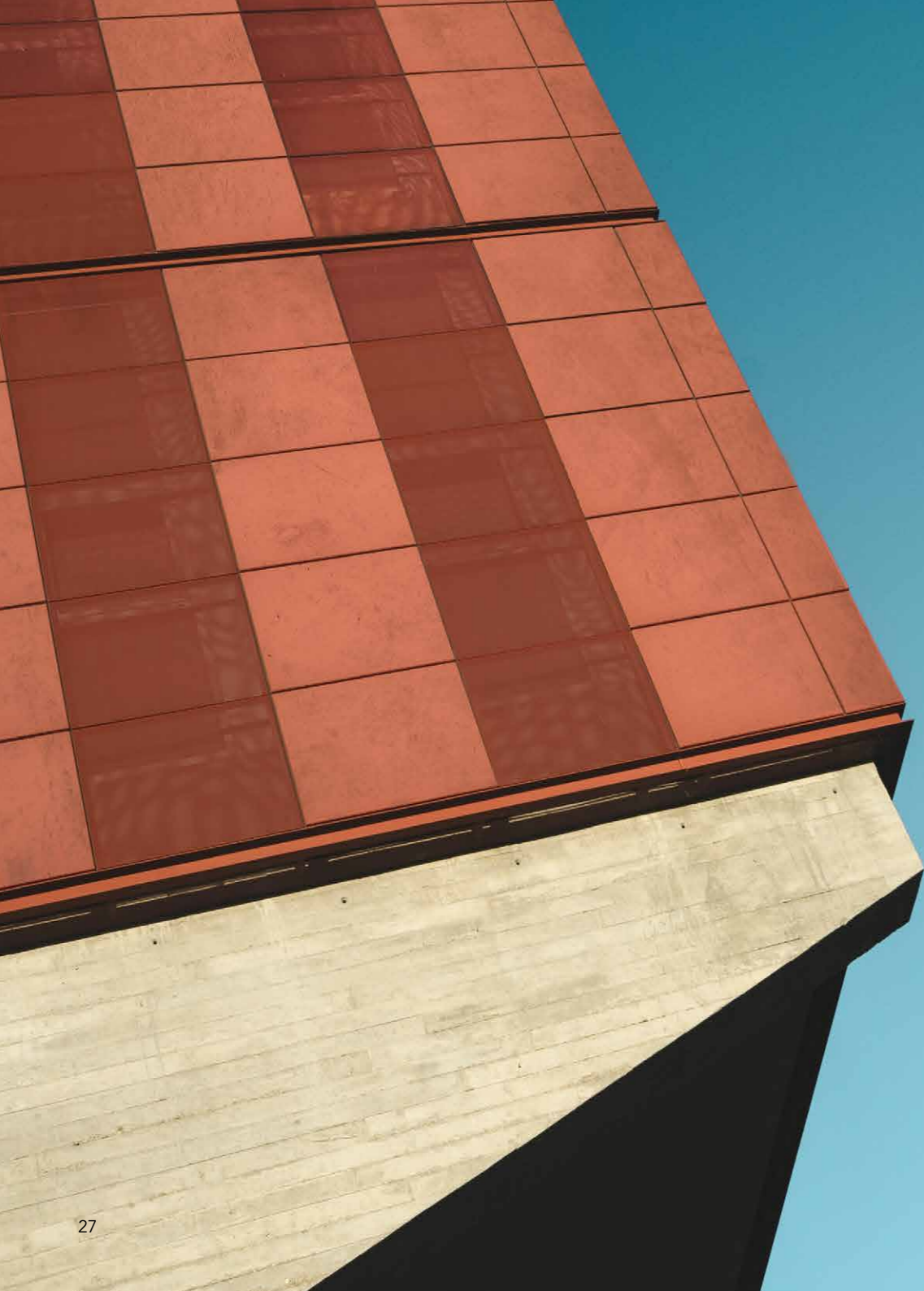


UM07
Burgundy Blends - 110 Wp/m²



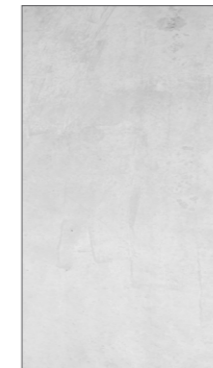
UM08
Graphite Grace - 105 Wp/m²





Cement Fusion

Spectro
DESIGN SERIES Urban



CF01
Arctic Artistry - 135 Wp/m²



CF02
Metallic Mist - 120 Wp/m²



CF03
Olive Oasis - 115 Wp/m²



CF04
Charcoal Cloud - 105 Wp/m²



CF05
Raw Elegance - 125 Wp/m²



CF06
Copper Canyon - 120 Wp/m²



CF07
Rustic Rouge - 120 Wp/m²



CF08
Sunset Sediments - 110 Wp/m²



Stone Symphony

Spectro
DESIGN SERIES Natural



ST02
Stoneware - 115 Wp/m²



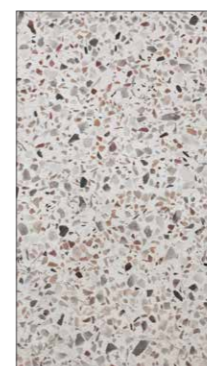
ST03
Garden Stone - 130 Wp/m²



ST04
Earth Brown - 120 Wp/m²



ST06
Harmony - 130 Wp/m²



ST13
Brandy Cream - 130 Wp/m²



ST19
Travertine - 135 Wp/m²



ST21
Stone Hewn - 120 Wp/m²



ST22
Whispering Wind - 130 Wp/m²

Power calculation based on the layout of PV cells with a module size of 685mm x 1200mm.

Woodland Wonders

Spectro
DESIGN SERIES Natural



WD02
Sandy Valley - 125 Wp/m²



WD03
Meditation - 120 Wp/m²



WD04
Peaceful Garden - 110 Wp/m²



WD05
Warm Sunglow - 115 Wp/m²



WD07
Herringbone - 115 Wp/m²



WD08
Timbergrain - 110 Wp/m²

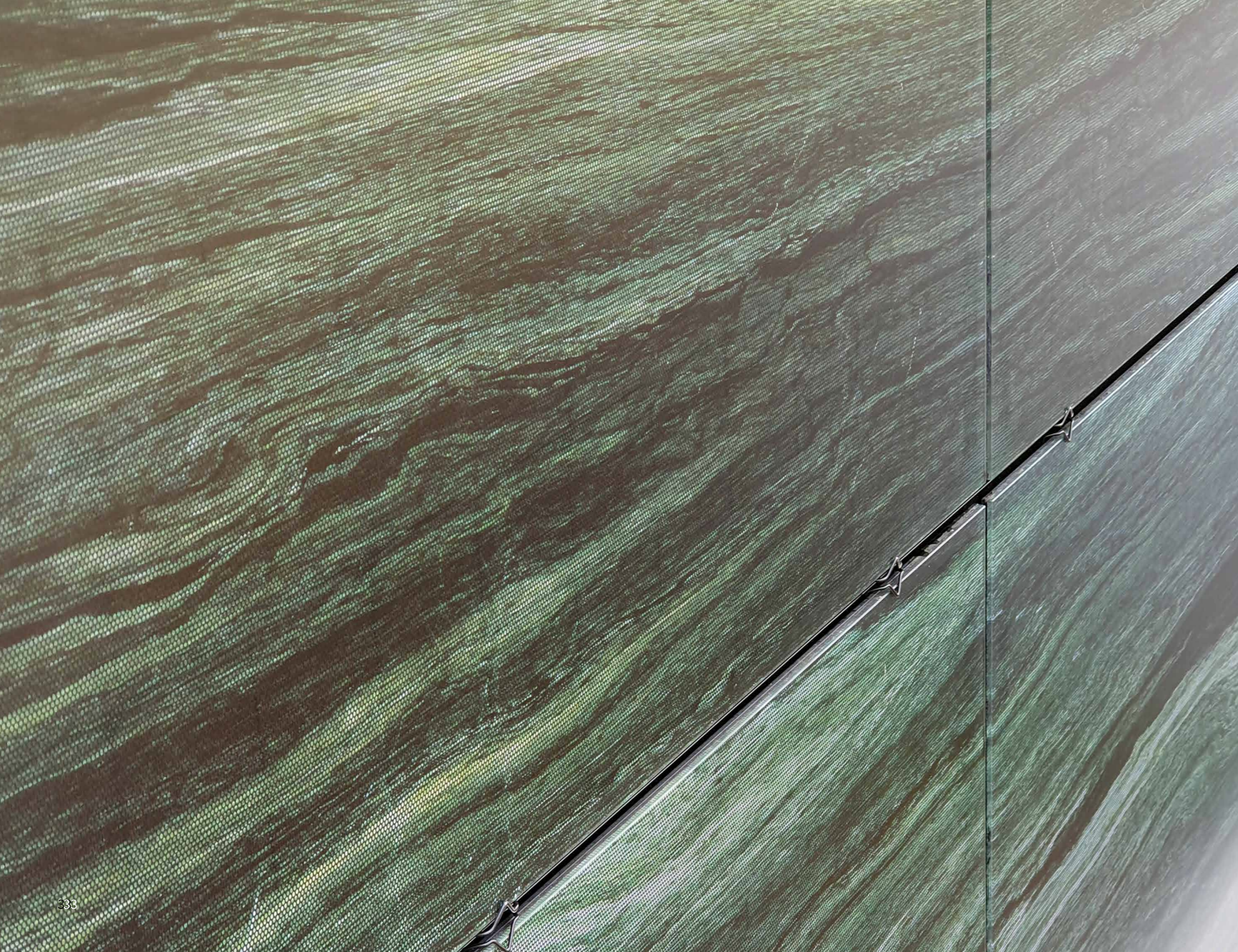


WD09
Serene Sands - 115 Wp/m²



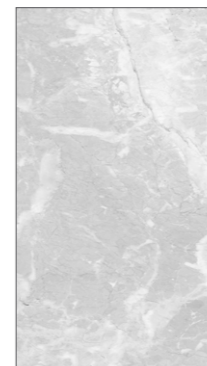
WD10
White Nordic - 130 Wp/m²



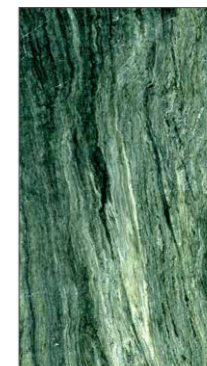


Stone Symphony

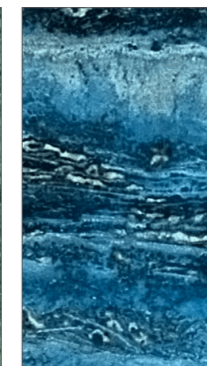
Spectro
DESIGN SERIES Natural



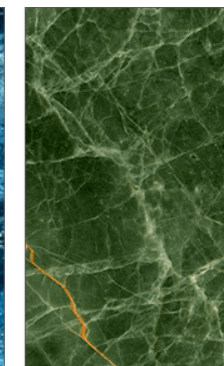
MB01
Sea Haze - 135 Wp/m²



MB02
Jade - 110 Wp/m²



MB03
Ocean Yonder - 120 Wp/m²



MB04
Heirloom - 105 Wp/m²



MB05
Sapphire - 105 Wp/m²



MB06
Graytint - 120 Wp/m²



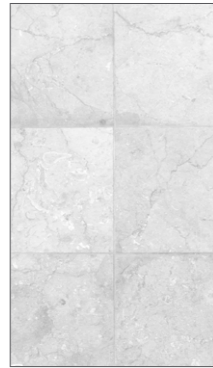
MB07
Carrara - 140 Wp/m²



MB08
Dusk Dunes - 120 Wp/m²

Power calculation based on the layout of PV cells with a module size of 685mm x 1200mm.

Spectro
DESIGN SERIES Natural



ST01
 Nightingale - 135 Wp/m²



ST05
 Shale - 120 Wp/m²



ST10
 Pashmina - 120 Wp/m²



ST11
 Granite - 125 Wp/m²



ST12
 London Mist - 130 Wp/m²



ST16
 Stonewashed - 120 Wp/m²



ST18
 Sparrow - 125 Wp/m²



ST20
 Lambskin - 130 Wp/m²

Spectro
DESIGN SERIES Urban



BK02
 York Gray - 135 Wp/m²



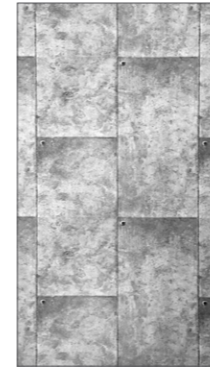
BK04
 Brick House Tan - 120 Wp/m²



CC01
 Concrete Grey - 125 Wp/m²



CC02
 Wabisabi - 135 Wp/m²



CC03
 Hushed Hue - 125 Wp/m²



MT01
 Rusty Iron - 110 Wp/m²



MT02
 Silver Box - 115 Wp/m²



MT03
 Fusion - 110 Wp/m²

NEW | ADVANCED

PV SCREEN

High Safety (PVB encapsulation)

EN 14449 Pass

EN 12600 1B1

EN 13501 B(s1, d0)

RoHS 2.0 Compliant

IEC 61215/61730

High Efficiency

130 - 170 W/m² (active area)

Privacy Protection

Moderate Transparency

for enjoying outdoor scenery

Transparency 15% - 35% (active area)

Suitable For Applications

such as balustrade, skylight, and window

Customizable

2x5 - 2x12 (mm) glass structure

600x600 - 1500x3600 (mm)

COMING SOON

Unlock visual openness, privacy, and energy efficiency with our tailored solutions.



High-resolution images

If you want to use images or texts from this document, request high-resolution images via: info@heliartec.com

All pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

HELIARTEC.COM

TEL: +886 3 5601958
info@heliartec.com

Heliartec Solutions Corporation, Ltd. (Taiwan)

4F., No 245, Dong Sec. 1, Guangming 6th Rd.,
Zhubei City, Hsinchu County 30244, Taiwan

© 2024 by Heliartec Solutions Co., Ltd. All rights reserved.