



nEXAR

**NEW GENERATION OF
SOLAR CELL**

www.nexar-technology.com

NEXAR is established by Gülhanım Dalan, with the goal of conducting research to improve product quality and production processes in various industries, by using nanotechnology and advanced technologies, and generating value-added results in production.

Our research projects focus on addressing existing problems and needs in the industry; we define our research according to the real needs of industrial and technology companies. We move forward with the principle of ensuring that our research projects are commercially viable.

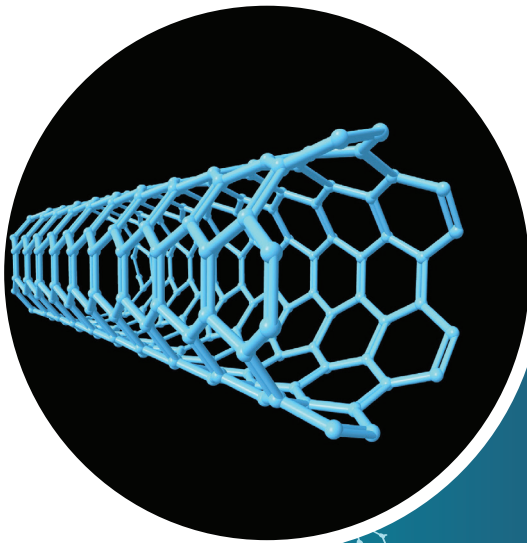
The nearly quarter-century of business experience of our founder, Gülhanım Dalan, the projects she has carried out, and her consultancy in the field of nanotechnology, guide us in achieving our goals.

With us, Everything is Possible!

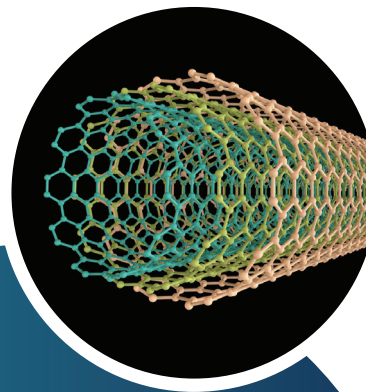
CARBON NANOTUBES (CNT)

Carbon nanotubes are cylindrical structures of carbon atoms, offering remarkable mechanical and electrical properties, used in various technological applications.

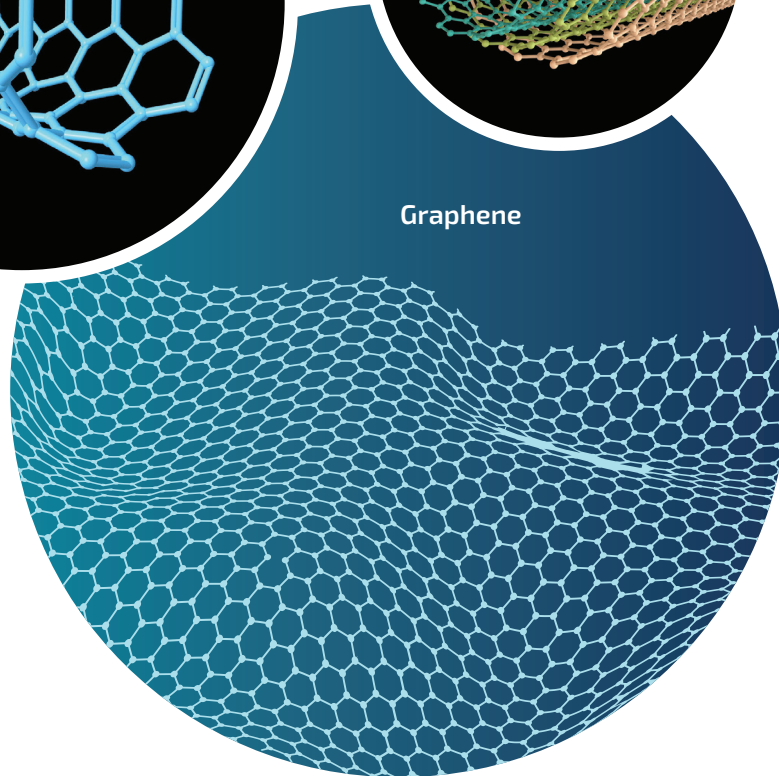
Single Wall Carbon Nanotube



Multi-Walled Carbon Nanotube



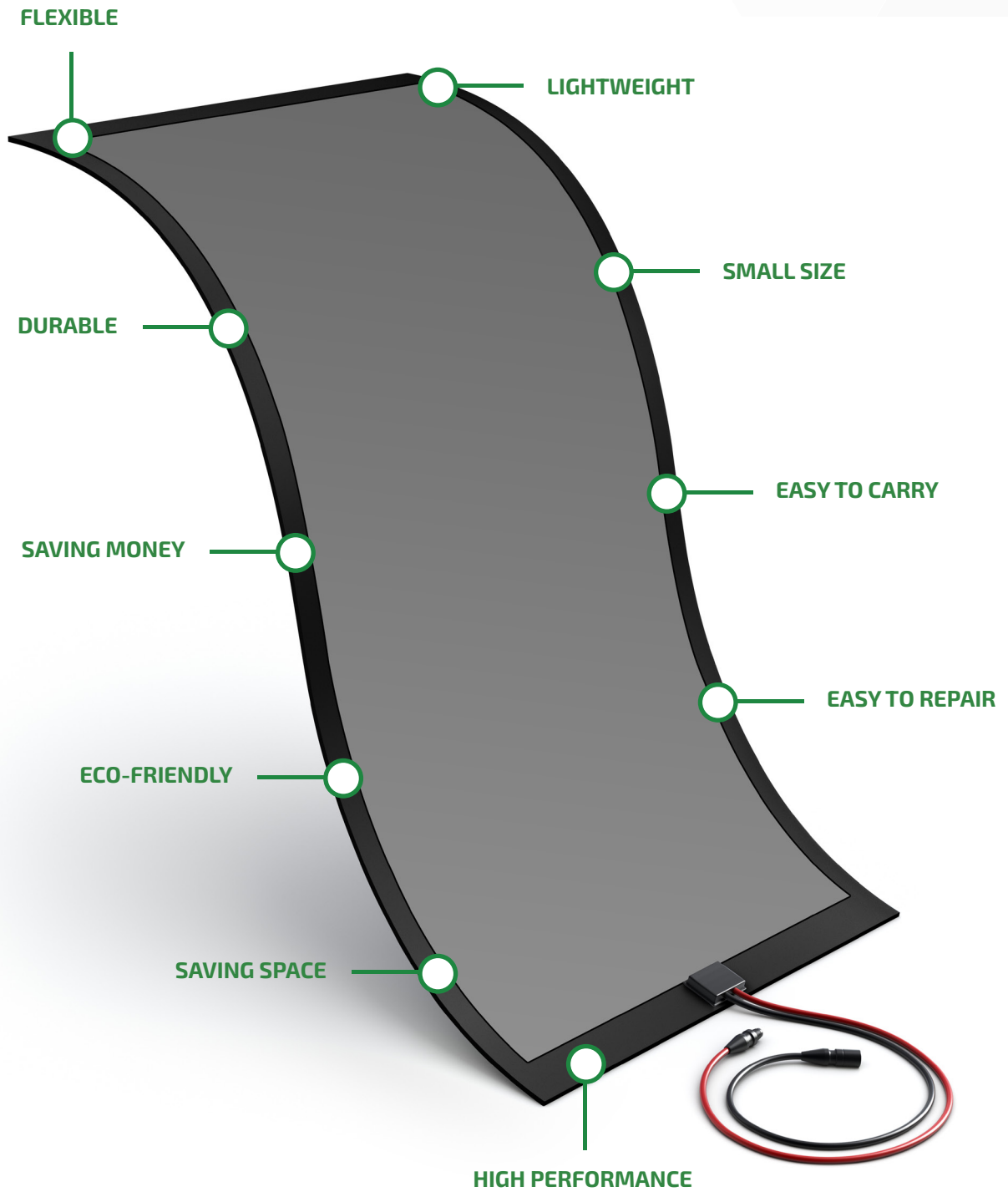
Graphene



GRAPHENE

Graphene is a two-dimensional layer of carbon atoms arranged in a hexagonal pattern, known for its high electrical conductivity, strength, and exceptional flexibility.

OUR SOLAR CELL



What is the Difference Between Other Cells?

NORMAL SOLAR CELL

40%

MORE THAN 37%

1

380-1100 NM

LIGHT ABSORPTION

REFLECTION OF LIGHT

SPEED OF ELECTRON MOVING

ABSORPTION BAND

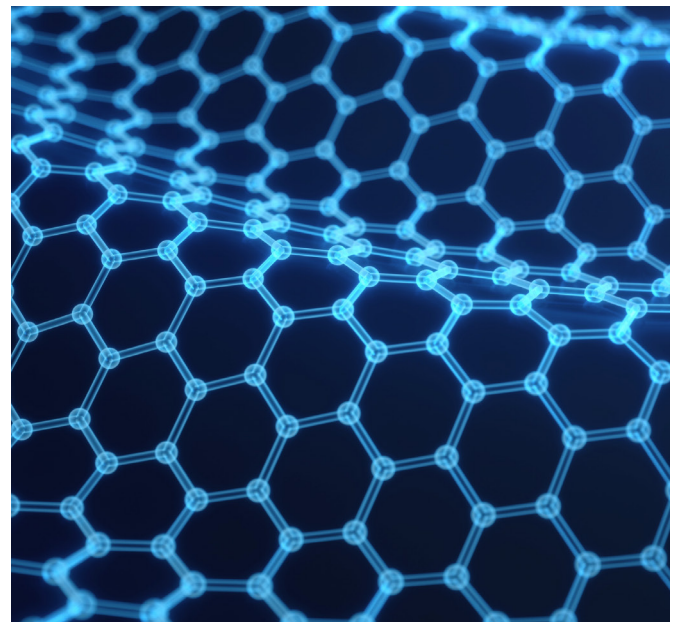
OUR SOLAR CELL

89%

LESS THAN 0.1%

MORE THAN 100

ALL OF BANDS

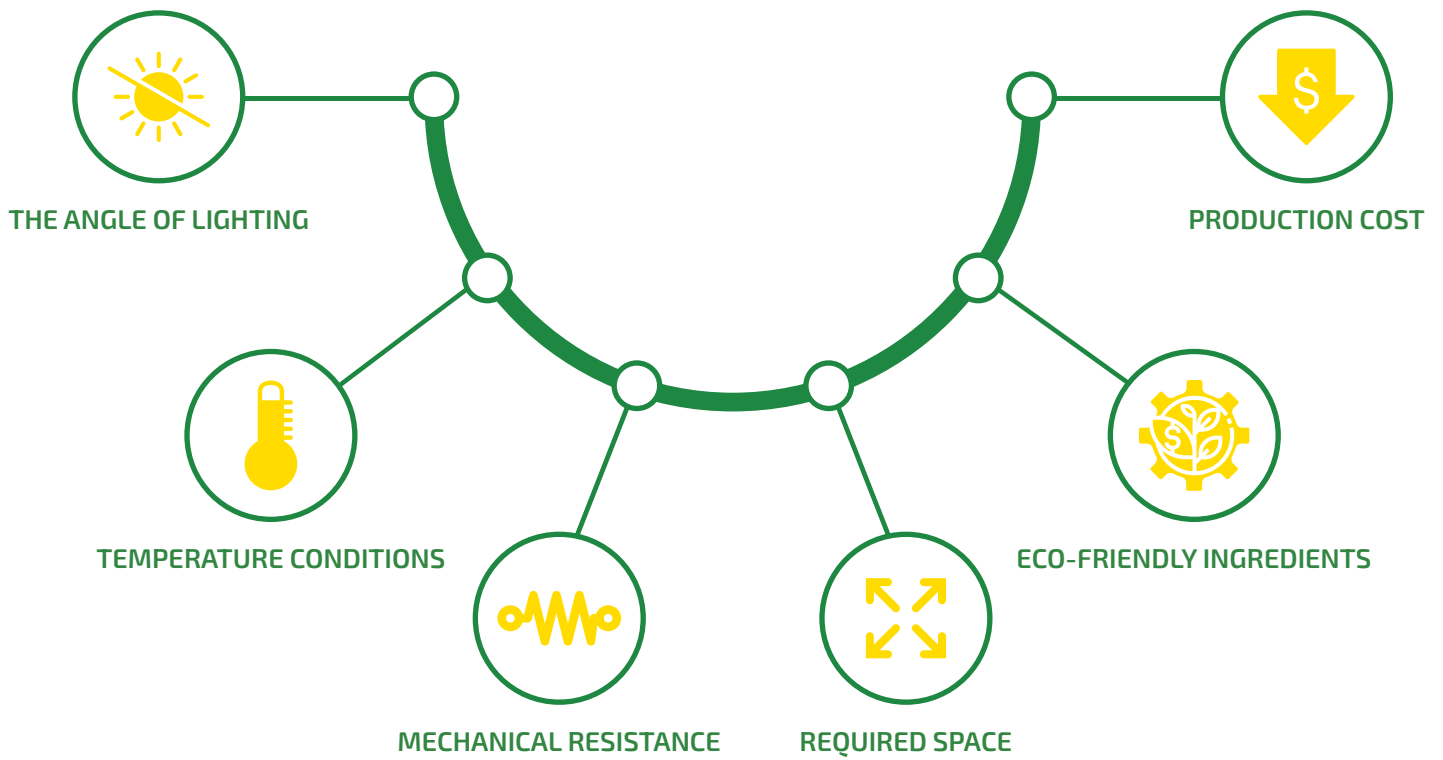
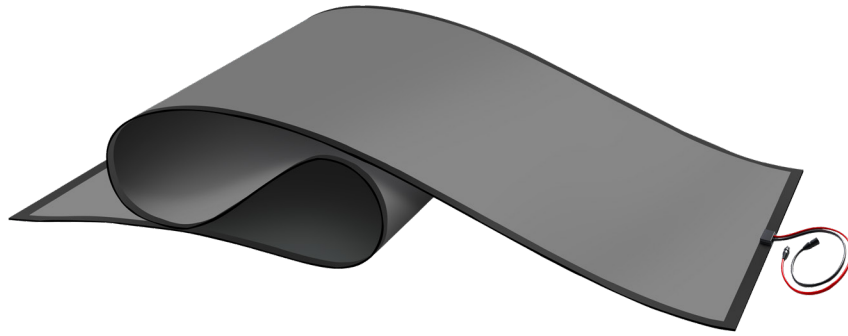


1 m² = 1 kW

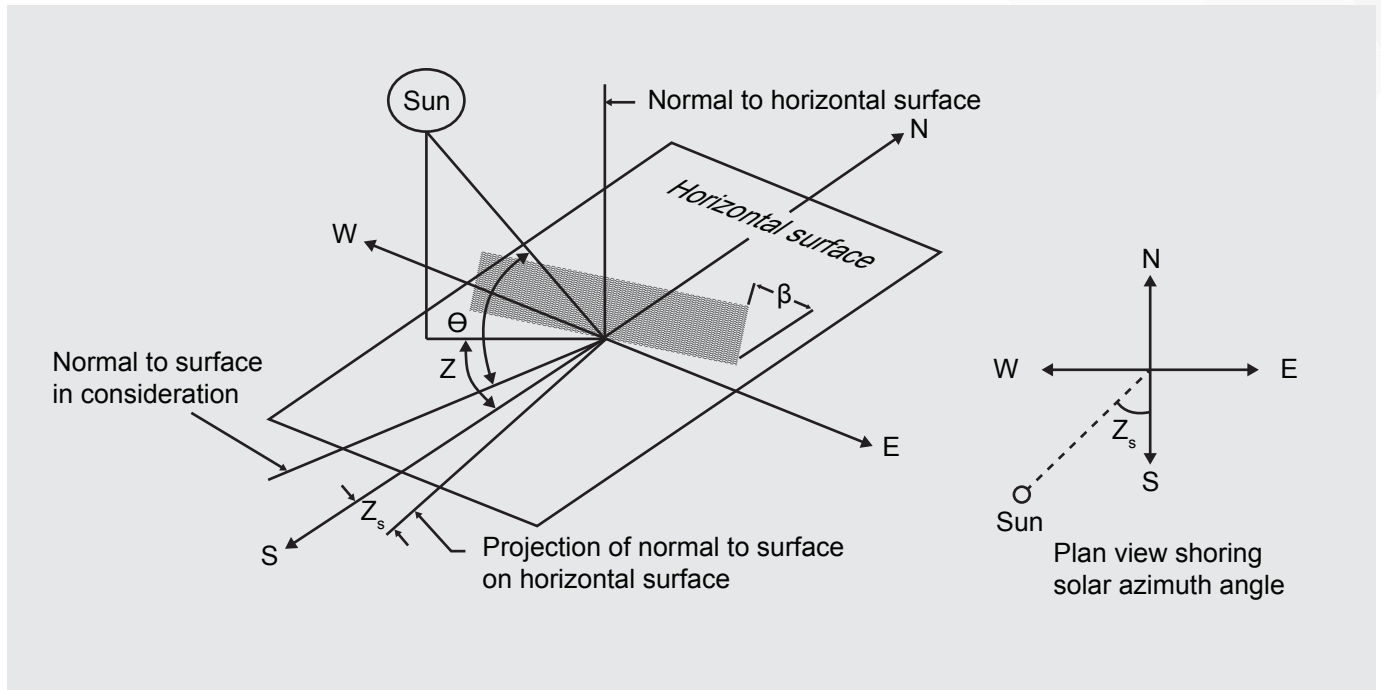
Our cell produces **5 times more energy** than normal cells

A large, bold, green number '5' is centered within a circular graphic that resembles a stylized cell or a lens. The number is surrounded by concentric circles and a ring of small, vertical lines, all in shades of gray. The background of the entire page is a light gray network of interconnected nodes and lines, with some nodes highlighted in white and others in gray.

Why Choose Our Cells?



THE ANGLE OF LIGHTING



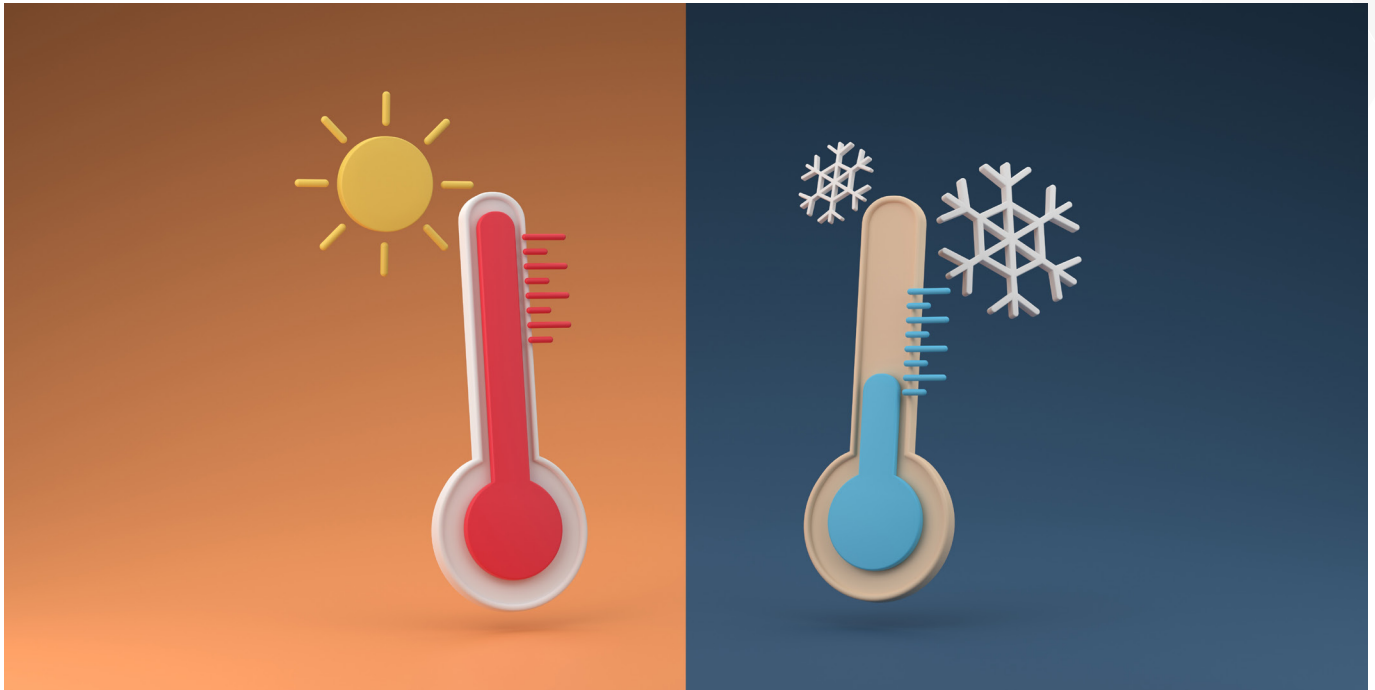
SILICON SOLAR CELL

Silicon solar cells face performance challenges under various lighting conditions, such as low light or indirect sunlight. This limitation is due to the optical properties of silicon and how it absorbs and converts light into electrical energy.

OUR SOLAR CELL

Our solar cells have no limitations against sunlight intensity and angle. You can even install these panels on walls. These panels will be able to generate electricity even at night to a very small extent because they also produce electricity with infrared waves.

TEMPERATURE CONDITIONS



SILICON SOLAR CELL

Silicon solar cells become less efficient as the temperature rises. At higher temperatures, the thermal movement of electrons increases, which can lead to a decrease in output voltage and energy conversion efficiency.

OUR SOLAR CELL

Our solar cells do not lose efficiency against temperature; on the contrary, for every degree increase in temperature, their performance increases by one watt.

ECO-FRIENDLY INGREDIENTS



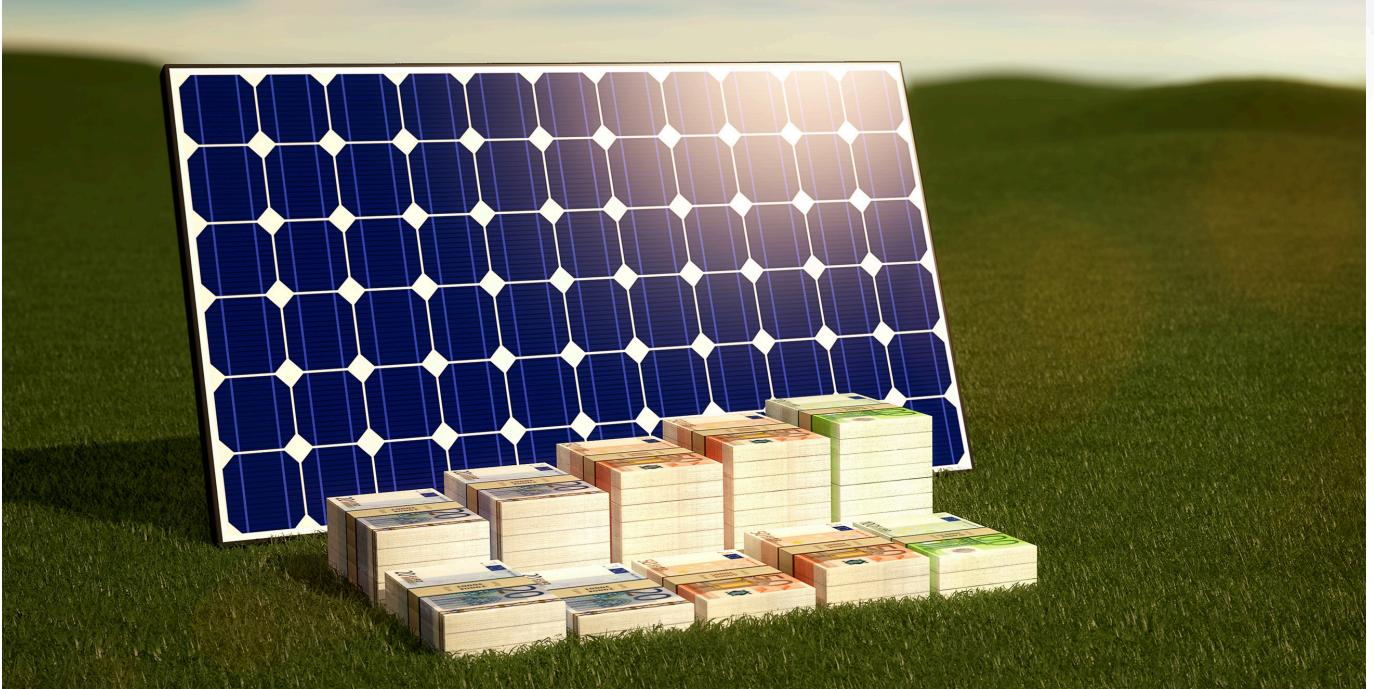
SILICON SOLAR CELL

Silicon solar cells sometimes use materials like indium tin oxide (ITO) for transparent electrodes, which can be expensive and scarce. Additionally, production processes might involve the use of silane or gallium arsenide, which can have adverse environmental impacts.

OUR SOLAR CELL

Our solar cells are made of 100% natural materials and will not cause any harm to the environment.

PRODUCTION COST



SILICON SOLAR CELL

Silicon solar cells have high production costs due to the complex processes required to purify and convert high-quality silicon into wafers used in solar cells. Extracting, purifying, and processing of silicon demands advanced technology and significant energy consumption, leading to increased costs.

OUR SOLAR CELL

Our solar cells require approximately one-tenth of the capital needed for a regular solar panel to produce. Therefore, you can achieve your desired income with less capital and in a shorter time.

REQUIRED SPACE



SILICON SOLAR CELL

Silicon solar cells need substantial space to produce considerable electricity due to their relatively moderate efficiency. This space requirement can be a limitation in densely populated or urban areas where land is scarce.

OUR SOLAR CELL

Our solar cells only require one-fifth of the space of regular solar panels to produce electricity. This means that on average, every 5 square meters of a regular panel can generate one kilowatt of electricity, while in our solar cells 1 square meter produces one kilowatt of electricity. Additionally, the weight of a regular panel, to produce one kilowatt, is about 50 kilograms, whereas, for our solar cells, it is around 2 kilograms.

MECHANICAL RESISTANCE



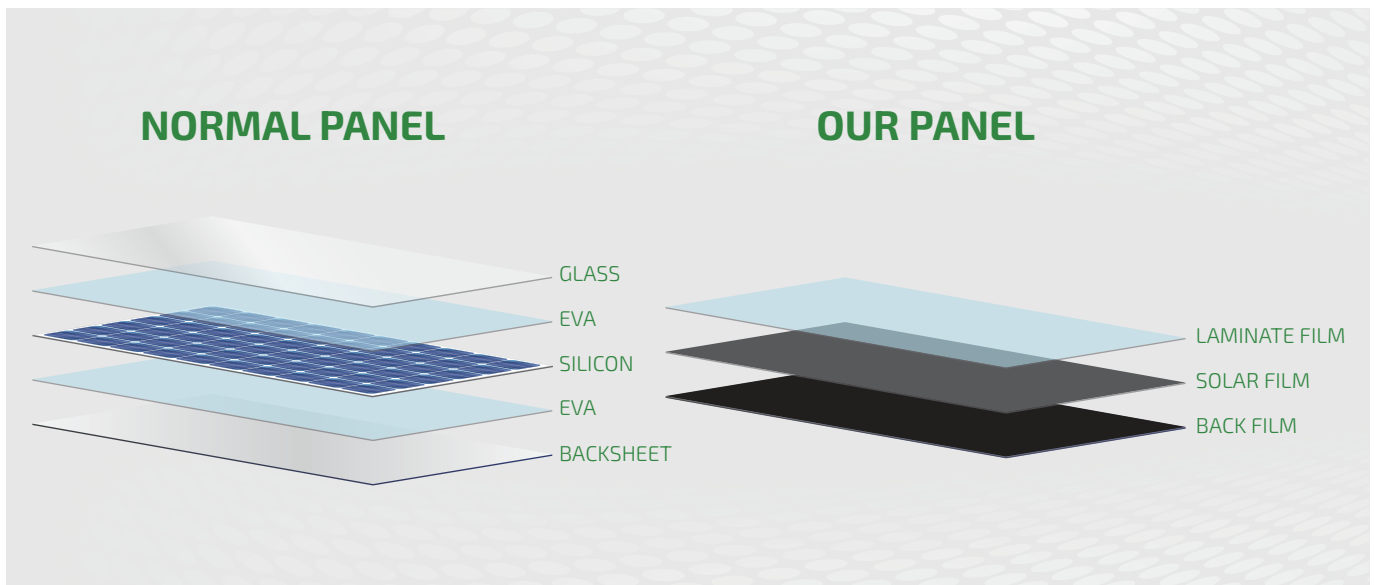
SILICON SOLAR CELL

In silicon solar cells, one of the drawbacks is their susceptibility to impact and damage when exposed to mechanical shocks. This characteristic can lead to a reduced lifespan and efficiency of the panels over time.

OUR SOLAR CELL

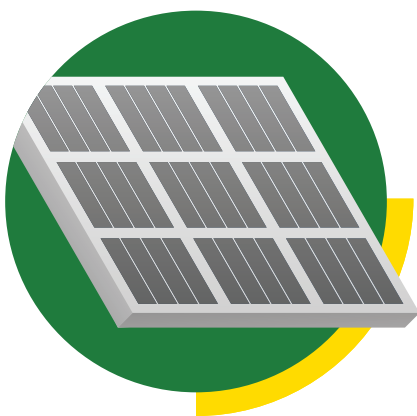
In our solar cells, due to the series and parallel connections of solar cells, half of a regular panel may be damaged after an impact, whereas our solar cells, with their honeycomb network connections, do not lose electricity production capability due to this impact.

Other Advantages of Our Solar Panel

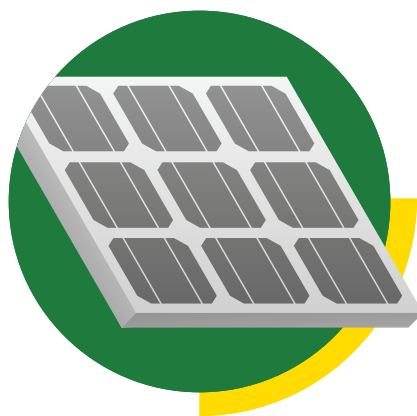
8 TIMESLOWER CARBON
EMISSIONS**EASY TO
CARRY****EASY TO
REPAIR****DURABLE**

A Cell From Our Panel Is Compared With A Cell From A Polycrystalline Panel And A Cell From A Mono-Crystalline Panel.

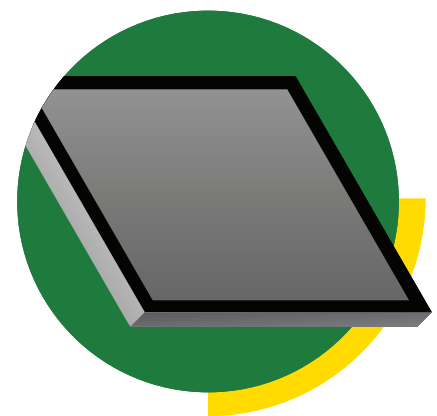
MEASURED PARAMETERS	MONOCRYSTAL SOLAR CELL	POLYCRYSTAL SOLAR CELL	OUR SOLAR CELL
ISc (A)	10.1	8.9	24
Uoc (V)	0.68	0.67	1.4
Imp (A)	9.7	8.5	23.1
Vmp (V)	0.58	0.54	1.31
Pmax (W)	5.63	4.59	30.33



POLYCRYSTALLINE PANEL



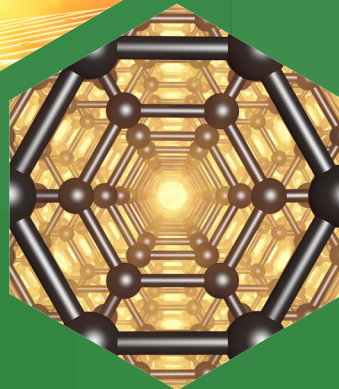
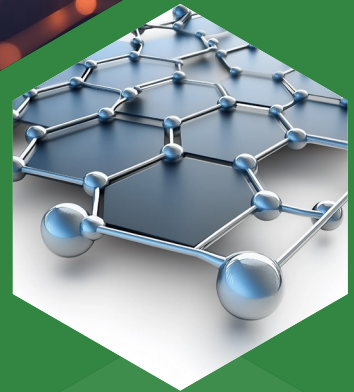
MONO-CRYSTALLINE PANEL



OUR PANEL



NEXAR



www.nexar-technology.com

info@nexar-technology.com