TecHologram Ltd.

company presentation

The Techologram Revolution

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TECHOLOGRAM SUMMARY

TECHOLOGRAM LTD. HAS A PATENTED TECHNOLOGY CALLED TECHOLOGRAM

- TECHOLOGRAM is an holographic solution for significantly increasing the efficiency and output of solar panels by more than 100%;
- Led by seasoned experts with extensive industry knowledge, SIXLUMENS continues to push boundaries and develop new holographic applications for the solar industry;
- TECHOLOGRAM LTD. a division of SIXLUMENS established its first production facility in Italy with production expected to commence by the end 2023. The production capacity is expected to reach more than 250 million square meters of holo-film per year which can service up to 50GW of solar panels;

Source: Company Presentation

TECHOLOGRAM COMPANY HIGHLIGHTS

ESTABLISHED YEAR IN CANADA	SIXLUMENS HEADQUARTERS	MANAGEMENT EXPERIENCE	NUMBER OF PATENTS
2023	**UK & ITALY**	**+25 Years**	**PATENTS 7**

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GLOBAL SOLAR INDUSTRY

MARKET SIZE 2022	MARKET SIZE 2024	MARKET SIZE 2030	CAGR Growth (2022-2029)	Total Solar Deployment In 2022
US$235 bil	US$374 bil	US$950+ bil	6,9%	231 GW

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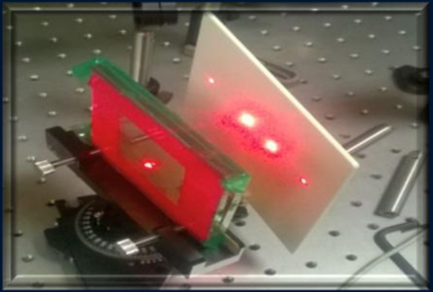
NEW PARADIGM

There is currently no direct competition in the market that utilizes holographic technology to significantly increase the efficiency and output of solar panels: the hologram basic principle is found in nature in the Opal stone, which captures light and releases it in the form of fluorescence.

The holographic film is composed of millions of microstructures: 300 lines per square millimetre, which create a photonic effect comparable to a Fresnel lens and a concentration lens.

This effect has been analyzed by the Italian National Research Council, which has investigated its application with solar panels on ESA (European Space Agency) satellites.



HOLO-FRESNEL CONCENTRATING LENS

Source: Company Presentation

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SOLAR PANEL 2D UPGRADE

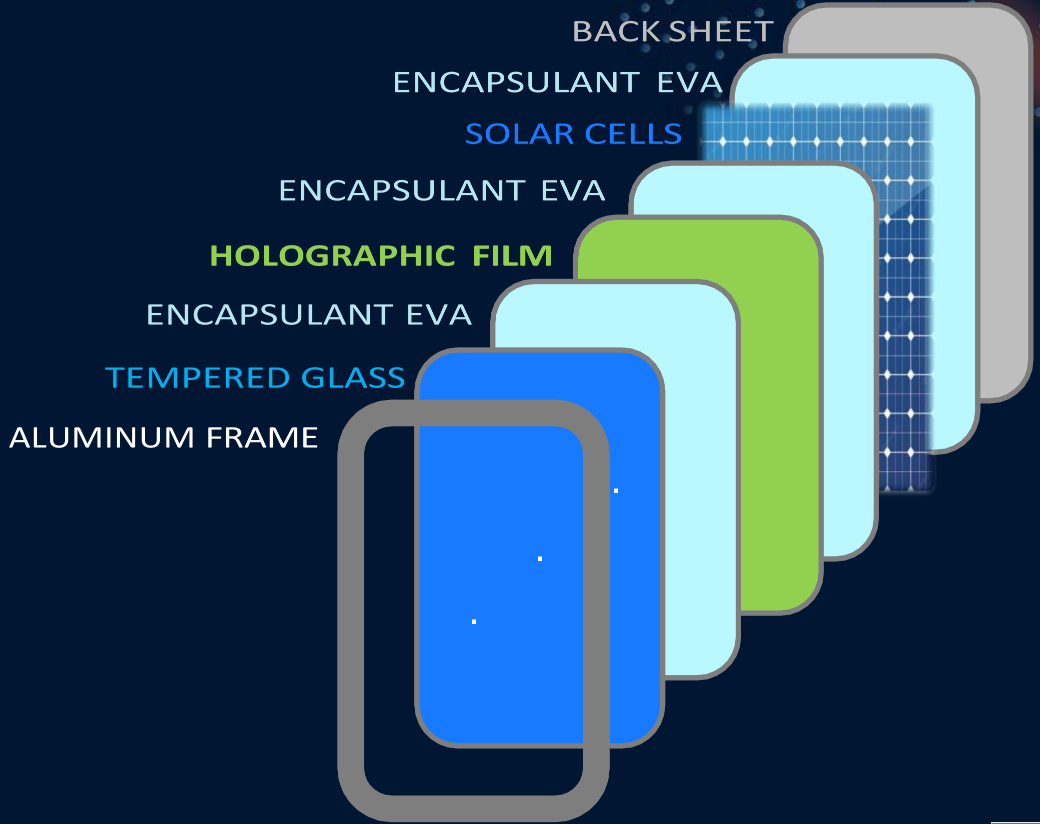
USING PATENTED TECHNOLOGY CALLED **TECHOLOGRAM**, THE HOLO-FILM DEVELOPED BY **SIXLUMENS**

Static Tracking System To Maximizing Energy Conversion Efficiency

Durability Enhancement

Low Production Cost

High Scalability



*EVA: Ethylene Vinyl Acetate

Source: Company Presentation

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ALL THE LIGHT WE CANNOT SEE

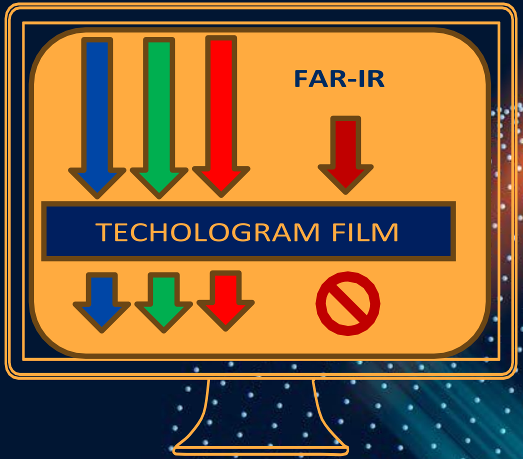
Why is infrared light harmful to solar panels and how can we utilize UV light?

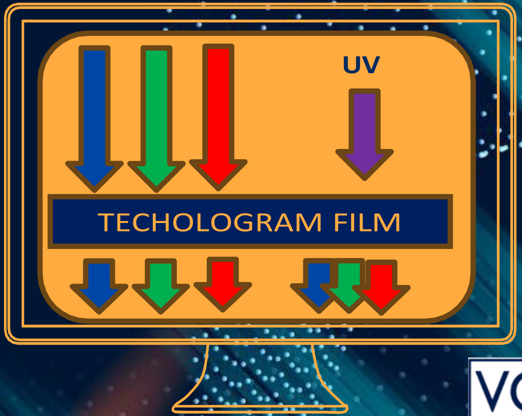
The sunlight is made up of many different wavelengths across the electromagnetic spectrum and of this light, only about 42-43% is visible light. While all light (including UV, visible and infrared light) is composed of photons and a solar panel works by converting these photons into energy, **the vast majority of solar panels can only convert primarily visible light into energy**.

The reason is because photons from infrared light don't have enough energy to create electrical flow. And photons from ultraviolet light have too much energy but a lot of energy is wasted as heat. This heat warms the panels, which decreases their efficiency.

FAR INFRARED FILTER:
New Patent based on Holography that is designed to block harmful infrared rays over 10.000 nanometre called FAR-infrared. As a result this helps prolong the solar cells life of the solar panels.

UV CONVERTER:
New patent that converts UV light in the range of 200 to 380 nanometres to visible light in the range of 500 to 600 nanometres, allowing solar cell for the harvesting of more light





Source: Company Presentation

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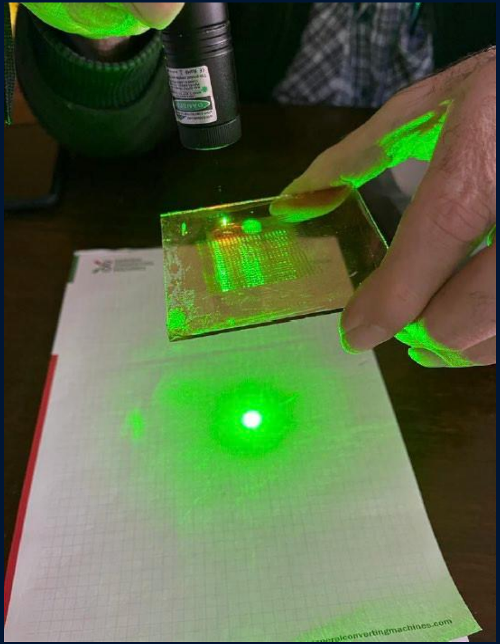
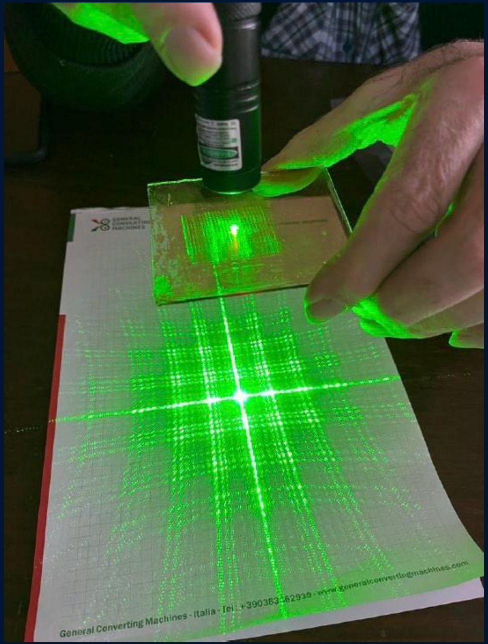
THE HOLOGRAM IS VISIBLE

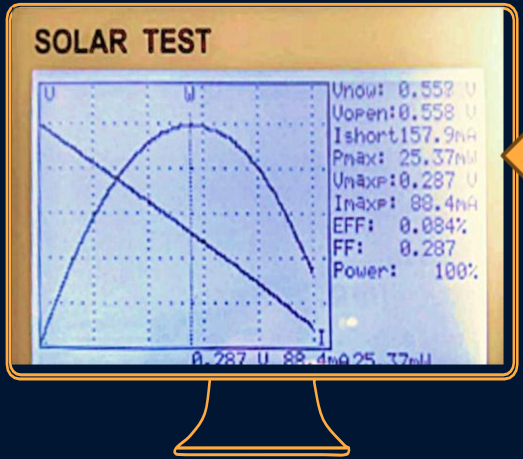


LASER THROUGH GLASS
WITHOUT HOLOGRAM:
Just one point of light



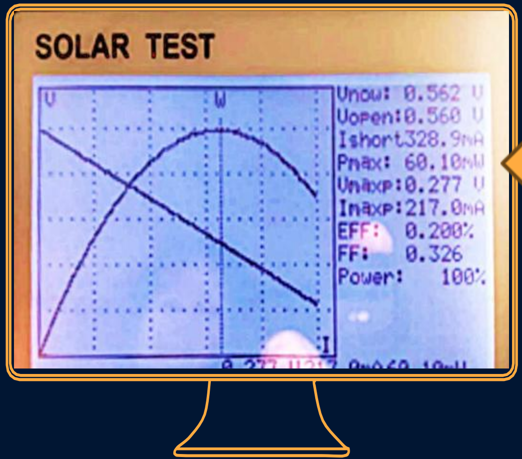
**LASER THROUGH
HOLOGRAM:
MORE THAN 300 LINES OF LIGHT
CAPTURED AND DELAYED**

THE HOLOGRAM PERFORMANCE IN LOW LIGHT CONDITIONS



WITHOUT HOLOGRAM

Normal cell PMAX: 25,37mW



WITH HOLOGRAM

With HOEs PMAX: 60,1 mW

Source: Company Presentation

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HOMO HOLO SAPIENS

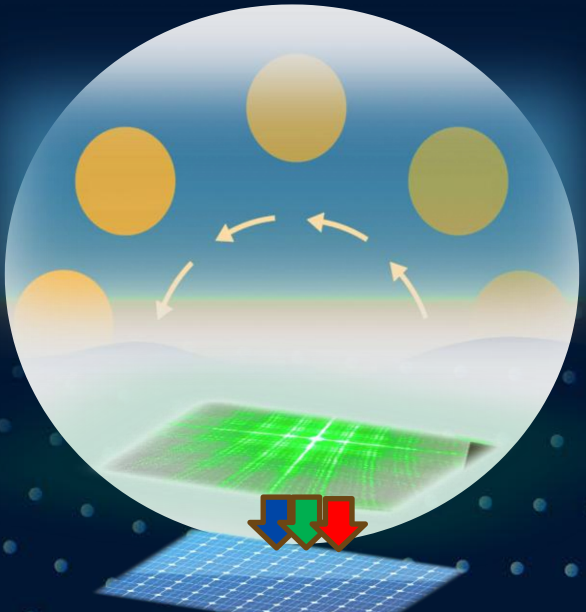
CHALLENGE

Traditional solar panels generally are oriented south at an angle between 30 and 45 degrees because it allows for the most sunlight exposure at a static position.

As the position of the sun changes throughout the day, the efficiency of the solar panels will exponentially decrease when it is not directly exposed to sunlight.

Solar panels require a significant amount of space to be installed, especially for larger systems. This can be a challenge for homeowners with limited roof space or small properties.

STATIC TRACKING SYSTEM

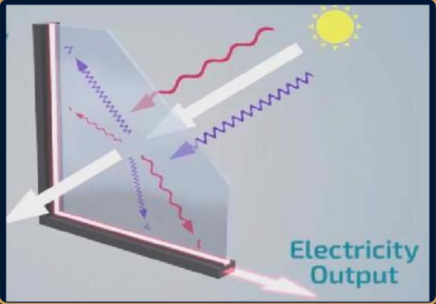


SOLUTION

- With the Company's patent **TECHOLOGRAM,** solar panels are no longer bound by orientation constraints, enabling the new designs and engineering of solar towers and solar cubes.
- **TECHOLOGRAM** panels possess a remarkable ability to **capture and store light** within a holographic light grid for a brief period of milliseconds. This dynamic grid is parallel to the solar cell and consistently projects up to 300 points of coherent light directly onto it.
- **TECHOLOGRAM** Solutions reduces the required space by up to 90%
- **TECHOLOGRAM** provides durability enhancement.

Source: Company Presentation

TOTAL TRANSPARENT SOLAR PANEL: HOLO-WINDOW



There is currently no direct competition in the market to provide a total transparent glass that in the same time is a solar panel

The holo-film can redirect light at a 90-degree angle with solar cells into the window frame, capturing 28% of the light with up to 55% efficiency proven by the Italian National Research Council This feature is the key to a fully transparent window pane that generates **40 watts per square meter.**

HOLOGRAPHIC T.I.R. TOTAL INTERNAL REFLECTION EFFECT

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HOLO-FILM UTILIZES MATERIALS WITH A LOW PRODUCTION COST

The holo-film is made from polyester when installed inside the solar panel. However, when installed aftermarket outside the solar panel, it is made from fluoropolymer. This thin and transparent material can diffract and redirect sunlight to maximize absorption by the solar cells.

Why use Fluoropolymer in stead of polyester for external holo-film?

- **Fluoropolymer is a family of high-performance plastics** which are characterized by their strong carbon-fluorine bonds;
- The **material is widely available and is used in a variety of industries** including transportation, electronics, medical devices, chemical and industrial manufacturing, consumer products, building and construction and alternative energy.;
- Fluoropolymers exhibit low refractive index values, which are advantageous in holographic applications as they can **minimize unwanted scattering and enhance the diffraction efficiency of the hologram**;
- The holo-film made with (FEP) and is **designed to be highly durable, weather- resistant, and long-lasting**, making it an ideal solution for use in harsh outdoor environments;

Characteristics of Fluoropolymer

- Chemical resistance
- Optical transparency
- Weather resistance
- Heat resistance
- Non-flammable
- Low coefficient of friction

Source: Company Presentation

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HIGHLY ANTICIPATED COMMERCIALIZATION OF HOLO-FILM

The highly anticipated holo-film is expected to commence production in the first half of 2024

Sixlumens' Production Facility and Capacity Overview

Current Production Overview

● SixLuumens Ltd. has **newly established a production facility in Italy** and has integrated its exclusive holographic printing/engraving patent into Roll-to-Roll printing production line. Despite using our older equipment originally designed for anti-forgery holograms, for bank currency notes, we successfully refurbished it to serve as a proof of concept for manufacturing the Techologram film. Integration and modification of new UV machines are necessary to align with our patented specifications, enabling large-scale production and unlocking the full potential of our innovative technology.

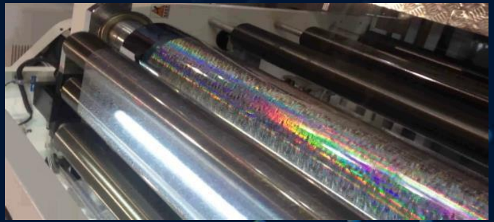
- **Current factory location:** Italy
- **Size of factory:** 1,500 sq.m.
- **Expected commencement of production:** End of 2023
- **Maximum production capacity:** 4-5 GW per year
    - Conversion: 1 MW = 5,000 square meters
    - Total conversion for 5 GW: 5,00MW = 25 million sqm.
- **Number of hours of production per day:** 24 hours (current facility)
- **Machinery Value:** Appraised at approx. EUR13 million

Source: Company Presentation

TECHOLOGRAM'S EXCLUSIVE PATENTS

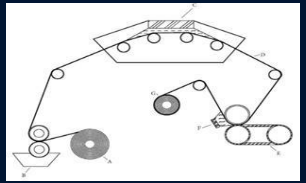
Hologram Printing Patent

- The Company holds the **exclusive patent to the equipment and machinery for engraving nanometric structures**;
- The machinery structure is designed in two processing stages: the **first stage is the spreading of UV ink on a supporting film**, and the second stage is the exposure process of the cliché with the UV ink to **transfer the cliché's imprint onto the UV ink**;
- Application: Flexible films such as fluoropolymer FEP for external film as aftermarket product, Alternatively polyester film for put the holograms inside the solar panel



UV Fast Printing Patent

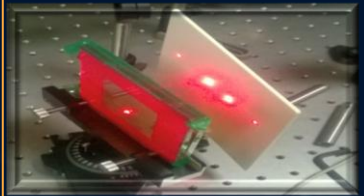
The patent is to **provide a fast and reliable method for micro-engraving nanometric structures on UV inks** applied to polyester film or fluoropolymer film. The below diagram from thr patent registration illustrates the method of engraving nanometric structures.



A) unwinding roller of the film reel to be coated with "UV" ink.
B) station for spreading the "UV" ink on the film that acts as a support.
C) station for partial drying of the "UV" ink solvents.
D) film with "UV" ink coated which passes towards the embossing module E.
E) embossing station with the cliché that transfers the nanometric imprint to the "UV" ink.
F) lighting unit to polymerize the "UV" ink in its final form rewinding roller of the film

Hologram Integration Patent

The patent is related to the **integration of the hologram technology consisting of the Fresnel lens, infrared filters, UV convertor, TIR lens** for the conversion of solar energy into eco-compatible energy.



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TECHNOLOGY HIGHLIGHTS

TECHOLOGRAM STEPS

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TECHOLOGRAM HIGHLIGHTS

TECHOLOGRAM

Revolutionary holographic technology that has been validated and proven by the Italian National Research Council to offer significant efficiency and output enhancement for solar panels

Well positioned to capture the promising growth of the global solar energy sector. **The extensive implementation of the Tower and Cube solution is poised to transform not just the solar panel market, but also the entire energy landscape encompassing both centralized and decentralized energy production, as well as hydrogen production.**

Techologram presents **a strong pipeline of promising projects, revolutionizing solar panels into innovative structures like Towers or Cubes. Our unique approach promises to reshape the solar energy landscape**.

This innovative approach offers **exceptional profit margins, along with robust projected growth**, and currently faces no competition from any country. The notion of competition is so distant that it seems unfathomable and even comical.

Led by seasoned experts in the field of holography with first-tier management team

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VENTURING INTO A REVOLUTION

TECHOLOGRAM has a strong pipeline of potential projects that fully integrates their holographic technology to create the most innovative products in the solar energy sector

SOLAR TOTAL TRANSPARENT WINDOWS

- Completely transparent and **produced with laminated plain or curved glass;**
- Able to **generate 40 watts of electricity per square meter;**
- Provide an opportunity to **use windows as a source of renewable energy without taking up additional space.**

STATIC TRACKING SOLAR PANELS

- By utilizing the holographic technology, **solar panels can be vertically installed while maximizing the energy captured;**
- Enables vertical stacking of solar panels, **resulting in a remarkable increase in energy output per unit of land.**
- **Do not require complex and costly tracking mechanisms** compared to dynamic tracking system.

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LANDSCAPE INNOVATION

Telehologram Management envisions the landscape of tomorrow

RAULUS SOLAR TOWER

- **A tower completely built with solar panels** with the incorporation of the Company's patent holographic technology.
- The tower is efficiently **exposed to sunlight in all angles while generating energy with limited space.**
- Projected to generate 1MW, **occupying only 100 sqm and standing 35 meters tall.**

HOLO SOLAR WAREHUSE

- **Integrates the Company's Techologram technology,** including holo window and holo cubes, to the exterior of the warehouse.
- The warehouse will be able to **generate electricity at all angles at optimal levels**
- Enables warehouses to **operate at an energy self-sufficient level and reduce carbon footprint.**

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HOMO HOLO SAPIENS

TECHOLOGRAM TESSERACT

State-of-the-art technology enables solar panels to be built in a cube design that can offer unique advantages and applications;
Can potentially reduce the required surface area by more than 90% per each installation of 1 MW;
Enables solar energy to be much more accessible in densely populated areas where space is limited.

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VALIDATED AND PROVEN HOLOGRPAHIC TECHNOLOGY THAT OFFERS UNPRECENDENT SOLUTIONS FOR SOLAR INDUSTRY

*As the pioneers of holographic technology for solar power, Sixlumens holds exclusive patents which *enabled* the Company to hold a significant competitive advantage in the market..*

Verified by the Italian National Research Council

The Techologram has been verified and certified by the Institute for Microelectronics and Microsystems (IMM) of the Italian National Research Council (CNR).

Exclusive Patents for the Holographic Technology

The Sixlumens' holographic technology is patent-protected, enabling the Company to hold a significant competitive edge

Strong R&D Capability Led by Seasoned Experts

With a passion for innovation, Sixlumens is committed to bring the latest holographic technology to the solar industry.

100%

More Efficient Solar Panel

Up to 250%

More Energy Output

95%

Much Smaller Footprint

Significant Advantage in Solar Efficiency and Output

With the holographic technology, solar panels can achieve:

No Direct Competition in the Market

There is currently no direct competition in the market that has the same technology. Sixlumens are the first on the market with this technology.

Well Positioned for Commercialization in Near Future

The Company plans to commence production as soon as the first half of 2024 with a production capacity of up to 5GW per year based on the current production facilities.

Thank You!

Please Contact Us

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