



日高新創大尺寸 輕質太陽能發電採光板

革新太陽能技術，實現綠能新高度！

全球面臨溫室氣體排放增加、傳統燃料成本波動及災害應變需求日益嚴峻，**屋頂太陽能發電**成為建築能源轉型的關鍵選擇。

傳統剛性玻璃太陽能板缺點：

重量大	增加建築結構負擔。
散熱不易	高溫影響效率。
安裝成本高	運輸和施工困難。
易碎不可彎曲	安全風險高，適應性差。
回收困難	不符合可持續發展目標。

日高太陽能採光板——新世代的高科技綠能選擇

針對傳統玻璃太陽能板缺點，全面升級集性能與環保於一身的創新產品

輕量化設計	減輕建築負擔，安裝更輕鬆。免申請雜項執照。
優異隔熱性能	降低建築內部溫度，提升能源效率。
堅固耐衝擊	不易破裂，安全可靠。
高度耐用	抗老化、長壽命，經久耐用。
環保回收性	符合綠能與永續理念。 自動除塵，不需花費高額保養經費。
性價比最高	在各類透明屋頂建築應用中，成效出色，超越傳統解決方案。

最適用場景

農漁溫室	提供理想採光與發電效能。
展覽館與游泳池	兼具美觀與節能需求。
透明屋頂與帷幕牆	綠能設計的首選方案。
冷凍貨櫃	使用自發電綠能，無二氧化碳排放。

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※本大尺寸輕量化太陽能板產品經專利授權日高公司生產與販賣。



日高大尺寸輕質太陽能發電採光板產品特色

綠能發電	發電效率高達 23%，並有不沾黏表面物性的自潔功能，能有效提供穩定的綠色電力，符合環保需求。
環保要求	全面考慮製造、安裝、維護及回收，產品可達到 100% 回收利用，最大程度減少對環境的影響。
降低成本	可依實際需求定制設計尺寸，超大跨距設計大幅減少鋼骨使用，顯著降低施工及材料成本。
施工快速 降低成本	90% 的材料於工廠內組裝完成，不僅節省現場安裝工時，還能提高工程進度控制，最大化投資回報。
降低照明能耗	配備高效採光板，能根據需求導入自然光，有效減少對人工照明的依賴，從而顯著降低照明能耗及成本。
良好隔熱性能	產品採用低熱傳導率結構設計，具有優異的 $0.8(W/m^2K)$ U 值，有效降低建築物能耗，提升舒適度。
耐強震	經過七級地震模擬測試，確保產品在強震環境下結構安全無損，保障使用者的安全。
輕量化	產品重量僅為傳統太陽能板的 1/8，安裝過程更加便捷，有效降低運輸與安裝難度。
防眩光	設計上有效防止外部眩光光害，同時提供健康的自然光進入，提升室內舒適度與健康環境。



日高工程公司新創大尺寸可彎曲、輕質、隔熱、耐撞擊、
高效發電**薄型太陽能板**。



日高大尺寸輕質太陽能發電採光板應用場域

薄型輕量化太陽能板，可在進行產生綠電，同時依實際需要提供透光率需求的機制，以達到可彎曲大面積的覆蓋農魚棚空間頂部，真正達到發電與光照結合的目的。大型農漁溫室屋頂包覆、工廠建築、倉儲、購物中心、體育場、走廊、遮陽頂部用材，建物向陽面的發電應用。

安裝案例

透光式頂棚安裝案例



冷櫃頂部輕量化太陽能供電案例
太陽能供電容量擴增裝置案例



產品規格

尺寸	寬幅 1/1.5/2.1m；標準長度 6m	長度可訂製
板材厚度	8/10/30/50 (mm)	可訂製
整體透光	0~60%	整體積分計算
高抗風能力	17 級強風	風壓測試
耐候性	超過 20 年的日照量	ASTM D436 測試
耐衝擊測試	2.8kg；>22.3 (J)	ASTM D5628-96
降伏點抗拉強度	673 (kgf/cm ²)	ASTM D638-10
熱傳導率	0.9 (W /m ² K)	ASTM C518-10
耐燃特性	燃燒速率 <40(mm/min)	UL-94
防焰性	2 級規範值 餘焰時間≤5 sec. 2 級規範值 餘燼時間≤60 sec.	ASTM 7614



日高新創軟板太陽能冷鏈貨櫃

RE100 新創軟板太陽能冷鏈貨櫃，是一款針對**緊急狀態、無電網覆蓋、偏遠地區**需求，具獨立運行設計空調與冷凍的最新節能環保設備。該模組採用一體化裝置於櫃頂的超薄高效耐撞擊太陽能板供電、儲能系統、變頻壓縮機，及最先進的電路控制和遠程監控技術。能夠大幅降低運行成本與碳排放，可應用於**冷鏈車輛、農用溫控、漁業養殖**等，提供高度靈活、節能、安全的低溫解決方案。

日高公司節能環保的冷凍設備有，**調溫工作室型、冷藏型、低溫冷凍型**三類，使用自發電綠能，無二氧化碳排放。

產品特色

一體化櫃頂設置之超薄耐撞擊太陽能板供電、儲能系統。

自發電綠能，無二氧化碳排放。

優化程式控制製冷系統，提高 25%運行效率。

特殊多層絕熱設計櫃體，具有優秀的保溫效果及高運行效率。

通過無線傳輸，具備遠程監控功能管理功能。



日高公司 新創軟板太陽能冷鏈貨櫃

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日高 RE100 新創軟板太陽能冷鏈貨櫃產品系列

本公司節能環保的冷凍設備分為三型，**調溫工作室型**、**冷藏型**、**低溫冷凍型**，均使用自發電綠能，無二氧化碳排放。

產品編號

應用/編號	使用溫度範圍	20 尺太陽能冷櫃	40 尺太陽能冷櫃
調溫工作室型	10-25°C	A-20 型	A-40 型
冷藏型	0-10°C	B-20 型	B-40 型
低溫冷凍型	-10~-25°C	C-20 型	C-40 型

20 尺 可移動式太陽能冷櫃產品系列與規格

規格/型式	A-20 型	B-20 型	C-20 型
外尺寸	L6M*W2.4M*H2.5M	L6M*W2.4M*H2.5M	L6M*W2.4M*H2.5M
內容積	15 M3	15 M3	15 M3
太陽能板規格	2 KW	3 KW	4 KW

註: 本標準型列表，規格可依不同地區日照狀態及工作量需求進行調節。

40尺 可移動式太陽能冷櫃產品系列與規格

規格/型式	A-40 型	B-40 型	C-40 型
外尺寸	L12.2M*W2.4M*H2.5M	L12.2M*W2.4M*H2.5M	L12.2M*W2.4M*H2.5M
內容積	39 M3	39 M3	39 M3
太陽能板規格	4 KW	6 KW	8 KW

註: 本標準型列表，規格可依不同地區日照狀態及工作量需求進行調節。



冷櫃輕量化太陽能容量之擴增裝置：
20 尺太陽能冷櫃單片可增加 2KW；
40 尺太陽能冷櫃單片可增加 4KW

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日高 新創軟板輕質太陽能發電採光板



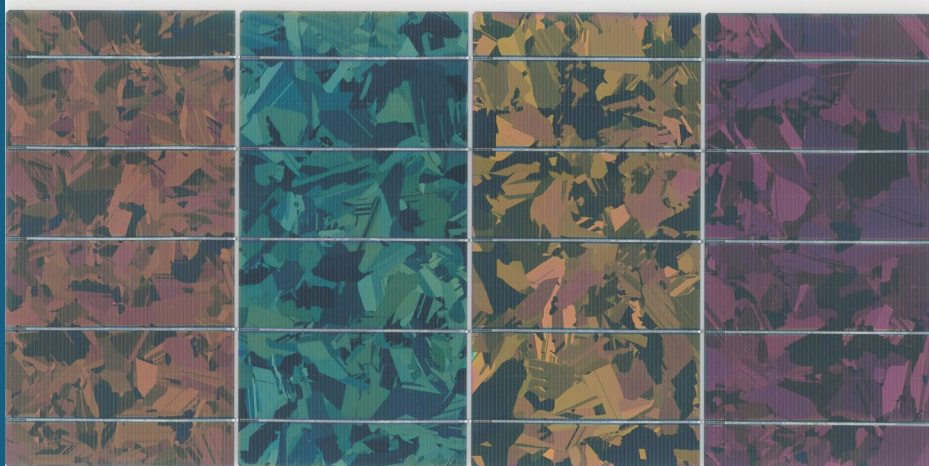
側面



正面



側面



色彩選擇



JUKAO

INNOVATIVE LIGHTWEIGHT LARGE-SCALE SOLAR POWER PANEL

The Achievement of Solar Power Technology to New Heights in Green Energy!

With the global rise in greenhouse gas emissions, fluctuating costs of traditional fuels, and increasing demand for disaster resilience, rooftop solar energy has become a key solution for building energy transformation.

Disadvantages of traditional rigid glass solar panels

Heavyweight	Over loading to building structures
Poor Heat Dissipation	Reduced efficiency at high temperatures
High Installation Costs	Complex transportation and installation
Fragility	Safety Risks
Recycling Challenges	Fails to meet sustainability goals

JUKAO Lightweight Large-Scale Solar Power Panel: The Next-Generation High-Tech Green Energy Solution

Addressing the limitations of traditional glass solar panels, our product combines performance and sustainability for comprehensive upgrades.

Lightweight Design	Reduces structural stress, making installation easier.
Superior Heat Insulation Performance	Lowers indoor temperatures and enhances energy efficiency
High Impact Resistance	Durable and safe from breakage
Highly Durable	Long-lasting and resistant to aging
Eco-Friendly Recycling	Aligns with green energy and sustainability principles
Best P/C Value	Outperforms traditional solutions in applications across transparent roofs

Ideal Applications:

Agricultural and Aquacultural Greenhouses	Optimal lighting and green power generation
Exhibition Halls and Swimming Pools	Aesthetic appeal combined with energy savings
Roofs and Curtain Walls	A premier choice for green power design
Refrigerated Containers	Green energy with zero carbon emissions

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※This large-sized lightweight solar panel product is produced and sold under patent authorization for JUKAO.

FEATURES OF JUKAO LARGE-SIZED LIGHTWEIGHT SOLAR PANELS

Green Power Generation	Achieves a high power generation efficiency of 23%. Features a self-cleaning, non-stick surface for easier maintenance.
Environmental Considerations	Fully recyclable with 100% material recovery. Designed with eco-friendly manufacturing, installation, maintenance, and recycling processes.
Cost Reduction	Customizable dimensions based on design requirements. Ultra-wide spans reduce the need for steel structures, significantly cutting costs.
Fast Installation	90% of materials are pre-assembled in the factory. Saves installation time and reduces labor costs, accelerating project timelines and increasing economic benefits.
Reduced Lighting Energy Consumption	Light-transmitting panels introduce natural light as required, cutting lighting energy costs.
Excellent Thermal Insulation	Low thermal conductivity design with an outstanding U-value of 0.8 (W/m²K), reducing building energy consumption.
Earthquake Resistance	Successfully tested under level 7 seismic simulations, ensuring structural safety without damage.
Lightweight	One-eighth the weight of traditional solar panels.
Anti-Glare	Provides healthy natural light indoors while preventing glare and light pollution externally.



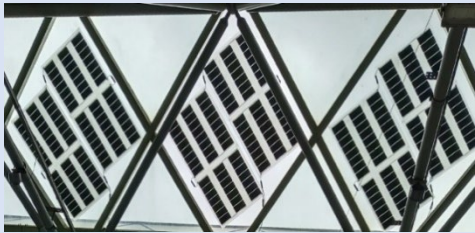
Jukao Engineering's innovative impact-resistant, lightweight, heat-insulating, high-efficiency, large-sized, and flexible thin solar panels.

※This large-sized lightweight solar panel product is produced and sold under patent authorization for JUKAO.

JUKAO SOLAR PANELS APPLICATION AREAS

The newly developed lightweight solar panels can generate green energy while providing customizable light transmission rates based on actual needs. These panels are designed for flexible, large-area coverage of agricultural and aquacultural greenhouse roofs, achieving a perfect combination of power generation and illumination.

CASE STUDIES OF JUKAO SOLAR PANELS

● Transparent roofing installations	● Lightweight solar-powered cold storage containers ● Solar power capacity expansion devices
	

Specifications of Jukao Large-Sized Lightweight Solar Panels

Dimensions	Width: 1/1.5/2.1m; Standard Length: 6m	Length can be customized
Panel Thickness	8/10/30/50 (mm)	Customizable
Light Transmission	0~60%	Whole set
Wind Resistance	Withstands level 17 winds	Wind pressure tested
Weather Resistance	Over 20 years of sunlight exposure	ASTM D436 test
Impact Resistance	2.8kg; >22.3 (J)	ASTM D5628-96 test
Tensile Yield Strength	673 (kgf/cm ²)	ASTM D638-10
Thermal Conductivity	0.9 (W/m ² K)	ASTM C518-10
Fire Retardancy	Burning rate < 40 (mm/min)	UL-94 test
Flame Resistance	Meets Level 2 standards: residual flame ≤ 5 sec, residual glow ≤ 60 sec	ASTM 7614

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JUKAO SOLAR POWER COLD CHAIN CONTAINER

JUKAO RE100 innovative solar power cold chain container is designed for emergencies, off-grid areas, and remote locations. This energy-saving, eco-friendly equipment designed to operate independently for air conditioning and refrigeration in emergencies, without grid coverage, and in remote areas.

This module uses ultra-thin, high-efficiency and impact-resistant solar panels integrated on the top of the cabinet for power supply, energy storage system, variable frequency compressor, and the most advanced circuit control and remote monitoring technology. It can significantly reduce operating costs and carbon emissions, and can be used in cold chain vehicles, agricultural temperature control, fishery breeding, etc., providing highly flexible, energy-saving, and safe low-temperature solutions.

JUKAO energy-saving and environmentally friendly refrigeration equipment includes three types: temperature-controlled studio type, refrigeration type, and low-temperature freezing type. They use self-generated green energy and have no carbon dioxide emissions.

Product Features:

- **Integrated ultra-thin impact-resistant solar panels, energy storage systems, variable frequency compressors**
- **Self-generating green energy with zero carbon emissions**
- **Optimized control systems to enhance operating efficiency by 25%**
- **Special multi-layer insulated container design for superior thermal efficiency**
- **Wireless transmission with remote monitoring and management capabilities**



- JUKAO SOLAR POWER COLD CHAIN CONTAINER

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JUKAO SOLAR POWER COLD CHAIN CONTAINER SERIES

Product Number	Application/Temperature Range	20-Foot Container	40-Foot Container
A Series	Temperature-Controlled Workspace (10-25°C)	A-20	A-40
B Series	Refrigeration (0-10°C)	B-20	B-40
C Series	Low-Temperature Freezing (-10~-25°C)	C-20	C-40

Standard Specifications for 20-Foot Solar Containers

Model	A-20	B-20	C-20
Exterior Dimensions	L6M*W2.4M*H2.5M	L6M*W2.4M*H2.5M	L6M*W2.4M*H2.5M
Interior Volume	15 M ³	15 M ³	15 M ³
Solar Panel Capacity	2 KW	3 KW	4 KW
Energy Storage System	6 KW	10 KW	15 KW

Standard Specifications for 40-Foot Solar Containers

Model	A-40	B-40	C-40
Exterior Dimensions	L12.2M*W2.4M*H2.5M	L12.2M*W2.4M*H2.5M	L12.2M*W2.4M*H2.5M
Interior Volume	39 M ³	39 M ³	39 M ³
Solar Panel Capacity	4 KW	6KW	8KW
Energy Storage System	10 KW	16 KW	20KW

Cold Storage Solar Panel Power Expansion



2 KW per side panel for 20-foot containers
4 KW per side panel for 40-foot containers

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Demonstration of the Lightweight Large-Scale Solar Power Panel



Side



Front



Side



Colorful Choices

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