

01. Appearance

1. No Frontal Gridline, No Back Busbar.
2. Excellent color consistency, pure black, premium aesthetics, meeting modern design trends.

❖ Technical Support

1. [HPBC2.0] Mass production cell closest to the theoretical efficiency limit of 29.4%; Mass production voltage exceeding 745mV, uniform passivation reducing aging risk; Equipped with TaiRay core, featuring less silicon wafer impurities, high resistance uniformity, and reduced current loss; Maximum breaking force increased by 16%, reducing micro-crack risk; Innovative development of OBB structure, shortening the maximum current transmission distance, making the module no frontal gridline, no back busbar.

2. [Full Back Contact One-line Welding Structure] Cell edge stress at 26MPa, compared to TOPCon cell edge stress at 50MPa, significantly improving anti-cracking performance.

thumb Advantages

1. More aesthetically pleasing.
2. 100% light absorption.
3. Full Back Contact One-line Welding Structure. Module reliability improved by 50%.

02. Comparative Evidence

1.Under indoor lighting conditions, components of both technologies can generate electricity to light up the lamps. The LONGi Hi-MO X10 module demonstrates excellent power generation performance in low-light indoor environments, with noticeably brighter lamp beads.

2. When half-cells are simultaneously shaded:

The conventional module (right side) experiences significant power loss, causing its LED to extinguish.

The LONGi Hi-MO X10 module (left side) maintains effective power generation and continues to illuminate its LED.

(In high-irradiance outdoor environments, the left Hi-MO X10 module can sustain power generation even with two half-cells shaded while keeping the LED illuminated.)

★ Key Features

1. Low-light performance (enhanced power generation in high irradiance conditions, additional power generation improvement in low irradiance conditions).

2. Shadow resistance, minimizing shading losses, maximizing roof utilization (dust, leaves, equipment, snow coverage).

❖ Technical Support

1. [Optimized Multi-layer Anti-reflection Film: Increase Light Absorption] Conventional cell textured surface short-wave reflectivity >14%, while HPBC2.0 textured surface short-wave reflectivity <2%, significantly improving current and generating more electricity in morning and evening low-light conditions.

2. [Soft breakdown Design + Bipolar Low-resistance Passivation] Principle similar to built-in bypass diodes; under single-cell shading conditions, power loss is 70%+ less than TOPCon modules; High-Doped Bipolar Passivated Contact Layer and Anode Paste Optimization improve current efficiency and reduce resistivity by 42%. Achieves more power generation while maintaining output flow.

thumb Advantages

Higher power in the same area, saving investment in other components, higher electricity generation, shorter payback period.

03. Extended Content

Long-term shadow coverage may cause localized overheating and fire hazards, but Hi-MO X10 modules can reduce local temperature by 28%+ compared to conventional modules, eliminating fire risks.

★ Key Features

Prevent Localized Overheating (The blocked current causes localized heating and temperature rise, forming a 'hot spot' with fire hazards; Hi-MO X10 essentially provides a 30-year "fire insurance" for your roof).

❖ Technical Support

Long-term shadow coverage can cause localized overheating and potential fire hazards. However Hi-MO X10 modules reduce local temperature by more than 28% compared to regular modules, effectively eliminating these fire risks.

❖ Technical Support

No fire hazard concerns, higher safety, 30-year long-term peace of mind.

04. Summary

Why HPBC2.0 is superior to TOPCon: Advanced, Value-added, Aesthetic, Safe.

1. Advanced: HPBC2.0, the most efficient solar technology currently in mass production, with cell efficiency exceeding 26.6%, Hi-MO X10 module efficiency reached 24.8%, power generation per unit area increased by more than 5% compared with TOPCon. Advanced technology: Based on BC cell platform, it is superimposed with three core technologies of TaiRay wafer, bipolar hybrid passivation and OBB zero busbar. It has nearly 200 patented technologies, resulting in stronger power generation performance.

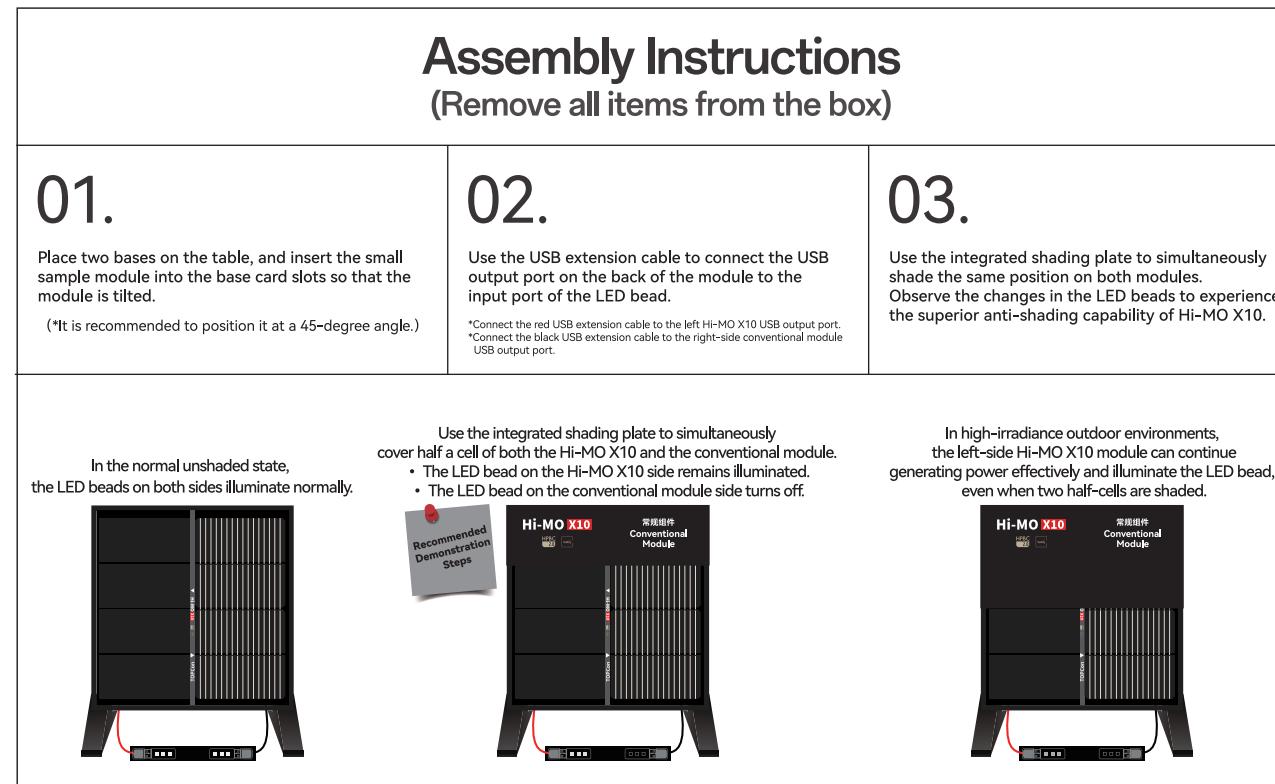
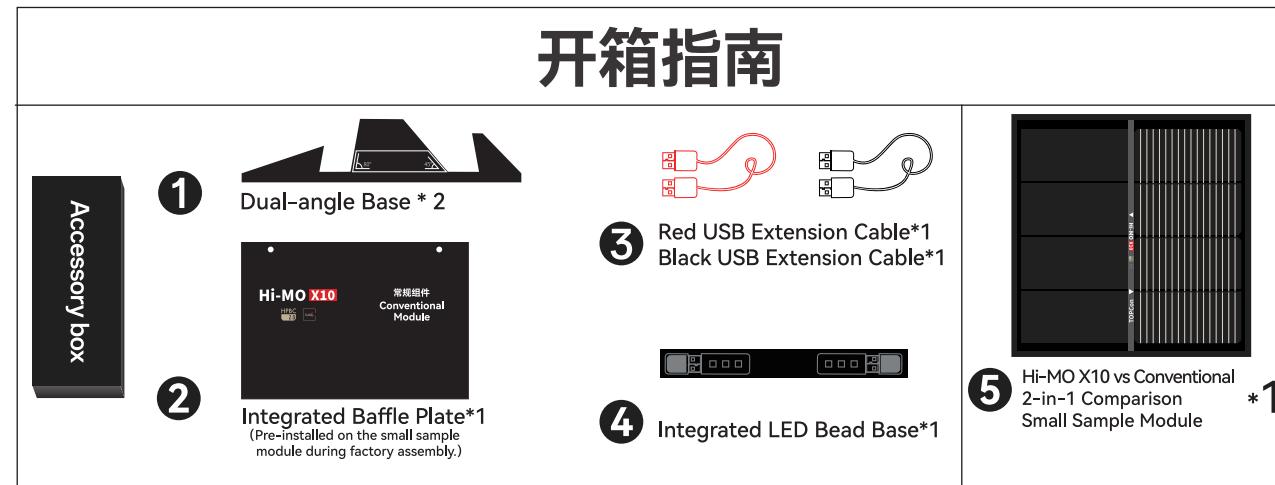
2. Value-added Hi-MO X10 modules are 30W more powerful than TOPCon modules of the same size. As a result, each module generates more than 60 kWh of additional electricity per year, generating an additional income of CNY42. Over 30 years, the total additional income will be CNY1,255. Each module requires an additional investment of less than CNY100, which can be paid back in less than two and a half years. Additional investment can bring 10 times the income.

3. Aesthetic: No grid line on the front, pure flawless black, showing the noble temperament. Similar to the appearance of LCD large-screen, matching the multi-scene design concept, to achieve perfect integration with the building.

4. Safe: Unique soft breakdown design, using the bypass diode effect, avoiding hot spots due to localized overheating when shaded, eliminating fire hazards. High-strength TaiRay wafers are stacked with one-line flat welding tape technology, which avoids folding and connecting the front and back sides of the welding tape and greatly reduces the risk of hidden cracks in wafers. More heightened full-scene test, to ensure the product safety and reliability of the whole life cycle, provide 30 years power warranty.

Exploration Guide

Module Comparison Box Unpacking Guide



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