



**ECO DELTA high-efficiency
shingled modules introduction**

PV Changes the World

A large white circle with a subtle shadow, containing the text "CONTENTS PAGE" in orange, uppercase letters.

**CONTENTS
PAGE**

An orange rounded rectangular button with a white circle on the left side, containing the text "Overview of shingled modules" in white.

Overview of shingled modules

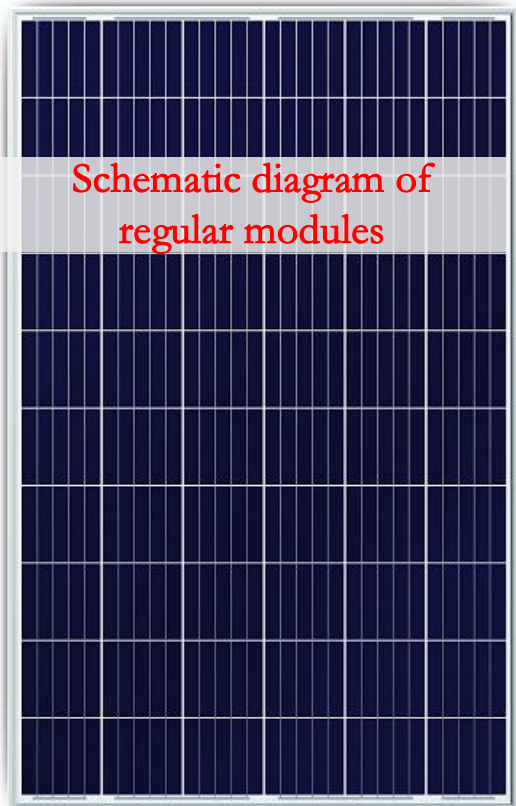
An orange rounded rectangular button with a white circle on the left side, containing the text "Advantages of shingled modules" in white.

Advantages of shingled modules



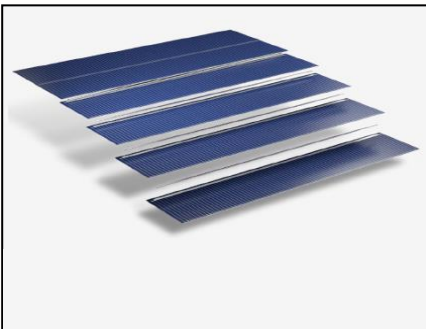
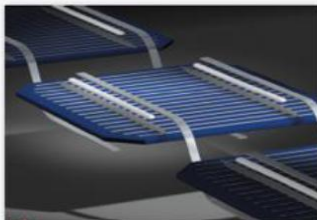
Overview of shingled modules

Shingled modules introduction-difference



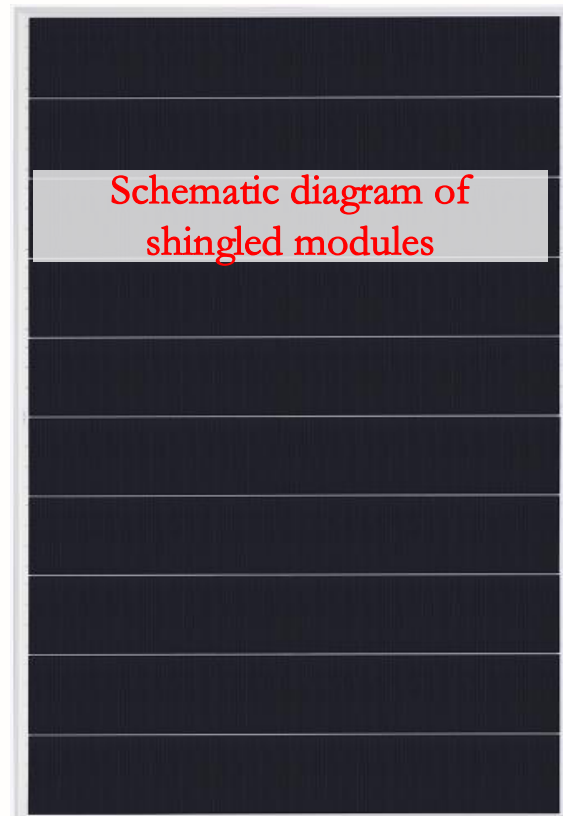
Traditional modules

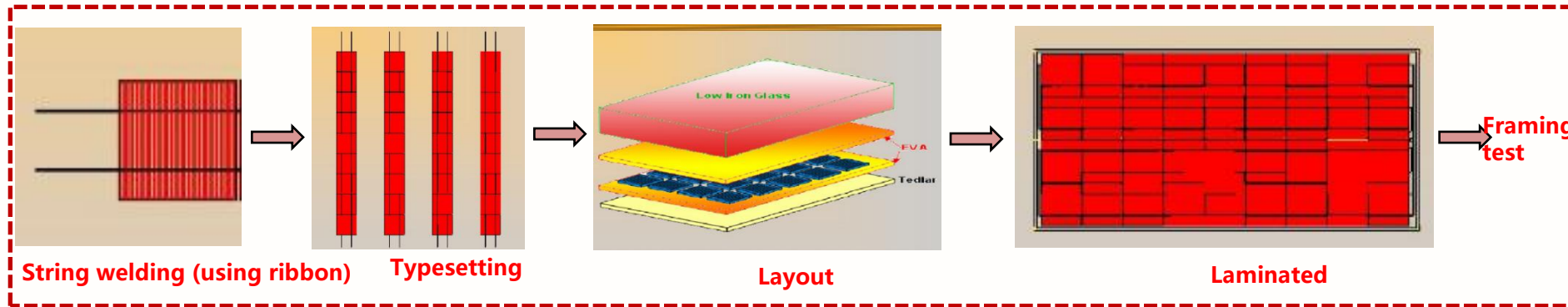
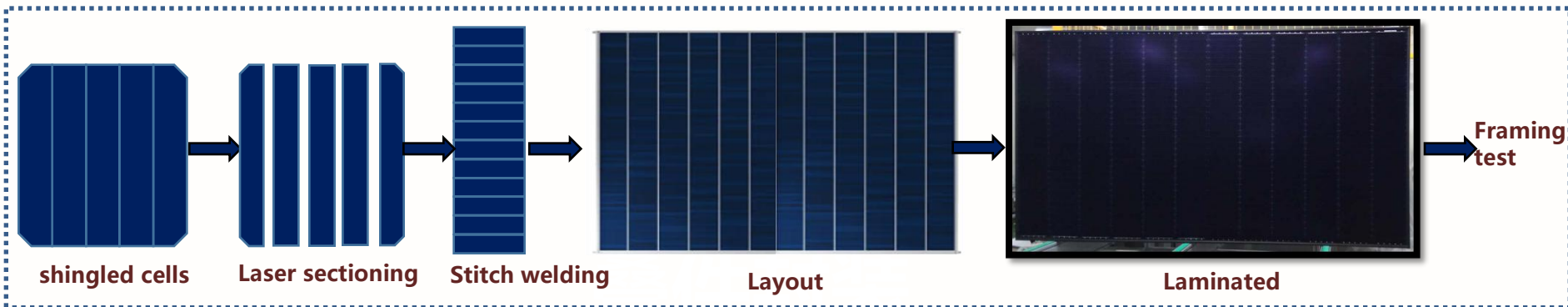
The crystalline silicon module cells are connected by solder ribbon



Shingled modules

The crystalline silicon module cells are connected by conductive glue







Advantages of shingled modules

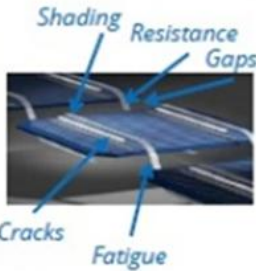
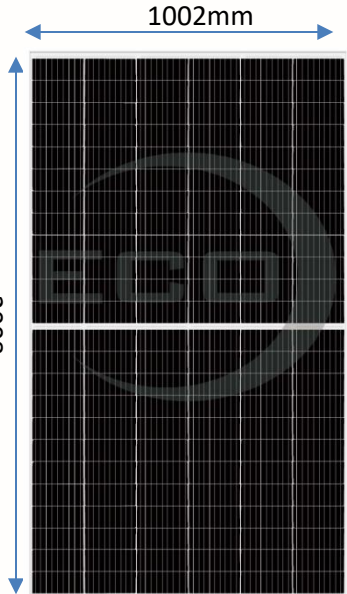
Super high efficiency

Cell usage increased by 13%

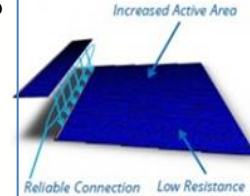
The actual light-receiving area increased by more than 10%

All five ways current reduced to 1/5

Suitable for high-efficiency battery packaging

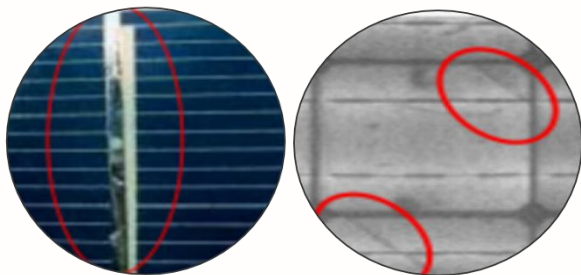


PERC single crystal half-cell module 415W
Module efficiency 20.63%



PERC shingled modules 475W+
Module efficiency $\geq 21.16\%$

Superior reliability



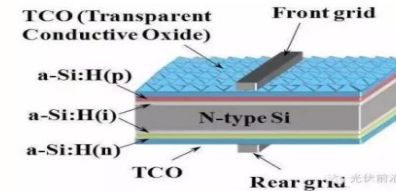
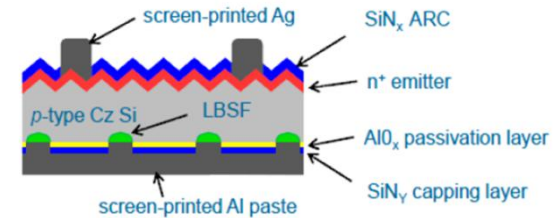
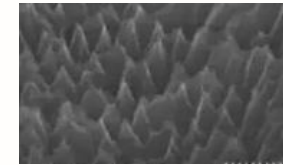
Exposure of conventional components and cracks in the solder ribbon

The non-strip connection method eliminates the two stubborn diseases of whiteness and cracking at the welding strip



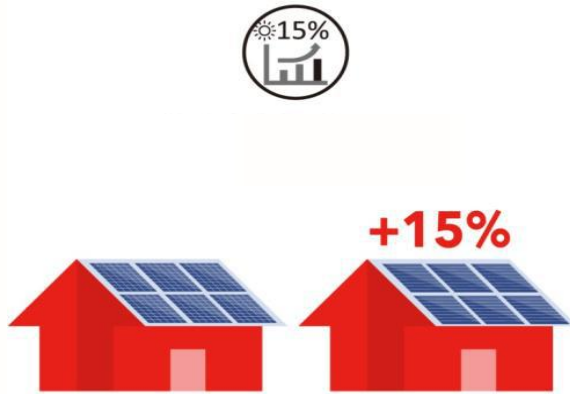
34 small pieces are connected in series, the current is 1/5 of the conventional module, which significantly reduces the hot spot effect

Compatible with a variety of batteries, strong scalability



The shingling process can be matched with the current mainstream technology routes of crystalline silicon cells, such as black silicon, PERC, HJT, etc. As a component packaging platform, it has strong scalability.

High power generation



The power generation is 15% higher than that of conventional modules, the same power output, the floor space is reduced by about 8%

Ultra-low cost



Logistics and transportation save 12%



The cost of installing BOS in power plants drops by 10-13%



The total installed power station increased by 5%

Strong ability to resist snow (melting)



Great appearance



The shingled module is designed with a parallel and series circuit structure, and the battery string runs along the short side of the module. Vertically installed components are more likely to accelerate snow melting when snow is covered, reduce covering time and increase power generation.

The front side of the shingled component is not covered by conventional welding tape, the structure is simple, and the appearance is more beautiful. At the same time, it is easier to find defects in appearance quality and facilitate operation and maintenance.



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Thanks For Watching!