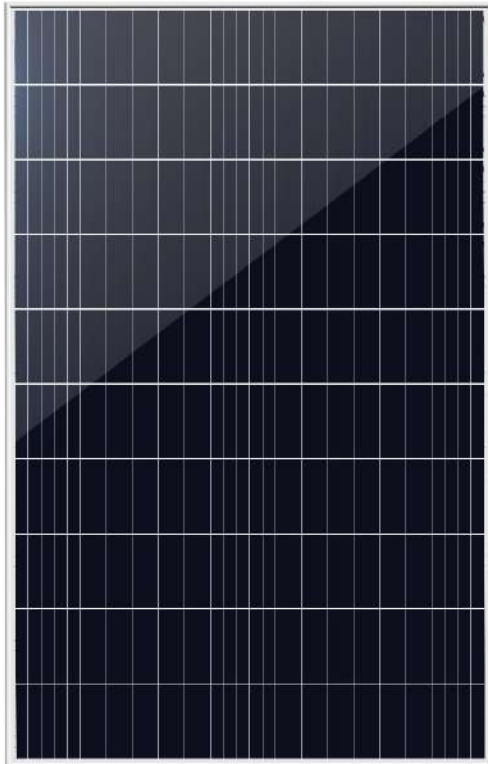




INFINITY ENERGY EUROPE



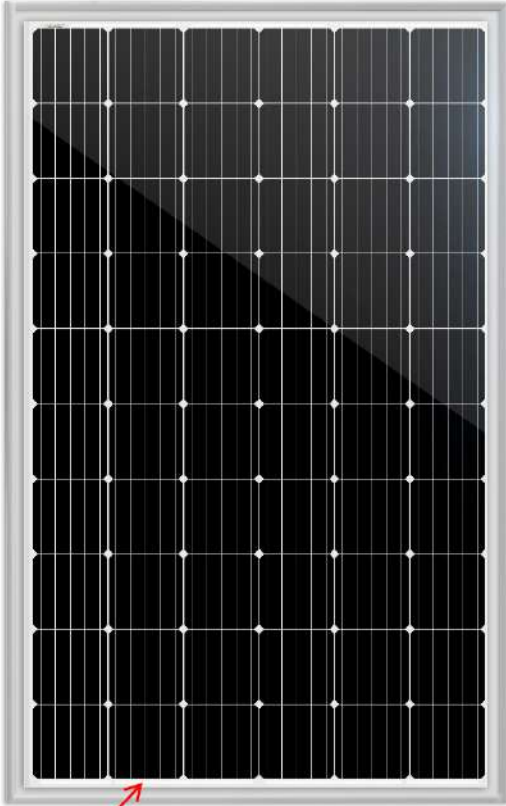
www.infinityenergyeurope.com



Higher Power output: up to **650W**
Higher Efficiency: up to **21.3%**
Much Lower Bos: saves up to **9.7%**
More electricity gain: up to **1.08%**
Less Micro-crack risks
Better hot-spot resistance
Better PID performance and Lower LID
Low Temperature Production procedure
Longer Warranty with less degradation
Elegant and attractive design for installations
More Flexible and stronger mechanical performance



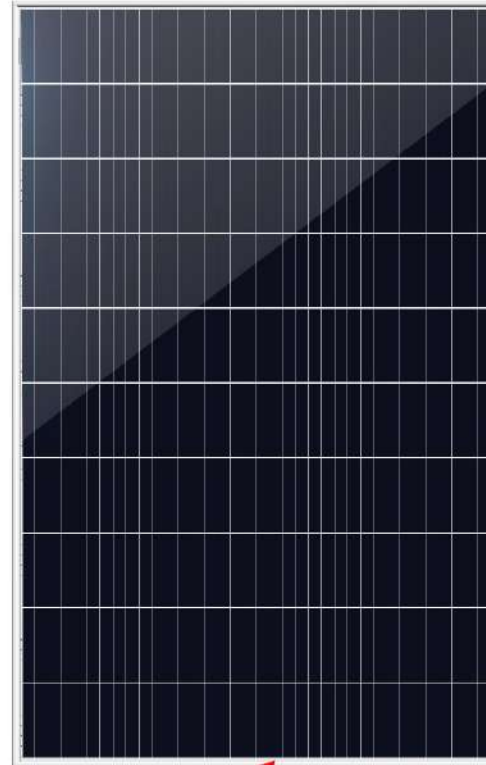
Differences between Shingled panel and conventional solar panels



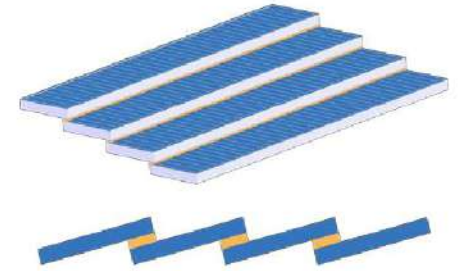
Inactive area losses, string losses and busbar losses



Solar cells are laid out across the panel with spaces, and are electrically connected together by copper busbars (ribbons) by means of high temperature soldering processes. The more copper busbars used the less resistance losses and hence the more efficient the electrical connection.



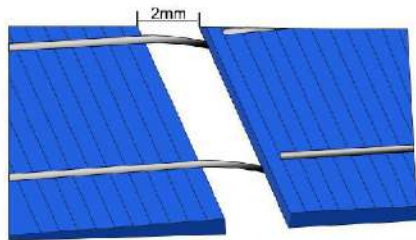
No busbar, no inactive area and parallel substrings



Shingle solar cells are solar cells which are cut into typically 5/6/7/8 strips which can be overlaid, to form the electrical connections. The strips of solar cells are joined together using an electrically conductive adhesive (ECA) that allows for conductivity and flexibility.

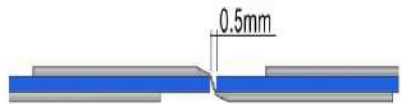


Electrically Conductive Adhesive Method (ECA) in Low Temperature



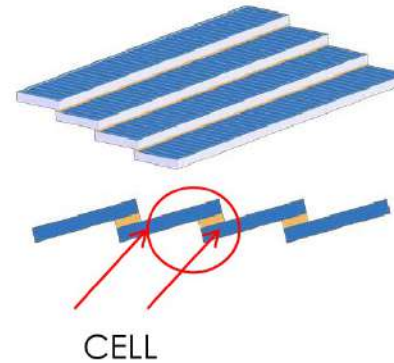
Conventional Panel:

250-300°C Temperature
Big gap between cells, lower efficiency and possible micro-cracks



Half-cut MBB Panel:

250-300°C Temperature
Small gap between cells, higher metal thermal effect with possible micro-cracks



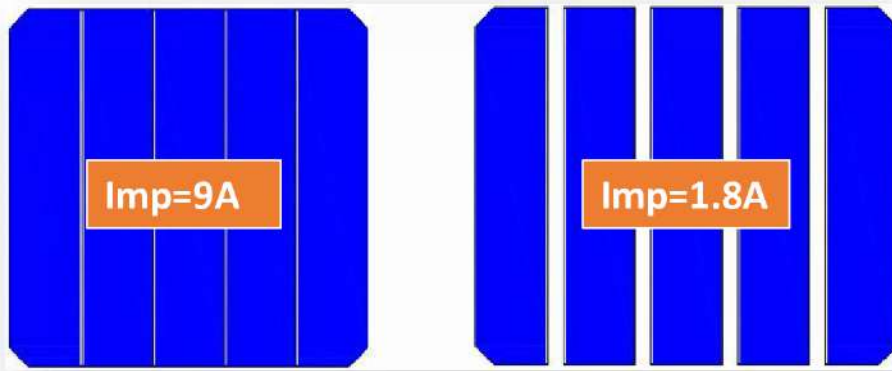
Shingled Panel:

$\leq 150^\circ\text{C}$ Temperature
Overlaid cells, no gap, no busbar, no metal thermal effect, no micro-crack by high temperature soldering





Lower Current in Strings

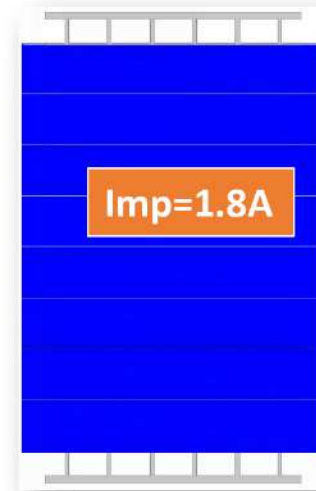


Conventional Panel:

Full cell $I_{mp}=9A$

Half-cut MBB Panel:

Cut cell $I_{mp}=1.8A$



Shingled Panel:

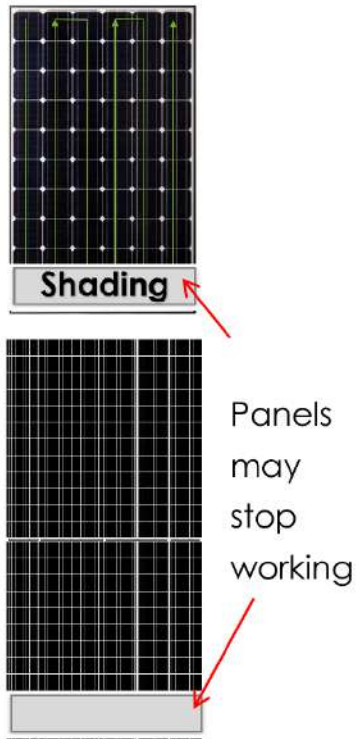
Shingled cell connected in series, $I_{mp}=1.8A$ without change, voltage changes, series current decreased from 9A to 1.8A.

$$P_{Loss}=I^2 \times R$$

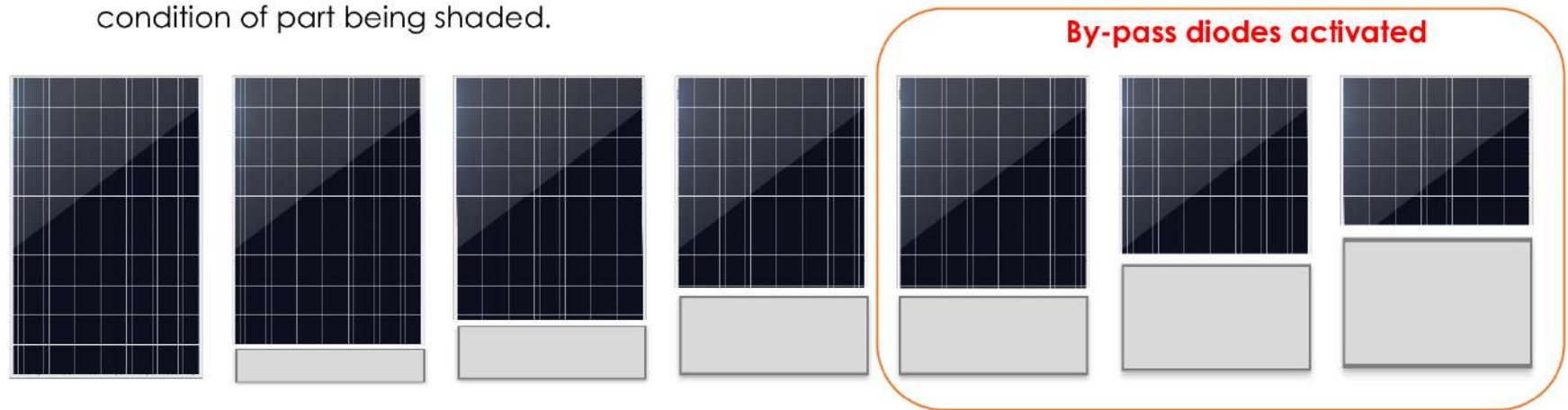
Current loss decreased dramatically



Less Energy Loss due to Shading



Solar Shingled solar panels can be wired in groups and configured in parallel which significantly reduces the losses caused by shading. They have the best performance in condition of part being shaded.

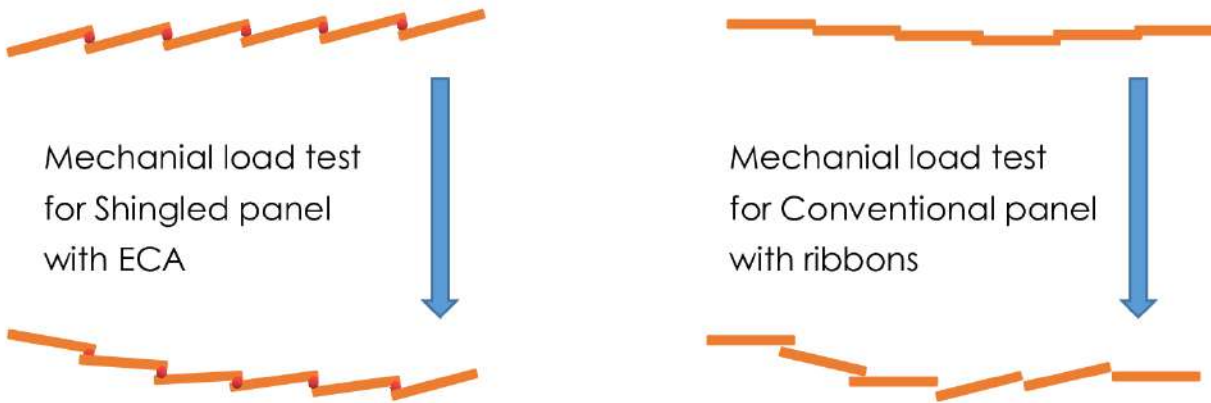


Conventional solar panels have the individual cells wired in series so when a part of the solar panel is shaded it can have a significant effect on the level of power output, with result that panels may stop working.

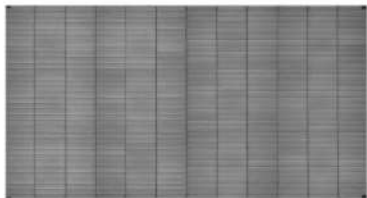


Better Reliability

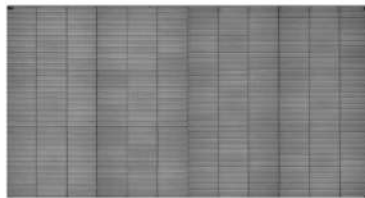
Shingled solar panels are more resistant to failures due to external forces applied to the surface of panels comparing with Conventional panels



* Better performance in Mechanical load test

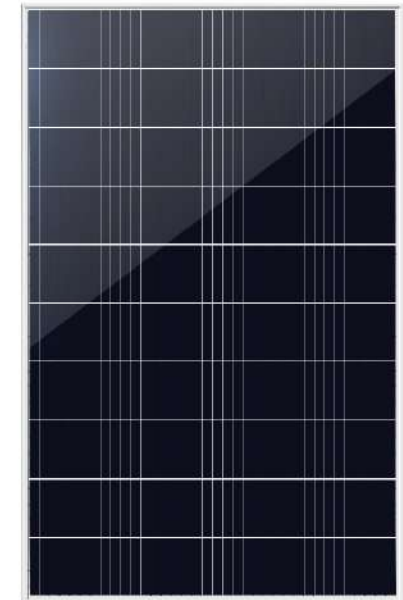


Before test



After test

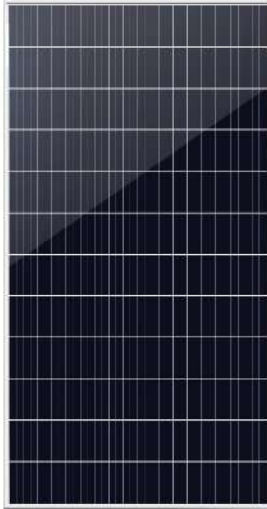
Also Shingled panels cancelled over 30 meters busbar, so busbar failures are reduced



* Reduced busbar failures



THE BEST PRODUCT OF INFINITY ENERGY EUROPE



Supo Series

158.75*158.75mm

460-475W

1969*1140*35MM

Efficiency up to 21.20%



Gold Series

210*210mm

630-650W

2355*1302*35MM

Efficiency up to 21.30%

INFINITY ENERGY EUROPE



WE ARE PRESENT in EUROPE, NORTH AFRICA, UKRAINA, SYRIA, TURKEY, INDIA, BRAZIL

INFINITY ENERGY EUROPE