

ITS LOW CARBON

Verified Traceable Low Carbon Solar Solution

JA SOLAR plays a leading role in the energy transition with our Integrated Traceability System (ITS) Low Carbon (LC) solar modules as a fully integrated ingot to module solar manufacturer.



55%
FBR
polysilicon*



High Share
recycled
ingot



Up to **40%**
less carbon**

"Our clients want us to address the carbon embedded in the modules."



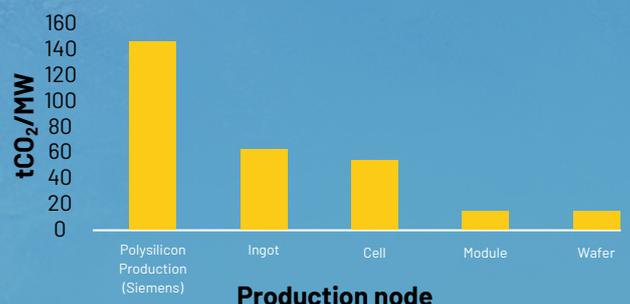
As a key contributor to the global energy transition, ITS LOW CARBON solar modules from JA SOLAR feature up to 40% less embedded carbon than China standard produced modules – verified by independent third-party assessments in accordance with ISO 14067.

Polysilicon production is the most carbon-intensive stage in solar manufacturing. The FBR (Fluidized Bed Reactor) method cuts energy use by up to 70-80% compared to the traditional Siemens process, thanks to lower operating temperatures and continuous production.

ITS LC FEATURES

- 55% FBR (Fluidised Bed Reactor) polysilicon*
- High share recycled ingot
- Life Cycle Analysis on supply chain nodes
- Tracked and documented with a 3rd party verified ISO report
- Up to 40% less carbon**

CO2 Emissions by Production Stage



* Specific ITS LC composition subject to actual production conditions

** ITS LC has a carbon footprint that is up to 40% lower than the standard baseline for modules produced in China.

THE ISO CARBON FOOTPRINT ASSESSMENT

The amount of embedded carbon in the final module is reduced by more than 1/3 - and by using recycled ingot the overall cradle to gate carbon is up to 40% lower!**

These figures are verified in a third party (Kapstan) report:

ISO 14067 Mono-crystalline modules



N-Type Bifacial Double Glass High Efficiency Mono Module 435 Wp ~ 460 Wp

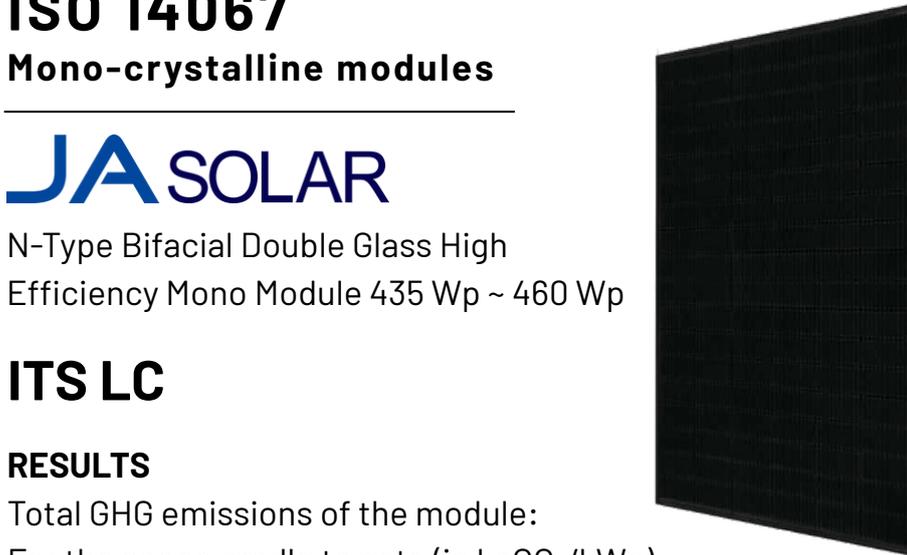
ITS LC

RESULTS

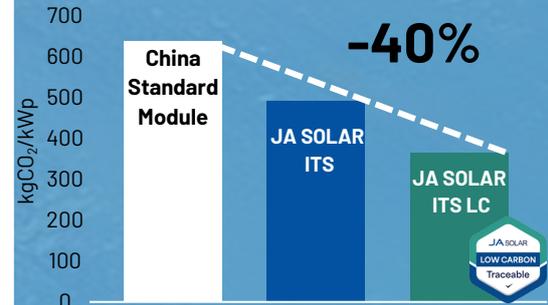
Total GHG emissions of the module:
For the scope cradle to gate (in kgCO₂/kWp):

	435W	440W	445W	450W	455W	460W
Chinese Default	673.2	665.6	658.1	650.8	643.6	636.6
JA SOLAR Standard	507.5	501.7	496.0	490.5	485.1	479.9
JA SOLAR LC	416.2	411.5	406.9	402.4	397.9	393.6

LCA practitioner(s)	Kapstan - 1790 Chem. de Saint-André 69760 Limonest, France contact@kapstan.fr
LCA reviewer(s)	SGS-GSTC Standards Technical Services Co., Ltd. 4/F, Building 1, GCL Plaza, No.99 Sian Street, Suzhou Industrial Park, Suzhou, China ee.shanghai@sgs.com
Software & Database	Simapro 9.6.0.1 Ecoinvent v3.10 for secondary data modelling National electricity mix was used for production in all LCAS
Impact Assessment Method	IPCC02021 GWP100a v1.0
Study Compliance	ISO14040/44:2006 ISO14067-2018

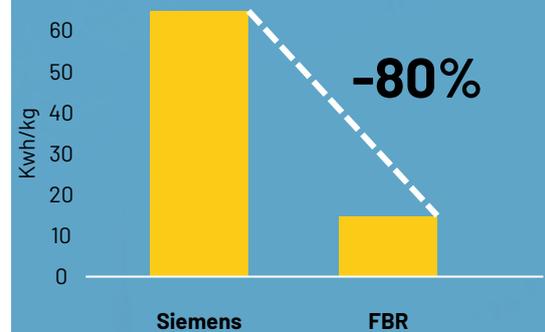


How does JA SOLAR compare to the carbon footprint of other modules?

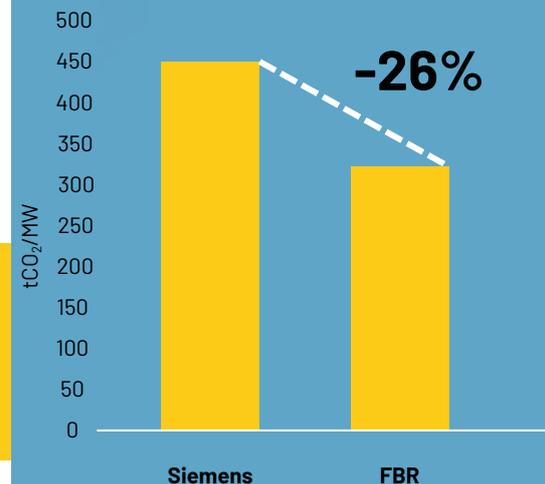


Polysilicon Production Stats

Electricity consumption



CO₂ Emissions



Look out for this label on all ITS Low Carbon modules:



* Specific ITS LC composition subject to actual production conditions
** ITS LC has a carbon footprint that is up to 40% lower than the standard baseline for modules produced in China.