JA SOLAR

LOW CARBON + TRACEABLE

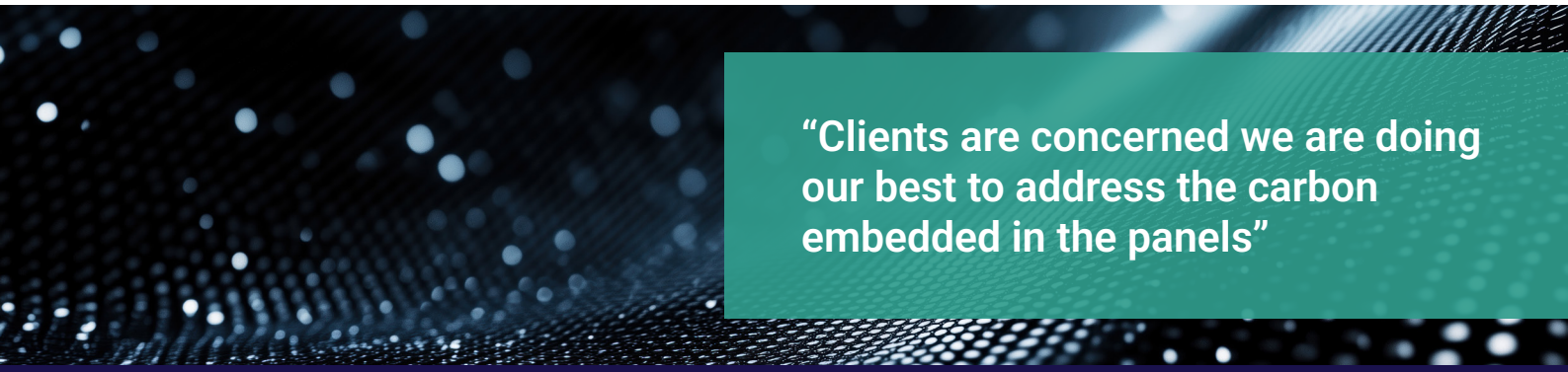
Verified solar supply chain solution

JA SOLAR LOW CARBON Traceable

JA Solar plays a leading role in supply chain management with our Integrated Traceability System (ITS) modules as a fully integrated Ingot to Module Solar provider.

To play the central role in the global energy transition **ITS LOW CARBON** solar panels have 40% less embedded carbon compared to standardmodules with third party verification in accordance with ISO 14067.

Possible through advanced low carbon solutions and rigorous supply chain management.



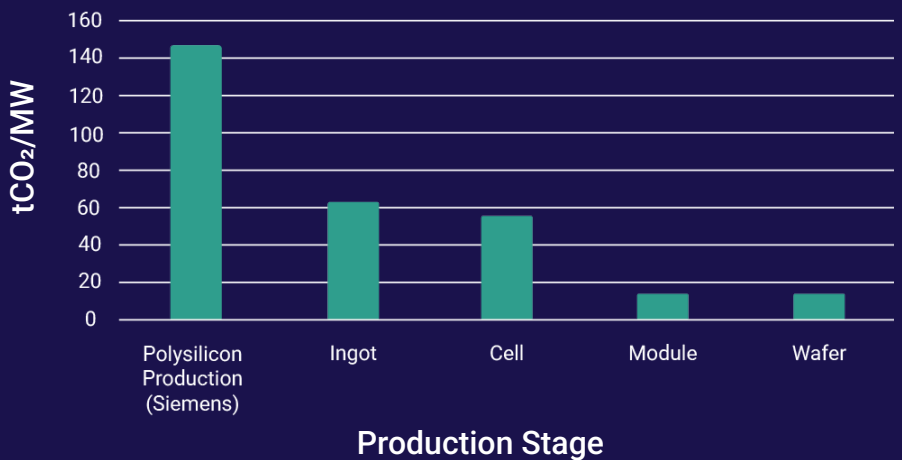
> **"Clients are concerned we are doing our best to address the carbon embedded in the panels"**

JA SOLAR ITS LC - FEATURES

- 50% FBR (Fluidised Bed Reactor) Polysilicon
- 50% Ingot recycling
- Life Cycle Analysis module and cell and ingot
- Tracked and documented with a 3rd party verified ISO report

ISO

Solar Supply Chain CO_2 Emissions By Production Process



About FBR Polysilicon

The manufacture of Polysilicon is the most carbon intensive stageof solar manufacturing. By using FBR (fluidised bed reactor) rather than the traditional Siemens method polysilicon, energy consumption is reduced up to 80% due to lower operating temperatures and continuous production capacity.

THE ISO CARBON FOOTPRINT ASSESSMENT

The amount of embedded carbon in the final module is reduced by more than 1/3rd - and by using recycled Ingot the overall cradle to gate carbon is up to 40% less.

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

Product Carbon Footprint Assessment

ISO 14067

Mono-crystalline modules JAM54D40LB and JAM54D41LB by JA Solar

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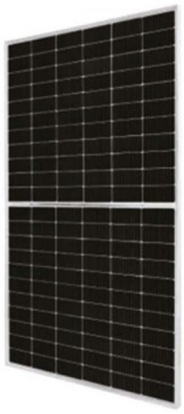
N-Type Bifacial Double Glass
High Efficiency Mono Module
435 Wp ~ 460 Wp
JAM54D40LB and JAM54D41LB



RESULTS

Total GHG emissions of the module:

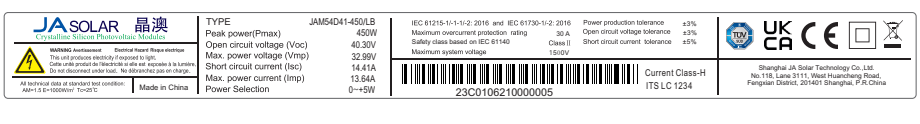
For the scope cradle to gate (in $kgCO_2/kWp$):

	435W	435W	435W	435W	435W	435W
Chinese Default	626.8	619.7	612.7	605.9	599.3	592.8
JA Solar Standard	461.5	456.3	451.1	446.1	441.2	436.4
JA Solar Low Carbon	378.0	373.7	369.5	365.4	361.3	357.4

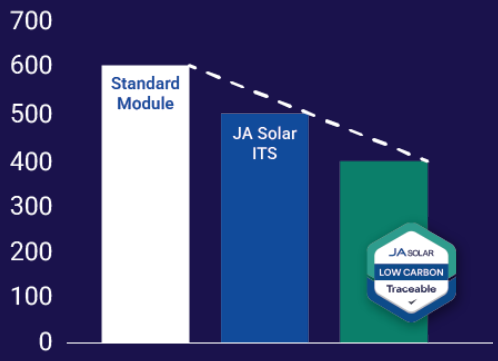
LCA practitioner(s)	Practitioner: Laurène MEJEAN **Kapstan** - 1790 Chem. de Saint-André 69760 Limonest, France contact@kapstan.fr
LCA reviewer(s)	Reviewer: James Yang - SGS LCA engineer **SGS-GSTC Standards Technical Services Co., Ltd.** 4/F, Building 1, GCL Plaza, No.99 Si'an Street, Suzhou Industrial 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

Kapstan SGS

Look out for this label on all low carbon ITS modules:

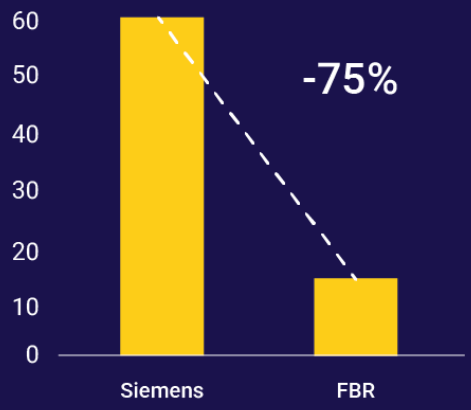


How does JA Solar compare to the carbon footprint of other modules?

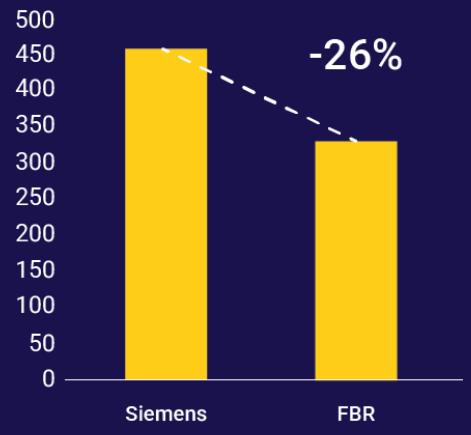


Polysilicon Production Stats

Electricity consumption



CO_2 emissions



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