



Suntub® – efficiency for flat roofs

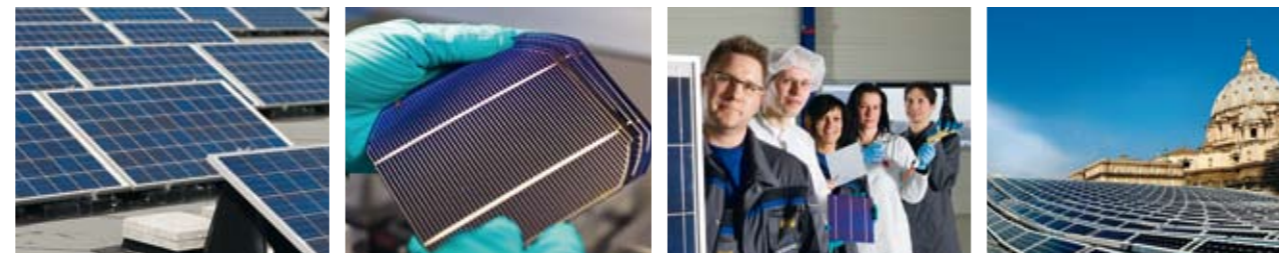
- › Optimised irradiance angle
- › Higher efficiency
- › About 3% more output
- › 10 year parts guarantee
- › Flow optimized design
- › Significantly reduced ballast-load with larger contact surface
- › No additional wind-force certification required
- › Perfectly compatible components
- › Easy and efficient installation

Top performance from a quality leader.


SolarWorld AG is among the largest solar energy companies in the world and offers products at every value-added stage – from raw materials to turn-key solar power plants – of the very best quality. That's been proven by a recent endurance test that confirmed modules from SolarWorld as the market leaders. SolarWorld AG ensures the high performance of its products with rigorous research and development. The company makes a significant contribution to environmentally-conscious value conservation by fully recycling solar power modules and closing the production cycle.

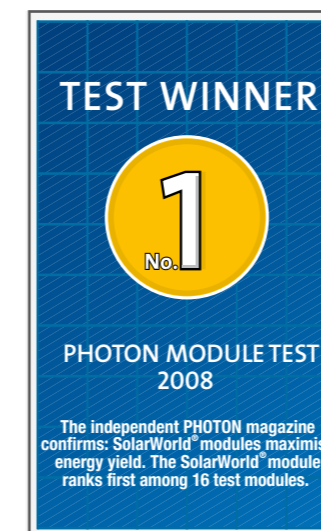
Sustainable success – winner of the 2008 German Sustainability Award, the SolarWorld AG business model combines economic prosperity with social responsibility and environmental protection.

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Benefits at-a-glance.

- › **Quality made in Germany**  With SolarWorld, you've chosen premium products that meet German quality standards.
- › **Many years of experience** With over 30 years of production experience, SolarWorld AG has been a world market leader for many years.
- › **25 year performance guarantee for modules** Robust, high-performance products ensure stable output over the long term.
- › **Superb products** An endurance test performed by the trade magazine Photon ranked modules from SolarWorld in first place.

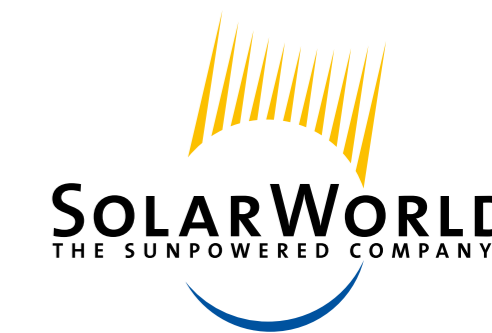


SolarWorld. And EveryDay is a SunDay.



Text and illustrations reflect current technology at the time of printing. Subject to alterations. Updated: May, 2009

Suntub® – the perfect solution for flat roofs



SolarWorld. And EveryDay is a SunDay.

Step by step: **Suntub®**



a Positioning the Suntub® plastic bases

Suntub® systems are composed of two easily assembled, identical plastic bases. Each system has two high and two low bases to support a single solar module. To ensure the module has the ideal tilt angle to the sun, the Suntubs® must be set up with their flat sides facing



south. To connect individual Suntubs®, mount the connecting elements and screw them in place during positioning. Lateral clearance between the installed solar modules should be over 8 mm.



b Ballasting and assembly

The Suntubs® can now be weighed down with the load recommended by the system plan. Gravel or concrete blocks, for example, can be used for this purpose. After



ballasting, insert both aluminium profiles into the Suntubs® up to the stop. The groove for the T-head bolt must be facing up.



c Mounting the module

After loosely assembling the clamp connections, the solar module can be lowered in place from above and fastened with the upper clamp connections. Please be aware that the module must be centred on the Suntub®. After aligning the solar module, tighten all the bolts.



d Wiring

The wiring must follow the wiring diagram. Be careful when laying the wires that the wires are protected from damage. Only a authorized electrician should make the connection to the public grid and activate the unit.



A high-performance system

Flexible and easy-to-install: Suntub® flat-roof installation systems are perfect for installation on flat roofs with inclines of up to 6°, for example on office buildings or bungalows. They allow the modules to be optimally tilted towards the incident light. The modules' superb rear ventilation ensures even better performance. Suntub systems deliver a total of about 3% more output than conventional flat-roof tub installation systems. In addition, they come with a 10 year parts guarantee, so you can count on quality over the long term.

Excellent design

Clean and stable energy supply – Suntubs® developed and designed by SolarWorld engineers feature high stability combined with low weight. The aerodynamic design and larger contact surface reduces load to the very minimum. The systems can be easily connected to each other offering even greater ballasting advantages. Thanks to their intelligent design, no additional wind-force certification required at any location. Suntubs® are also sustainable: they deliver higher solar energy output and, because they're built from environmentally-friendly, easily recyclable plastic, they promote a positive environmental balance overall.

Fast installation

Simply straightforward: perfectly compatible components from SolarWorld® make installation easier and ensure fast and efficient set-up. Installing Suntubs® does not interfere with the roofing or bottom cover in any way. The units can be flexibly fitted with a variety of module types, for example with the Sunmodule Plus® from SolarWorld. Besides the extremely resistant Suntub® flat-roof systems, SolarWorld Sunkits® kits include high-performance modules and inverters, and are pre-modified to suit each customer's individual structural demands.