



#### SALES & SERVICE CONTACTS

**Headquarters** Oerlikon Solar Ltd., Trubbach T: +41 81 784 6588  
Hauptstrasse 1a F: +41 81 784 6544  
9477 Trubbach Sales: sales.solar.tr@oerlikon.com  
Switzerland Service: service.solar.tr@oerlikon.com

**Oerlikon Solar China** Oerlikon Solar (Shanghai) T: +86 21 5048 5958  
Trading Co., Ltd. F: +86 21 5048 5957  
Fu Te Dong San Road No.76 Sales: sales.solar.sh@oerlikon.com  
33# Building Service: service.solar.sh@oerlikon.com  
Waigaoqia Free Trade Zone  
Shanghai 200313  
P.R. China

[www.oerlikon.com/solar/thinfab](http://www.oerlikon.com/solar/thinfab)

# THINFAB

Economically Viable Solar Power with  
Thin Film Silicon—Now!



**world records**

**oerlikon**  
solar





# INTRODUCING THE NEW THINFAB

Oerlikon Solar proudly announces the new ThinFab which reduces the manufacturing cost of thin film silicon modules to a record breaking € 0.50 Wp, with 10 percent stabilized efficiency and 143 Wp module performance. Beyond that we introduce our new world record breaking cell efficiency of stabilized 11,9 percent on Micromorph® technology, confirmed by NREL.

## FEATURES & BENEFITS NEXT GENERATION PECVD KAI MT 2

2

- 100% Higher productivity (throughput) since launch of Micromorph® to significant reduction of capex/Wp
- Best in class in facility consumption: up to 30 % less gas and electricity usage
- Integrated Micromorph® process (no vacuum breakage between both absorber films) using 40 MHz technology
- Optimized temperature cycles during deposition (less heat & cooling steps)
- Contamination free processing enabled by the differential pressure in the Plasma Box® and the new gate valve isolation between the process chambers

## FEATURES & BENEFITS NEXT GENERATION TCO 1

1

- 60% higher throughput and 40% lower cost of ownership compared to the previous generation
- Best-in-class transmittance and light trapping enables a high efficiency thin absorber layer
- In-house front contact TCO enables cost-efficient local bare glass sourcing
- Extended maintenance cycles allow higher system availability

## FEATURES & BENEFITS NEXT GENERATION LSS LASER 3

3

- Faster process through 50% tact-time reduction
- Reduced scribe separation leading to increased active area i.e. higher module power
- Improved process stability leading to even higher reproducibility

## FEATURES & BENEFITS NEW LOW VOLTAGE MODULE 4

4

- Up to € 5.80 cost saving on electrical BOS per module
- Operating voltage (Vmpp) in the regime of crystalline silicon
- Attractive homogenous black appearance across the entire module
- Excellent Micromorph® temperature coefficient of 0.26%/°C power maximum power point (Pmpp)
- Best in class TCO corrosion resistance<sup>1</sup> even by applying transformer less inverters, leading to up to 3% higher energy yield!

## THINFAB FEATURING

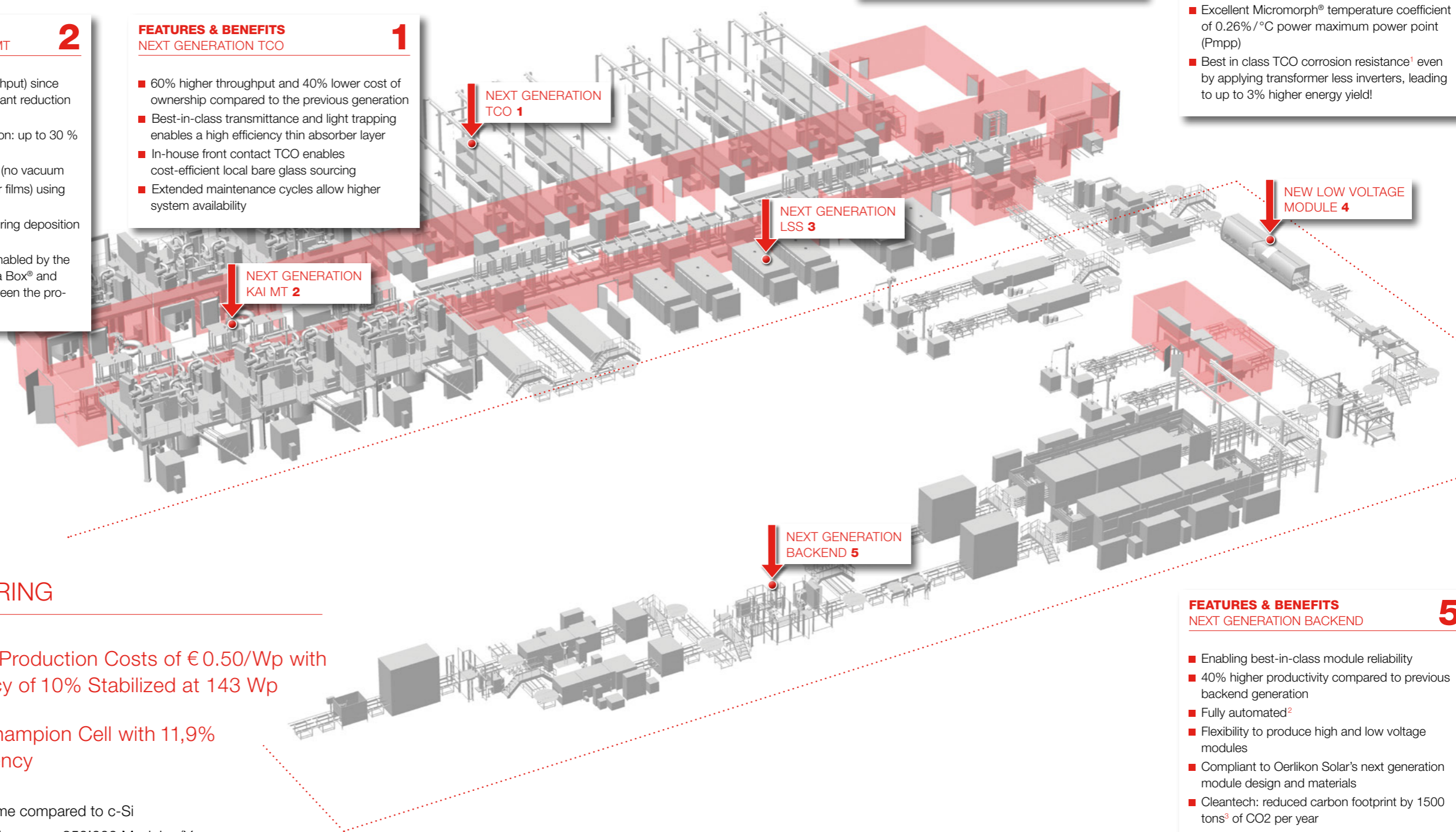


Lowest Module Production Costs of € 0.50/Wp with Module Efficiency of 10% Stabilized at 143 Wp



...and a New Champion Cell with 11,9% Stabilized Efficiency

- Lowest Energy Payback-Time compared to c-Si
- Output capacity of 120 MW, approx. 850'000 Modules/Year
- Non-toxic and Environmentally Friendly Micromorph® Technology
- Unlimited Resources for Thin Film Silicon



## FEATURES & BENEFITS NEXT GENERATION BACKEND 5

5

- Enabling best-in-class module reliability
- 40% higher productivity compared to previous backend generation
- Fully automated<sup>2</sup>
- Flexibility to produce high and low voltage modules
- Compliant to Oerlikon Solar's next generation module design and materials
- Cleantech: reduced carbon footprint by 1500 tons<sup>3</sup> of CO2 per year
- Short time-to-market: Transfer of IEC61646/61730 and UL1703 master certificate at start of production

<sup>1</sup> In combination with Oerlikon Solar MMI (Module Mounting Interface)

<sup>2</sup> Except substrate loading (front and back glass)

<sup>3</sup> European reference energy mix leading to 0.6kg CO2 per kWh