

# PROFILE

## "Innovation at the pulse of time"

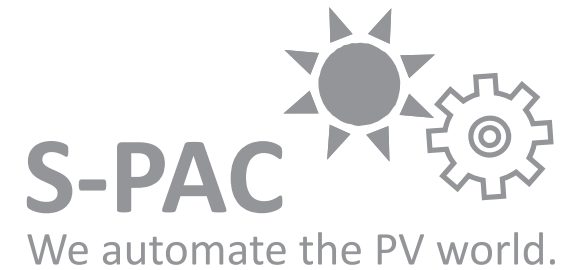
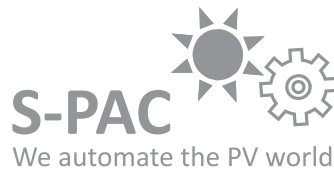
Laser technology development, process design, planning and construction of customized systems for automated manufacture

- Assembly systems, laser systems, ECM-systems right from stand-alone configuration up to the integrated solution, among others, for automotive, electrical engineering/electronics and medical engineering industries
- Development of solutions for inline-laser scribing of thin-film photovoltaic modules
- Development of technological solutions for making contact breakthroughs, edge isolation, marking including traceability linking and metallising of backside-contacted photovoltaic cells

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Federal Ministry  
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## S-PAC

Saxon Photovoltaic  
Automation Cluster

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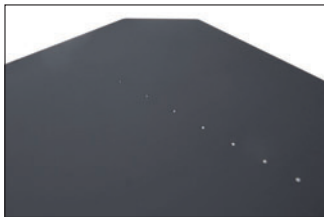
# PRODUCTS

## Innovative laser systems for automated manufacture of photovoltaic cells

Laser systems for

### Wafers/Cells (MWT-cells)

- Boring of breakthroughs for through-contacting
- Healing of grating effects
- Metallization
- Edge isolation
- Laser-marking
- Inline metrology



Laser systems for

### Thin-film photovoltaic modules

- Laser-structuring of cells/modules
- Laser-marking
- Edge deletion
- Inspection of trench quality



# INNOVATIONS

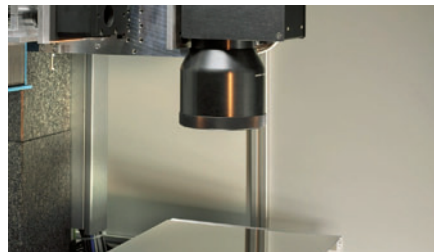


## Laser-machining of thick-film cells

- Process and system optimisation from laser ablation up to metallising
- Inline metrology to detect crystal-lattice defects, borehole and mark locations as well as to enhance efficiency

## Inline laser-scribing of thin-film photovoltaic modules

- High-speed machining of microstructures
- Inline measurement of profile and position of trenches via spectroscopy



# COMPETENCES

## Integrated laser material machining for high-precision automotive assemblies



Assembly system for car injection components with integrated laser-welding and laser-marking (data matrix code)



Integrated laser-welding for airbag generators