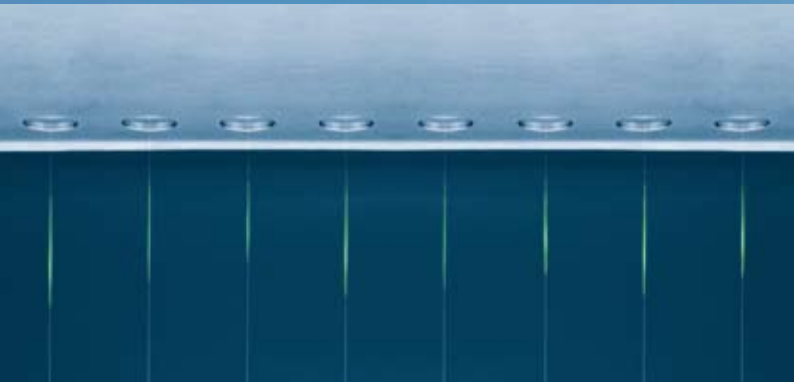
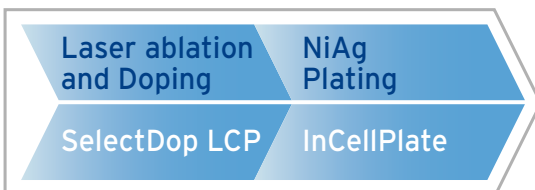


# SOLAR METALLISATION CLUSTER HIGH EFFICIENCY



## The self aligned Selective Emitter solution

The RENA Selective Emitter solution in two steps: Simultaneous SiN ablation and phosphorous doping by a liquid jet guided laser in the RENA SelectDop LCP and the self adjusted plating process on the RENA InCellPlate.



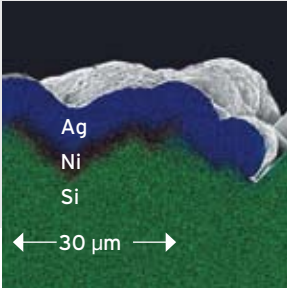
### Features and benefits

- Efficiency increase of ~1% absolute
- Ablation and selective doping in a single process step
- High Line accuracy without interruption
- Fast diffusion without thermal damage
- Easy integration on self aligned Selective Emitter process
  - Adjust diffusion to a high ohmic emitter
  - Skip front side printer station
  - Add LCP and Ni/Ag plating
- Self aligned metallisation by Ni and Ag plating
- Self aligned laser and plating processes
- Direct metallisation
- Good contact adhesion
- Process guarantee
- Perfect automation integration
- Typical laser groove 35 µm
- Typical dimension after plating: 50 µm
- Ideal workflow integration
- Process start up by RENA



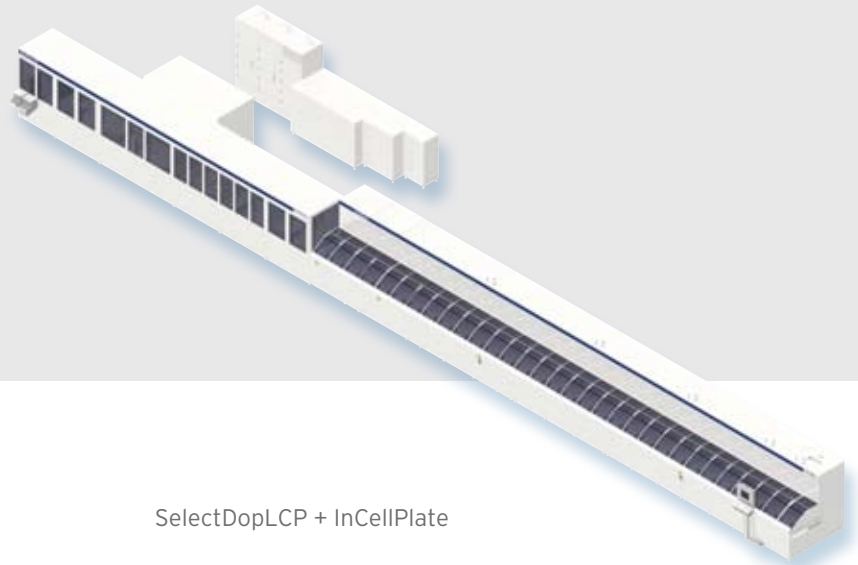
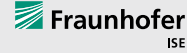


InCellPlate



SE + EDX

Source:



SelectDopLCP + InCellPlate

## Technical Data

	SelectDop LCP	InCellPlate
Process	<ul style="list-style-type: none"> <li>• SiN ablation</li> <li>• n++ doping</li> </ul>	<ul style="list-style-type: none"> <li>• NiAg</li> <li>• NiCuAg in preparation</li> </ul>
Dimension	approx. 11400 x 4500 x 2350 mm (length x width x height)	approx. 22800 x 2150 x 2590 mm (2400 w/h) approx. 16400 x 2150 x 2590 mm (1200 w/h) (length x width x height)
Throughput	up to 3000 wafers/h	up to 3000 wafers/h
Wafer thickness	160 μm	160 μm