DATA SHEET

SOLAR PERC processing

RENA



Perfect shape and best CoO -BatchTex N and InOxSide⁺ team up for PERC processing

Well-adapted front and back side morphologies are of crucial importance for advanced cell concepts. RENA's BatchTex and InOxSide⁺ offer both independent surface optimization and best match of front and rear sides for high PERC cell efficiencies. With its proprietary monoTEX[®] process, RENA's BatchTex reaches excellent front side reflection combined with very homogeneous and small pyramid formation. This makes rear side polishing in the InOxSide⁺ even more effective and further supports advanced rear side passivation performance.

Areas of application

- High efficiency PERC and PERT solar cell production
- BatchTex N: IPA free alkaline texturing
- InOxSide⁺: Junction isolation, rear side polishing and PSG/BSG removal

Features and benefits

BatchTex N:

- IPA-free alkaline texturing
- Minimized front side reflection
- Optimized pyramides by $\mathsf{monoTEX}^{\texttt{B}}$ additive
- Ultra-compact tool design with high throughput
- Short process time 5 7 min

InOxSide⁺:

- Efficient and fast junction isolation and rear side polishing (1 5 $\mu m;$ higher etch off on request)
- Patented single side etching process
- RaPID (option): For PID-free cells. The RaPID forms a thin oxide on the wafer surface prior to AR deposition a key factor for the production of PID-free cells.



Wafer surface after texturing and rear side smoothing



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BatchTex N 400

InOxSide⁺

Technical Data PERC processing

	BatchTex N 400/N400-XL	InOxSide ⁺
Process	Saw damage removal: alkaline Pre-cleaning: alkaline, ozone Texturing: alkaline Cleaning: alkaline, ozone, acidic Drying: hot water, warm air	Junction isolation, rear side polishing and glass removal
Dimensions (I x w x h)	13600 x 2440 x 2390 mm	8400 x 2150 x 2350 mm
Throughput	> 8000 wafers/h (depending on wafer size)	> 5000 wafers/h (depending on wafer size)
Wafer thickness	> 150 μm > 100 μm on request	>150 μm
Wafer Size	156-210 mm, square and pseudo-square	156-210 mm, square and pseudo-square
Options	Extended loading/unloading buffer Process carriers: RENA ASC Bulk chemical supply systems Filter fan unit	RaPID: Formation of a thin and dense oxide as anti-PID layer PreCon: Advanced rear side smoothing

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