

Alkaline Texturing



Efficient texturing of mono-crystalline wafers

The Alkaline Texturing Inline System of SCHMID ensures the most efficient texturing of mono-crystalline wafers. The IPA-free process, the long bath life and the smooth transport system suitable for all common wafer sizes guarantee a stable production. Uniform process conditions for all wafers ensure an incomparably homogeneous pyramid structure without the need of cassettes.

Details

Alkaline texturing is applied with mono-crystalline wafers. It removes the contamination and damage caused by the sawing process. The uniform, pyramid-shaped surface reduces the reflection and thus decisively influences the cell efficiency.

SCHMID's Alkaline Texturing Inline System achieves perfect surface qualities with reflection values of less than 12 %. Due to the horizontal inline process less etch removal is required along with zero rework due to wafer sticking. A special sprinkling device irrigates the wafers very gently and hence enables the process of wafer with a thickness down to 100 μ m. The continuous exchange of the etching medium results in shortest process times.

Together with the automatic dosing and the bath monitoring, the machine operator has full control over the entire process at all times. At its end the low-noise dryer module Dry Jet with its energy-efficient side channel blower provides for uniformly and spotlessly dried wafers.

Service and maintenance work can be carried out quickly and easily. All components are easily accessible. The transport rollers can be removed with just one action. The sophisticated transport system can do without a top roller. So there are no run marks. Thanks to the modular design of the inline system, throughput and process steps can be adapted to customers' needs.

Technical Data

Throughput (M12):

- 5,000 wafers/h (5 tracks)
- 10,000 wafers/h (10 tracks)
- Further throughputs configurable

Wafer size:

- M2 - M12

Breakage rate:

- < 0,05 %

Process media:

- KOH or NaOH
- Additives

Optional:

- Integrated pre-cleaning

Benefits

- Gentle and damage-free inline transport of the wafers
- Ready for thin Wafers down to 100 μ m thickness
- No wafer rework and carrier marks
- Homogeneous pyramid structure owing to equal process conditions for all wafers
- IPA-free process
- Process control by automatic dosing and bath monitoring
- Long bath life for up to 1 million wafers by Feed and Bleed
- Very good accessibility for service and maintenance work

