



MODULUS

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Multilayer Sputtering
Deposition System

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Modular Inline System for Multiple Applications

MODULUS Inline Sputter Deposition System

The SINGULUS TECHNOLOGIES inline sputter deposition system is designed for production with loading and unloading of the substrates from one side and processing in a minimized footprint. Depending on the requirements, the system can be configured with an advanced transport solution. As a modular inline sputter system this machine is ready for applications in display and consumer electronic applications. In the different process modules, plasma treatment, RF sputtering and DC sputtering can be implemented as well as cooling & heating modules. The cooling stations are special designed to maintain a low temperature without compromising on throughput. Essential is the exact temperature control which is required processing plastic substrates.

Typical Performance Characteristics

- Modular configuration
- Up to 13 independent process stations
- DC and RF process stations available
- SMART CATHODE technology, 170 mm diameter
- Special vertical carrier orientation
- Static deposition
- Special designed substrate cooling station
- Cycle time up to 3.5. s
- Typical sputtering material Cu, Ag, SiN, Al, SS, etc.

Nowadays typical applications can be found in the emerging touch panel industry.



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One Glass Solution Technology

Modular inline physical vapor deposition sputter systems provide process solutions for dedicated coating processes on glass like the deposition of Nb, SiO₂ or ITO. The systems from SINGULUS TECHNOLOGIES are fully automated innovative and modular coating tools for the industrial production of modern touchscreen applications. The systems provide several customizable vacuum chambers for different processes. Scratch resistant coatings provide glass with durability and increased longevity. A high quality hard coating assures the best scratch resistance. Mobile display cover glass has to meet the requirements of crystal clear images, withstand every day application and allow smooth touch screen use.



Electro Magnetic Shielding for Mobile Applications

Mobile applications demand also a very high functional density for electromagnetic shielding interference. Cover shields do not provide the shielding quality required for the next generation of products. SINGULUS TECHNOLOGIES offers modular vacuum sputtering system providing the best solution to produce high quality metal layers in a cost effective and economical way. Electromagnetic shielding is the practice of reducing the electromagnetic field by blocking the field with barriers made of conductive or magnetic materials. Shielding is typically applied to enclosures to isolate electrical devices from the outside world. A commonly used shielding method, especially with electronic goods housed in plastic enclosures, is to deposit the inside of the product with a relatively thick copper layer to provide the best device shielding solution from high frequencies.



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THIN FILM
DEPOSITION

SURFACE
ENGINEERING

THERMAL
PROCESSING

WET
CHEMICAL

SINGULUS TECHNOLOGIES – Innovations for New Technologies

SINGULUS TECHNOLOGIES develops innovative technologies for economic and resource-efficient production processes. SINGULUS TECHNOLOGIES' strategy targets the use and expansion of its existing core competencies. This includes process technology and scientific solutions combined with mechanical and plant engineering. The core competence of SINGULUS TECHNOLOGIES rests on vacuum thin-film and plasma technology, wet-chemical processing as well as thermal process technology.

SINGULUS TECHNOLOGIES is expanding this expertise in its core segments and is transferring the know-how to new application areas: consumer goods, entertainment, energy, mobility and semiconductors.