ACS200 GEN3

AUTOMATED COATER / DEVELOPER PLATFORM

SUSS MicroTec

ACS200 GEN3 SOLUTIONS	
Process Flexibility	+ Universal platform for substrates from 2" up to 200 mm in diameter + Spin-, spray- and GYRSET® closed cover coating for covering flat to high topographies + Dispense systems for resist thicknesses ranging from 1 µm to over 500 µm + Developing of positive and negative resists with multiple nozzle options for puddle and spray developing
Production Capability	+ Fully automated platform + Configuration with up to 4 wet process modules with 19 plates allow for high volume manufacturing

Low Cost of Ownership	+ High throughput coating and/or developing by
	   + maximized number of process modules
	   + dual end effector robot system
	   + auto load cassette station
	+ High EBR accuracy to increase yield
	+ Small footprint with high module to space ratio

COMBINING EXPERTISE WITH INNOVATION +

The SUSS ACS200 Gen3 platform is the successful result of a perfect mix of innovative and production proven components. With the capability of up to 4 wet process modules and a maximum of 19 plates it perfectly suits the needs of high volume manufacturing (HVM). The unmatched configuration flexibility of modules and technologies covers not only the requirements of the Advanced Packaging, MEMS and LED market it also bridges the gap between R&D and HVM.

The versatile base frame provides multiple configuration possibilities, e.g.:
+ up to 4 wet process modules (either coater and /or developer) with up to 19 plates or
+ 2 wet process modules and 2 spray coater modules with up to 13 plates

With the possibility of stacking up to 3 plates over each wet process module and up to 7 plates in the 5th module, the ACS200 Gen3 allows the maximum module count in its class.

Different I/O systems match with any need. The 2x I/O serves R&D requirements, whereas the new designed auto load cassette station enables a continuous operation without stopping the system for cassette exchange.

The novel coater bowl offers state of the art open bowl coating and the patented GYRSET® closed cover coating technology. The bowl design offers the possibility to use disposable process bowls for operation without compromising in flow dynamics or exhaust

flows. It simplifies operation with inconvenient or unusual materials due to easy cleaning of the bowl and reduced maintenance time. The possibility to separate the solvent and resist lines on 2 different dispense arms per coater module, the ACS200 Gen3 follows consequently the path on providing excellent yield.

For developing applications, either an aqueous or solvent developer module can be configured. A high variety of different nozzle types are available to match with any process requirement.

Optional filter fan units and temperature/humidity control of the tool results in process stability, reproducibility and finally in a high yield.

ACS200 Gen3 with dual robot handling system

AUTOMATED COATER / DEVELOPER PLATFORM

TECHNICAL DATA

GENERAL

Number of Modules	max. 4 modules + 1 additional plate stack (max. 7 plates)
Available Modules	- spin coater + 3 optional plates above - spray coater - developer + 3 optional plates above - plate stack (max. 7 plates)
Wafer Size	2" up to 200 mm round, 2" to 150 mm square substrates 2 consecutive wafer sizes can be handled at the same time
Wafer Load Port	2x I/O, 4x I/O, auto load cassette station, SMIF
Substrate Handling	SEMI wafer standard optional: edge handling, bow/warped wafer handling
Robot System	3 axis, single or dual arm robot

User Interface

User Interface	Windows 7 operating system with SUSS MMC
Dispatching	cyclic mode, with hot-cold handling, swap-all Decision on the Fly (DoF) mode
Remote Access	host interface

MODULE CONFIGURED FOR SPIN COATING

Coater Types	spin coater, GYRSET® closed cover coater
# of Dispense Arms	up to 2
# of Dispense Lines	4 standard (max. 3 with optional independent temperature control up to dispense tip)
Solvent Nozzles	EBR, back side rinse, solvent pre dispense
Cleaning Options	nozzle, bowl cleaning GYRSET® cover cleaning
Flow Meters	digital as standard

MODULE CONFIGURED FOR SPRAY COATING

# of Resist Lines	2 separate resist spray nozzles
Solvent Nozzles	EBR, back side rinse, solvent dispense
Nitrogen Flow	recipe step programmable
Cleaning Option	integrated nozzle cleaning

MODULE CONFIGURED FOR DEVELOPING

Developer Types	positive/negative developer
# of Dispense Arms	up to 2
# of Dispense Lines	4 standard (max. 3 with optional independent temperature control up to dispense tip)
Nozzles Types	positive developer: puddle, fan spray negative developer: puddle, fan spray, high pressure
Flow Meters	digital as standard

ADDITIONAL MODULE OPTIONS

CENTERING

Centering	mechanical centering optical centering (also for glass substrates)
Options	flat alignment wafer ID reader

STACK MODULES

Hot Plate

Hot Plate Temperature	up to 250 °C
Temperature Uniformity	±0.5 °C up to 120 °C ±1 % >120 °C
Bake Method	fixed and programmable proximity options: electrostatic charge control for pyroelectric wafers; top side heating

Cool Plate

Cool Plate Temperature	15 to 30 °C
Temperature Control	±0.2 °C
Cool Method	fixed and programmable proximity option: electrostatic charge control for pyroelectric wafer

Vapor Prime

Vapor Prime Temperature	up to 250 °C
Priming Method	vapor injection via nitrogen bubbler process

GENERAL OPTIONS AND UTILITIES

OPTIONS

Environmental Treatment	local cleanroom humidity and temperature controlled environment
Safety	fire suppression system

FOOTPRINT

Footprint	1850 x 1500 mm

UTILITIES

Power	configuration dependent
Exhaust	configuration dependent
Vacuum	min. - 0.8 bar, +/- 5 %
N_2	8 bar, +/- 10 %
Compressed Air	8 bar, +/- 10 %
Water	3 bar, +/- 10 %

Data, design and specification depend on individual process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously. Illustrations, photos and specifications in this brochure are not legally binding. SUSS MicroTec reserves the right to change machine specifications without prior notice.

ACS200 Gen3: Open bowl spin coater module

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