



JETFIRST

RTP System 300 mm

Versatile & cost-effective software controlled rapid thermal processing (RTP) tool designed to meet requirements for up to 12" wafers in R&D laboratories and small scale production units.



THE JETFIRST 300 SYSTEM

was developed to meet university, R&D center and small scale production unit requirements. The chamber reactor

receives samples up to 12" diameter and is designed and optimized for an 8" sample. The frame design allows for quick installation, the friendly user interface is easy to use, and no special training is required for system utilization.

The JetFirst 300 system is stainless steel with a water-cooled chamber. The cold wall chamber technology advantages include: high process reproducibility, low memory effects of the wall run to run, better cooling rates, an ultra clean and contamination-free environment, and no metallic and no cross contamination. The JetFirst system comes standard with two temperature measurement sensors: optical pyrometer and thermocouple. The optical pyrometer calibration is accurate and easy for customer samples. Because of this, the optical pyrometer settings are adjustable for customer utilization (not for standard processes using standard materials).

Our fast PID system provides accurate and repeatable thermal control across the temperature range. Furthermore, our software includes an autotuning procedure which allows for easy definition of PID parameters for the customer process. The system is fully controlled thanks to our PIMS software and the system parameters are saved under historical files allowing for easy process data analysis and maintenance.

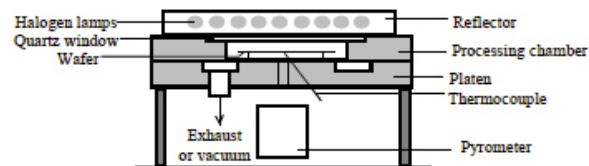
Key Features

- Stainless steel chamber
- High temperature pyrometer
- One purge gas line
- Process gas lines with mass flow controller
- Digital PID temperature controller

Processing Capabilities

- Rapid Thermal Annealing | RTA
- Rapid Thermal Oxidation | RTO
- Rapid Thermal Nitridation | RTN
- Diffusion for spin on dopants
- Contact allowing

All processes can be performed on silicon, III-V, II-VI, glass wafers or cutted wafer parts.



The chamber can reach up to 10⁻⁶ mbar (depending of the pumping group installed on the system). The reactor chamber can also work at atmospheric pressure. A check valve installed on the exhaust line avoids the overpressure problems.

Specifications	
Model	JETFIRST 300
Substrate	
Dimensions	300mm /12in. max.
Thickness	Up to 5mm
RTP Module	
Reactor Technology	Water-cooled polished stainless steel
RTP Heating System	24 Infrared lamps / 6 zones
Maximum Power	100 kW
Temperature Range	RT to 1000°C
Temperature Uniformity	±1°C (typical)
Ramp Rate	1°C/s to 200°C/s
Temperature Control	TCs, pyrometer & digital PID
Thermocouple Control	ambient to 1000°C
HT Pyrometer Control	400°C to 1200°C
Cooling	Fan & water-cooled reflector
Loading Method	Manual pick & place through lid or fully automated
Control System	PIMS and software on PC
Waste Abatement	Dry vacuum pump
System Footprint (LxWxH)	1000x850x1500mm
Weight	300kg

