

Compact RTP Tube Furnace with 4" Quartz Tube & Digital Vacuum Gauge up to 1100C and Control Software



RTP-1000D4 is a compact rapid thermal processing tube furnace with 4" I.D. processing quartz tube and vacuum flange. It is designed for annealing semiconductor wafer or solar cell up to 3" diameter. RTP-1000D4 is heated by 10KW halogen light with max. 120°C/second heating rate. 50 segment precision temperature controller is built in with +/-1°C. accuracy. RS485 port and control software are included to allow you running furnace and monitoring temperature profile via PC.



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Specifications:	
Furnace structure	Double layer steel case with mullite liner without water cooling or air cooling
Heating element	8 pcs Halogen light tube (D=10 L=300 T =200, mm)
Heating zone	12" length with 4" constant temperature zone within +/-1°C uniformity
Quart Tube & Sample Holder	<ul style="list-style-type: none"> • Quart Tube Size: 4.33" O.D x 4.05" I.D x 16.14" Length (110.10mm x 103.05mm x 410mm) • 3" diameter Sample holder is inserted to sliding flange, which is made of quartz <ul style="list-style-type: none"> ○ One 3" diameter AlN wafer is placed on center of holder for annealing sample up to 3" dia. ○ AlN has very high thermal conductivity, which promise sampel area achieve the best temperature uniformity ○ The sample holder is removable from flange and use the RTP for other purpose
Vacuum Flange	Made of stainless steel with double hi-temp. silicone O-rings, needle valves.
Water Cooling Jacket	<ul style="list-style-type: none"> • Please make sure the source of cooling water you aim to fill in meet this requirement. (water rate >= 3L/min) • We suggest you using recirculating water chiller as cooling water (please order separately at the related product below) to save water. • You can use flowing tap water as cooling at flowing rate > 8 Liter/minute.
Flow-meter	One flow meter is installed on the front panel to adjust gas flow from 0 - 160 ml/min
Vacuum gauge	CE certified Digital vacuum gauge with a measurement range from 1 mtorr~800 torr is installed with the furnace.
Vacuum pressure	<ul style="list-style-type: none"> • Pressure can reach 50 mtorr by using mechanical vacuum pump with KF25 adapter. • Pressure can reach 10⁻³ torr by molecular pump with KF25 adapter.
Temperature control	PID automatic control via SCR (Silicon Controlled Rectifier) power control, e.g. current limiting phase angle fired the resistor.
Thermal Couple	S type
Programmable Temperature controller	<ul style="list-style-type: none"> • Built in protection from overheated and broken thermal couple • 30 programmable segments • Auto tune function • Temperature control accuracy: +/- 0.5°C • Built in RS485 port for PC control • Software is included. (Computer is not included)
Max. Heating Rate	50 °C/sec recommended, and 120°C/sec. for short time
Max. Cooling Rate	64 °C/min (Under vacuum: 200 mtorr), 117°C/min (Under atmosphere pressure)
Working Temperature	1100°C Max.