

mini 96-well gradient pcr thermal cycler with cooling module

Mini 96-well Gradient PCR Thermal Cycler is designed with highly integrated internal structure to reduce the size and occupy less space, which is very suitable for experimental environments with limited space.

Mini 96-well Gradient PCR Thermal Cycler adopts innovative air cooling and vacuum heat pipe combined with heat dissipation technology, which significantly improves the accuracy and uniformity of temperature control and ensures accurate and stable PCR amplification results.

Features of Mini 96-well Gradient PCR Thermal Cycler

1. highly integrated design: the core components are highly modularized and intensively laid out to ensure that the instrument is compact and stable.
2. Innovative heat dissipation system: combining air cooling system and vacuum heat pipe cooling technology, to improve the cooling efficiency and realize accurate temperature control.
3. Branded core components: long-life Peltier components and high-sensitivity sensors, stable performance, reducing the failure rate and maintenance costs.



4. fashionable appearance design: simple and generous modeling, smooth lines, in line with modern aesthetics, enhance the image of the laboratory.
5. saving laboratory space: compact body design suitable for limited space in the laboratory, reasonable air duct design to ensure good heat dissipation.
6. 7-inch touch screen: humanized interface design, ergonomic, comfortable and easy to operate, enhance the user experience.
7. simple program editing: preset a variety of commonly used reaction procedures, the user can easily edit custom experimental parameters.
8. accurate and uniform temperature control: advanced temperature control system to ensure the accuracy and uniformity of the experimental temperature, reduce errors and ensure consistent results.
9. gradient temperature function: support 12 independent gradient temperature zone, convenient for rapid optimization of primer annealing temperature.

Advantages

1. high space utilization: compared with the traditional thermal cycler to save more space on the experimental table, suitable for small laboratories and mobile experimental scenarios.
2. reliable and stable performance: integrated core components to ensure efficient operation of the instrument for a long time, reducing the frequency and cost of maintenance.

3. easy and fast operation: touch screen interface is intuitive, the program operation process is simplified, novice quickly get started without complex training.
4. excellent temperature control performance: combined with multiple heat dissipation technology and high-precision sensors, to achieve high temperature stability and uniformity, more reliable experimental results.
5. flexible gradient design: 12-channel temperature gradient design provides multi-parameter screening solutions for complex experiments, shortening the optimization time.
6. economical and practical: under the premise of ensuring performance, the instrument cost is reasonable, suitable for laboratories with limited budget procurement.

Working Principle

Mini 96-well gradient PCR thermal cycler uses Peltier semiconductor refrigeration heating element, relying on the change of current direction to achieve rapid temperature conversion. The air-cooling system circulates air through the built-in fan to assist in heat dissipation. the vacuum heat pipe utilizes the vacuum environment inside the heat pipe to conduct heat efficiently, significantly improving the speed and uniformity of heat dissipation. Multiple high-precision temperature sensors collect the sample temperature in real time and feed back to the control system to adjust the heating or cooling power to ensure that the sample accurately completes the denaturation, annealing and extension steps within the set cycle program. 12 gradient channels allow multiple sets of different temperatures to be set in the same experiment, which provides a powerful support for screening and optimization of PCR reaction conditions.

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Model	TC30
Block	0.2 mL semi-skirted, non-skirted 96-well plates, PCR tubes, or 8-strip tubes
Cooling module	peltier
Reaction block	aluminum block
Maximum sample throughput	96
Recommended reaction volume	10ul to 100ul
Temperature Control Range	4°C to 100°C
Maximum heating rate	4°C per second
Maximum cooling rate	3°C per second
Temperature accuracy	±0.3°C, at 95°C
Temperature resolution	0.1°C
Temperature uniformity	±0.3°C

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Model	TC30
Heated lid temperature	30°C to 110°C
Gradient range	30°C to 100°C
Gradient differential	1°C to 36°C
Temperature gradient	12-row temperature gradient
Temperature control method	Tube mode, Block mode
Time increment, decrement	1 second to 9 minutes 59 seconds
Temperature increment, decrement	0.1°C to 9.9°C
Maximum cycle number	99
Maximum steps	30
Data port	1xUSB2.0

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Model	TC30
Display	7-inch full-color LCD touchscreen
Power supply	100Vac to 230Vac, 50-60Hz, 750W
Dimensions	220x338x180mm
Weight	5.6kg