

Gradient PCR

OPTIMA 96

Four E's USA is on the cutting edge of PCR with the Optima 96 gradient PCR device. The Optima 96 uses 6 separate imported thermo-electric modules to ensure precise temperature control. These modules allow for gradient PCR, used to optimize PCR performance, and ensure performance on the edges of 96 well plates. Contact one of our product specialists for more information.



Features

- Easy-to-Use and Advanced High Resolution, 7-inch LCD Touchscreen Panel for Operating and Monitoring Processes
- Six Independent Heating/Cooling Modules to Provide Precise Temperature Control for PCR Optimization and Excellent Gradient Temperature Accuracy (+0.1°C)
- Independent Front and Rear Air Inlet/Outlet Duct Design Allows Instruments to be Placed Close to Each other Saving Laboratory Space
- Ultra Large Fin-type Heat Sink with Intelligent Fan Speed Control Technology Provides High Performance and Low-noise Heat Dissipation
- Segmented Heating Lid Design Adapts to all Types of PCR tubes, Strips, and Plates by Automatically Adjusting the Lid Fitment
- Lid has Intelligent Auto-heating Off Function to Reduce Non-specific Amplification by Turning Off the Heating When Unit Approaches Low Temperatures
- One of the Fastest Heating/Cooling Rates in the Industry (Maximum heating rate >5°C/s, maximum cooling rate >4°C/s) for Better Nucleotide Pairing Performance
- Front Facing USB Interface for Easy Program Import & Export. Also Allows for Software Updates
- Comes with Multiple Accounts and Access rights (Administrator, User Accounts, Visitor Accounts)
- Many Advanced Features Such As Touchdown (TD) PCR Mode and Long-Range PCR Modes
- Designed to be Compatible with PCR tubes, PCR 8 strips and 96-well plates



4E's USA

A FOUR E'S SCIENTIFIC*
COMPANY

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Specifications	
Model	Optima96
Sample Capacity	96-well plates, 12x PCR 8 strips, 96x 0.2 ml well plates, PCR Tubes
PCR reaction volume	10-100 μ L
Heating lid temperature	30-110°C
Max. block heating Rate	5°C/s
Max. block cooling Rate	4°C/s
Temperature uniformity	<0.5° (20s after reaching 95°C)
Sample temperature range	4°C ~ 100°C
Temperature accuracy	\pm 0.1°C (35°C - 99.9°C)
Technology (heating/cooling)	Semiconductor Peltier Technology, 6 independent blocks
Display resolution	0.1°C
Max. temperature difference between blocks	25°C (max. 5°C between two adjacent blocks)
Temperature difference between two adjacent blocks	0.1°C ~ 5.0°C
Gradient temperature accuracy	\pm 0.1°C (35°C - 99.9°C)
Gradient temperature uniformity	<0.5°C (20s after reaching 95°C)
LCD display	7" LCD touch screen, real-time display of PCR process, can be used while wearing gloves
Max. number of steps	No limit
Time increment / decrement	1~120s, for Long Range PCR experiment
Temperature increment / decrement	0.1°C~10.0°C, for Touchdown PCR
Max. number of cycles	Unlimited
Tm value calculation function	Yes
Automatic pause/power-off protection	Yes
Communication interface	Network interface (LAN), USB 2.0 Interface, Wifi, Bluetooth 2.0
Storage	External USB Drive and Internal Memory
Program storage capacity	Up to 15,000 programs in the instrument, Unlimited storage with USB flash drive
Input power	100~240V, 50~60Hz
Max. power	750W
Max. current	10A
Noise	<45dB
Specific amplification	The blocks do not start heating until the heating lid temperature reaches the set temperature so as to prevent sample evaporation and improve reaction specificity.
Template	Pre-stored multiple standard experiment templates, simplify the the tedious programming steps
Certification	CE, RoHS
Dimensions (L x W x H)	364 x 243 x 244mm
Net weight	8.7kg