

THERMAL CYCLER



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Thermal Cyclers have become an essential tool for DNA amplification, and are considered by many as the workhorse of the laboratory. It provides outstanding performance in a compact and user friendly design. Better performance, efficiency and faster optimization makes it a perfect choice for any laboratory.

Used in Research, Development, Food Science, Pharmaceutical, Life Science, Animal Diagnostics, Analytical Laboratories, Cloning, Sequencing, Gene Expression, Gene Amplification..

Also known as DNA Amplifier, Thermocycler, PCR Machine, Laboratory Thermocycler, Laboratory PCR Machine, Laboratory DNA Amplifier.

PT11 SERIES THERMAL CYCLER



PT111



PT112

FEATURES

PT111 PT112

Convenient and flexible module replacement mode	•	•
Large size super-high-definition LCD screen	•	
Intuitive, friendly user interface makes program easier and faster	•	
Memory function in case of power-down	•	
Low noise, low energy consumption, long application life	•	
Solemn, elegant appearance, innovative design	•	
Unique rotating stall heat-regulating function	•	
Optimal panel keypad design for user- friendly operation	•	
Heated lid could be positioned at any angle	•	
Handle-module, more secure and convenient for module replacement, improving interchanging efficiency and long life span	•	
Adjustable pressure hot lid, to prevent volatilizing and dewing		•
Hot lid with pressure alarm device, to prevent damaging test tube by too much pressure		•
Innovative module wire socket design achieves module replacement without wire		•
The unique left-right design for amplification area and operating area makes operator more convenient and safer		•

SPECIFICATIONS

Model	PT111	PT112
Temperature Range	0°C~99.9°C	4°C~99.9°C
Max.Heating Ramp Rate	4.0°C/s	2.5°C/s
Max.Cooling Ramp Rate	3.5°C/s	2.5°C/s
Block Formats	96x0.2 ml (A) / 54x0.5 ml (B) / 96x0.2 ml+77x05 ml (C) / 384well (D)	64x0.2 ml (A) / 36x0.5 ml (B)
Display Interface	5.7' LCD	4.3' LCD
Heating/Cooling adjustable rate	0.1°C/s~4.0°C/s	-
Uniformity	≤±0.2°C(20~75°C)	-
Accuracy	≤±0.2°C	
Hot Lid Temperature	30~115°C	-
Max.No.of Cycle	99	
Communication	USB2.0 / RS 232 / RJ45	-
Temp Control Mode	Block, tube	Block
Memory Capacity	200	9
Dimension (W×D×H)	380x270x250 mm	370x260x290 mm
Weight	7.2 kg	4.9 kg
Power Supply	85 ~ 264 V AC , 47 ~ 63 Hz	

ACCESSORIES

Accessory Code	Name	Capacity	For Models
PX1001	Block C	96×0.2 ml+77×0.5 ml	PT111
PX1008	Block A	64×0.2 ml	PT112

OPTIONAL ACCESSORIES

Accessory Code	Name	Capacity	For Models
PX1002	Block A	96×0.2 ml	PT111
PX1003	Block B	54×0.5 ml	PT111
PX1004	Block D	384 well	PT111
PX1009	Block B	36×0.5 ml	PT112

PT12 SERIES THERMAL CYCLER



PT121



PT122



PT123, PT125



PT124



PT126



PT127, PT128

FEATURES

	PT121	PT122	PT123	PT124	PT125	PT126	PT127	PT128
It uses advanced Peltier Technology	•	•	•			•	•	•
Hot-lid enables the oil-free operation	•	•	•			•		
Gradient function	•	•	•			•		
The menu software is more simple	•	•	•			•		
Cooling and heating speed can be set up	•	•	•			•		
RS232 Interface	•	•						
While block temperature is lower than set temperature or program ends, the hot lid will be automatically closed			•	•	•	•	•	•
Software intuitive interface and user friendly				•	•			
Powerful hardware configuration to meet your needs				•	•			
Interchangeable five block for your choice				•	•			
Extensive experiment application				•	•			
Accurate Experimental Data				•	•			
Suitable for many series of reagens and consumables, simplify experiments				•	•			
Reinforced aluminum module with anodizing technology can keep rapid heating-conducting property and have enough corrosion resistance							•	•
Scalable hot lid fits tubes of different heights							•	•
TFT color capacitive touch screen (5 inches, 800×480 pels), graphical menu navigation interface, very easy to operate							•	•
Built-in 11 standard program file template, can quickly edit the required files							•	•
Folder management, user can build directory							•	•
The running program and left time can be displayed in real time , allow to edit file when program is running							•	•
One-click quick incubation function can meet experiment's needs such as denaturation, enzyme cutting/enzyme-link and ELISA							•	•
Automatic restart after power failure. When power is restored it can continue to run unfinished program							•	•

Support USB to store and copy PCR data, user can control PCR by USB mouse										•	•
Update software by USB and LAN										•	•
WiFi module built-in, one unit can control multiple PCR machine through computer or cell phone with internet connection										•	•
Support email-alert function when experiment is over										•	•
Mobile phone App available										•	•

SPECIFICATIONS

Model	PT121	PT122	PT123	PT124
Temperature Range	4°C~99.9°C			
Max Heating Rate	≥4.0°C / sec	≥5.0°C / sec	-	-
Max Cooling Rate	≥0.3°C / sec	≥4.0°C / sec	-	-
Display Interface	320x240 LCD, 5.7'	320x240 LCD, 3.8'	LCD Display and touch screen (5.7')	6.5', 262k-color LCD display and touch screen
Graph Display	Yes		-	-
Uniformity	≤±0.4°C	≤±0.2°C	≤±0.3°C	≤±0.2°C
Accuracy	≤±0.3°C	≤±0.2°C	±0.1°C(55°C) ≤±0.2°C(≥90°C)	≤±0.1°C(55°C) ≤±0.2°C(≥90°C)
Hot Lid Temperature	30°C~110°C		RT +5°C-110°C(default 105°C)	30°C~110°C
Height of hot Lid	Adjustable hot lid		Automatic Adjusted	
Max.No.of Cycle	99		99 Suitable for Nested PCR	
Program Storage	99 files	100 files	-	-
Max Program Steps	16		-	-
Max Segments	5		-	-
Temp Control Mode	Block, tube			
Dimension (W×D×H)	340x470x260 mm	212x297x200 mm	260x335x270 mm	160x140x120 mm
Weight	10 kg	3.2 kg	10 kg	10.5 kg
Power Supply	100-240 V, 50-60 Hz	-	-	Ac 220 V, 50 Hz, 200 VA
Sample Capacity	-	24x0.2 ml 8-strip 24-microplate	96-PCR plate (full-skirted) 96x0.2 ml tubes 12x8-strip	-
Temperature Increment/Decrement	-	-	0~9.9°C, Suitable for touchdown PCR	0.1°C~9.9°C, Suitable for touchdown PCR
Max. ramp rate	-	-	0.1°C~4°C	0°C~4°C
Max.Heating Ramp Rate	-	-	Upto 4.0°C/s	-
Max.Cooling Ramp Rate	-	-	Upto 4.0°C/s	-
Gradient Temp Range	-	-	30~99°C	-
Memory Capacity	-	-	≥250 typical programs onboard, unlimited with USB flash drive expansion	
Time Increment/Decrement	-	-	0~9 min 59 sec, suitable for Long PCR	
Auto pause/ power protection	-	-	Yes	
Soak Function	-	-	Yes	

Network	-	-	USB	LAN
Power	-	-	600 W	
Thermal Gradient Accuracy	-	-	-	$\leq \pm 0.4^{\circ}\text{C}$ (35 $^{\circ}\text{C}$ -99 $^{\circ}\text{C}$)
Temperature difference range of lines	-	-	-	-
Gradient Function	-	-	-	-
Communication	-	-	-	-
Timer Range	-	-	-	-
Hold at 4 $^{\circ}\text{C}$	-	-	-	-
Display Resolution	-	-	-	-
Gradient Spread	-	-	-	-
Tube	-	-	-	-
Pause Function	-	-	-	-
Auto Data Protection	-	-	-	-
PC Operation system	-	-	-	-

Model	PT125	PT126	PT127	PT128
Temperature Range	4 $^{\circ}\text{C}$ ~99.9 $^{\circ}\text{C}$		4 ~ 100 $^{\circ}\text{C}$	
Max Heating Rate	-	-	5 $^{\circ}\text{C}$	
Max Cooling Rate	-	-	4 $^{\circ}\text{C}$	
Display Interface	6.25' , 262, 144 color LCD display and touch screen	10.4' , 262k-color LCD display and touch screen	LCD, 5', 800x480, 65K color	
Graph Display	-	-	-	-
Uniformity	$\leq \pm 0.2^{\circ}\text{C}$			
Accuracy	$\pm 0.1^{\circ}\text{C}$ (55 $^{\circ}\text{C}$) $\leq \pm 0.2^{\circ}\text{C}$ ($\geq 90^{\circ}\text{C}$)	$\leq \pm 0.1^{\circ}\text{C}$ (55 $^{\circ}\text{C}$) $\leq \pm 0.15^{\circ}\text{C}$ ($\geq 95^{\circ}\text{C}$) $\leq \pm 0.15^{\circ}\text{C}$ ($\geq 72^{\circ}\text{C}$)	$\leq \pm 0.2^{\circ}\text{C}$	
Hot Lid Temperature	RT +5 $^{\circ}\text{C}$ -110 $^{\circ}\text{C}$ (default 105 $^{\circ}\text{C}$)	30 $^{\circ}\text{C}$ ~110 $^{\circ}\text{C}$		
Height of hot Lid	Automatic Adjusted		-	-
Max.No.of Cycle	99 Suitable for Nested PCR		100	
Program Storage	-	-	-	10000+(USB Flash)
Max Program Steps	-	-	30	
Max Segments	-	-	-	-
Temp Control Mode	Block, tube			
Dimension (WxDxH)	260x335x270 mm	316x457x309 mm	190x267x115 mm	
Weight	10 kg	14 kg	3.2 kg	3 kg
Power Supply	100-240 V, 50-60 Hz			Ac 220 V, 50 Hz, 200 VA
Sample Capacity	96-PCR plate (full-skirted) 96x0.2 ml tubes 12x8-strip	96-PCR plate (full-skirted) 96x0.2 ml tubes 12x8-strip	32x0.2 ml(4x8 layout)	16x0.2 ml(4x4 layout)
Temperature Increment/Decrement	0~9.9 $^{\circ}\text{C}$, Suitable for touchdown PCR	0.1 $^{\circ}\text{C}$ ~9.9 $^{\circ}\text{C}$, Suitable for touchdown PCR	0.1~10.0 $^{\circ}\text{C}$	
Max. ramp rate	0.1 $^{\circ}\text{C}$ ~4 $^{\circ}\text{C}$		0.1 $^{\circ}\text{C}$ ~5 $^{\circ}\text{C}$	
Max.Heating Ramp Rate	Upto 4.0 $^{\circ}\text{C}/\text{s}$	Upto 5 $^{\circ}\text{C}/\text{s}$	-	-

Max.Cooling Ramp Rate	Upto 4.0°C/s	Upto 4°C/s	-	-
Gradient Temp Range	30~99°C	-	30°C~100°C	-
Memory Capacity	≥250 typical programs onboard, unlimited with USB flash drive expansion		-	-
Time Increment/Decrement	0~9 min 59 sec, suitable for Long PCR	-	1 sec ~600 sec	
Auto pause/ power protection	Yes		-	-
Soak Function	Yes		-	-
Network	LAN	-	-	-
Power	600 W		200 W	120 W
Thermal Gradient Accuracy	-	-	-	-
Temperature difference range of lines	-	0.1°C~6.0°C	-	-
Gradient Function	-	Yes	-	-
Communication	-	RS232 / LAN and Bluetooth	USB2.0 , WIFI	
Timer Range	-	0~9 min 59 sec, suitable for Long PCR	-	-
Hold at 4°C	-	-	Forever	
Display Resolution	-	-	0.1°C	
Gradient Spread	-	-	1~30°C	-
Tube	-	-	0.2 ml single tube, 8 strip	0.2 ml single tube
Pause Function	-	-	Yes	
Auto Data Protection	-	-	Yes	
PC Operation system	-	-	-	Yes

OPTIONAL ACCESSORIES

Accessory Code	Name	Description	Gradient Range	Heating speed of Ramping	Cooling speed of Ramping	Gradient Range of Temperature Difference	For Models
PX1028	Block A	96x0.2 ml					PT121
PX1029	Block B	60x0.5 ml tube					PT121
PX1030	Block C	30x0.5 ml, dual-block					PT121
PX1031	Block D	48x0.2 ml, dual-block					PT121
PX1032	Block E	30x0.5 ml + 48x0.2 ml, dual-block					PT121
PX1033	Block F	384-microplate					PT121
PX1034	Block G	96x0.2 ml, Gradient	1°C~30°C				PT121
PX1035	Block H	4 x standard in situ plates					PT121
PX1023	Block A	48x0.2 ml, dual-block		Upto 4°C / sec	Upto 4°C / sec		PT124
PX1024	Block B	30x0.5 ml+48x0.2 ml		Upto 2.8°C / sec	Upto 2.8°C / sec		PT124
PX1025	Block C	384-microplate	30°C~99.9	Upto 2.8°C /	Upto 2.8°C /	1°C~30°C	PT124

			°C	sec	sec		
PX1026	Block D	96x0.2 ml, Gradient	30°C~99.9°C	Upto 4°C / sec	Upto 4°C / sec	1°C~30°C	PT124
PX1027	Block E	4 x standard in situ plates		Upto 1.8°C / sec	Upto 1.8°C / sec		PT124
PX1010	Block A	96x0.2 ml,6 independent modules Noble gold-plated block					PT126
PX1011	Block B	96x0.2 ml,6 independent modules Nickle plated block					PT126

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