

BIOER

THERMAL CYCLER

Add : 1192 Bin An Rd., Hi-tech (Binjiang) District, Hangzhou, 310053, P.R.China

Tel : +86-571-87774575

E-mail : overseas@bioer.com.cn

Http ://www.bioer.com.cn

Fax : +86-571-87774553

After-sales service : +86-571-87774558

Sci & tech products of BIOER will be updated continuously; please understand that no prior notice will be given as for any design and specification alteration. The real product and color shall prevail.
Final interpretation right for the Catalogue is reserved by BIOER. BIO 101-1509

HANGZHOU BIOER TECHNOLOGY CO., LTD.

Chapter 2

Thermal Cycler

- Product serialization
- Semi-conductor heating/cooling
- Multiple modules for selection
- Fast ramp rate
- Good temperature uniformity
- High temperature control accuracy
- Adjustable hot lid function
- Powerful software functions
- New touch screen display
- Gradient and Touch Down functions and other special requirements can be met



GeneExplorer



GeneMax



LifeECO



GeneTouch Plus

GeneExplorer

GeneMax

GeneTouch

GeneTouch Plus

LifeTouch

LifeECO

新型XP
Cyber

LifeExpress Classic

GeneExplorer



GeneExplorer series is a new generation of gene amplification instrument launched by Bioer Technology. Adopt the new family design concept, combined with 8 inch color LCD screen, the appearance is simple and beautiful, optimized structure design is more durable.

The products continue the consistent precision temperature control characteristics of Bioer Technology, using imported alloy materials, with the upgraded bottom cooling module, using the advanced thermoelectric refrigeration technology of ITI from the United States and the Japanese quality management mode of thermoelectric refrigeration components, stable and reliable performance, so that the temperature control module performance is equal to the imported brand. The automatic hot cover can adjust the height and pressure according to the actual use state to adapt to different reaction tubes, effectively prevent the evaporation and contamination of reagents.

Product features

Intelligent Operation

Independently designed UI interface, easy to learn operation procedures

Multi-module configuration

Customers can change the required modules according to the experiment. A host machine can be applied to all kinds of experimental systems.

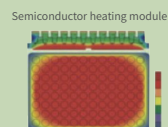
Built-in gradient function protection

The maximum temperature difference between zones can reach 6°C.

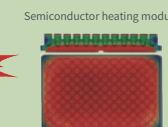
Mobile App Sync

Innovative mobile app and WiFi capability helps to monitor your PCR status with remote control

Heat transfer at the edge of the BLOCK is not uniform



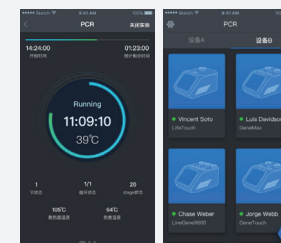
Module temperature uniformity



TAS

Equipped with advanced TAS (edge temperature compensation technology), the temperature accuracy of the module is less than 0.1°C.

The interface display



(Mobile operation interface)



(Host operation interface)

Multiple operation modes

1.Single machine operation mode



2.On-line operating mode



3.Network operation mode



Product parameters

Product name	Gene Explorer			
Product code	BYQ6617E	BYQ6627E	BYQ6631E	BYQ6640E
Model	GE-96G	GE-48DS	GE-48D	GE-48DG
Sample capacity	96×0.2ml	48×0.2ml 2 Blocks 3 zones	48×0.2ml (without gradient)	48×0.2ml
Temp. range	4.0~105°C (min. resolution: 0.1°C)			
Temp. uniformity	≤±0.2°C			
Temp. accuracy	≤±0.2°C(30s after reaching 55, 72 and 95°C respectively)			
Hot-lid temp. range	30°C~110°C			
Gradient temp. range	1~30°C	1~30°C	-	1~30°C
Max. cycles	≥99, suitable for Nested PCR			
Time up/down	0~9m59s, suitable for Long PCR			
Temp. up/down	0.1~9.9°C, suitable for Touchdown PCR			
Memory	≥2000 programs on board, unlimited with USB flash drive expansion			
Interface	USB, LAN, WIFI			
Press mode of hot lid	One-time locking			
Mobile app.	iOS / Android			
Power supply	100~240V, 50~60Hz, 600W			
Dimension	420mm×269mm×254mm(L×W×H)			
Net weight	10.5kg			

* Ideal value measured in standard lab environment.

GeneExplorer

GeneMax

GeneTouch

GeneTouch Plus

LifeTouch

LifeECO

新型XP
Cyder

LifeExpress Classic

GeneMax



GeneMax is a high-end thermal cycler created by BIOER Company with all its strengths. The design completely centers on the subject of “precise and intelligent temperature control”. The combination of 6-zone independent temperature control and double-mode temperature control between lines realizes free setting of annealing temperature of the ranks within a deviation of 5°C.

In the meantime, a large screen of 10.4 inches for operation, together with highly efficient and stable ARM9 processor and ThreadX system configuration, expound the real meaning of “high end” of the equipment.

Additionally, based on the Ni-Al alloy module of the product, BIOER has promoted the upgraded version of “Electroless Nickel/Immersion Gold module”, striving for a more superior temperature performance, as perfection is always the goal of BIOER for its products.

Product features

Multi-mode temperature control

- General mode
Annealing temperature can present linear change based on set value
- Senior mode
Annealing temperature of the ranks can be in dependently set by users (temperature difference between ranks is less than 5°C)

Intelligent computation

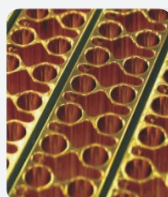
Equipped with Tm value calculation function, can further optimize experiment and improve down-stream experiment success rate.

Password protection

Provide dynamic password protection system, follow programs and protect experiment conditions and results.

Large-screen operation

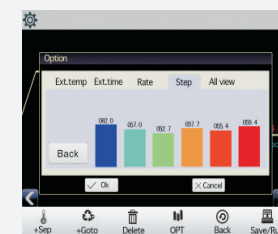
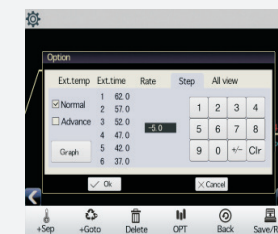
10.4-inch touch screen interface, independently developed UI operating system is easier to be learned and understood.



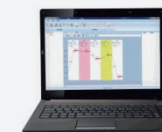
Noble ENIG module
Super high temperature uniformity $\leq 0.1^{\circ}\text{C}$, satisfy rigid experiment requirements



Classical alloy module
Mature module design, temperature uniformity $\leq 0.2^{\circ}\text{C}$, extremely high price performance ratio



Specially equip the high-end model with Bluetooth signal port.



Product parameters

Product name	GeneMax	
Product model	TC-S/96/G/H(b)BA	TC-S/96/G/H(b)BB
Module model	B-96G	
Sample capacity	96-PCR plate, 12×8-strip tubes, 96-well×0.2ml single tubes	
Temperature range	4.0~105°C	
Max.heating rate	5°C/s	
Max.cooling rate	4°C/s	
Temperature uniformity	$\leq \pm 0.2^{\circ}\text{C}$	
Temperature accuracy	$\leq 0.1^{\circ}\text{C}$	
Max. cycle number	99 suitable for nested PCR experiment	
Time increment/decrement	0~9m59s, suitable for Long PCR experiment	
Temperature increment/decrement	0~9.9 °C, suitable for Touch down PCR experiment	
Tm value calculation function	Yes	
Soak function	Yes	
Range of temperature difference between ranks	0.1~5.0°C	
Hot lid temperature	30~110 °C (adjustable, minimum control temperature: ambient temperature +5 °C)	
Communication port	Internet port (LAN), USB port	
Input power	100~240V, 50~60Hz, 800W	
Dimension	457x316x309 (LxMxH)	
Net weight	14Kg	
Certification	Ferrotec Pelitier / CE / EMC / MET/RoHS2.0 / PICC Product Quality Liability Insurance	

* Ideal value measured in standard lab environment.

GeneExplorer

GeneMax

GeneTouch

GeneTouch Plus

LifeTouch

LifeECO

新型XP

LifeExpress Classic

GeneTouch



Gene Touch is a product of most complete configuration in the Touch series of BIOER. Equipped with free module replacement function, it can configure 5 experiment modules to realize experiments of various modes covering from regular 0.2ml single test tube to glass slides. All modules are equipped with gradient temperature control function, as well as with TAS technology (marginal temperature compensation technology) to ensure temperature difference between wells is less than $\pm 0.2^{\circ}\text{C}$.

Product features

Multi module configuration

User can independently replace module within 1 minute, making it easy and convenient. One host machine is suitable for various experimental systems.

Easy and convenient operation

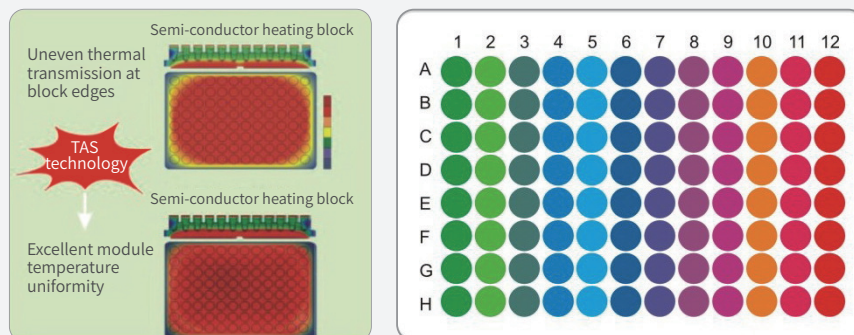
Adopt independently designed UI operating interface, easy to be learned and understood. Only by reading through the simple SOP operation instruction, user can learn how to use the equipment within 10 minutes.

Gradient function

Can realize temperature setting between $30\sim 105^{\circ}\text{C}$, gradient temperature difference between ranks can be as high as 30°C .

Remote monitoring

Can be connected to APP software via Bluetooth for exclusive use of Bioer instruments to realize real-time monitoring of equipment operation status and experiment results with mobile terminal.



B96GA

B3084UA

B384GA



B48DA

B41A

Three operating methods for your choice.

1.Connected operation mode

2.Standalone operation mode



3.Networking operation mode



Product parameters

Product name	GeneTouch				
Product model	TC-EA (main body)				
Module model	B-96GA	B-384GA	B-3048UA	B-48DA	B-41A
Sample capacity	96×0.2ml tube 96-PCR plate 12×8 strip tubes	384 micro-well plate (full skirt)	30×0.5ml 48×0.2ml 4×12 strip tubes	48×0.2ml 6×8-strip tubes each block	4 in situ plates
Temperature range	4~105℃				
Max temperature heating/cooling rate	≥4℃/s	≥2.8℃/s		≥4℃/s	≥1.8℃/s
Temperature uniformity	≤±0.2℃				
Temperature accuracy	≤±0.1℃				
Gradient temperature range	30~105℃	30~105℃	——	——	——
Gradient temperature difference range	1~30℃	1~30℃	——	——	——
Max. cycle number	99 suitable for nested PCR experiment				
Time increment/decrement	0~9m59s, suitable for Long PCR experiment				
Temperature increment/decrement	0.1~9.9℃, suitable for Touch down PCR experiment				
Soak function	Yes				
Hot lid temperature	30~110℃ (adjustable, minimum control temperature: ambient temperature +5℃)				
Communication port	Internet port (LAN)				
Input power	100-240V, 50~60Hz, 600w				
Net weight	10.5kg				
Dimension	368x250x285mm(L*W*H)				
Certification	Ferrotec Peltier/MET/CE/EMC/RoHS 2.0/PICC Product Quality Liability Insurance				

- GeneExplorer
- GeneMax
- GeneTouch
- GeneTouch Plus
- LifeTouch
- LifeECO
- 新型XP Cyder
- LifeExpress Classic

GeneTouch Plus



To deal with the experimental requirements from users for gradient gene amplification test and simultaneous multi-user experiment, BIOER has especially extended and developed a dual-block independent-gradient thermal cycler of high performance based on GeneTouch.

The product has inherited all advantages of GeneTouch, and also has added internal vacuum dissipation technology for effectively dissipating heat. Thus, it can realize rapid and precise temperature change, and provide clients with PCR instrument of high price performance ratio.

Product features

Dual-module and dual-gradient

Can realize multi-user multi-module gradient amplification experiment

Precise temperature control

Adopt internal vacuum dissipation technology, realize temperature control effect of high-efficiency heat transmission with cost-effective materials in limited dissipation space.

Product parameters

Product name	GeneTouch Plus
Product model	B-48DA
Sample capacity	6×8 strip tubes, 48×0.2ml each tube
Temperature range	4~105℃
Max. temperature heating/cooling rate	4℃/s
Temperature uniformity	≤±0.2℃
Temperature accuracy	≤0.1℃
Gradient temperature range	30-105℃
Gradient temperature difference range	1-30℃
Gradient temperature accuracy	≤±0.5℃
Max. cycle number	99 suitable for nested PCR experiment
Time increment/decrement	0~9m59s, suitable for Long PCR experiment
Temperature progressive increase/decrease	0~9.9℃, suitable for Touch down PCR experiment
Tm value calculation function	Yes
Soak function	Yes
Hot lid temperature	30~110℃ (adjustable, minimum control temperature: ambient temperature +5℃)
Communication port	Internet port LAN/USB2.0/RS232/Bluetooth
Network control	One computer can control up to 30 instruments at the same time for work.
Input power	100~240V, 50~60Hz, 600W
Dimension	457x316x309 (LxMxH)

LifeTouch



Life Touch is a highly-efficient universal thermal cycler specially designed and developed by BIOER to satisfy needs of users from various industries. Except for the rapid temperature heating and cooling performance of general qualitative PCR instruments, the product also has the advantages including moderate size, light weight and long service life. It is suitable for both 0.1ml and 0.2ml test tubes. Meanwhile, it adopts Peltier customized and manufactured by Ferrotec from Japan and is equipped with special TAS (marginal temperature compensation technology) to realize rapid and even temperature change.

Product features

Complete-steel structure

The equipment has adopted complete-steel structure, contributing to high reliability, good vibration and fall resistance, and favorable stability.

High-end touch screen

It adopts 6.5-inch colorful touch screen imported with original packaging from Japan. The screen boasts sensitive operation, large visual angle display and clear imaging.

High impermeability

High impermeability design of the sample reaction room prevents condensation of samples under long-time storage in low temperature. (Except high-temperature and high-humidity environment beyond the allowable scope of the equipment).

Precise temperature control

It can reach maximum temperature heating and cooling rate of 5℃/s, and average temperature uniformity ≤±0.2℃

Product parameters

Product name	LifeTouch
Product model	TC-96/G/H(b)B
Sample capacity	96-well × 0.2ml, 96-well full skirt, semi-skirt, universal none-skirt, 12×8 connected tube
Temperature range	4~105℃
Max.temperature heating/cooling rate	≥4℃/s
Temperature uniformity	≤±0.2℃
Temperature accuracy	≤0.1℃
Gradient temperature range	30-105℃
Gradient temperature difference range	1~30℃
Max. cycle number	99 suitable for nested PCR experiment
Time increment/decrement	0~9m59s, suitable for Long PCR experiment
Temperature increment/decrement	0~9.9℃, suitable for Touch down PCR experiment
Soak function	Yes
Hot lid temperature	30~110℃ (adjustable, minimum control temperature: ambient temperature +5℃)
Communication port	Internet port (LAN)
Input power	100-240V, 50~60Hz, 600w
Net weight	10kg
Dimension	345x250x270mm (LxMxH)
Certification	Ferrotec Peltier / MET / CE/EMC / RoHS2.0 / PICC Product Quality Liability Insurance

GeneExplorer

GeneMax

GeneTouch

GeneTouch Plus

LifeTouch

LifeECO

新型XP

LifeExpress Classic

LifeECO



Product features

High gradient performance

Besides rapid gene amplification experiment, it is also equipped with gradient function for exploring amplification conditions, and the range of gradient temperature difference can reach 30°C.

Networking operation

Multiple equipment-connected operation can be realized through USB or network cable to adapt to batch test by enterprises or scientific research labs.

Easy maintenance

Main consumable parts of the equipment have been modularized and can be maintained and replaced on site.

Product parameters

Product name	LifeECO
Product model	TC-96/G/H (b) C
Sample capacity	96-well × 0.2ml, 96-well full skirt, semi-skirt, universal none-skirt, 12×8 connected tube
Temperature range	4~105°C
Max.temperature heating rate	≥4°C/s
Temperature uniformity	≤±0.3°C
Temperature accuracy	≤±0.1°C
Gradient temperature range	30-105°C
Gradient temperature difference range	1~30°C
Max.cycle number	99 suitable for nested PCR experiment
Time increment/decrement	0~9m59s, suitable for Long PCR experiment
Temperature increment/decrement	0.1~9.9 °C, suitable for Touch down PCR experiment
Soak function	Yes
Hot lid temperature	30~110 °C (adjustable, minimum control temperature: ambient temperature +5 °C)
Communication port	USB port
Input power	100-240V, 50~60Hz, 600w
Net weight	8kg
Dimension	345x250x270mm
Certification	Ferrotec Pelitier / MET / CE / EMC/RoHS2.0/ PICC Product Quality Liability Insurance

XP Cyder



Product features

Independent control

Independently controlled two-unit modules can operate two different PCR experiments respectively.

Torque-type adjustment

Torque-type adjustment of hot lid pressure can prevent actual evaporation and pollution to the greatest extent and prevent screw loose caused by over tightness.

Consistent dimension

The exterior dimension can meet over 90% test beds. The length and width are completely consistent with that of test beds, and thus it can reduce space waste.

Product parameters

Product name	XP				
Product model	TC-XP-E	TC-XP-F	TC-XP-H	TC-XP-D	TC-XP-G
Module model	XP-E	XP-F	XP-H	XP-D	XP-G
Sample capacity	48× 0.2ml PCR test tube 30×0.2ml PCR test tube	384 micro-well plate (full skirt)	4 in-situ glass slides	Each module 48×0.2ml (two modules can operate two different programs at the same time)	96× 0.2ml PCR test tube 96-well reaction plate 12×8 connected PCR reaction tube
Temperature range	4~99.9°C				
Max.temperature heating/cooling rate	≥4°C/s				
Temperature uniformity	≤±0.4°C				
Temperature accuracy	≤±0.3°C				
Gradient temperature difference range	1~30°C				
Max.cycle number	99				
Hot lid temperature	30~110 °C (adjustable, minimum control temperature: ambient temperature +5 °C)				
Max.number of segments	5 segments				
Max.procedures	16 procedures				
Computer port	RS232				
Input power	220V, 50Hz, 600W				
Net weight	10Kg				
Dimension	470x340x260 (LxWxH)				
Medical instrument registration certificate	Z.S.Y.J.X. (Z.) Z. 2013 No. 2400391				
Quality warranty	Professional test of EU standard cycletest, and test report can be provided.				
Certification	Ferrotec Pelitier / MET / CE / EMC/ RoHS2.0 / PICC Product Quality Liability Insurance				

GeneExplorer

GeneMax

GeneTouch

GeneTouch Plus

LifeTouch

LifeECO

新型XP
Cyber

LifeExpress Classic

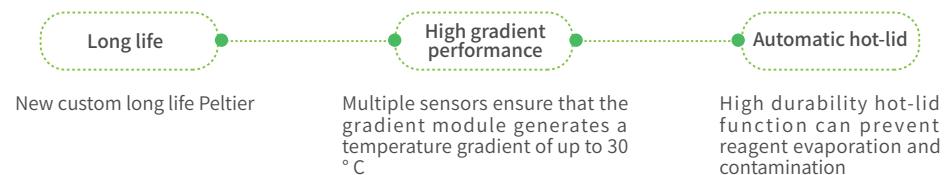
LifeExpress Classic



Since the first gene amplification instrument based on semiconductor technology came out in China in 1998, LifeExpress series products have been carrying the expectation of Bioer Technology. After 20 years of innovation, LifeExpress series has won the recognition and support of customers with stable quality and mature technology.

Today, in order to develop PCR technology and respond to the experimental needs of customers at all levels, Boday Technology integrates the original LifeExpress and adds new design concepts to create this cost-effective LifeExpress classic.

Product features



Product parameters

Product name	LifeExpress classic
Product model	TC-96/G/H(b)
Sample capacity	96-well × 0.2ml, 96-well full skirt, semi-skirt, universal none-skirt, 12×8 connected tube
Sample Throughput	96
Temperature Range	4°C-99°C
Heating Rate (Max.)	≥3.0°C/s
Cooling Rate (Max.)	≥2.0°C/s
TAS Technology	Yes
Module Temperature Uniformity	≤±0.3°C (At 55°C)
Gradient Temperature Range	1-30°C
Temperature Control Precision	≤±0.3°C
Temperature Range of Hot Lid	30°C-110°C, Adjustable
The Gradient Range	1°C-30°C
Temperature Control Mode	Block/Tube
Program Graphic Display Function	Yes
Program Storage	100
Maximum Number of Cycles	99
Input Power	220V-50Hz.600W

* Ideal values measured in a standard laboratory environment