LineGene 9600 Plus

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Fluorescent Quantitative Detection System

BIOER TECHNOLOGY

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Integrated Tablet Computer,
Convenient Operation, Wireless Experience

LineGene 9600 Plus

Fluorescent Quantitative Detection System

High Throughtput, Multiple Channels,
Smart System

Peltier
Ferrotec
PeltierInside™

MET
c   us

CE

EMC

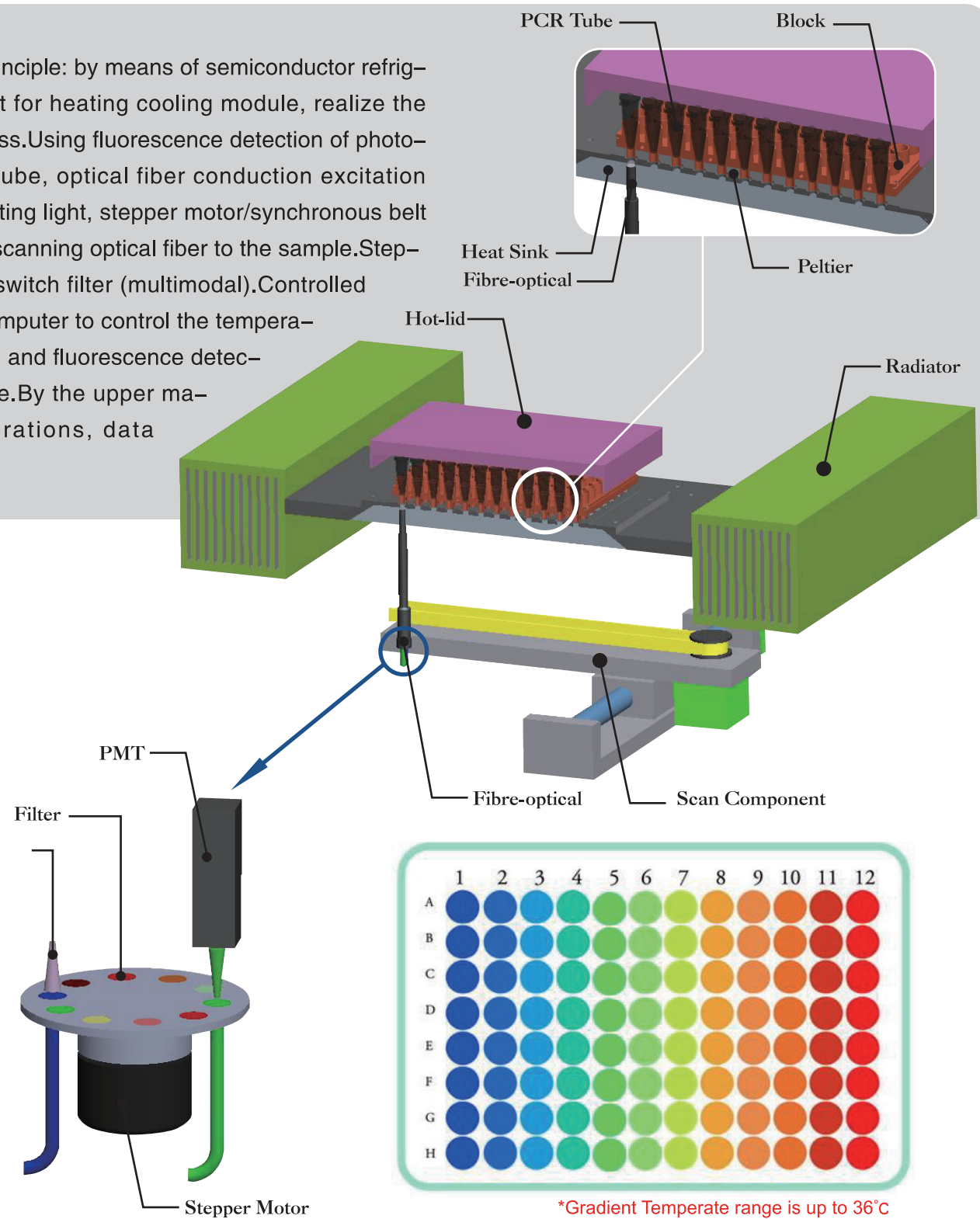96 Wells High Throughput

Upgraded Motors with Automatic Brake Function

Max. Gradient Range 36℃

3D Hotlid Design
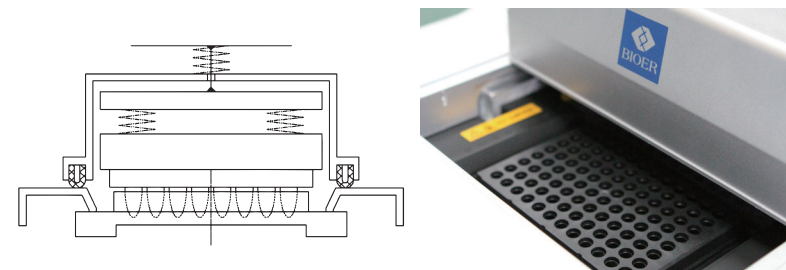
Working principle: by means of semiconductor refrig-erating unit for heating cooling module, realize the PCR process.Using fluorescence detection of photo-multiplier tube, optical fiber conduction excitation light, detecting light, stepper motor/synchronous belt drives the scanning optical fiber to the sample.Step-per motor switch filter (multimodal).Controlled by microcomputer to control the tempera-ture control and fluorescence detec-tion module.By the upper ma-chine operations, data analysis.
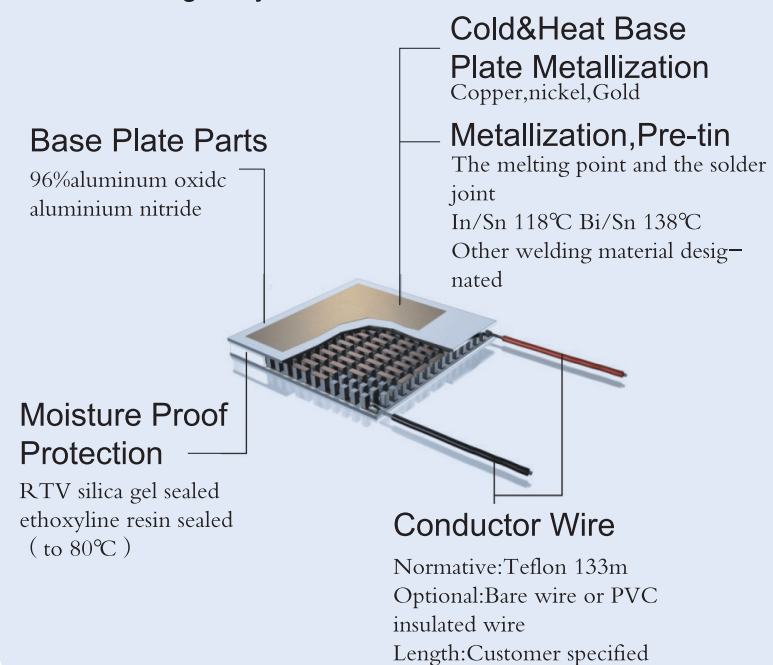
PCR Tube   Block

Heat Sink
Fibre-optical   Peltier

Hot-lid

Radiator

PMT

Filter

Fibre-optical   Scan Component

Stepper Motor

*Gradient Temperate range is up to 36℃

Lid to use a new way of pressure box, uniform distribution on module 6 compression spring, pressure box pressure on the pressure spring first, again through the compression spring compression module, to ensure that stress distribution on the module.Around again with perfect sealing way, one side is embedded with rubber pad plastic box cover the lid of the aluminum plate, and a certain amount of pressure to the pressure in neighboring modules form an airtight space, prevent cold air and hot air convection on the module.Ensure the module of dynamic temperature uniformity.

TE refrigeration using 72 long life series, the process in TE base plate and the semiconductor substrate using the new adhesive technology, make the TE also can work normally under high humidity environment, great-ly improve the service life of the TE piece at the same time, through the experiment testing TE refrigeration service life greatly increased
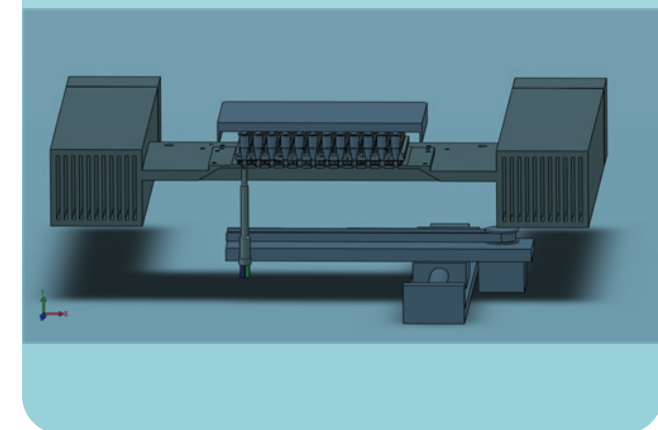
The one at the bottom of the unique scanning, effectively pre-vent interfere with each other,
- use long life of LED light source, do not need to maintain
- advanced optical fiber transmission technology, photoelectric detection system more sensitive, more reliable
- precision optical path system combined with ultra high sensitivity of PMT system, let the fluorescence detection accuracy, the best sensitivity

The one at the bottom of the unique scanning, effectively prevent interfere with each other,
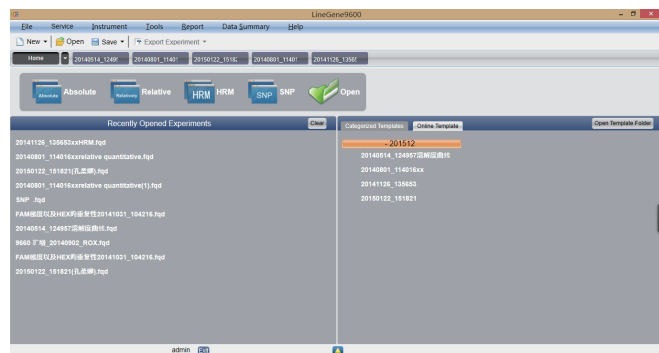
The accuracy of detection, the best sen-sitivity

Cold&Heat Base Plate Metallization
Copper,nickel,Gold

Base Plate Parts
96%aluminum oxidc
aluminium nitride

Metallization,Pre-tin
The melting point and the solder joint
In/Sn 118℃ Bi/Sn 138℃
Other welding material desig-nated

Moisture Proof Protection
RTV silica gel sealed
ethoxyline resin sealed
（to 80℃）

Conductor Wire
Normative:Teflon 133m
Optional:Bare wire or PVC insulated wire
Length:Customer specified

Powerful software system

- all Chinese interface, flexible program setting, comprehensive analysis and reporting functions, all the parameters can be stored
- can print multiple or single sample report
- emote network automatic, accurate, timely service, for the 96 hole quantitative detection system provides the most advanced technical support
- support Windows tablets
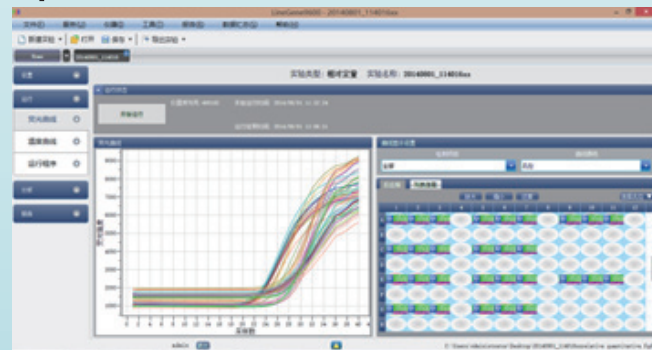- support RS232, USB, Wifi, Bluetooth interface

Software Interface

The LineGene 9600 Plus software includes Absolute Quantification, Relative Quantification, SNP Analysis, HRM Analysis function modules. With the preset programs, the user can set up experiments simply and fast. The recently opened files and categorized templates in the main interface make it easy to find previous experiments and fast to set up new experiments.
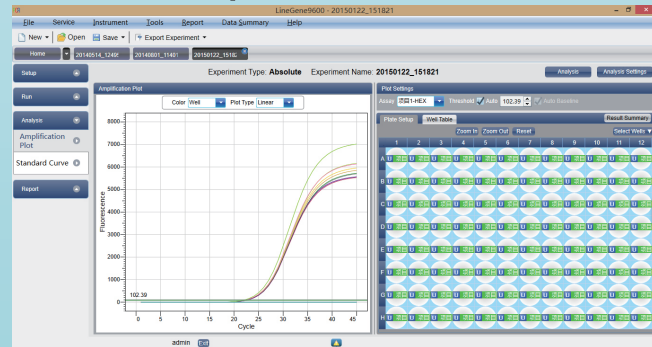

Many software programs, to give customers a variety of operating experience and meet customers' various selection.
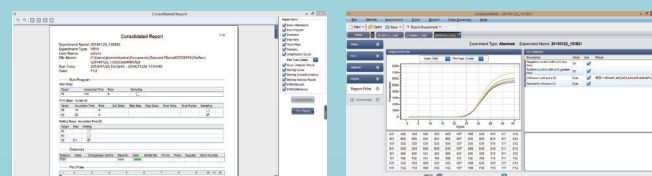
Operation interface

Can see the real-time temperature curve, application process, real-time fluorescence signal. To master the experimental progress.

Software analysis interface

Three different algorithms ensure the accuracy of Ct value analysis. The user can use standard reference set up in experiment to generate standard curve and analyze the results or import external standard curves to analyze and save experiment resources.
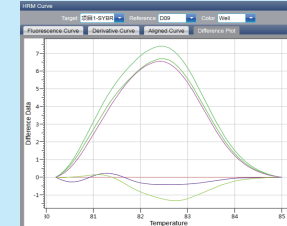
Consolidated report

Basic experiment information, experiment process, plate diagram, and amplification curve can be put into the report, making it clear and unambiguous.
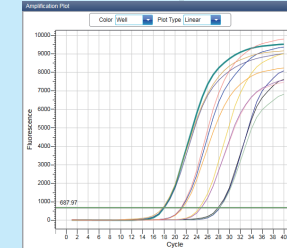
QC report

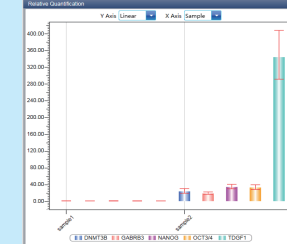Safeguarding the accuracy of your experiments.

HRM

Two templates with one base pair difference in triplicate, the difference is easily recognized.

Absolute quantitative

Four gradient templates in triplicate, proving good stability.
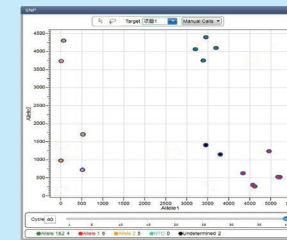
Relative quantitative

Target genes: GAPDH, NANDG, OCT3/4, DNMT3B, BABRB3
The detection result shows accurate relative quantity of each gene.

SNP

The result shows that different genotypes are obviously distinguished.

Product Name	LineGene 9600 Plus Fluorescent Quantitative Detection System
Model	FQD-96A(EA2) FQD-96A(EA4) FQD-96A(EA5) FQD-96A(EA6)
Sample Capacity	96-Well PCR plate, 12 × 8-strip, 96 × 0.2ml(Bottom Transparent)
Dynamics Range	$1\sim10^{10}$Copies
Excitation Wavelength	300-800nm
Emission Wavelength	500-800nm
Detected Fluorescence	F1:FAM,SYBR Green Ⅰ; F2:VIC,HEX,TET,JOE,CY3,NED,TAMRA; F3:ROX,TEXAS-RAD,F4:CY5;F5:CY5.5;
Block Temp. Range	4~105 ℃(Minimum Increment: 0.1 ℃) SOAK Low Temp. Conservation Function
Heating/Cooling Rate	4.0 ℃/s(max)
Temp. Control Accuracy	≤ ± 0.2℃
Temp. Fluctuation	≤ ± 0.1℃
Temp. Uniformity	≤ ± 0.4℃
Temp. Control Mode	BLOCK/Tube Simulation Mode (Automatic Control Based On Sample Volume)
Sample Volume Range	5~100 μL
Gradient Temp. Range	1~36℃
Hot-lid Temp. Range	30~110℃(Adjustable, Default 105 ℃), Automatic Hot-lid
Fluorescence Detection Repeatability	5%
Scan Mode	Entire Plate or Designated Line
Program	Max 20 Segments for Each Program, Max 99 Cycles
Operation Mode	Continuous
Scan Period	5.5s
Feature Function	Absolute Quantification、Relative Quantification、SNP Analysis; Data Automatic Analysis; Melting Curve Genotyping; Gradient、HRM Multi-channel Crosstalk Correction; Background Correction; Automatic Gain; Customized Parameters;
Operation System	Microsoft: Windows7/windows 8.1 Software: Excel2000/2002/2003/2007/2012
PC Configuration	Memory: 512M Hard Disk:10GB CPU: Pentium® 4 Virtual Memory: ≥1000MB
Power Supply	100-240V~ 50/60Hz 600W
Dimension(L × W × H)	410mm × 386mm × 352mm
Socket	USB Adapter, RS232 Adapter, WIFI Adapter, Bluetooth Adapter