

LineGene 9600 Plus | Real-Time PCR Detection System



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Real-Time PCR Detection System





Integrated Tablet Computer,
Convenient Operation, Wireless Experience



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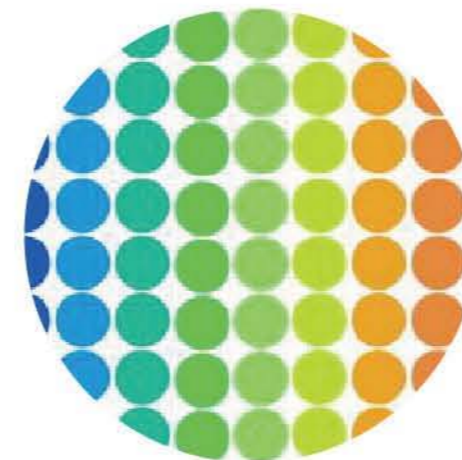
High Throughput, Multiple Channels,
Smart System



96 Wells High Throughput



Upgraded Motors with Automatic Brake Function



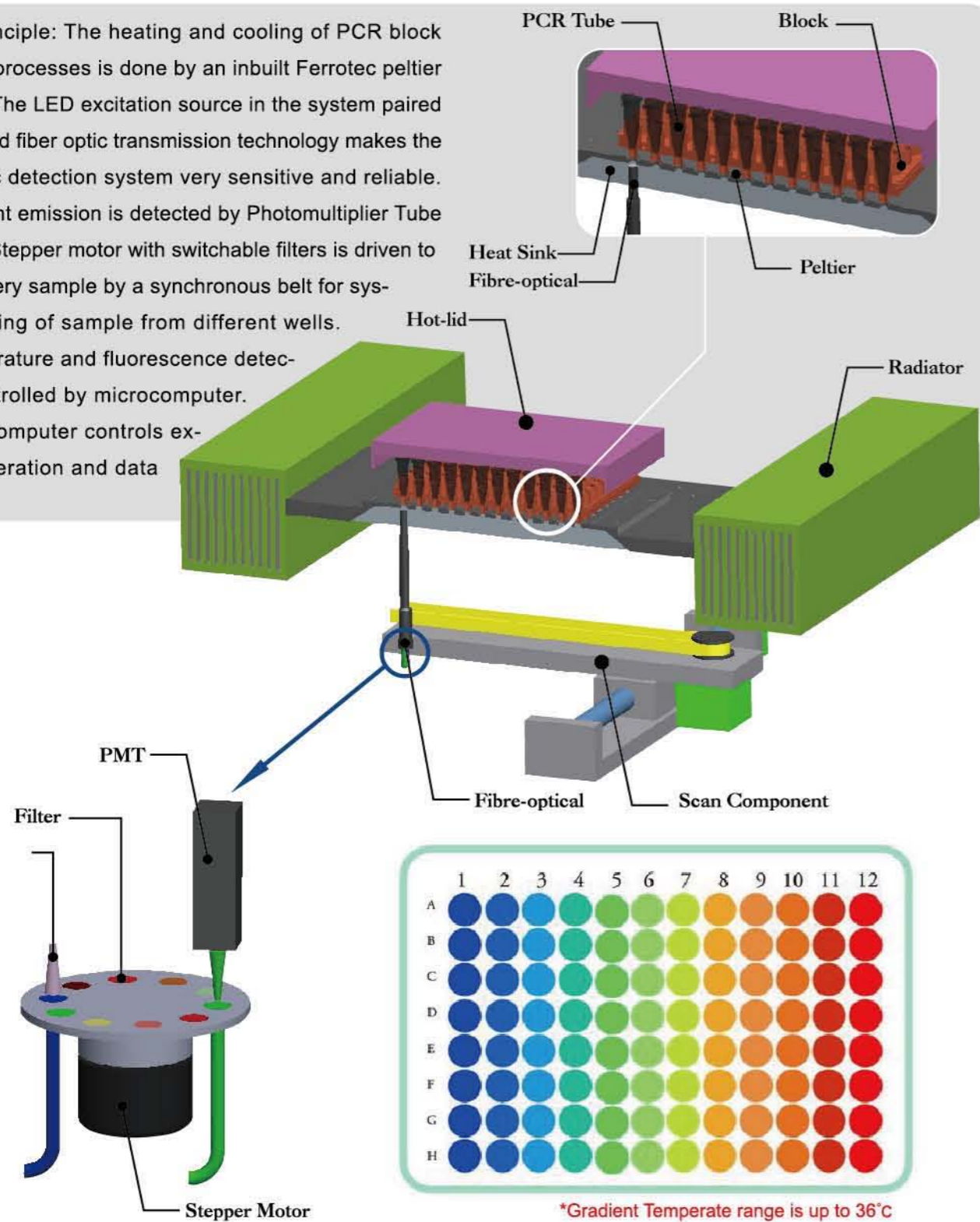
Max. Gradient Range 36°C



3D Hotlid Design

Working principle of the article

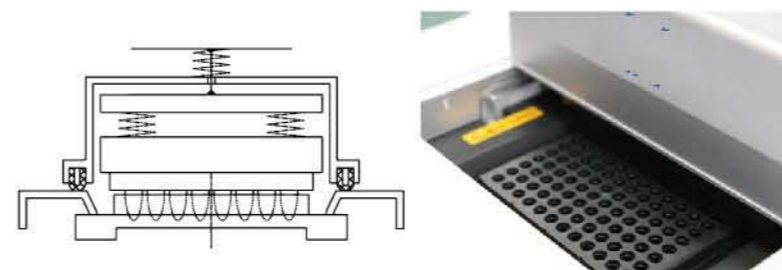
Working Principle: The heating and cooling of PCR block during PCR processes is done by an inbuilt Ferrotec peltier technology. The LED excitation source in the system paired with advanced fiber optic transmission technology makes the photoelectric detection system very sensitive and reliable. The florescent emission is detected by Photomultiplier Tube (PMT). The Stepper motor with switchable filters is driven to each and every sample by a synchronous belt for systemic scanning of sample from different wells. Block temperature and fluorescence detection are controlled by microcomputer. The upper computer controls experiment operation and data analysis.



*Gradient Temperature range is up to 36°C

Product hardware article

The hot lid applies a new method of frame pressing. 6 springs are distributed on the block in regular intervals. The pressure frame presses on the springs and the springs force on the block to ensure the uniformity of pressure. Moreover, the hot lid has a perfect sealing design. The new design of pressure frame has rubber pad embedded around the edge, and it tightly wraps the aluminium heating plate and forces on it to create a sealed space around the block. This new design avoids the convection of hot and cold air around the block so that the good dynamic uniformity of block temperature is achieved.



TE element adopts 72 long-life series. Adopting new coating skill on the basis of TE base plate and semiconductor substrate, allows TE could work in high humid environment. Meanwhile, TE's lifespan is greatly improved which has been certified by lab tests.

Base Plate Parts

96%aluminum oxide
aluminium nitride

Moisture Proof Protection

RTV silica gel sealed
ethoxyline resin sealed
(to 80°C)

Cold&Heat Base Plate Metallization

Copper,nickel,Gold

Metallization,Pre-tin

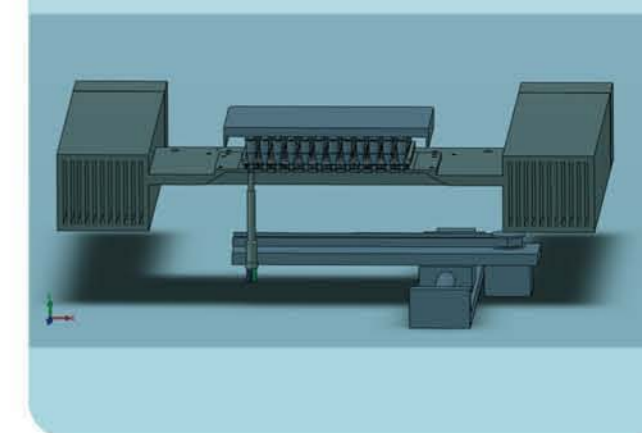
The melting point and the solder joint
In/Sn 118°C Bi/Sn 138°C
Other welding material designated

Conductor Wire

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

The unique scan at the bottom of tube prevents interfere with each other effectively.

- 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, makes the fluorescence detection more accurate and sensitive.



Product software

Powerful software system

- all English interface, flexible program setting, comprehensive analysis and reporting functions, all the parameters can be stored
- can print multiple or single sample report
- remote network automatic, accurate, timely service, for the 96 hole quantitative detection system provides the most advanced technical support
- support Windows tablets
- support RS232, USB, 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 make it easy to find previous experiments.



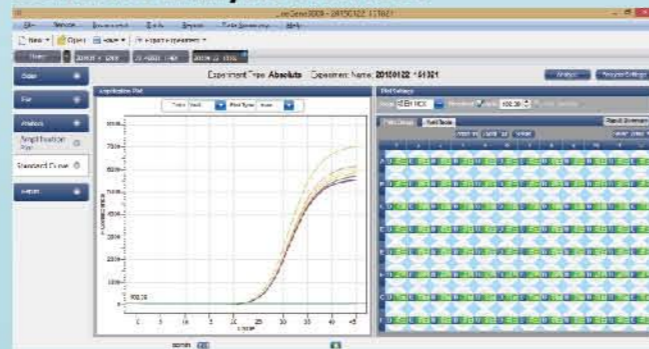
Many software programs give customers a variety of operating experience and meet customers' various selection.

Operation interface



We can see the real-time temperature curve, application process and 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.

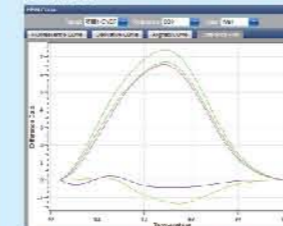
Consolidated report QC report



Basic experiment information, experiment process, plate diagram, and amplification curve can be put into the report, making it clear and unambiguous. Safeguarding the accuracy of your experiments.

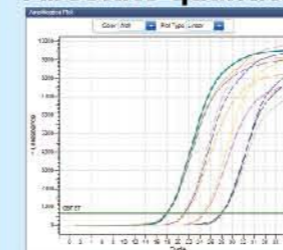
Technical parameters of product

HRM



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

Absolute quantitative



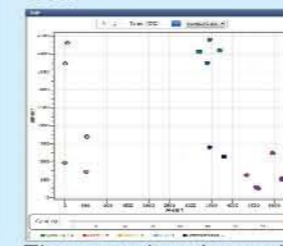
Four gradient templates in triplicate, proving good stability.

Relative quantitative



Target genes: DNMT3B, GABRB3, NANDG, OCT3/4, TOGF1
The detection result shows accurate relative quantity of each gene.

SNP



The result shows that different genotypes are obviously distinguished.

Product Name	LineGene9600 Plus Fluorescence Quantitative PCR Detection System
Model	FQD-96A
Sample Capacity	96-Well PCR plate, 12 x 8-strip, 96 x 0.2ml(Bottom Transparent)
Dynamics Range	1~10 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-RED,F4:CY5;F5:CY5.5;
Block Temp. Range	4~105 °C(Minimum Increment: 0.1 °C) SOAK Low Temp. Conservation Function
Heating/Cooling Rate	4.0 °C/s(max)
Temp. Control Accuracy	≤ ± 0.1 °C
Temp. Fluctuation	≤ ± 0.1 °C
Temp. Uniformity	≤ ± 0.3 °C
Temp. Control Mode	BLOCK/Tube Simulation Mode (Automatic Control Based On Sample Volume)
Sample Volume Range	5~100 μ L
Gradient Temp. Range	1~36 °C
Hot-lid Temp. Range	30~110 °C(Adjustable, Default 105 °C), 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: 2G Hard Disk: 32GB
Power Supply	100-240V~ 50/60Hz 600W
Dimension(L x W x H)	410mm x 386mm x 352mm
Socket	USB Adapter, RS232 Adapter, Bluetooth Adapter
Authentication	Ferrotec Pelitier/CE (EMC & LVD)/IVD/RoHS2.0/ PICC product quality liability insurance