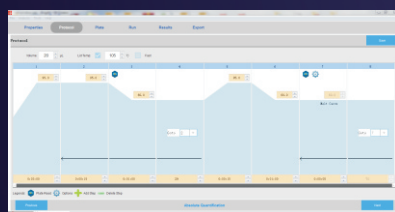
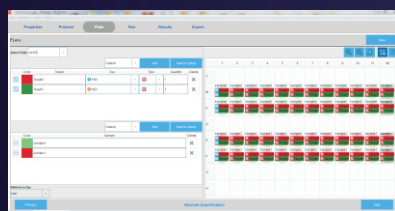


OptimumGene™ series

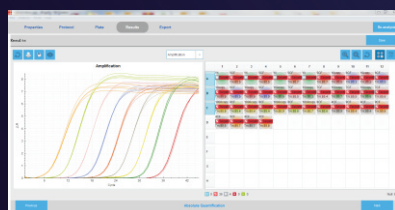
## Real-time PCR System Q2000



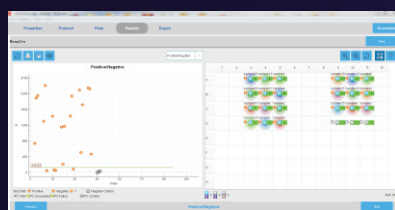
1. Connection via an ethernet cable or via router.
2. Pre-calibrated optics allow you to start using the instrument immediately, no additional calibration is required.
3. Quality control (QC) on data automatically, ensuring reliability of analysis results.
4. Graphical display of protocols, default templates, and real-time running status.



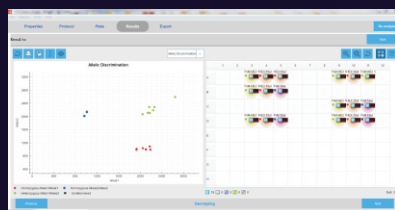
5. Simple and intuitive program, easy to use, without prior reading the user guide thoroughly.
6. PCR protocols can be run via a computer network or in the stand-alone mode (using a USB flash drive)
7. Real-time monitoring of amplification curve or melt curve via the 10" display and touch screen.
8. Intuitive qPCR plate setup.



9. Thermal gradient capability with 12 columns of different temperatures for optimizing PCR reaction protocol.
10. Protocols and plate setups can be saved as templates for future use.
11. Multitasking software, able to analyze multiple experiments at the same time.



12. Varieties of Data Analysis Methods are included.
  - (1) Standard curves for absolute quantification
  - (2) Melt-curve to verify product identity
  - (3) Relative quantification for gene expression analysis, with multiple reference genes & amplification efficiency correction
  - (4) Allelic discrimination (SNP Genotyping) using two allele-specific probes, with automated calling & quality-value assignment
  - (5) Presence/Absence (Plus/Minus) assays with/without internal positive control (IPC) for pathogen detection



13. A variety of algorithms are included, such as auto-baseline, manual-baseline, auto-threshold, manual-threshold, amplification efficiency (E), able to streamline data analysis.
14. Export results to .xls, .txt.



**HANGZHOU LONGGENE SCIENTIFIC INSTRUMENT CO., LTD.**

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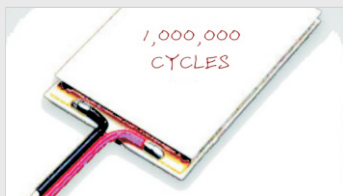
W: www.longgene.com

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Ver. 12, 2019



## MAIN ADVANTAGES

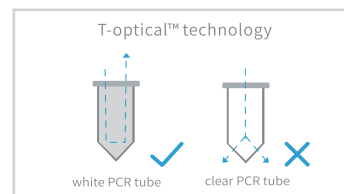


### 1 POWERFUL PELTIER TECHNOLOGY

Leading Peltier Elements from Marlow, ensure long life of 1,000,000 thermal cycles and fast ramping rate up to 6°C/s.

### 2 T-OPTICAL™ TECHNOLOGY

T-optical™ technology, reduce background noise, improve fluorescence signal sensitivity and signal to noise ratio.

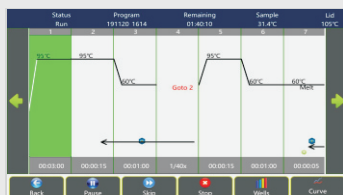
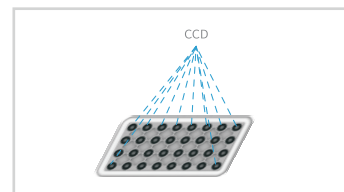


### 3 ARTICULATING DISPLAY SCREEN

The angle of display could be adjusted to the best view.

### 4 SYNCHRONOUS DETECTION

Simultaneous detection of wells, not in sequence.



### 5 SELF-CONTAINED TOUCH SCREEN

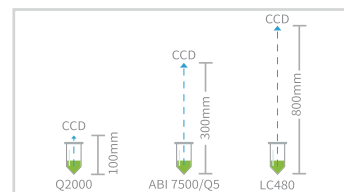
Users could view qPCR process and run PCR protocol through self-contained 10" TFT LCD and touch screen.

### 6 PATENTED OPTICAL DESIGN

Innovative SSLP™ CCD imaging technology for qPCR, avoiding more moving parts problems like overhear, wear and off-center. Not optical fiber based, avoiding break and block by dust.

### 7 LONG LIFE LED

Long life LED lamps to excite fluorescence, no need for replacement in the future.



### 8 GRADIENT FUNCTION

Sample wells with temperature gradient function, convenient to optimize PCR conditions.

#### REMOTE CONTROL

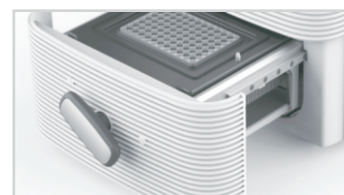
Equipped with LongGene's "Optimum qPCR Design & Analysis Software" for remote operation of instruments and analysis of results.

### 9 DRAWER DESIGN

The drawer design of sample block, makes it easier to pick and place PCR tubes and plates.

### 10 LIFETIME FREE FOR SOFTWARE UPGRADED

LongGene's "Optimum qPCR Design & Analysis Software" could be upgraded for free.



## DETAILED PARAMETERS

Model	Q2000A	Q2000B	Q2000C
	Instrument Performance		
Sample Block Capacity	96 wells * 0.1 ml		
Reaction Volume	10~50ul （recommend 20ul）		
Tubes Option	White or clear PCR tubes or strips or 96 well PCR plate, with optical flat cap		
Heating & Cooling Technology	Peltier technology allow 1,000,000 thermal cycles		
Control Methods	Operated via PC or self-contained touch screen on instrument		
Language	English		
Communications	USB2.0 or LAN		
Display	10" Color TFT LCD and Touch Screen, view angle adjustable.		
Max. Number of Programs	Max.15,000 programs onboard, unlimited storage of protocols with USB flash drive		
Temperature			
Block Temp.Range	0℃~105℃		
Max. Heating Rate	6℃/sec		
Max. Cooling Rate	5℃/sec		
Temp.Uniformity	≤±0.2℃（at 90℃）		
Temp.Accuracy	≤±0.2℃（at 90℃）		
Display Resolution	0.1℃		
Heat Lid Temp. Range	30℃~112℃		
Temp.Control Mode	Block & Calculated sample		
Gradient Range	30℃ ~ 100℃		
Temp.Differential Range	1℃ ~ 30℃		
Fluorescence Detection			
Excitation	Long life LED lamps		
Detection	CCDs		
Dynamic Range	1~10 <sup>10</sup>		
Sensitivity	≥1 copy		
Calibrated Dyes at Installation	F1: FAM, SYBR Green F2: VIC, HEX, JOE, Cy3, NED	F1: FAM, SYBR Green F2: VIC, HEX, JOE, Cy3, NED F3: ROX, TEXAS-RED F4: CY5	F1: FAM, SYBRGreen F2: VIC, HEX, JOE, Cy3, NED F3: ROX, TEXAS-RED F4: CY5 F5: CY5.5 F6: Reserved
Fluorescence Excitation Range	300-800nm		
Fluorescence Detection Range	500-800nm		
Data Export Formats	Excel, TXT		
Other Features			
AC Power Supply	100 ~ 240V, 50 ~ 60Hz		
Consumption	600 W		
Net Weight	13 KG		
Dimension （L×W×H）	334×280×365mm		
Computer Operating Systems	Windows10, Windows7, Windows XP		