



Real-Time PCR System

LIGHTGene G Series



LIGHTGene 40G & 60G

Powerful Peltier Technologies

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

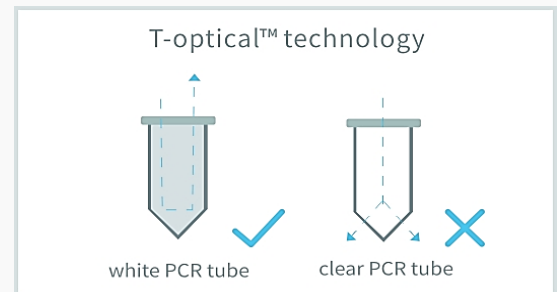


Long Life LED

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

T-Optical Technology

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

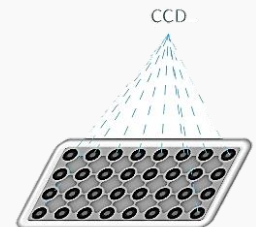


Articulating Display Screen

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

Synchronous Detection

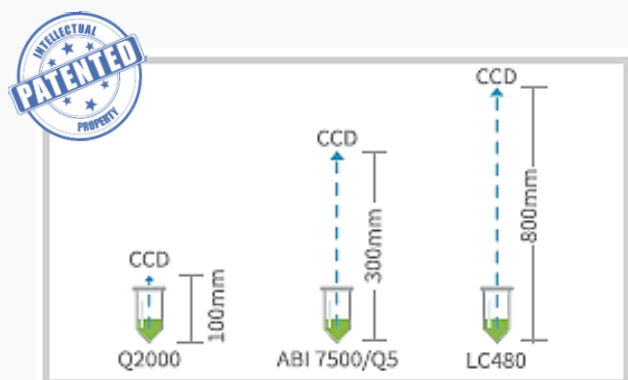
Simultaneous detection of wells, not in sequence.



FEATURES

Patented Optical Design

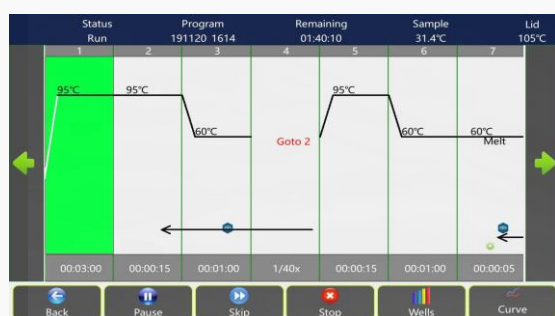
Innovative SSLP™ CCD imaging technology for qPCR, avoiding more moving parts problems like overheat, wear and off-center. Not optical fiber based, avoiding break block by dust.



*The Innovative Technology
by Qualified Standard*

Stand-alone Touch Screen

User could view qPCR and run PCR protocol through self-contained 10 inches TFT LCD and touch screen



Drawer Design

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



FEATURES

Gradient Function

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

Lifetime Free for Software Upgraded

Biometrics "optimum qPCR Design & Analysis Software" could be upgraded for free.

Remote Control

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



The Quantitative Polymerase Chain Reaction (qPCR)

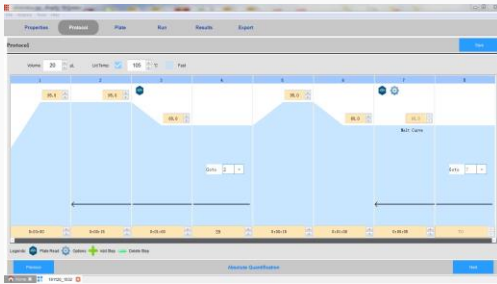




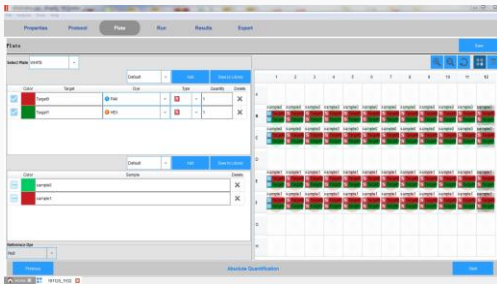
SOFTWARE

LIGHTGene G Series

SOFTWARE FUNCTION



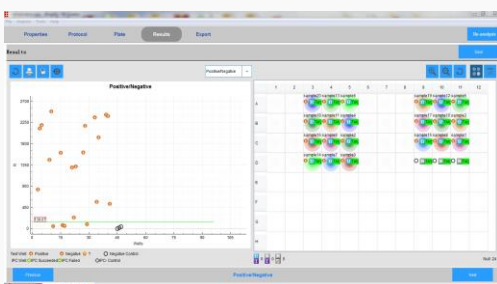
- Connection via an ethernet cable or via router.
- Pre-calibrated optics allow you to start using the instrument immediately, no additional calibration is required.
- Quality control (QC) on data automatically, ensuring reliability of analysis results.
- Graphical display of protocols, default templates,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



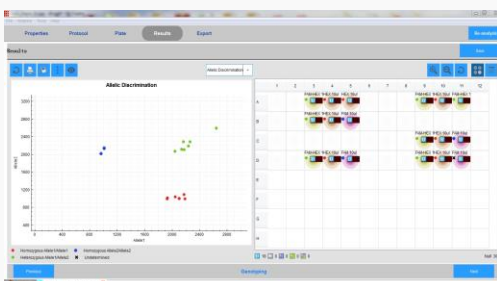
- Simple and intuitive program, easy to use, without prior reading the user guide thoroughly.
- PCR protocols can be run via computer network or in the stand-alone mode (using a USB flash drive)
- Real-time monitoring of amplification curve or melt curve via the 10 inches display and touch screen.
-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



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



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



- A variety of algorithms are included, such as auto-baseline, manual-baseline, auto-threshold, manual-threshold, amplification efficiency (E), able to streamline data analysis.
- Export result to Excel (.xls) format, Text document (.txt) format.

SPECIFICATION

Model	LIGHTGene 40G	LIGHTGene 60G
Instrument Performance		
Sample Block Capacity	96 wells x 0.1 ml	
Reaction Volume	10- 50 ul (recommend 20ul)	
Tube Option	White or clear PCR tubes or strips or 96 well PCR plate, with optical flat cap	
Control Method	Operated via PC or stand-alone touch screen on instrument	
Language	English	
Communications	USB2.0 or LAN	
Display	10 inches Color TFT LCD 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°C - 105°C	
Max. Heating Rate	6°C /sec	
Max. Cooling Rate	5°C /sec	
Temp. Uniformity	±0.2°C (at 90°C)	
Temp. Accuracy	±0.2°C (at 90°C)	
Display Resolution	0.1°C	
Heat Lid Temp. Range	30°C - 112°C	
Temp. Control Mode	Block & Calculated sample (Tube)	
Gradient Range	30°C - 100°C	
Gradient Spread	1°C - 30°C	
Fluorescence Detection		
Light Source	Long life LED lamp	
Detection	CCD	
Dynamic Range	1 - 10 ¹⁰	
Sensitivity	≥ 1 copy	
Calibrated Dyes at installation	F1: FAM, SYBR Green F2: VIC, HEX, JOE, Cy3, NED F3: ROX, TEXAS-RED F4: Cy5	F1: FAM, SYBR Green F2: VIC, HEX, JOE, Cy3, NED F3: ROX, TEXAS-RED F4: Cy5 F5: Cy5.5 F6: Reserved
Fluorescence Excitation Range	300 – 800 nm	
Fluorescence Detection Range	500 – 800 nm	
Data Export Formats	Excel, TXT	
Other Features		
AC Power Supply	100 - 240V, 50 - 60Hz	
Consumption	600 W	
Net Weight	13 Kg	
Dimension (D x W x H)	334 x 280 x 365 mm	
Computer Operating Systems	Windows10	

Information, description, and specification in this publication are subject to change without any notice.

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Biometrics

Quality of life

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