



1000-Series Thermal Cyclers



ADVANCING PCR TOGETHER



Take control of your experiments. Bio-Rad's 1000-series thermal cycling platform gives you the power to do the experiments you want to do, the way you want to do them. The high-performance 1000-series platform can be configured to meet any researcher's unique needs. Choose the C1000 Touch™ Thermal Cycler, the S1000™ Thermal Cycler, or a combination of both. Choose from multiple interchangeable reaction modules, including two for



real-time PCR. Use the intuitive touch-screen interface on the C1000 Touch Cycler, optimize PCR assays using the gradient feature, and transport your files and data with a USB flash drive. No matter how you configure your 1000-series system, you'll get superior thermal performance in a simple-to-use, dependable instrument that delivers accurate results and the flexibility to expand as your research grows.

FASTER, SMARTER, EASIER PCR



PCR Faster

If you're like most researchers, you want to get results faster. Many factors contribute to the overall time it takes to get PCR results: the time to design, program, and optimize a protocol, the time to run the protocol, and the time to analyze the results. Bio-Rad has developed a complete thermal cycling system that will speed every step of your PCR process to give you what's really important — a shorter time from setup to results.

Protocol autowriter — generates an optimal protocol based on your polymerase, primers, and product length

Thermal gradient feature — identifies optimal annealing temperature in a single run

Reduced-mass honeycomb sample block — fast ramping and settling produce the shortest time to target temperature

Intuitive software — makes programming faster and easier for PCR and real-time PCR

Superior Uniformity

Precision of the temperature steps is critical for the rate and efficiency of PCR. To obtain reliable, consistent results, it is important that all wells maintain the proper temperature throughout each incubation step. This is especially critical for precise quantification in real-time PCR. 1000-series thermal cyclers have six independently controlled thermal electric modules (TEs), the heating and cooling elements of the thermal cycler, to maintain tight temperature uniformity at all points during a run — even during ramping.

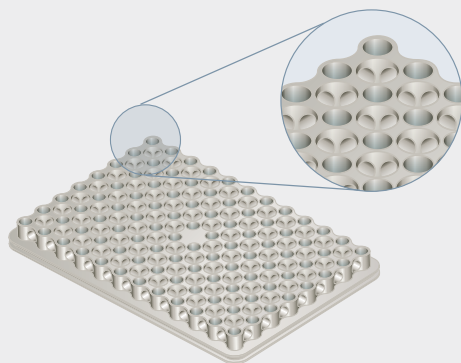
Rapid Arrival at Target Temperature

A key component of overall protocol run time is the time to reach target temperature, which is determined by the average ramp rate and the time for the sample block to reach thermal uniformity. Maximum ramp rate is less important because it can fluctuate significantly during the ramp. The C1000 Touch and S1000 Thermal Cyclers' tight temperature control produces high average ramp rates and tight uniformity during ramping to yield fast time to target temperature and faster protocol run times.

The time to reach target temperature, which comprises the average ramp rate and the settling time (the time it takes to reach thermal uniformity), is the key factor determining how fast a thermal cycler can run a given PCR protocol. Average ramp rate is a better indicator of a cycler's capabilities than maximum ramp rate because the latter is generally not maintained throughout a temperature step. The average ramp rate of 1000-series cyclers, combined with a 10 sec settling time, allows fast run times while maintaining excellent thermal accuracy and uniformity.

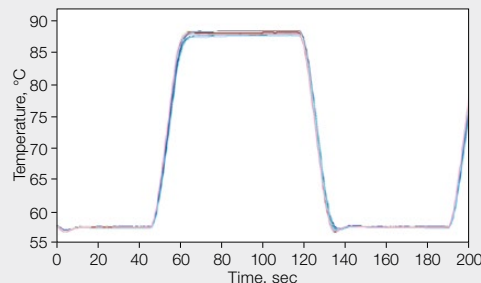
Performance

The overall run time of a PCR reaction depends on protocol design, enzyme type, and the thermal capabilities of the thermal cycler. 1000-series thermal cyclers deliver premium thermal performance for reproducible results and fast run times.



The patented* reduced-mass honeycomb sample block heats and cools more quickly than standard blocks, so average ramp rates are increased and overall run times are reduced.

* U.S. patent 7,632,464.



Superior uniformity with rapid arrival at target temperature. 1000-series thermal cyclers exhibit high average ramp rates, rapid settling time, and tight thermal uniformity throughout the ramp. This graph shows the temperature measured by probes in 15 wells across a sample block. The traces are nearly indistinguishable due to the tight uniformity. Note the consistent high average ramp rate throughout heating and cooling.



PCR Smarter

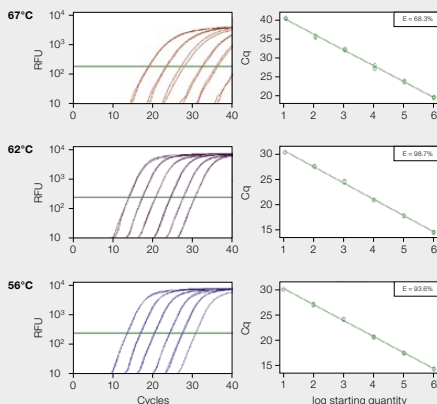
Smarter means no hassles. Smarter means giving you the freedom to do the things you want to do. And most of all, smarter means trustworthy and dependable. Bio-Rad's 1000-series instruments simplify your work with tools accessed with an easy-to-use interface. 1000-series instruments are dependable and long-lasting, and they generate data you can trust.

- Easily interchangeable reaction modules let you change formats quickly without tools
- Obtain better results with 6 TEs that produce precise, uniform temperatures
- O-ring hermetic seal protects TEs from condensation, maximizing their life
- Real-time PCR detection system uses long-lasting solid-state light-emitting diodes (LEDs) and photodiodes

Thermal Gradient for Easy Protocol Optimization

The programmable temperature gradient allows you to identify the optimal annealing temperature in a single PCR experiment by letting you test eight incubation temperatures at once. Optimizing reaction conditions results in higher specificity and higher yields.

The 1000-series gradient feature uses dynamic ramping, which means the temperature gradient forms during ramping and all wells come to the designated temperature at the same time. As a result, the incubation period is the same for all samples, which is crucial for transfer of gradient to nongradient protocols.



Thermal gradient experiment for optimizing annealing temperature.

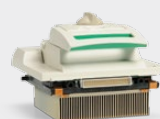
A tenfold dilution series (10⁶–10 copies) of plasmid containing *GAPDH* template was amplified in the presence of SYBR® Green Dye using a protocol with an annealing thermal gradient ranging from 55 to 68°C. Results are presented for three temperatures, showing 62°C as the optimal in this case, with early Cq values and the highest standard curve efficiency. Cq, quantification cycle; RFU, relative fluorescence units.



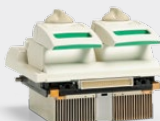
PCR Easier

Since PCR is central to genomics research, you need a flexible platform that can adapt as your research evolves. Bio-Rad's 1000-series cycling platform offers two chassis options, six interchangeable reaction modules, and simple expansion capabilities, so you can create a setup that can grow with you and continue to meet your needs.

First, choose a chassis: the feature-rich C1000 Touch Thermal Cycler, the streamlined, equally powerful S1000 Thermal Cycler, or a combination of the two. Next, choose one or more reaction modules: 96-well fast, 96-deep well, 384-well, or independently controlled dual 48/48-well fast format, or a six-channel 96-well or five-channel 384-well optical reaction module for real-time PCR. Adding instruments to increase throughput is as easy as connecting a USB cable — up to 32 thermal cyclers can be controlled by one computer. You can even connect thermal cyclers and real-time PCR detection systems, run different protocols, and start experiments at different times.



- 96-well fast reaction module
- 96-deep well reaction module
- 384-well reaction module



- Dual 48/48-well fast reaction module



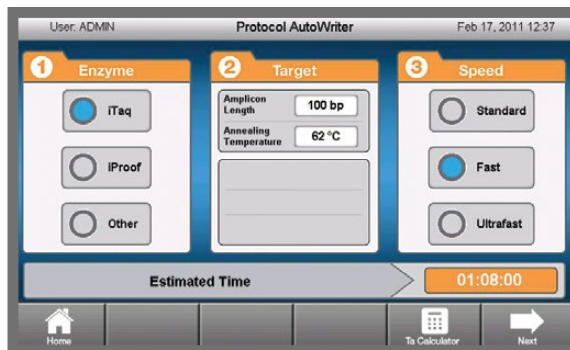
- CFX96™ Optical Reaction Module
- CFX96 Deep Well Optical Reaction Module
- CFX384™ Optical Reaction Module

THERMAL CYCLERS

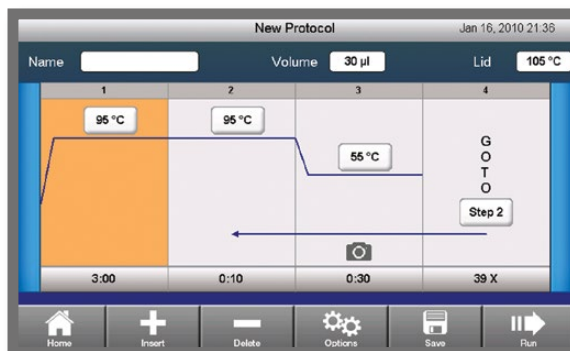
C1000 Touch Thermal Cycler — A Premium Instrument for PCR

The C1000 Touch Cycler is the flagship of the 1000-series thermal cycling platform, offering unmatched performance for fast, reliable results and a state-of-the-art interface with new ways to optimize protocols and monitor runs. The C1000 Touch Cycler offers all the powerful features of the 1000-series platform, so you can:

- Run real-time PCR experiments using the CFX96, CFX96 Deep Well, or CFX384 Optical Reaction Module
- Quickly optimize reactions using the protocol autowriter
- Save time by creating and viewing protocols using the large color touch-screen display and intuitive graphical programming
- Get answers quickly using desktop support, data logging, and run reports
- Have the convenience of sending an email notification of run completion
- Back up your data, and manage and transfer files using a USB flash drive
- Have peace of mind by protecting your files with optional log-in, restricted user privileges, and secure mode for controlled environments
- Increase throughput simply and easily by daisy-chaining up to 3 additional cyclers or adding PC control for up to 32 cyclers



Optimize reactions using the protocol autowriter.



Quickly customize run parameters.



Use the Saved Files feature to organize data.



Dual 48/48-Well Fast Reaction Module — It's Like Having Two Thermal Cyclers in One

Bio-Rad offers a gradient-enabled dual reaction module that allows you to run two independent experiments at the same time. This ability is valuable for laboratories with multiple users running different applications on different schedules. A dual thermal gradient is convenient for protocol optimization, allowing more variables to be tested simultaneously.

S1000 Thermal Cycler — A Great Companion

The S1000 Cycler is just right for researchers who require less — or more — than what the C1000 Touch Cycler offers. Those who simply need dependable performance can use the S1000 Cycler as a stand-alone instrument for PCR. Those who need more than one powerful cycler can connect up to three S1000 Cyclers to a C1000 Touch Cycler to form a high-throughput multi-bay instrument.

The S1000 Cycler offers the same thermal performance as the C1000 Touch Cycler, and also lets you:

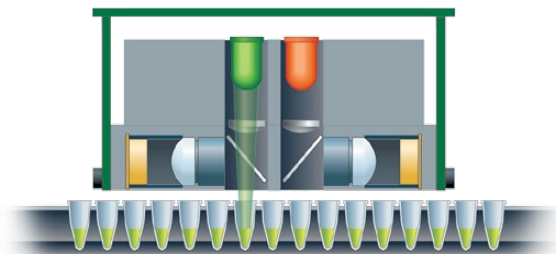
- Program protocols easily with the semi-graphical user interface
- Choose a reaction module that suits your needs — dual 48/48-well fast, 96-well fast, 96-deep well, or 384-well format
- Get optimal sealing using your favorite vessels and sealers with the redesigned fully adjustable heated lid



REAL-TIME PCR DETECTION SYSTEMS

Precise Detection

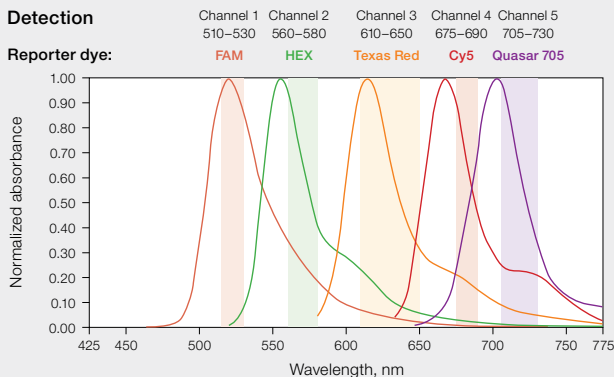
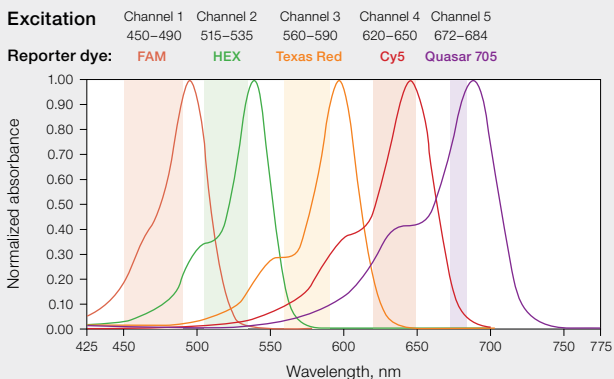
The CFX96, CFX96 Deep Well, or CFX384 Optical Reaction Module converts a C1000 Touch Cycler into a powerful and precise real-time PCR detection system. Both real-time PCR systems include advanced optical technology combined with precise thermal control to deliver the most sensitive, reliable detection in different throughput formats. The accompanying CFX Manager™ Software, which runs on a PC, provides numerous features and tools to simplify experiment setup and data analysis.



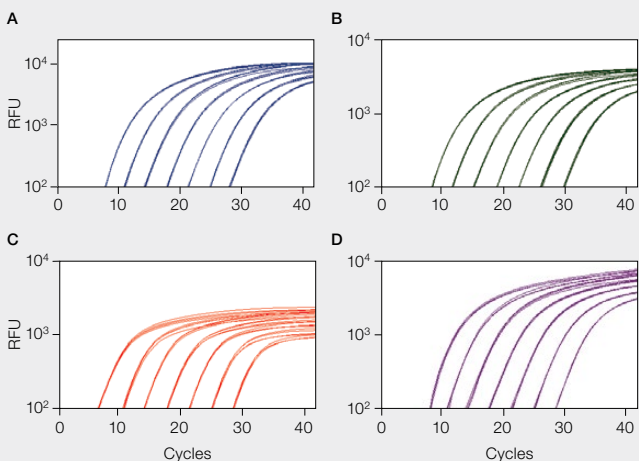
As the optics shuttle of the CFX96 Touch™, CFX96 Touch Deep Well, or CFX384 Touch™ Real-Time PCR Detection System travels across the plate, light is focused directly into the center of each sample well. Side view of the optics shuttle shows the green LED firing over a well.

With the CFX96 Touch, CFX96 Touch Deep Well, and CFX384 Touch Systems you can:

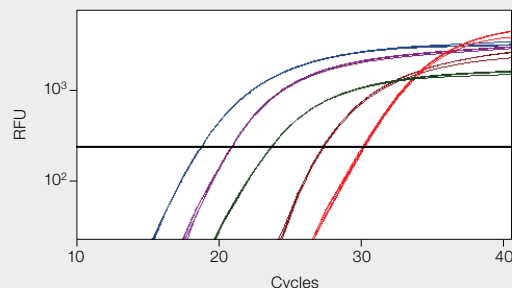
- Save reagents and samples by detecting up to 5 targets per well in the CFX96 Touch or CFX96 Touch Deep Well System or up to 4 targets per well in the CFX384 Touch System using long-lasting multicolored LEDs and sensitive photodiodes
- Tailor a run to suit your application using multiple data acquisition modes, including a fast scan for SYBR® Green and FAM
- Get your experiment under way before spending time to enter or edit plate information — both systems automatically collect data from all wells
- Save benchspace with multiple configuration options, including a stand-alone mode without a computer
- Get more accurate gene expression results by using multiple reference genes and individual reaction efficiencies for normalization
- Analyze data when and where you want — when a run is finished get email notification with a data file attached
- Make decisions sooner about next steps in your experiment by monitoring real-time reactions on the instrument's large touch-screen display



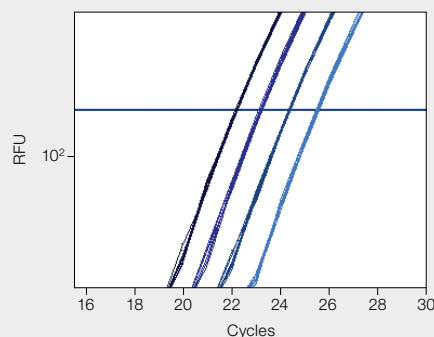
Optimal reporter dye signal collection is achieved using the discrete excitation and detection wavelength ranges of the CFX96 Touch System. Channels 1–4 are identical to the CFX384 Touch system.



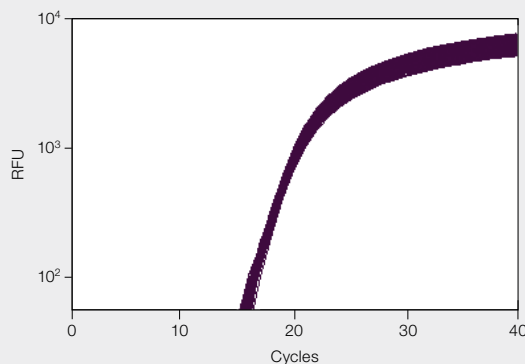
Broad linear dynamic range of four-target multiplexing using the CFX384 Touch System ensures detection of less abundant products. A–D, fluorescence data from a series of tenfold dilutions of plasmid DNA (10^8 – 10^2 copies) amplified using reporter dyes to monitor four targets: ■, FAM/actin; ■, HEX/GAPDH; ■, Texas Red/cyclophilin; ■, Cy5/tubulin. RFU, relative fluorescence units.



Accurate five-target multiplex gene expression is produced using the precise optics of the CFX96 Touch System. Human spleen RNA was transcribed into cDNA using the iScript™ cDNA Synthesis Kit. cDNA (50 ng) was amplified in four replicate 50 μ l reactions using five reporter dyes to monitor fluorescence data from five targets: ■, FAM/actin (18.02 ± 0.02); ■, Cy5/tubulin (20.07 ± 0.03); ■, HEX/GAPDH (22.81 ± 0.02); ■, Quasar 705/*IL-1 β* (26.39 ± 0.04); ■, Texas Red/*IL2* (29.17 ± 0.07). Average Cq values are shown in parentheses. RFU, relative fluorescence units.



Precise target discrimination results from the tight thermal control of the CFX96 Touch System. One-cycle spacing between Cq values is precisely maintained in a series of twofold dilutions of human genomic DNA from 120 to 15 ng. *IL-1 β* target was amplified using a FAM-labeled detection probe with iQ™ Supermix. Graph shows eight replicates for each dilution with the following average Cq values: 22.15 ± 0.02 , 23.14 ± 0.04 , 24.28 ± 0.03 , 25.41 ± 0.04 . RFU, relative fluorescence units.



Excellent uniformity using the CFX384 Touch System provides reliable results. *IL-1 β* plasmid template diluted to 10^5 copies per reaction amplified in the presence of a FAM-labeled detection probe with iQ Supermix. Graph shows 384 replicates of 5 μ l reactions. Average Cq value = 18.11 ± 0.045 . RFU, relative fluorescence units.

A COMPLETE SYSTEM

1000-series cyclers and reaction modules are a powerful platform for genomics research. Bio-Rad offers a wide selection of reagents, vessels, and sealers to help you make the most of your PCR experiments.

RNA Isolation

- Kits are designed and formulated to assist in the isolation of highly pure and intact RNA from different starting materials
- RNA is compatible with a variety of downstream applications
 - Real-time quantitative PCR (qPCR)
 - Northern blotting
 - Microarray analysis
- DNase treatment ensures genomic DNA removal

Reverse Transcription Reagents

- Formulated for efficient reverse transcription across a broad linear dynamic range
- Potent RNase A inhibitors protect RNA during setup and reverse transcription
- Flexible input RNA capacity to suit different experimental needs
- Optimized for gene expression analysis using real-time qPCR

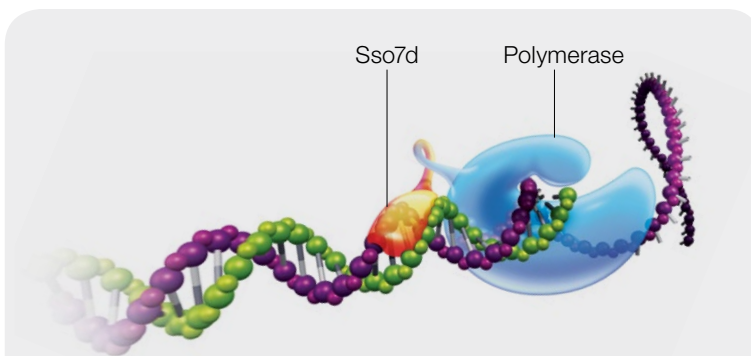
Real-Time qPCR Reagents

- Patented* Sso7d fusion enzyme technology delivers higher processivity and inhibitor tolerance
- Antibody-mediated hot-start polymerases enable instant activation and higher specificity
- Choice of fast, standard, or universal cycling conditions
- Formulated for optimal performance on a variety of real-time instruments

PCR Plastic Consumables

- Precisely manufactured for optimal fit and cycling performance
- Produced in Class 10,000 or 100,000 cleanroom environment
- Certified to be free of DNase, RNase, and human genomic DNA
- Extremely uniform wells reduce well-to-well variability in real-time PCR
- Warp-free Hard-Shell® Plates are designed for optimum performance with automation

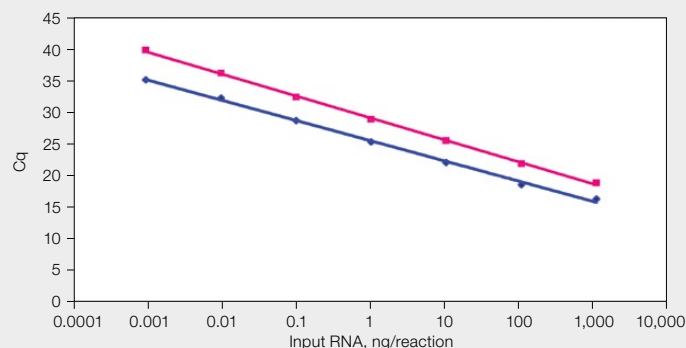
* U.S. patents 6,627,424; 7,541,170; and 7,560,260.



Bio-Rad's SsoFast™ qPCR Supermixes utilize patented* Sso7d fusion protein technology to provide enhanced processivity, speed, and tolerance to PCR inhibitors. SsoFast EvaGreen Supermix delivers enhanced fluorescence compared to SYBR® Green. SsoFast Probes Supermix enables robust detection of two different gene targets under standard or fast cycling conditions.



Bio-Rad's broad selection of vessels and sealers for PCR and real-time PCR.



Maximum efficiency and sensitivity with iScript Reverse Transcription Supermix for RT-qPCR and SsoFast Probes Supermix. Different amounts of HeLa cell RNA (1 ng–1 pg) were reverse transcribed and one-tenth of resulting cDNA was used as template to amplify β-actin (◆; ~90 bp) and α-tubulin (■; ~120 bp) genes in 20 μl qPCR reactions. Data demonstrate efficient reverse transcription and amplification across a broad linear dynamic range for reliable gene expression analysis. Cq, quantification cycle.

Specifications

Thermal Cycler	C1000 Touch	S1000
Input power	Up to 850 W maximum	Up to 700 W maximum
Frequency	50–60 Hz, single phase	50–60 Hz, single phase
Display	8.5 in. LCD display and touch screen	LCD
Ports	5 USB A, 1 USB B	4 USB A, 1 USB B
Memory	>1,000 typical programs onboard; unlimited with USB flash drive expansion	>1,000 typical programs onboard
Dimensions (W x D x H)	13 x 18 x 8 in.	13 x 18 x 8 in.
Weight	23 lb	23 lb
Temperature control modes	Calculated and block	Calculated and block
Programming options	Step-based graphical and automatic	Text based
Security features	Optional log-in required mode for regulated environments	—
Reporting	Exportable run logs, system error logs	Yes, if attached to a C1000™ or C1000 Touch Cycler
Onboard software	Windows CE 6.0	No
PC compatibility	Windows XP or higher	Windows XP or higher with C1000 or C1000 Touch Cycler
USB peripheral compatibility	Mouse, USB flash drive, bar code reader	No
Real-time PCR upgrade	CFX96, CFX96 Deep Well, or CFX384 Optical Reaction Module	No
Instant incubation	Yes	Yes

Reaction Module	96-Well Fast	96-Deep Well	Dual 48/48-Well Fast	384-Well
Sample capacity	96 x 0.2 ml tubes or 1 x 96-well plate	96 x 0.2 ml tubes, 48 x 0.5 ml tubes, or 1 x 96-well plate	2 x 48 x 0.2 ml tubes or 2 x 48-well plates	1 x 384-well plate
Maximum ramp rate	5°C/sec	2.5°C/sec	4°C/sec	2.5°C/sec
Average ramp rate	3.3°C/sec	2°C/sec	3°C/sec	2°C/sec
Temperature range	0–100°C	0–100°C	0–100°C	0–100°C
Temperature accuracy	±0.2°C of programmed target at 90°C	±0.2°C of programmed target at 90°C	±0.2°C of programmed target at 90°C	±0.2°C of programmed target at 90°C
Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C	±0.4°C well-to-well within 10 sec of arrival at 90°C	±0.4°C well-to-well within 10 sec of arrival at 90°C	±0.4°C well-to-well within 10 sec of arrival at 90°C

Thermal Gradient (available on all reaction modules)	
Gradient accuracy	±0.2°C of programmed temperature at end rows
Row uniformity	±0.4°C well-to-well (within row) within 10 sec of arrival at target temperature
Gradient range	30–100°C
Temperature differential range	1–24°C

Optical Reaction Module	CFX96	CFX384
Excitation	6 filtered LEDs	5 filtered LEDs
Detection	6 filtered photodiodes	5 filtered photodiodes
Range of excitation/emission wavelengths	450–730 nm	450–690 nm
Sensitivity	Detects 1 copy of target sequence in human genomic DNA	Detects 1 copy of target sequence in human genomic DNA
Dynamic range	10 orders of magnitude	10 orders of magnitude
Scan time		
All channels	12 sec	<20 sec
Single channel fast scan	3 sec	8 sec

Visit bio-rad.com/ThermalCyclersMore for more information.

Ordering Information

Catalog #	Description	Catalog #	Description
184-1100	C1000 Touch Thermal Cycler Chassis , includes USB flash drive, power cord; does not include reaction module	170-8842	iScript Advanced cDNA Synthesis Kit for RT-qPCR , 50 x 20 µl reactions, includes 200 µl 5x iScript Advanced Reaction Mix, 50 µl iScript Advanced Reverse Transcriptase
185-1148	C1000 Touch Thermal Cycler with Dual 48/48 Fast Reaction Module , includes C1000 Touch Thermal Cycler Chassis, dual 48/48 fast reaction module, USB flash drive	172-5270	SsoAdvanced™ Universal SYBR® Green Supermix , 2 ml (2 x 1 ml vials), 200 x 20 µl reactions, 2x qPCR mix, contains Sso7d fusion polymerase, ROX Normalization Dyes
185-1196	C1000 Touch Thermal Cycler with 96-Well Fast Reaction Module , includes C1000 Touch Thermal Cycler Chassis, 96-well fast reaction module, USB flash drive	172-5280	SsoAdvanced Universal Probes Supermix , 2 ml (2 x 1 ml vials), 200 x 20 µl reactions, 2x qPCR mix, contains Sso7d fusion polymerase, ROX Normalization Dyes
185-1197	C1000 Touch Thermal Cycler with 96-Deep Well Reaction Module , includes C1000 Touch Thermal Cycler Chassis, 96-deep well reaction module, USB flash drive	172-5160	SsoAdvanced PreAmp Supermix , 1.25 ml (1 x 1.25 ml vial), 50 x 50 µl reactions, 2x PreAmp Mix, contains dNTPs, Sso7d fusion polymerase, salts, enhancers, stabilizers, other proprietary components
185-1138	C1000 Touch Thermal Cycler with 384-Well Reaction Module , includes C1000 Touch Thermal Cycler Chassis, 384-well reaction module, USB flash drive	172-5150	iTaq™ Universal SYBR® Green One-Step Kit , 1 ml (1 x 1 ml vial), 100 x 20 µl reactions, includes 2x one-step SYBR® Green Reaction Mix containing iTaq DNA Polymerase, buffers, and ROX Normalization Dyes; iScript Reverse Transcriptase; nuclease-free water
184-2000	S1000 Thermal Cycler Chassis , includes power cord; does not include reaction module	172-5140	iTaq Universal Probes One-Step Kit , 1 ml (1 x 1 ml vial), 100 x 20 µl reactions, includes 2x one-step reaction mix containing iTaq DNA Polymerase, buffers, and ROX Normalization Dyes; iScript Reverse Transcriptase; nuclease-free water
185-2148	S1000 Thermal Cycler with Dual 48/48 Fast Reaction Module , includes S1000 Thermal Cycler Chassis, dual 48/48 fast reaction module	172-5310	iProof™ HF Master Mix , 100 x 50 µl reactions, premixed PCR reagents, includes 2x master mix (0.04 U/µl), DMSO; suitable for most templates
185-2196	S1000 Thermal Cycler with 96-Well Fast Reaction Module , includes S1000 Thermal Cycler Chassis, 96-well fast reaction module	HSP-3805	Hard-Shell 384-Well Skirted PCR Plates , clear shell, white well, 50
185-2197	S1000 Thermal Cycler with 96-Deep Well Reaction Module , includes S1000 Thermal Cycler Chassis, 96-deep well reaction module	MLP-9601	Multiplate™ High-Profile 96-Well Unskirted PCR Plates , clear, 25 plates
185-2138	S1000 Thermal Cycler with 384-Well Reaction Module , includes S1000 Thermal Cycler Chassis, 384-well reaction module	MSB-1001	Microseal® 'B' Adhesive Seals , optically clear, 100
184-5096	CFX96 Optical Reaction Module , for use with C1000 Touch Thermal Cycler Chassis, includes CFX Manager Software, license for qbase+ Software, communication cable, reagents, consumables	TBC-0802	8-Tube Strips and Domed Cap Strips (0.2 ml) , clear, 20 bags of 12 x 8-tube strips and 12 x 8-cap strips
185-5196	CFX96 Touch Real-Time PCR Detection System , includes C1000 Touch Thermal Cycler Chassis, CFX96 Optical Reaction Module, CFX Manager Software, license for qbase+ Software, communication cable, reagents, consumables	TWI-0201	PCR Tubes with Domed Caps (0.2 ml) , clear, 1,000
184-5384	CFX384 Optical Reaction Module , for use with C1000 Touch Thermal Cycler Chassis, includes CFX Manager Software, license for qbase+ Software, communication cable, reagents, consumables		
185-5484	CFX384 Touch Real-Time PCR Detection System , includes C1000 Touch Thermal Cycler Chassis, CFX384 Optical Reaction Module, CFX Manager Software, license for qbase+ Software, communication cable, reagents, consumables		
184-0148	Dual 48/48 Fast Reaction Module , independent dual 48-well reaction module, fits C1000, C1000 Touch, and S1000 Thermal Cyclers, gradient enabled		
184-0196	96-Well Fast Reaction Module , fits C1000, C1000 Touch, and S1000 Thermal Cyclers, gradient enabled		
184-0197	96-Deep Well Reaction Module , fits C1000, C1000 Touch, and S1000 Thermal Cyclers, gradient enabled		
184-0138	384-Well Reaction Module , fits C1000, C1000 Touch, and S1000 Thermal Cyclers, gradient enabled		
184-5008	CFX Manager Software, Chinese Edition , includes 3 user licenses, installation CD, 3 HASP HL keys		
184-5028	CFX Manager Software, Russian Edition , includes 3 user licenses, installation CD, 3 HASP HL keys		
184-5001	CFX Manager Software, Security Edition , includes 1 user license, installation CD, HASP HL key		
184-5025	Precision Melt Analysis™ Software , includes 2 user licenses, installation CD, 2 HASP HL keys, melt calibration kit		
170-8840	iScript Reverse Transcription Supermix for RT-qPCR , 25 x 20 µl reactions, includes 100 µl 5x iScript RT Supermix and iScript RT Supermix No-RT Control		

Visit bio-rad.com/web/ThermalCyclersMore for more information.

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Bio-Rad's thermal cyclers and real-time thermal cyclers are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 6,767,512 and 7,074,367.

Purchase of iTaq DNA Polymerase includes an immunity from suit under patents specified in the product insert to use only the amount purchased for the purchaser's own internal research. No other patent rights are conveyed expressly, by implication, or by estoppel. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

The use of iQ, SsoAdvanced, and SsoFast Supermixes is covered by one or more of the following U.S. patents and corresponding patent claims outside the U.S.: 5,804,375; 5,994,056; and 6,171,785. The purchase of these products includes a limited, non-transferable immunity from suit under the foregoing patent claims for using only this amount of product for the purchaser's own internal research. No right under any other patent claim and no right to perform commercial services of any kind, including without limitation reporting the results of purchaser's activities for a fee or other commercial consideration, are conveyed expressly, by implication, or by estoppel. These products are for research use only. Diagnostic uses under Roche patents require a separate license from Roche. Further information on purchasing licenses may be obtained from the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

Hard-Shell Plates are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 7,347,977; 6,340,589; and 6,528,302.



**Bio-Rad
Laboratories, Inc.**

Life Science
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France 01 47 95 69 65 Germany 49 89 31 884 0 Greece 30 210 9532 220 Hong Kong 852 2789 3300 Hungary 36 1 459 6100 India 91 124 4029300
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