

# AriaDx

Real-Time PCR Instrument

*For In Vitro Diagnostic Use*



## The Most Trusted Cytogenetics Research Solutions

Built on Stratagene's legacy qPCR platform, Agilent Technologies provides a modular and precision real time PCR instrument in the AriaDx that is capable of evolving with your future clinical needs. AriaDx offers intuitive software, superior instrument quality and technical support empowering you with fast, reproducible and accurate results. The state of the art thermal cycler, the modular LED optical cartridges and the on-board instrument self-diagnostic capability keeps the lifetime costs low and makes the AriaDx a need in clinical laboratories.



## Confidence in Success

### Fast Instrument for Fast Chemistries

AriaDx with its next generation optics design, precision thermal block and easy user interface enables quick turnaround time from assay set up to results—enabling quicker time to results.

- Blazing Fast Scan Times: < 3 sec. for all 6 channels
- Ready to Go: Factory Calibrated
- Fast Assay Set Up: Intuitive touch screen interface

**SPEED**



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## Confidence in a System that Meets Your Needs

### Today and Tomorrow

The agile design of the AriaDx Real-Time PCR System offers the industry's first configurable and customer-changeable optics. Now you can mix-and-match optics to suit your needs today, and easily change them to suit your needs for tomorrow.

- Modular Optical Cartridges: 1-6 filter capability
- Low Maintenance and Lower Life Time Costs
- On Board Self-diagnostics to keep your instrument running better

**AGILITY**



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## Confidence in Easy-to-Use, Precise Software

### Superior Data & Data Analysis

The AriaDx Software combines robust data analysis algorithms and intuitive organization for precision and ultimate ease-of-use.

- Free Software package
- 21 CFR part 11 compliant software
- Tight & Accurate Thermal Control

**PRECISION**





INTRODUCING

# AriaDx

**BETTER SYSTEMS. BRILLIANT RESULTS.**

Confidence in a system that meets your needs today and tomorrow.



The AriaDx Real-Time PCR System is a fully integrated qPCR amplification, detection, and data analysis system. The system's modular design combines a state-of-the-art thermal cycler, an advanced optical system with spectra-optimized LED cartridges, and data analysis software. The instrument leverages a comprehensive software suite of on-board instrument diagnostics, giving you confidence that instrument failpoints are identified prior to running your assay. Experience total confidence with AriaDx's blend of speed, agility, and precision.

## **SPEED**

*Ready, Go!*

### **Factory Calibrated**

AriaDx is ready to go—no need to set quantification curves or calibrate the instrument.

### **Ultra-Fast Chemistry**

AriaDx is compatible with all fast reaction chemistries.

### **Blazing Scan Times**

Scan all channels in less than three seconds—the fastest in the industry.

## **AGILITY**

*Today and Tomorrow*

### **Modular Design**

Modular cartridges make in-lab upgrades possible with the click of a button.

### **Intuitive Interface**

AriaDx's touchscreen makes system integration easy for all users.

### **Broad Applications**

AriaDx supports more than one assay and chemistry. Applications include: Comparative Quantification (Single-Plex and Multiplex), Quantitative PCR (Single-Plex and Multiplex), Genotyping, Allele Discrimination, Gene Expression and more.

## **PRECISION**

*Superior Data*

### **Thermal Control**

Easily maintains within  $\pm 0.2^{\circ}\text{C}$  or less of target temperature.

### **Impressive Sensitivity**

Two-fold discrimination in a single cycle with 95% confidence over a wide range of copies.



**READY, GO!** Built upon Stratagene’s legacy, Agilent Technologies provides a total solution approach to real-time quantitative PCR.

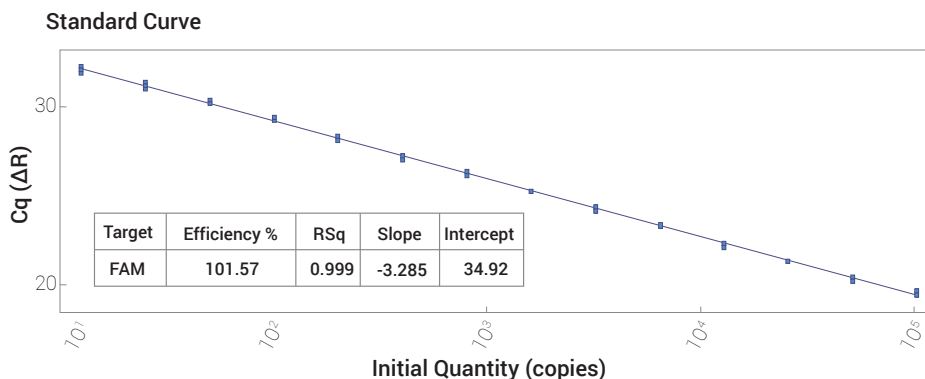
AriaDx instrumentation makes routine and complicated applications faster and easier without sacrificing data integrity. Applications where AriaDx excels:

- **Multiplex**  
More agility and speed in your assays with reagents optimized for your reactions
- **Open Platform**  
Compatible with multiple reagent chemistries

Standard Curve				
Fluorescence Term				
Target Information Table				
Target	Efficiency	R <sup>2</sup>	Slope	Intercept
FAM	96.47	0.998	-3.41	22.06
HEX	97.53	0.999	-3.383	22.52
ROX	101.54	0.999	-3.286	21.75
CY5	99.84	0.998	-3.326	22.21
CY3	96.21	0.997	-3.416	22.41
ATT0	96.21	0.997	-3.416	22.41

Figure 1. Six Color Standard Curve Data by Fluor.

- *Tight manufacturing quality controls*
- *Open reagent platform: use your assays and reagents*



AriaDx is sensitive enough to detect 2 copies to 1x10<sup>9</sup> copies.

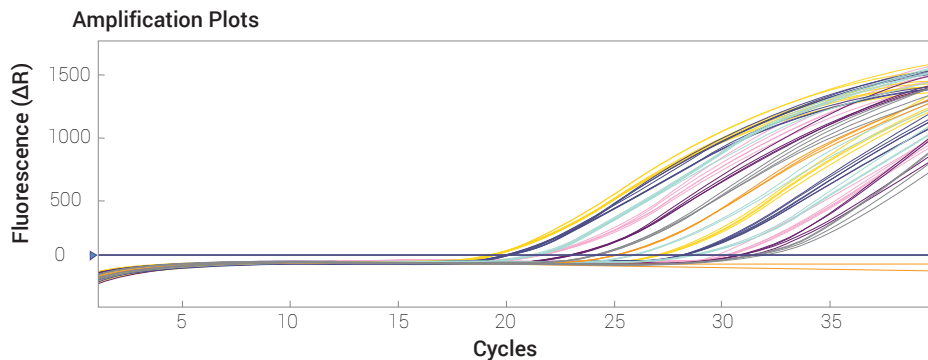


Figure 2. Amplification and Standard Curve Plots Showing Sensitivity Measuring a Two-Fold Change.



**MODULAR OPTICAL CARTRIDGES.** The first real-time PCR system with optics contained in modular cartridges, the AriaDx allows for less cross talk between channels – resulting in improved data resolution.

AriaDx comes calibrated straight from the factory. Calibration is only necessary if future modules are added. Now you can be confident you are measuring biological variation over the instrument's life.

- LIMS connectivity
- Expandable and upgradeable in the lab
- No reference channel needed
- “Set it and forget it” calibration
- Future-proof
- Accommodate as many or as few optic channels as you required

With optical cartridges that have no need for a reference channel, the tight calibration of the cartridges and steady emission wavelengths from the instrumentation provide consistent data with every run.



**Software with LIMS connectivity. To effectively and effortlessly manage import and export of experimental data.**

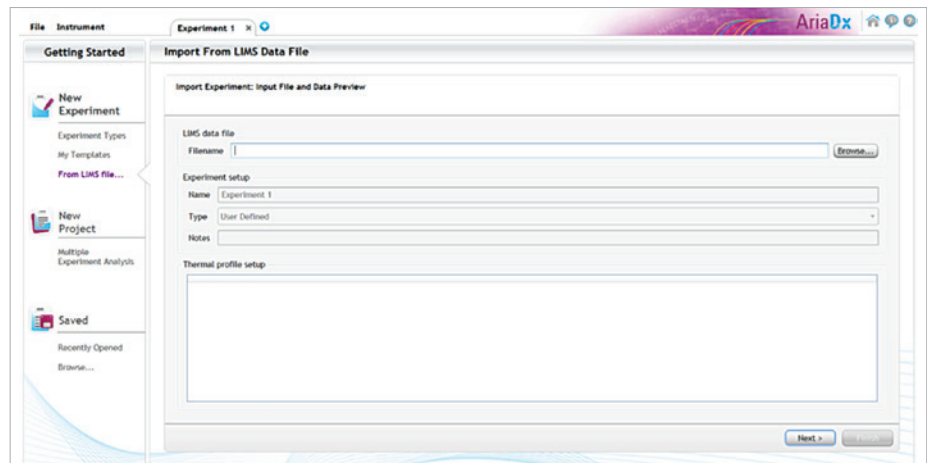


Figure 3. Set up experiments quickly and efficiently using LIMS import feature.

# PRECISION

**SUPERIOR DATA.** Advanced, yet easy-to-use SOFTWARE with proprietary algorithms accompany AriaDx’s precision chemistry and thermocycling capability.

### Easy Touchscreen Set-Up

Simple-to-use, feature-rich touchscreen allows you to set up runs with the touch of a finger. 21 CFR Part 11 compliant features are available by licensing ET software.

### Plate Maps at Your Fingertips

Program at the plate and well level. Simply hover over a well, and its details will open in a new window.

### New Software Features

- Touchscreen Set-Up
- Onboard Diagnostics
- Remote Monitoring
- Base software included with instrument purchase
- LIMS connectivity at no additional charge.
- Secure data management and audit trail as required by 21 CFR Part 11



- *LIMS connectivity at no additional charge*
- *Secure data management and audit trail as required by 21 CFR Part 11*

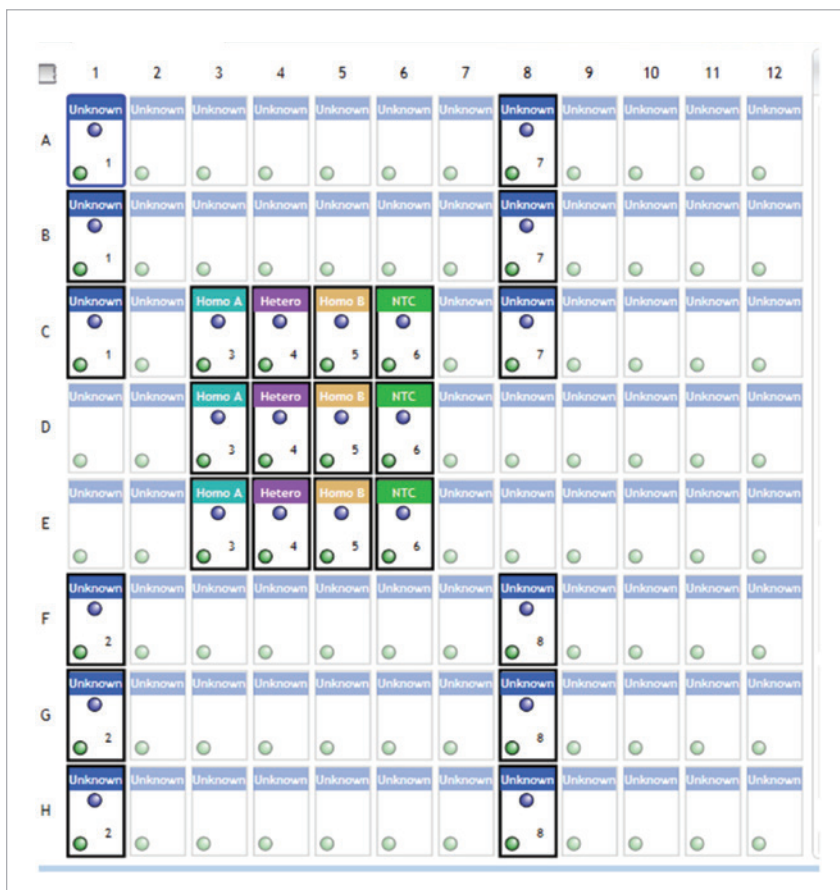


Figure 4. Easy-to-access, Plate and Well Maps.



## Pre-Programmed Assays

Pre-programmed assays allow for easy selection of calibrators, normalizers and sample associations.

- Quantitative PCR
- Allele Discrimination
- Comparative Quantification

In high throughput gene expression studies, standard curves are not used. Relative quantity calculation is automated using the Comparative Quantitation module in the AriaDx Software. See Figure 5 for details.

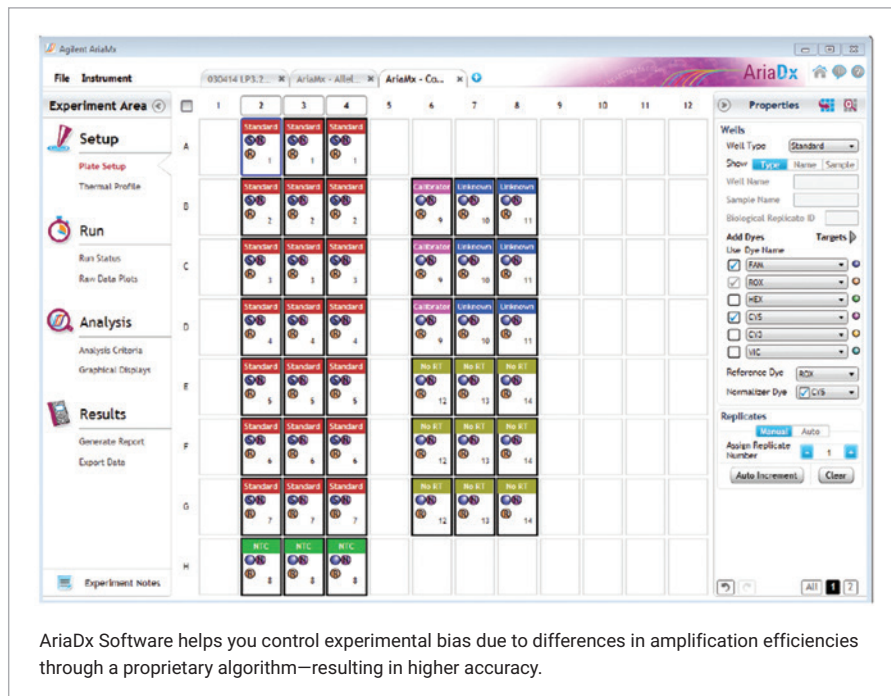


Figure 5. Set-up Screen for Comparative Quantitation.

Note: 21 CFR Part 11 compliant software is available at an additional cost. HRM analysis feature is not available for AriaDx.

## Easy Reporting

Easily export raw data in multiple formats with the touch of a finger. Select only those datasets you want displayed using custom data reports:

- Plate Set-Up
- Experimental Thermal Profile
- Raw Data Plots
- Analysis Criteria
- Amplification Plots
- Allele Determination
- Graphical Displays
- Tabular Results
- Experimental Notes

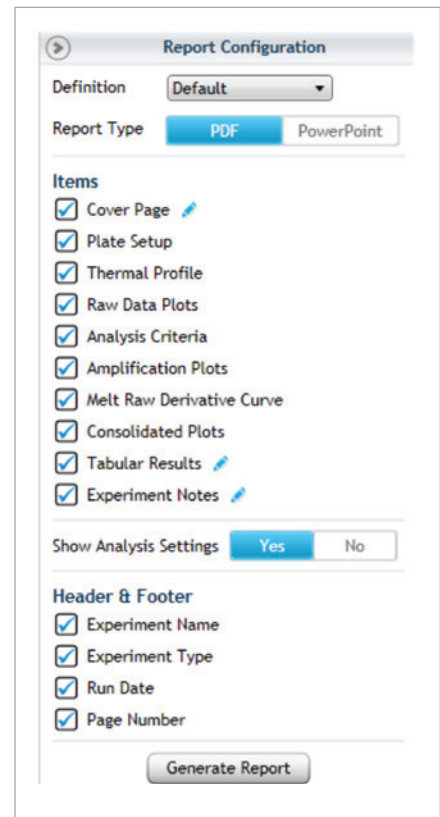


Figure 4. Report Configuration



# SERVICES

Give your data the attention it deserves. Regain time lost on peripheral tasks and focus on the critical processes that keep your lab successful.

## More Reliable Results and Achievements

Agilent CrossLab Diagnostic Service Agreements ensure productivity and availability for critical systems, they provide fast response times and priority handling for technical support and repairs. An Instrument Service Agreement can cover single or multiple instruments. They also are an ideal way to avoid unplanned expenses.

## Confidence, Not Compromise

Agilent's service group stands behind every instrument, giving you confidence in equipment functionality and data. Agilent has one global focal point: providing our customers with the best service available worldwide. It's no wonder that over 70% of our service employees stay with Agilent for over five years. Equipped with calibrated and traceable tools, our service technicians verify your equipment is running at maximum performance. Specialized remote monitoring (free to activate as needed) allows Agilent's service group to troubleshoot your instrument directly from the lab, providing confidence at every turn.

## Breadth of Services

Agilent's professional services team has been called upon for our support with customized training, systems and enterprise integration, workflow design, special engineering projects, protocol development, and project management. We have conducted over 100,000 successful system qualifications worldwide, and our genomics professionals operate in 65 countries.

- *Fast delivery for critical parts*
- *Dedicated instrument support for fast issue resolution*

Cost effective  
**On-time delivery**

## Rapid Assistance

Whatever the challenge, Agilent's broad resources address your needs. Expect reduced repair time with:

- **Call Center:** Rapid assistance with instrumentation, from our highly experienced genomics technical support professionals. That's why our technical support professionals are PhD scientists with extensive genomics experience.
- **Remote Monitoring:** Instrument health monitored remotely for greater troubleshooting flexibility.

## Warranty and Multi-Year Upfront Coverage

Each AriaDx includes the standard warranty for the country of purchase. If moved to another country, the destination country's standard warranty will apply to the instrument.\*

### Services available for purchase with AriaDx include:

- **Installation and Familiarization (I&F):** Have an Agilent Field Service engineer or member of our team install and familiarize you with the AriaDx.
- **Extended Warranty Diagnostic (Onsite repair):** Have an Agilent team member diagnose and repair to keep your AriaDx running at peak performance.
- **Agilent CrossLab Preventive Maintenance Diagnostic:** This factory-recommended service ensures reliable operation and accuracy for a range of diagnostic systems. Our certified service engineers utilize quality Agilent parts and supplies, and follow certified procedures for the highest levels of maintenance.
- **Agilent CrossLab Silver Diagnostic:** Our most comprehensive service plan covers both repair and maintenance of your system to meet all of your diagnostic laboratory needs. It includes preferred response over time-and-materials calls. All onsite repair visits and repair parts to restore your system to operating condition in addition to an annual Preventative Maintenance service. A cost-effective offering to help maximize your instrument's availability keep your system running at peak performance.

1-year base warranty sold with the instrument. Additional coverage can be purchased at a minimal cost.

1-YEAR	+1 YEAR	+2 YEARS	+3 YEARS	+4 YEARS
<b>Initial Warranty</b> Sold with instrument (covers 1 year)	<b>Extended Warranty 2</b> Adds additional year (covers 2 years)	<b>Extended Warranty 3</b> Adds additional year (covers 3 years)	<b>Extended Warranty 4</b> Adds additional year (covers 4 years)	<b>Extended Warranty 5</b> Adds additional year (covers 5 years)

\* Except for on-site warranty where Agilent does not have an applicable product-specific support presence or authorized representative in that country.

## Specifications Table

Feature	Description
Excitation Source	8 dye specific LEDs per optical module
Detection Sources	8 photodiodes
Optical Cartridges	SYBR/FAM HEX ROX CY3 CY5 ATTO425 6 slots, swappable optical modules
Dye Selection	Excitation and Emission
Reaction Volume	10 µl to 30 µl
Chemistries Supported	SYBR and Probes
Thermal System	Six Peltiers made from two ceramic plates with semi-conductor elements, 96-well
Thermal System Temperature Range	25.0 – 99.9°C Heating: 6.0°C/sec Cooling: 3.0°C/sec (Median), 2.5°C/sec (Average) Accuracy: ± 0.2°C or better at typical annealing, amplification, and denaturation temperatures
Dynamic Range	9
Experiment Types	Quantitative PCR with dye, Quantitative PCR with probe, Allele Discrimination with probe, Comparative Quantitation, User Defined
Uniformity	± 0.4°C
Data Acquisition Time	<3 seconds for all
Cq Uniformity	Cq St Dev <0.20 at fast cycling (5s 95°C/10s 60°C)
Electrical Power (input)	100 – 240VAC, 50/60Hz, 1100VA
Operating Environment	20 – 30°C, 20 – 80% non-condensing humidity, 7500 feet, max altitude
Weight	50 lbs. (23 kg)
Dimensions	19.7" W x 18.1" D x 16.5" H (50cm x 46cm x 42cm)
Sample Containers	96-well plates, strip tubes; 0.2mL tubes
Warranty	<ul style="list-style-type: none"> <li>• 1 year warranty is standard with the instrument</li> <li>• 5 year warranty and service packages available</li> </ul>
Onboard Analytics	<ul style="list-style-type: none"> <li>• Thermal, physical, interactive (sensors) tests</li> <li>• Extended: 125 performance points tested in 30 minutes</li> <li>• Start-up: 59 performance points tested in ~1 minute</li> <li>• Optional bypass of both features</li> </ul>
Services (upon request)	<ul style="list-style-type: none"> <li>• Installation &amp; Familiarization</li> <li>• Diagnostic Preventative Maintenance</li> <li>• Additional service contract to extend warranty coverage up to 5 years</li> <li>• Return-to-Agilent Instrument Exchange Program</li> <li>• Thermal block verification</li> </ul>
Operating System	<ul style="list-style-type: none"> <li>• Windows 7 and 10</li> </ul>
Run Modes	<ul style="list-style-type: none"> <li>• Stand alone</li> <li>• PC connected</li> <li>• LAN connected to PC (more than 20 instruments can be connected and monitored remotely)</li> <li>• USB connected, external devices</li> </ul>
Software	Free software including LIMS connectivity feature
Optical Module Calibration and Cleaning	<ul style="list-style-type: none"> <li>• All channels can be tested and calibrated</li> <li>• All attributes of optical channels are calibrated at the factory – LED light output, light path, mirror, and photodiode</li> <li>• Optical modules can be cleaned in lab without Agilent technician or sending back to factory</li> </ul>
Selected Applications	<ul style="list-style-type: none"> <li>• Quantitative and qualitative gene expression analysis</li> <li>• miRNA analysis</li> <li>• Genetic mapping</li> <li>• Genetic fingerprinting</li> <li>• NGS library quantification</li> <li>• 2-6 channel multiplex ability</li> <li>• Pathogen quantification</li> </ul>

### **USEFUL WEB LINK**

Software Updates  
Ensure your software is the most  
current version by visiting

**[www.agilent.com/genomics/  
ariadxsoftware](http://www.agilent.com/genomics/ariadxsoftware)**

### **TECHNICAL SUPPORT**

**[genomics\\_dx\\_tech\\_europe@agilent.com](mailto:genomics_dx_tech_europe@agilent.com)**

Other regions, consult:

**[www.agilent.com/genomics/contactus](http://www.agilent.com/genomics/contactus)**

# AriaDx

**BETTER SYSTEMS. BRILLIANT RESULTS.**



**SPEED**



**AGILITY**



**PRECISION**



Cost-Effective

Interchangeable

OPTICAL CARTRIDGES

Modular

## Ordering Information

Category	Part #	Description	Quantity	
Instrumentation	K8930AA	AriaDx Real-Time PCR instrument	1	
	Option 101	SYBR/FAM Optical Cartridge	1/pack	
	Option 102	ROX Optical Cartridge	1/pack	
	Option 103	HEX Optical Cartridge	1/pack	
	Option 104	CY3 Optical Cartridge	1/pack	
	Option 105	CY5 Optical Cartridge	1/pack	
	Option 106	ATTO425 Optical Cartridge	1/pack	
	Option 300	Electronic Tracking	1	
	Option 650	PC Kit	1	
AriaDx Software Upgrade (post instrument purchase)	K5822AA	Electronic Tracking of AriaDx Software (Upgrade)	1	
Optical Cartridges (sold without instrument)	G8830-67001	SYBR/FAM Optical Cartridge	1/pack	
	G8830-67002	ROX Optical Cartridge	1/pack	
	G8830-67003	HEX Optical Cartridge	1/pack	
	G8830-67004	CY3 Optical Cartridge	1/pack	
	G8830-67005	CY5 Optical Cartridge	1/pack	
	G8830-67006	ATTO425 Optical Cartridge	1/pack	
Plastics	401490	96-well plates, skirted and low profile	1 x 25/pack	
	401491	96-well plates, skirted and rigid	1 x 25/pack	
	401494	96-well plates, non skirted low profile	1 x 25/pack	
	401492	Adhesive plate seals	1 x 25 plates	
	401493	Low profile strip tubes for PCR and qPCR applications, without caps	8/strip x 120/box	
	401425	Strip caps for PCR and qPCR applications	8/strip x 120/box	
	401427	Optical Strip Caps	Box of 60	
Reagents	SYBR	5190-7708	SYBR Qualification Plate	1 plate/pack

Learn more:

[www.agilent.com/genomics](http://www.agilent.com/genomics)

U.S. and Canada

**1-800-227-9770**

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