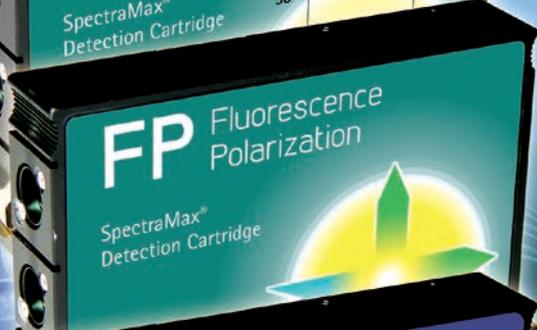


SpectraMax Paradigm Microplate Reader

User-upgradeable Multi-Mode Detection Platform



Key standard features



Every SpectraMax® Paradigm® Detection Cartridge starts with an application-optimized excitation energy source either in the form of a long-life, high-powered LED, xenon flash lamp, or high-powered laser. Concentrating the excitation light on the sample through label-specific optics, high levels of sensitivity and performance are reached. All this combined in the detection cartridge creates the ultimate no-compromise multi-mode detection platform.

Growing array of SpectraMax Paradigm Detection Cartridge capabilities

The flexible nature of the design allows for single or dual excitation and emission, to address existing needs and future expansion.

Automatic Z-height optimization

Z-Height focusing is enabled for both top- and bottom-read configurations for all appropriate read modes. By performing the Z-Height optimization, a lens is adjusted to address low volumes or varied well geometry.

No more gain

Fluorescence measurements no longer require you to adjust the gain. The SpectraMax Paradigm Detection Cartridge design utilizes an energy intensity optimization technique that allows the user to read up to seven logs of sample concentration in a single pass of a plate without any manual intervention.

Intuitive software and help tools

Industry-recognized SoftMax® Pro Microplate Data Acquisition and Analysis Software includes a variety of ready-to-read protocols to reduce setup time while speeding up research. The ready-to-read protocols address a variety of common assay types such as cell-based, binding, nucleic acid quantitation and protein purity, offering default settings as well as data analysis options. For more advanced users, SoftMax Pro Software offers very powerful data analysis options with custom formula writing, multiple curve fits, and data comparison features.

Applications

Fluorescence Intensity

- DNA/RNA/protein quantitation
- Endpoint qPCR
- Green fluorescent protein
- Receptor-ligand binding

Fluorescence Polarization

- SNP genotyping
- Protein-protein interactions
- Drug receptor studies

Absorbance

- DNA/RNA and protein purity
- ELISA
- Cell viability
- Enzyme kinetics
- Low volume applications

Time-Resolved Fluorescence

- Enzyme Activity
- TR-FRET Eu+3 chelates
- Protein-protein interactions
- Western blot detection

Glow Luminescence

- LIA
- Reporter gene
- cAMP
- Toxicity
- Screens
- Kinetics

Western blot applications

The ScanLater™ Western Blot Detection System enables first-of-its-kind western blot membrane detection in a multimode microplate reader platform. This system includes the ScanLater Western Blot Detection Cartridge, ScanLater Western Blot Kit and image acquisition software powered by SoftMax Pro® Software. Users can install the ScanLater Western Blot Detection Cartridge in the SpectraMax Paradigm System in just minutes to add western blot detection capability, rather than investing in dedicated western blot detection systems.



Low volume applications

Molecular Devices' unique SpectraDrop™ Micro-Volume Microplate offers the highest throughput solution for low volume measurement available on the market today. Innovative and flexible design features enable accelerated sample preparation time and increased laboratory productivity of DNA, RNA and protein samples as low as two μ L. The SpectraDrop Micro-Volume Microplate assures uniform and reproducible analysis and integrates seamlessly with the StakMax® Microplate Handling Stacker for greater research capacity.



User-upgradeable

Custom
Cartridges
Now
Available

The SpectraMax Paradigm Multi-Mode Detection Platform utilizes a patent-pending design that allows for real-time system configuration by the user in less than two minutes. This revolution in modularity makes no-compromise detection the norm. The broad array of SpectraMax Paradigm Detection Cartridges enables the user to perform an ever-evolving array of applications. Although your detection needs may change, your equipment can stay the same simply by adding a new detection cartridge.



TUNE Multi-Mode

- cAMP Quantitation
- Cell Migration
- Cell Viability and Proliferation
- Cytotoxicity
- DNA/RNA Quantitation (Fluorescent)
- ELISA (Fluorescent/Luminescent)
- Enzyme Kinetics
- GPCR
- Immunoassay
- Neurotransmitter Transporter Uptake
- Protease
- QBT Fatty Acid Uptake
- Reporter Assays



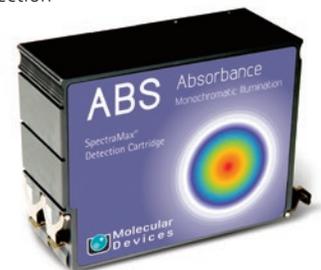
Homogeneous Time-Resolved Fluorescence (HTRF)

- Certified for detection of Cisbio's HTRF assays
- GPCR assays (cAMP cell-based, membrane-based)
- Kinases and ATPases
- Cytokine Assays



Scan Later Western Blot (WB)

- Protein Detection



Absorbance (ABS)

- DNA/RNA and Protein Purity
- ELISA
- Cell Viability
- Enzyme Kinetics
- Low Volume Applications



Fluorescence Intensity (FI)

- DNA/RNA/Protein Quantitation
- Endpoint qPCR
- Green Fluorescent Protein
- Receptor-Ligand Binding
- FRET



Fluorescence Polarization (FP)

- SNP Genotyping
- Protein-Protein Interactions
- Drug Receptor Studies



Time-Resolved Fluorescence (TRF)

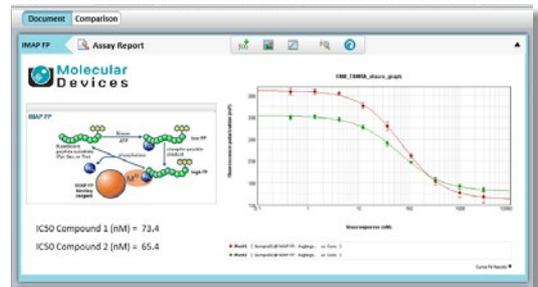
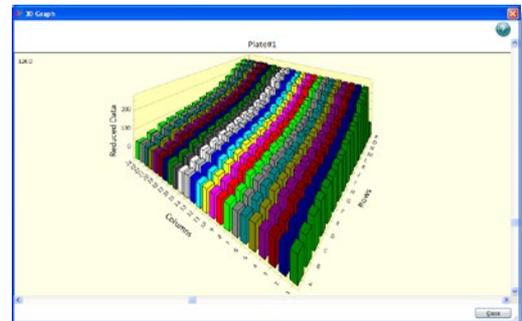
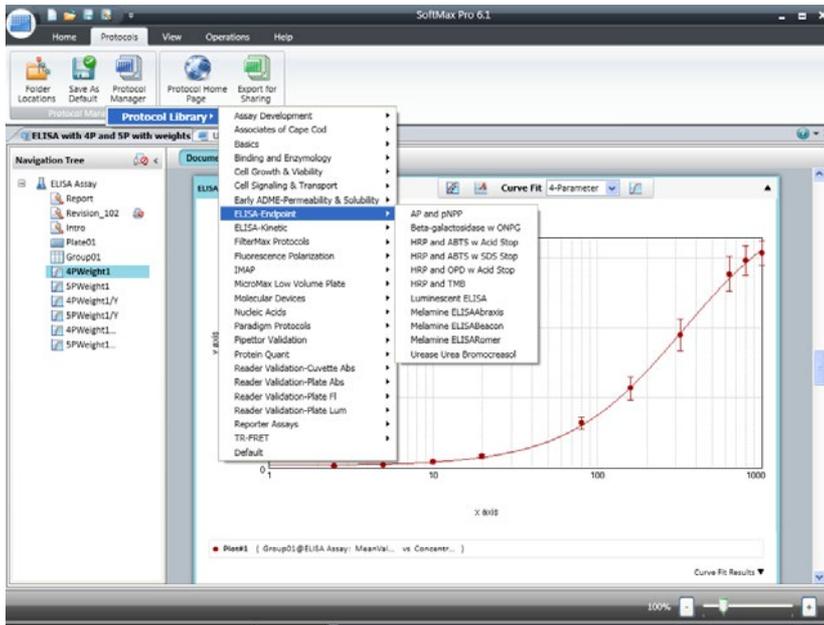
- Enzyme Activity Assays
- cAMP Quantitation
- Protein-Protein Interactions



Glow Luminescence (LUM) Dual Color Luminescence

- LIA
- Reporter Gene
- cAMP Quantitation
- Toxicity Screening
- BRET
- Chroma-Glo

Simple and customizable



Simple setup

SoftMax® Pro Microplate Data Acquisition and Analysis Software helps take advantage of an instrument's capabilities by providing:

- Automatic instrument recognition
- Over 140 pre-written protocols for popular assays
- A wide variety of scan types: Endpoint, Kinetic, Spectral Scanning, and Well Scanning
- Standard data reduction settings are pre-selected as default
- The spectral optimization wizard for signal window optimization*
- Patented PathCheck® Sensor to automate well volume normalization for OD measurements**
- Automatic data recovery feature

* Available with TUNE cartridge only

** Available with absorbance cartridge only

Tailored data analysis

Stop wasting time exporting data to external applications for analysis. In addition to the predefined experimental protocols, use the straightforward yet powerful programming capabilities of SoftMax Pro Software to further enhance specialized data collection and analysis results.

- Perform multiple calculation on one data set with the Plate Cloning option
- Analyze data in a single plate, across multiple plates, or between different groups
- Use comparison view to look at multiple sections of your experiment side-by-side
- Zoom into desired wells, then adjust reduction parameters while collecting realtime data for Kinetic and Spectral Scans
- Report data using conditional formulas and apply variable weighting
- Create results summary reports with live mini-graphs and tables

Flexible calculations and formulas

Use the extensive set of predefined Reductions, Columns, and Summary formulas, or create custom calculations with ease thanks to our Syntax Helper.

- Perform extensive mathematical calculations within and across multiple columns of data
- Apply a single standard set across multiple plates to perform cross-plate analysis and interpolation
- Easily analyze common calculations like EC_{50} and Z-factors to identify potency and assay quality
- View side-by-side graphs and tables from different sections of your experiment
- Clone your plate data for multiple data reduction options
- Graph your results with over 15 curve fit options

General specifications

Light Source.....	High Powered LED or Xenon Flash Lamp
Plate Formats.....	6- to 1536-well
Temperature Range.....	4°C above ambient to 45°C
Injectors.....	Option Available
Uniformity.....	± 0.75°C
Shaking.....	Linear, Orbital
Environmental Control.....	Gas Quick Connect
Endpoint Measurement.....	All Modes
Kinetic Measurement.....	All Modes
Well Area Scanning.....	All Modes
Wavelength Scanning.....	Abs, FI, TRF, LUM
Dimensions W x H x D cm (in.).....	39 (15.4) x 45 (17.7) x 63 (24.8)
Weight, without Cartridges.....	45 kg (99 lbs)
Power Source.....	100-240 VAC, 2 A, 50/60 Hz
Robotic Compatible.....	Yes

Technical specifications

	Optimized	Guaranteed*
Fluorescence Intensity (FI) (Fluorescein)		
96-well (200 µL)	0.020 fmol	0.100 fmol
384-well (75 µL)	0.012 fmol	0.100 fmol
1536-well (8 µL)	0.003 fmol	0.030 fmol
Fluorescence Polarization (FP) (Fluorescein 1 nM, SD)		
96-well (200 µL)	0.5 mP	3 mP
384-well (75 µL)	0.5 mP	3 mP
1536-well (8 µL)	1.5 mP	6 mP
Time-Resolved Fluorescence (TRF) (Europium)		
96-well (200 µL)	2.5 amol	10.0 amol
384-well (75 µL)	1.0 amol (100 µL)	5.0 amol
1536-well (8 µL)	0.6 amol	1.5 amol
Luminescence (LUM) (ATP-Glow)		
96-well (200 µL)	0.30 fmol	0.50 fmol
384-well (50 µL)	0.30 fmol	0.50 fmol
1536-well (8 µL)	0.15 fmol	0.20 fmol
Linear Dynamic Range:.....	> 6 decades	
Wavelength Range:.....	Abs: 230-1000 nm	
.....	FI, TRF, LUM: Ex 360-790 nm, Em 400-050 nm	
Wavelength Selection:.....	1.0 nm increments	
Wavelength Bandwidth:.....	Abs: 4.0 nm; FI, TRF, LUM: Ex/Em ~20nm	
Wavelength Accuracy:.....	Abs: ± 1 nm; FI, TRF, LUM: ± 2 nm	
Wavelength Repeatability:.....	Abs: ± 0.5 nm; FI, TRF, LUM: ± 1 nm	
Photometric Range:.....	0-3.5 OD	
Photometric Resolution:.....	0.0001 OD	
Photometric Accuracy:.....	± (2% + 0.010 OD), @ 2 OD, 405 nm	
Photometric Precision:.....	± (1% + 0.005 OD), @ 2 OD, 405 nm	

* For properly functioning, operated, and maintained equipment.

Ordering information

PARADIGM SpectraMax Paradigm Multi-Mode Microplate Reader Base Instrument

- SoftMax Pro Microplate Data Acquisition and Analysis Software
- 2 PMT
- Integrated Shaking and Temperature Control
- Power Cable, RS232 Serial Cable, Serial USB adapter
- Compatible with 6-, 24-, 96-, 384-, and 1536-well microplates

Note: Detection Cartridges and PC not included.

Accessories: StakMax® Microplate Handling Stackers
SpectraDrop Micro-Volume Microplate
SpectraMax Paradigm System injector option



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Check our website for a current listing of worldwide distributors.

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