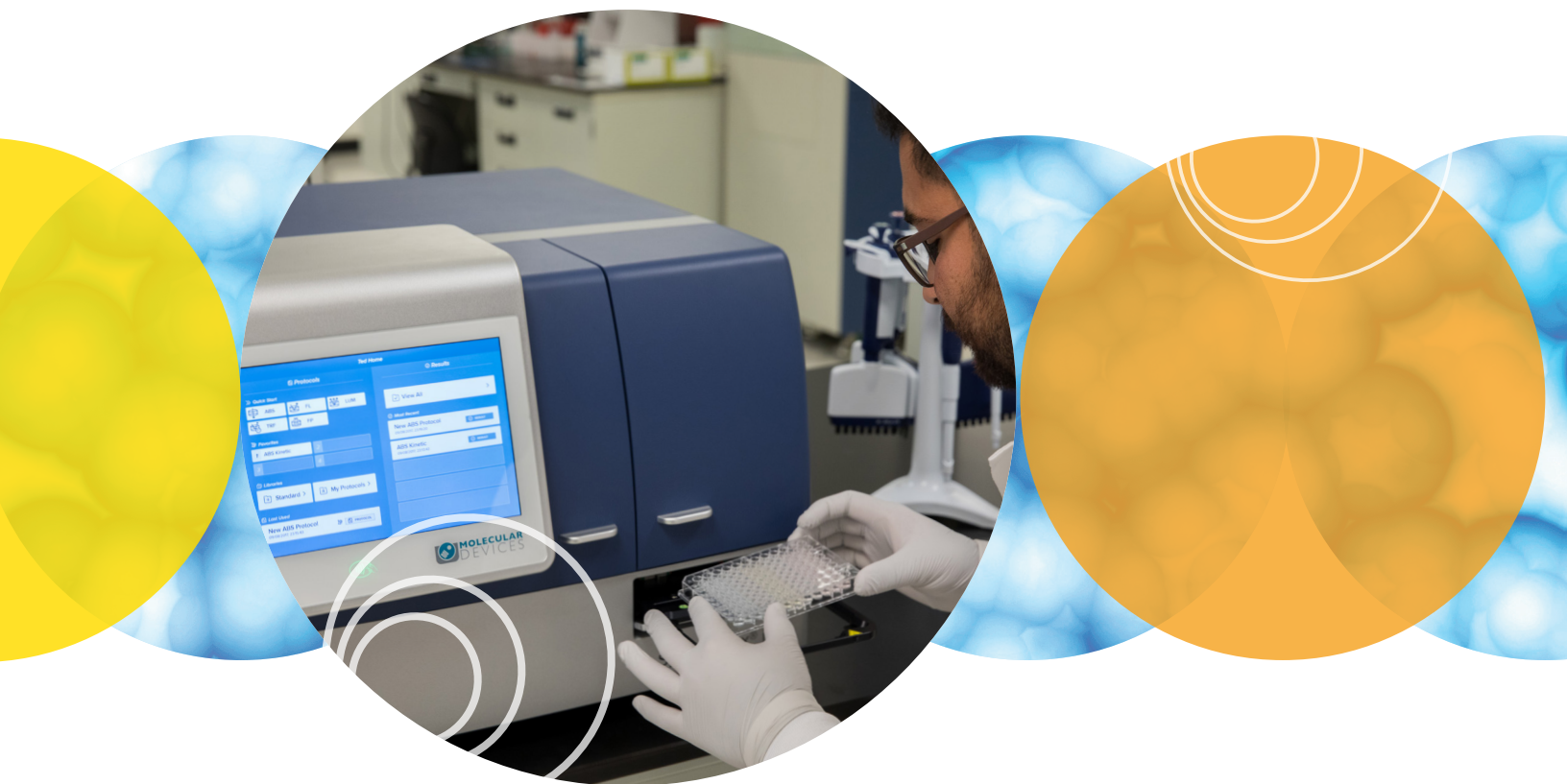


# SpectraMax iD5 Multi-Mode Microplate Reader

Your all access pass to your next breakthrough



## KEY BENEFITS

- Use the touchscreen to easily set up protocols, run experiments or view tutorial videos
- Automatically identify filter sets using NFC functionality, simplifying workflows and eliminating confusion
- Perform western blot detection
- Push data to workstations with QuickSync, eliminating the need to retrieve data from the instrument



# SpectraMax iD5 Multi-Mode Microplate Reader

Five-mode microplate reader with automatic filter identification and western blot capability

The SpectraMax® iD5 Multi-Mode Microplate Reader is the complete laboratory solution to help you increase your research capabilities and comes with built-in absorbance, fluorescence, luminescence, time-resolved fluorescence (TRF), and tunable fluorescence polarization (FP) read modes. In addition, the SpectraMax iD5 reader can be expanded to include bottom-read luminescence, TR-FRET, HTRF®, BRET, dual luciferase reporter assays with injectors, and western blot detection.

With optimized reagents and the industry-leading data acquisition and analysis tool, SoftMax® Pro 7 Software, the SpectraMax iD5 reader is your all access pass to helping you unleash your brilliance.

## UNLEASH YOUR BRILLIANCE



### Your all access pass to personalized workflows

Built-in near-field communication (NFC) functionality in the SpectraMax iD5 reader enables you to pull up your custom protocols with a single tap, saving you precious time better spent on your research.

Using built-in near-field communication (NFC) tags, the SpectraMax iD5 reader automatically detects the identification code of the filter to recognize the slide and filter configuration, eliminating confusion and simplifying your filter workflow.

It features a large, high-resolution touchscreen interface with embedded SoftMax Touch Software allowing you to set up custom protocols, take advantage of preloaded protocols, and run your experiment without the need for a dedicated computer workstation.

### A complete solution to answer all your research needs

The SpectraMax iD5 reader measures absorbance, fluorescence, luminescence, TRF, FP, and much more. The superior optical system includes a xenon flash lamp and features an ultra-cooled photomultiplier tube (PMT) that reduces background noise for excellent sensitivity and a wide dynamic range.

Featuring temperature control up to 66°C, linear, orbital, and double orbital shaking, a four-monochromator optical pathway with high efficiency gratings, option to use filters or a hybrid mix of monochromator and filter-based reads, well scanning up to a 20x20 read matrix, spectral scanning and detection of plate formats from 6- to 384-wells, the SpectraMax iD5 reader is the complete solution for all your research needs.

# Key features



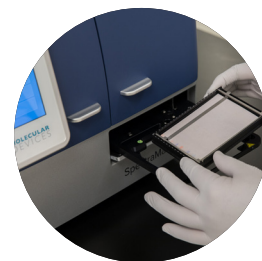
## Automatic filter identification

Using built-in near-field communication (NFC) tags, the SpectraMax iD5 reader automatically detects the identification code of the filter to recognize the slide and filter configuration, eliminating confusion and simplifying your filter workflow.



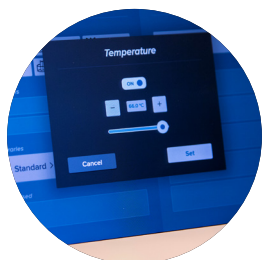
## Capture flash assays with ease

The SpectraMax iD5 reader is injector-ready allowing you to expand your lab's capabilities to include flash applications such as dual luciferase and ATP assays. The SpectraMax Injector System with SmartInject™ Technology features low dead volume (10  $\mu$ L), overflow protection, and ensures equal mixing across the plate for high-precision experiments.



## Western blot capable

The SpectraMax iD5 reader, utilizing an optional enhanced TRF detection module, is capable of scanning and analyzing your membranes for western blot data. The Europium-incubated membranes are resistant to photo bleaching and allow you to read the membranes without loss of signal for longer periods.



## Flexible temperature control

Simple-to-use temperature control allows you to adjust your experiment's conditions from ambient up to 66°C, expanding your laboratory's capabilities to include temperature sensitive assays.



## Enhanced security

In busy, multi-user labs, reader access control is crucial. The SoftMax Touch Software secures user accounts with PIN- or NFC-protection and features a lock screen option for long kinetic reads. Data is stored on the reader's hard drive ensuring safe data storage before, during, and after transfer to a computer for analysis.



## Intuitive touchscreen

Easy-to-use touchscreen interface allows you to easily set up your experiments, use preconfigured protocols, or view tutorial videos.

## Expanded read mode capabilities

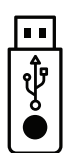
Equipped for high performance, the SpectraMax iD5 is HTRF®-certified, DLReady, and SpectraMax® DuoLuc™-certified. Microplate reader assays requiring infrared (IR) or red-shifted assays can be read with great sensitivity using the iD5 reader's filter system. Specialized filters allow for IR fluorescence detection ranging from 10-40 times more sensitive than conventional monochromator detection reader. With the novel filter system, assays such as hydrogen peroxide detection assays and IR antibody-binding assays can be run confidently with Molecular Devices set of IR filters.



## QuickSync data push technology

Reduce the amount of time you spend collecting data and increase your productivity. The SpectraMax iD5 reader allows you to interact with your data any way you want from anywhere you want. View your data quickly using the large touchscreen interface, export your data to a USB drive for analysis in the program of your choice, or analyze your data using the industry's leading data acquisition and analysis tool, SoftMax Pro 7 Software. The SpectraMax iD5 reader also features network connectivity that allows you to walk away from the instrument to focus on additional research. Data is automatically delivered to any workstation on the same network, eliminating the need to physically retrieve data from the instrument.

*View data on the large touchscreen for quick reading of results*



*Export data to a USB drive for analysis in the program of your choice*

*Automatically send data to any workstation on the same network*



*Use SoftMax Pro 7 Software for advanced data acquisition and analysis*

# Reliable performance with a proven track record



## SoftMax Pro GxP Compliance Software

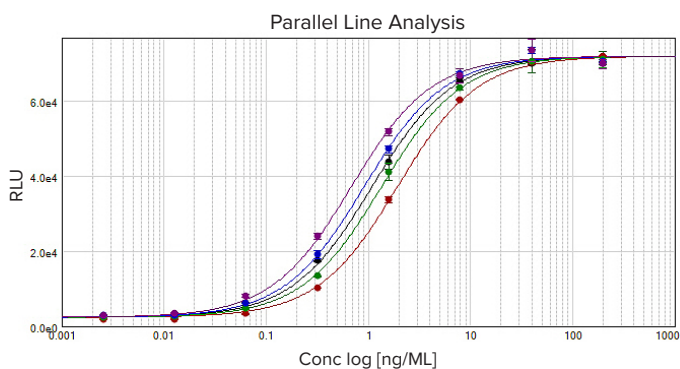
SoftMax Pro GxP Compliance Software extends Molecular Devices leading data acquisition and analysis solution into regulated laboratories working under GMP, GLP, 21 CFR Part 11, and other similar guidelines for secure electronic records.

### Secure, traceable electronic recordkeeping

- Controlled user access through a granular permission structure and unique logins
- Electronic signature support for verification, authorization, and approval
- Audit trails to document the history of user actions for each data file
- Local and remote administration of user accounts for straightforward deployment

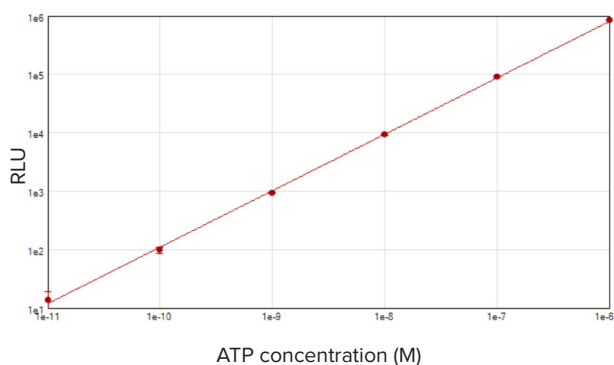
### Save time and reduce cost

- Extensive suite of tools available for validation can reduce the cost and time of validation by 50% as compared to using multiple platforms to collect and analyze data
- Provides end-to-end chain of custody from capture through analysis to validation of data
- Validation tools for PLA, 4-P and 5-P curve fits
- Ready-to-use data for OQ confirmation tests
- Printable IQ/OQ documents for GLP/GMP paper trail

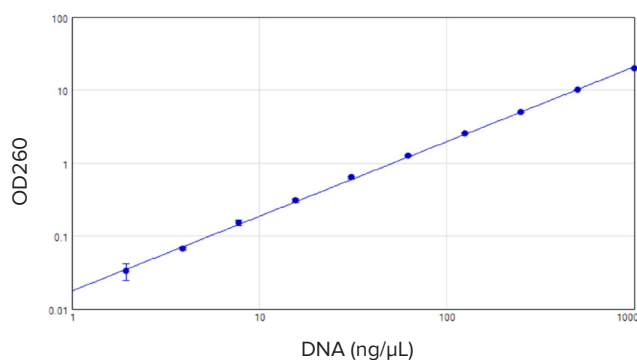


## Built on a foundation of excellence

For nearly 30 years, Molecular Devices has provided scientists with tools to expand the boundaries of their research. Our microplate readers are the industry's most cited instruments and have empowered life science researchers to advance protein and cell biology, breaking the barriers to novel, landmark discoveries. The SpectraMax iD5 reader is built on the same foundation that has made our entire SpectraMax microplate reader product line among the most trusted in the industry.



**An ATP standard curve spanning five decades was run using the ATPlite 1step Luminescence Assay System (PerkinElmer) on the SpectraMax iD5 reader.** Standard concentrations ranged from  $1 \times 10^{-11}$  M to  $1 \times 10^{-6}$  M. A wide linear dynamic range ensures accurate assay results across a broad span of sample types. Standards were plotted using a log-log curve fit in SoftMax Pro Software.



**The SpectraMax iD5 reader is fully compatible with the SpectraDrop™ Micro-Volume Microplate, enabling quantitation of precious low-volume samples.** 4-μL DNA standards from 2 ng/μL to 1000 ng/μL were read in absorbance detection mode with a preconfigured protocol in SoftMax Pro Software. Performance matching the 2 ng/μL sensitivity specification is demonstrated here.



## Technical specifications – SpectraMax iD5 reader

### General specifications

Dimensions (in.)	15.79 (H) x 20.94 (W) x 23.54 (D)
Dimensions (cm)	40.1 (H) x 53.2 (W) x 59.8 (D)
Weight	88.1 lbs. (40 kg)
Power requirements	100–240 VAC, 2 A, 50/60 Hz
Robotic compatible	Yes

### General performance

Plate formats	6 to 384 wells
Light source	Xenon flash lamp
Reading capabilities	Microplates, cuvettes (via adapter)
Detectors	Photomultiplier Tube and Photodiode
Shaking	Linear, orbital and double orbital
Temp. control	5°C above ambient to 66°C <sup>1</sup>
Temp. uniformity	± 0.75°C
Temp. accuracy	± 1°C at 37°C set point
Spectral scanning	Abs, FI, Lum, TRF
Endpoint reading	Abs, FI, Lum, TRF, FP, FRET, TR-FRET
Kinetic reading	Abs, FI, Lum, TRF, FP, FRET, TR-FRET
Well scanning	Over 20 by 20
Wavelength selection	1.0 nm increments

### Standard read times (minutes:seconds)

	96 wells	384 wells
Absorbance	0:30	1:30
Fluorescence intensity <sup>2</sup>	0:30	1:30
Luminescence <sup>2</sup>	0:30	1:30
Time-Resolved Fluorescence	0:30	1:30
Fluorescence Polarization	1:00	3:00

### Absorbance photometric performance

Wavelength range	230–1000 nm
Wavelength bandwidth	4.0 nm full width half maximum
Wavelength accuracy	± 2.0 nm across wavelength range
Wavelength repeatability	± 1.0 nm
Photometric range	0–4.0 OD
Photometric resolution	0.001 OD
Photometric accuracy	< ±0.010 OD ±1.0% 0–3 OD VIS, 0–3 OD UV
Photometric precision (repeatability)	< ±0.003 OD ±1.0% 0–3 OD VIS, 0–3 OD UV
Stray light	< 0.05% @ 260 nm, 280 nm

### Fluorescence intensity performance

Wavelength range (EX mono)	250–830 nm
Wavelength range (EM mono)	270–850 nm
Wavelength range (Filters)	See accessory list
Wavelength selection (mono)	1.0 nm increments
Dynamic range	> 6 logs

### Optimized top sensitivity (fluorescein)

	Monochromator	Filters
96 wells	1 pM	0.3 pM
384 wells	1 pM	0.5 pM

### Optimized bottom sensitivity (fluorescein)

	Monochromator	Filters
96 wells	2 pM	2 pM
384 wells	2.5 pM	2.5 pM

### Fluorescence polarization performance

Wavelength range (EX mono)	(300-) <sup>3</sup> 400–750 nm, 1.0 nm increments
Wavelength range (EM mono)	(300-) <sup>3</sup> 400–750 nm, 1.0 nm increments
Wavelength range (Filters)	See accessory list

### Detection limit<sup>4</sup>

	Monochromator	Filters
96 wells black	2 mP @ 10 nM	1 mP @ 1 nM
384 wells black	2 mP @ 10 nM	2 mP @ 1 nM
Measurement range <sup>5</sup>	Delta > 200 mP	Delta > 320 mP

### Luminescence performance

Wavelength range	300–850 nm 300–650 nm for “All Wavelengths” setting
Wavelength selection	Choice of simultaneous detection of all wavelengths or selection in 1.0 nm increments
Dynamic range	> 7 decades
Cross-talk	< 0.1% in white 96- and < 0.2% in 384-well microplates
Detection limit	20 amol ATP (“Flash” luminescence using Promega ENLITEN® ATP Assay System)

### Time-Resolved Fluorescence performance

Wavelength range (EM mono)	450–750 nm
Wavelength range (EX filter)	350 nm
Wavelength range (EM filter)	490 nm (Terbium), 616 nm (Europium) For other filters, please see accessory list
Linear dynamic range	Up to 5 logs

### Detection limit

	96 wells (white)	384 wells (white)
Standard TRF	30 fM Europium (6 amol/well)	30 fM Europium (3 amol/well)
Enhanced TRF Module (Optional)	10 fM Europium (2 amol/well)	10 fM Europium (1 amol/well)

### Injector system with SmartInject Technology (optional)

Injectors	2
Read modes	Absorbance, fluorescence, luminescence
Dispense accuracy	± 5% at 100 µL
Dispense precision	CV ≤ 2% at 100 µL
Dead volume	Injector Tubing: 250 µL < 10 µL with Reverse Prime function

<sup>1</sup> For > 66°C, minimum 25°C ambient temperature is required.

<sup>2</sup> 10 msec integration time for fluorescence measurement. 100 msec integration time for luminescence for a 96-well plate and 40 msec integration time for a 384-well plate.

<sup>3</sup> Requires optional UVIS polarizer

<sup>4</sup> 1x Stdev Fluorescein replicates [mP]

<sup>5</sup> ThermoFisher P3088, FP One-Step reference kit

**SpectraMax iD5 Multi-Mode Microplate Reader**  
**YOUR ALL ACCESS PASS TO**  
**YOUR NEXT BREAKTHROUGH**

[moleculardevices.com/iD5](http://moleculardevices.com/iD5)



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