

# Infitek

## MICROPLATE READER

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## Microplate Reader

### MPR-D110



#### Main Features

- ◆ 7-inch color LCD display with touchscreen operation
- ◆ Eight channel optical fiber measurement system, imported detector.
- ◆ Fully enclosed design of optical path system, long-term maintenance free
- ◆ Endpoint method, kinetic method, suppression rate, single/dual wavelength measurement



#### Specifications:

Model	MPR-D110
Lamp	DC12V 22W Tungsten halogen lamp (Lifespan up to 5000h)
Optical path	8 channel vertical light path system
Wavelength range	400-1000nm
Filter	Default configuration 405、450、492、630nm, Can be installed up to 15 filters.
Reading range	0-4.000Abs
Linear range	0-3.000 Abs
Resolution	0.001Abs
Accuracy	±0.01Abs
Stability	±0.003Abs
Repeatability	≤0.3%
Reading Speed	Single Wavelength≤5s ;Double Wavelength≤7s
Vibration plate	Three kinds of linear vibration plate function, Adjustable 0-255 seconds
Display	7 inch color LCD screen, display the entire board information, touch screen operation
Software	Professional software, Can store 500 groups program, 100000 sample results, More than 10 kinds of curve fitting equation
	Configure the inhibition rate measurement module, dedicated to the field of food safety.
PC software	equipped with professional computer-based enzyme-linked immunosorbent assay software (no additional charge)
Power input	Use the power adapter design AC100-240V 50-60Hz
Weight	5Kg
Size	400mm (L) * 260mm (W) * 200mm (H)
Package Dimension (W*D*H)(mm)	600*440*400
G.W.(kg)	14.2KG

## Microplate Reader

### MPR-D111



#### Reliability

- ◆ 8-inch color LCD display with touchscreen operation
- ◆ Eight channel optical fiber measurement system, imported detector.
- ◆ Fully enclosed design of optical path system, long-term maintenance free
- ◆ Center positioning function, accurate and reliable.
- ◆ Three linear shaking functions with adjustable speed and time.
- ◆ Unique open Cut-Off judgment formula, Think what you think.
- ◆ End point method, two point method, dynamics, single 1 dual wavelength test mode.
- ◆ Printer :optional external printer
- ◆ PC software: equipped with professional computer-based enzyme-linked immunosorbent assay software (no additional charge)
- ◆ Configure the inhibition rate measurement module, dedicated to the field of food safety.

#### Specifications:

Model	MPR-D111
Lamp	DC12V 22W Tungsten halogen lamp (Lifespan up to 5000h)
Optical path	8 channel vertical light path system
Wavelength range	400- 1000nm (Optional 340-1100nm)
Filter	Default configuration 405、450、492、630nm, Can be installed up to 15 filters.
Reading range	0-5.000Abs
Linear range	0-3.500 Abs
Resolution	0.001Abs
Accuracy	±0.01Abs
Stability	±0.002Abs
Repeatability	≤0.2%
Reading Speed	Single Wavelength≤5s ;Double Wavelength≤7s
Incubation function	RT.+4°C to 50°C, with an accuracy of ±0.5°C at 37°C (optional).
Vibration plate	Three kinds of linear vibration plate function ,Adjustable 0- 255 seconds
Display	8 inch color LCD screen, display the entire board information, touch screen operation.
Software	Professional software, Can store 100 groups program, 100000 sample results, More than 10 kinds of curve fitting equation.
Interfaces	COM + USB ports (communication, printing, USB flash drive).
Power input	AC100-240V 50-60Hz
Weight	11Kg
Size	433mm(L)* 320mm(W)*308mm(H)
Package Dimension (W*D*H)(mm)	620*520*460
G.W.(kg)	21Kg

## Microplate Reader

### MPR-H200BN



#### Main Features

- ◆ Single or dual wavelength measurements, comprehensive qualitative and quantitative data-evaluation functions with cut-offs, curve-fits and transformation formulas
- ◆ Proven optical system with 8 channel optical fiber scanning, auto plate centering system positions the center of the cell accurately
- ◆ Performing 12 different tests in just one plate
- ◆ Multi-forms in result output including patient comprehensive report
- ◆ With USB interface, easily connect to PC , comprehensive functions with Found Workstation PC software
- ◆ Printer :Built-in Thermal Printer,
- ◆ PC software: equipped with professional computer-based enzyme-linked immunosorbent assay software (no additional charge) elisa Microplate Reader/elisa plate reader

#### Technical Specification

Model	MPR-H200BN
Microplate types	96/ 48 -well plate
Photodetector	Silicon Photodiode
Light source	LED 8v/50w (Lifespan up to 10000h)
Wavelength range	400nm~725nm
Standard filters	405,450,492,630nm & 4 optional
Reading range	0.000~4.000A
Accuracy	±0.008A
Reproducibility	≤0.2%
Stability	±0.003A
Sensibility	≥0.01 (L/mg)
Channel error	≤0.01A
Reading Speed	Single Wavelength≤3s ;Double Wavelength≤6s
Shaking	Linear Shaking , 3 speeds
Input	DIATEK ELISA Reader software
Interface	USB
Power supply	100~240V, 50~60Hz
Package Dimensions(W*D*H)(mm)	600*455*360
Net weight	7kg

## Microplate Reader

### MPR-H200BC



#### Features

- ◆ Brand-new shell and new operation system .
- ◆ New design and advanced operation system.
- ◆ Touch screen,7" high resolution colour LCD display
- ◆ 8 channel optical fiber scanning
- ◆ Single or dual wavelength measurements
- ◆ Performing 12 different tests just in one plate
- ◆ Extensive report with patient information
- ◆ Multiply report formats of patient information
- ◆ Auto Lamp adjustment and auto calibration
- ◆ Stable memory stores up to 200,000 test data,500 test projects
- ◆ User-friendly, easy to programme and can update software online
- ◆ Easily connect to PC , provide software

#### Specifications

Model	MPR-H200BC
Microplate types	96/ 48 -well plate
Photodetector	Silicon Photodiode
Light source	LED8v/50w (Lifespan up to 10000h)
Wavelength range	400nm~725nm
Standard filters	405,450,492,630nm & 4 optional
Reading range	0.000~4.000A
Resolution	0.001A
Accuracy	±0.008A
Reproducibility	≤0.2%
Stability	±0.003A
Sensibility	≥0.01 (L/mg)
Channel error	≤0.01A
Reading Speed	Single Wavelength≤3s ;Double Wavelength≤6s
Shaking	Linear Shaking , 3 speeds
Printer	Built-in Thermal Printer
PC software	equipped with professional computer-based enzyme-linked immunosorbent assay software (no additional charge)
Interface connections	2×USB-A,1×USB-B,1×RS-232, 1×Printer
Power supply	100~240V, 50~60Hz
Dimensions	475(L)×350(W)×210(H)mm
Net weight	8kg
Package Dimension (W*D*H)(mm)	610*460*360
G.W.(kg)	11.5KG

# Microplate Reader

## MPR-H200B



MPR-H200B

### Main Features

- ◆ Touch screen with 10.4" color LCD display, resolution 1024\*600
- ◆ Large Intelligent operation interface, easy connect to PC
- ◆ Flexible Plate layout with Blanks, Standards, Samples, Reference, QC in one screen
- ◆ Comprehensive qualitative and quantitative data-evaluation functions with cut-offs, curve-fits and transformation formulas
- ◆ More than 20 different report formats
- ◆ Auto Lamp adjustment and auto calibration
- ◆ Support keyboard and mouse with USB interfaces
- ◆ Stable memory stores up to twenty million test data, 500 test projects
- ◆ elisa Microplate Reader/elisa plate reader
- ◆ PC software: equipped with professional computer-based enzyme-linked immunosorbent assay software (no additional charge)



### Specification

Model	MPR-H200B
Microplate types	96/ 48 -well plate
Photodetector	Silicon Photodiode
Light source	LED 8v/50w (Lifespan up to 10000h)
Wavelength range	400nm~725nm
Standard filters	405,450,492,630nm & 4 optional
Reading range	0.000~4.000A
Resolution	0.001A
Accuracy	±0.008A
Reproducibility	≤0.2%
Stability	±0.003A
Sensibility	≥0.01 (L/mg)
Channel error	≤0.01A
Reading Speed	Single Wavelength≤3s ;Double Wavelength≤6s
Shaking	Linear Shaking , 3 speeds
Printer	Built-in Thermal Printer,
Interface connections	DVI,VGA,NETWORK INTERFACE,USB,AUDIO INTERFACE, RS-232
Power supply	100~240V, 50~60Hz
Package Dimensions (W*D*H)(mm)	590*490*390
Net weight	8kg



### Description







It is equipped with a 10-inch touch screen, no need to connect a computer. The layout, operating parameters, and algorithm settings and the other information can be completed by a single machine.

# Microplate Reader

## MPR-A300



### Features

-  Offers affordable high performance detection solutions, powered by monochromator and filter based technologies.
-  A high performance multimode detection instrument to provide a simple means of detecting advanced chemistry.
-  Compatible with the customers modular upgraded functions. Users can upgrade to equip the low volume u-Nano Ultra-Micro plate and the automatic injector as your need.
-  The built-in software of the instrument includes multiple algorithm analysis functions of standard curve, qualitative and quantitative, basic calculation, kinetics, spectroscopy and etc.
-  The instrument is operated by an Android system, a 10-inch touch screen, APP software, which provides quick-to-use and easy navigation through the control options. Exporting your result and data are seamless with a variety of options, including export to your local data network.
-  It has a code scanning function, which can not only identify the filters information, but also create a QR code for the experimental program or standard curve. Researcher can quickly import the experimental program into the instrument through the QR code.

## Specification

Model	MPR-A300
<b>Basic Information</b>	
Function	Absorbance, fluorescence, luminescence
Microplate Types	6/12/24/48/96/384 wells
<b>Absorbance</b>	
Light Source	High energy xenon flash lamp
Detector	PD
Wavelength Accuracy	2nm
Wavelength Repeatability(SD)	0.2nm
Half Width (FWHM)	<2.5nm
Wavelength Range	200-1000nm, 1nm step
Measuring Range	0-4 OD
Resolution	0.0001 OD
Accuracy	96-precision mode $\pm(1.0\%+0.003\text{Abs}) @ (0.0-2.0\text{Abs}) \pm 2.0\% @ (2.0-3.0\text{Abs})$
Repeatability	CV < 1.0 % or SD< 0.003 Fast (0.0-3.0Abs] CV < 0.5 % or SD< 0.003 Accurate (0.0-3.0Abs]
Stray Light	0.1 % @ 220nm
Linear	$R^2 > 0.999 @ [0.0-3.0\text{Abs}]$
Reading Time	96-well plate: fast <15s
<b>Fluorescence</b>	
Reading Mode	Top reading
Excitation Light Source	High energy xenon lamp
Detector	PMT
Wavelength Range	EX: 200-1000nm; EM: 270-850nm
Filter EX / EM	3 groups: EX485/EM530, EX523/EM564, EX624/EM692 (other wavelengths can be replaced)
Detection Limit	$\leq 1\text{pm}$
Linear Dynamic Range	6 logs
<b>Luminescence</b>	
Detector	PMT
Detection Limit	15amol / hole
Linear Dynamic Range	6 logs
Crosstalk	$\leq 0.005\%$
Wavelength Range	200-850nm
<b>Shaking &amp; Incubation</b>	
Shaking Mode	Linear, circular, double circular
Incubation Temperature	RT. +4 °C to 45 °C
Temperature Uniformity	$\pm 0.5\text{ °C} @ 37\text{ °C}$

## Specification

Model	MPR-A300
<b>Software</b>	
Software Interface	English
Screen Size	10-inch LCD display
Operation Method	Touch capacitive screen; use mouse
Data Capacity	10GB
Compatibility	Support PC software, Win7 to Win10 64 bit
Data Transmission and printer	Test data report can be uploaded to PC server via FTP.Connect the printer through the PC end
<b>Others</b>	
Instrument Port	2 USB A type ports / 1 USB B type port 1 Ethernet port RS 232 bus interface (injector connection)
Electricity	AC 100~240 V, 50~60 Hz
Power	160W, 24V, 6.67A (can be adjusted according to hardware requirements)
External Dimension(W*D*H)	420*550*386 mm
N.W./G.W.	33kg/70kg
Package Dimension(W*D*H)	800*780*800mm
<b>u-Nano Ultra-Micro Plate (Optional)</b>	
Number of Samples	1-16
Sample Detection Volume	2-4 $\mu\text{L}$
<b>Automatic Injector Module (Optional)</b>	
Quantity	1, 2
Dispensing Volume	5-1000 $\mu\text{L}$ , 1 $\mu\text{L}$ increment
Liquid Injection Speed	125-500 $\mu\text{L} / \text{s}$
Accuracy	$\pm 1\mu\text{L} @ 5-50\mu\text{L} \pm 2\% @ 51-1000\mu\text{L}$
Waste Liquid Collection	50mL
<b>PC Software (Optional) ReaderIt-II</b>	
<b>Modular Filter (Optional)</b>	
<b>ABS Optical Performance Validation Board (Optional)</b>	

# Microplate Reader

MPR-A200 MPR-A200HT



MPR-A200



MPR-A200HT

## Features

### High Quality Data and Stable Performance

Double beam optical system has the reference optical channel system, which make the data more stable;

After the instrument is started, the light source, grating, detector, position, etc. are automatically calibrated to ensure stable and reliable operation of the instrument;

Long life xenon lamp which can be used for  $10^9$  times.

### u-Nano Ultra-Micro Plate (Optional)

Quickly complete high-throughput quantification of micro nucleic acid and proteins without samples dilution;

Independent lower computer software, can quickly read the sample concentration and purity report; 1-16 samples can be detected at the same time, only 2-4 $\mu$ L sample volume is needed;

During continuous testing, you only need to wipe off the last batch of samples with dust-free paper.

Printer:Connect the printer through the PC end.

### Choose Detection Wavelength Freely with Raster

It adopts the xenon flash lamp as light source, which chooses the wavelength range from 200-1000nm with 1nm step by grating monochromator for the full spectrum scanning.

### Powerful and Flexible Software

User authority classification;

Powerful data analysis and process;

Standard curve library;

FTP (File transfer protocol);

Multiple report export types;

Printer:Connect the printer through the PC end.

### Cuvette Mode (only for MPR-A200HT)

Independent cuvette slot;

Detection wavelength 200-1000nm;

With incubation function, RT.+4 °C ~ 45 °C;

Independent software can be directly used for endpoint method, kinetics, spectral scanning and standard curve establishment.

## Description

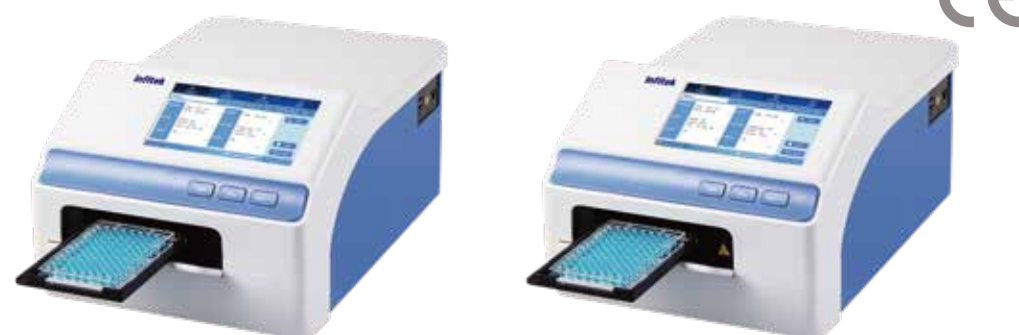
It's a high-quality microplate reader based on a monochromator with a wavelength range of 200-1000nm. It can be used for spectral scanning, endpoint method and kinetic detection. Suitable for 96-well plates and 384-well plates with and without lids.

## Specification

Model	MPR-A200	MPR-A200HT
Cuvette Mode	NO	YES
Microplate Type	96/384 wells	
Detection Mode	Absorbance	
Light Source	Xenon flash lamp/number of flashes $>10^9$	
Wavelength Range	200-1000nm	
Wavelength Accuracy	2nm	
Wavelength Repeatability	0.2nm	
Optical System	Monochromator, 1nm step	
Reading Range	0~4.0OD	
Bandwidth	<2.5nm	
Detection System	2 silicon photodetectors, one for measurement, one for reference	
Linear @450nm	$R^2 \geq 0.999$ , [0.0-3.0 Abs]	
Absorbance Accuracy @450nm	$\pm (1.0\% + 0.003 \text{ Abs})$ , (0 ~2.0 Abs); $\pm 2.0\%$ , (2.0 ~ 2.5 Abs]	
Absorbance Repeatability @450nm	CV<0.5% or SD<0.003 accurate mode; CV<1.0% fast mode	
Measuring Speed	96-well plate: fast mode <8 seconds, accurate mode <28 seconds (end point method)	
Shaking	Linear, 3 speeds adjustable	
Temperature Range	RT.+4 °C~45 °C	
Temp. Accuracy & Uniformity	$\pm 0.5\text{ °C}$ @37 °C, $\pm 0.5\text{ °C}$ @37 °C	
User Interface	Built-in software, independent use	
Optional	ReaderIt-II software, u-Nano Ultra-Micro Plate, ABS Optical Performance Validation Board	
Operation Display	Touch screen input, Android system, 10-inch LCD display full board information, can be connected with keyboard and mouse	
Internal Storage	16 G storage, can store more than 20,000 data files	
Port	1 type B USB interface, 2 type A USB interfaces, 1 network port	
Robotic Arm Compatibility	Temporarily incompatible	
Electricity	DC 24 V, 6.67 A	
External Dimension(W*D*H)	300*500*260 mm	
N.W./G.W.	15.5kg/21kg	
Package Dimension(W*D*H)	690*490*500mm	

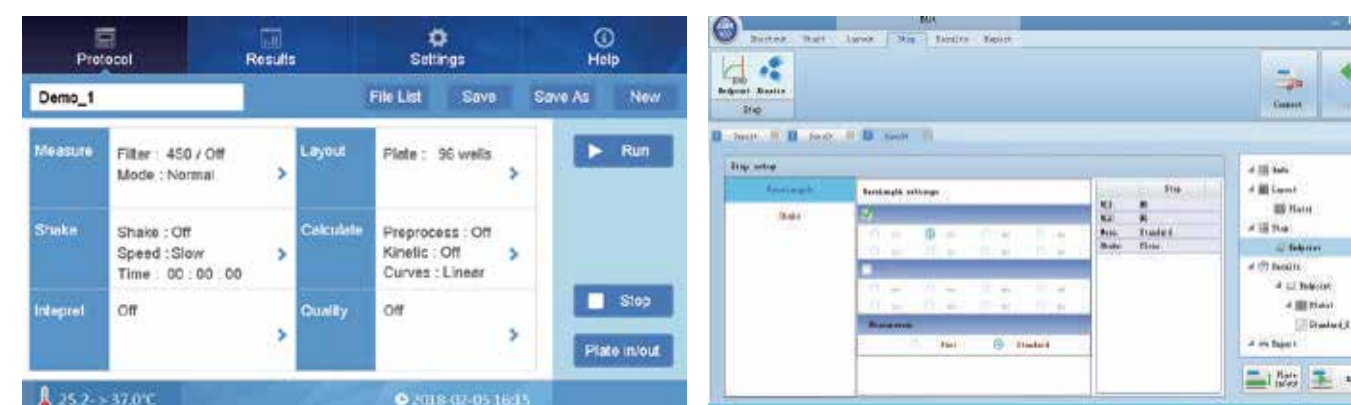
# Microplate Reader

MPR-100 MPR-100T



## Specification

Model	MPR-100	MPR-100T
Display	7 inch high resolution capacitive touch screen	
Light Source	6V, 10 W halogen lamp(Lifespan up to 10000h)	
Wavelength Range	340nm ~ 750nm	
Optical Filter	8-position filter wheel, standard 4 filters: 405nm, 450nm, 492nm, 630nm	
Absorbance Range	0-4.0Abs	
Resolution	0.001 Abs	
Linear Range	R <sup>2</sup> ≥0.995 absorbance range 0~3.0 Abs	R <sup>2</sup> ≥0.995 [0,3 Abs]
Wavelength Accuracy	±2nm	
Absorbance Repeatability	CV≤0.3 % [0,3 Abs); CV≤1 % [3,4 Abs)	
Absorbance Stability	≤0.005 Abs [0,3 Abs)	≤±0.005 Abs [0,2 Abs)
	≤2.0 % [3,4 Abs)	≤0.3 % [2,3 Abs) ≤2.0 % [3,4 Abs)
Absorbance Accuracy	≤±0.005 Abs [0,2 Abs)	≤±0.005 Abs [0,2 Abs)
	≤±0.01 Abs [2,3 Abs) ≤±1.5 % [3,4 Abs)	≤±1 % [2,3 Abs) ≤±1.5 % [3,4 Abs)
Sensitivity / Detector	≥0.01 A / photodiode	
Measuring Speed	6s / 96-well plate, fast mode; single wavelength <15 s / 96-well, dual wavelength <28s / 96-well (common mode)	
Shaking	Linear, 3 speeds adjustable	
Incubation Temperature Range	--	RT.+4 °C ~ 50 °C
Temperature Accuracy	--	±0.5°C @ 37 °C
Temperature Uniformity	--	±0.5°C @ 37 °C
User Interface	Built-in software, touch screen input, external mouse	
Internal Storage	Can store 1000 measurement programs and measurement results	
Port	3×USB ports, connecting computer, printer and USB drive	
Electricity	AC 100-240 V, 50-60 Hz, 2 A	
External Dimension (W*D*H)	295*440*225 mm	
N.W./G.W.	10kg/14kg	11kg/14kg
Package Dimension (W*D*H)	560*430*390mm	



MPR-100T Operation Interface

ReaderIt-I Software Interface

## Features

- ◆ High-resolution 7-inch color touch screen, easy to operate, no keyboard required, easy to use;
- ◆ Multiple software configuration, which can be used as a single machine or connected with a computer, and the results are exported in real time;
- ◆ Absorbance range: 0.0~4.000 Abs, meeting different measurement requirements;
- ◆ 8-position filter wheel, standard 4 filters, optional other filters;
- ◆ The built-in software can provide instrument control and data analysis, and can be directly connected to a U disk;
- ◆ The detection speed is fast, and the whole 96-well microplate detection can be completed within 6 seconds.
- ◆ MPR-100T has additional incubation function, with temperature range is from RT+4°C to 50 °C

## Advantages

- ◆ High-resolution 7-inch touch screen, simple and intuitive operation, no keyboard required;
- ◆ Visual layout, convenient and practical;
- ◆ The microplate reader is equipped with the standard control and data analysis software ReaderIt-I, which is convenient and quick for data detection;
- ◆ Powerful data analysis function and excellent result report, not only can run the analysis independently, but also run the analysis on the computer.

## Description

The MPR-100/MPR-100T is a high-quality light absorption microplate reader based on a filter, with a wavelength range of 340nm-750nm, suitable for scientific research and clinical applications. 7-inch touch screen color LCD display, no keyboard required, easy to use.

# Microplate Reader

## MPR-A400



## Features

- ◆ The absorbance detection is based on a monochromator, which can realize continuous spectrum detection of 200-1000 nm without a filter, which meets almost all absorbance detection applications. Fluorescence detection adopts the detection light path of the filter. The fluorescence path composed of a Xenon lamp, a filter and a PMT can fit the characteristics of fluorescent dyes to the greatest extent, ensuring excellent detection performance and high-quality detection effect. The optimized optical path design can be used for time-resolved fluorescence detection with higher sensitivity requirements. Luminescence detection also uses a PMT as the detector, and the sensitivity can reach a dynamic range of more than 6 orders of magnitude.
- ◆ The detachable modular fluorescence detection filter can identify the filter information simply by scanning the code. The modular design provides convenient filter replacement, reducing operation time.
- ◆ The instrument is equipped with a 10-inch touch screen. According to the researcher's operation habit of the instrument, the screen angle can be converted through the LCD control button to facilitate the researcher's setting of the instrument. The instrument has no need to connect to a computer. The layout, operating parameters, and algorithm and the other settings can be completed by a single machine. The built-in software of the instrument includes multiple algorithm analysis functions of standard curve, qualitative and quantitative, basic calculation, kinetics, spectroscopy and etc, which makes it more convenient for the processing and research of experimental data.
- ◆ Incubation utilizes PID temperature control technology. When the experimental plate is covered or sealed, the edge effect can be minimized through the temperature differential between the top and bottom of the plate, ensuring the data stability of the sample in the process of kinetic analysis.
- ◆ In addition, the instrument has a code scanning function, which can not only identify the filters information, but also create a QR code for the experimental program or standard curve. Researchers can quickly import the experimental program into the instrument through the QR code.

## Description

The multi-mode microplate reader is specifically designed for medical, biological and pharmaceutical research and development institutions to meet the needs of various drug development and life science research. The reliable detection performance ensures high-quality analysis based on molecular biology, biochemistry and cell biology.

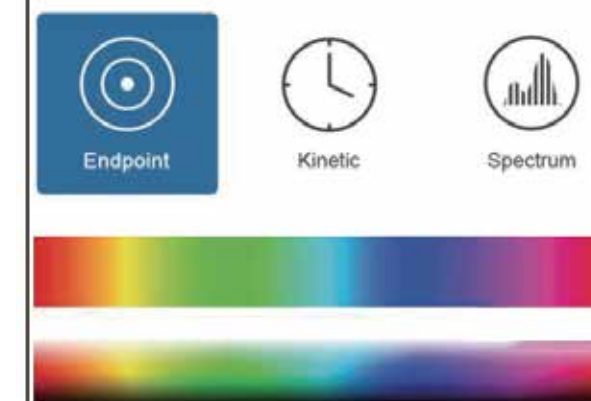
## UV/Vis Absorbance

Wavelength selection is performed using an advanced monochromator system. Any wavelength from 200 to 1000 nm can be selected. Using the spectral scanning feature, the whole spectrum of a sample can be scanned in 1 nm increments to allow the identification of the optimal measurement wavelength for a new assay.

Long life xenon lamp  
which can be used for 10<sup>4</sup>

Fast reading mode only  
need time 15 s for 96-well  
whole plate

Can be used for spectral  
scanning, endpoint and  
kinetic detection



## Fluorescence

The instrument is equipped with filter-based fluorescence optics and dichroic mirrors for screening applications such as fluorescence polarization and TR-FRET. Standard applications such as fluorescence-based DNA/RNA quantification assays are not only supported in microplates, but also in low-volume u-Nano ultra-micro plates.

The independent, removable filter modules make it more convenient for users to replace filters. The filter-based fluorescence optics detection ensures high sensitivity, greater light transmission, precise control over transmitted peak shapes, and excellent blocking of undesired wavelengths. This is ideal for excitation and emission applications. The filters are also the technically preferred and most cost-efficient technology for non-absorbance based assays.



## Luminescence

This series of luminescence microplate readers shows reliable sensitivity and a wide dynamic range in both glow- and flash-based assays. The PMT enhances sensitivity for weak luminescence signals, prevents saturation of strong signals, and effectively expands the detection range. The optimized optical path minimizes signal crosstalk between wells and ensures the accuracy of experimental results. The precise dual-channel injector ensures assay performance even when assaying high-density 384-well plates.



## Time-Resolved Fluorescence (TRF)

Time-resolved fluorescence is based on lanthanide elements as dyes. When excited, the emission time is much longer than that of ordinary fluorescein. After the excitation light is turned off, the emitted light can still be continuously expressed and released, thereby eliminating the interference of excitation light and scattered light.

Time-resolved fluorescence has high sensitivity, strong specificity, good stability, and a simple operation flow. It is suitable for ultra-micro analysis in biology and medicine, hormone detection, viral hepatitis marker detection, target cell marker detection, and drug screening.



## Optional Accessories

### (1) u-Nano Ultra-Micro Plate

Rapidly perform high-throughput quantification of nucleic acids and proteins without sample dilution.

1 to 16 samples can be detected simultaneously, requiring a sample volume of only 2 to 4  $\mu\text{L}$ .

No calibration required, ensuring reliable performance.



### (2) ABS Optical Performance Validation Plate

The ABS optical performance validation plate is mainly used to comprehensively evaluate absorbance detection performance. It quickly and easily checks whether the absorbance function of the instrument is working properly. It is suitable for system verification during Installation and Operational Qualification.



### (3) Modular Filter

The detachable modular filter module provides a cost-effective and highly sensitive solution to your fluorescence detection. Simply by scanning the QR code on the module, the instrument reads the filter information, ensuring accurate experimental parameters for convenient and quick operation.



### (4) MSS-2 Automatic Injector Module

Equipping the instrument with dual automatic injector modules is critically important for a myriad of assays, most notably flash luminescence and calcium flux assays. The instrument features a standard injector module, which supports precise reagent dispensing in 384-well plates, enabling rapid detection of high-throughput plates.

The automatic injector module can be purchased alongside the instrument or upgraded later.

Liquid injection protection: The software has a liquid injection protection function to effectively prevent the risk of sample overflow.



## Optional Accessories

### (5) ReaderIt-II PC Analysis Software

The ReaderIt-II PC analysis software features a graphical user interface. Data export is quick and convenient. Detailed reports can be created using built-in tools. The ReaderIt-II software can also provide more comprehensive and advanced data analysis algorithms than the instrument APP software. The ReaderIt-II PC software makes it more convenient for users to process assay results.



## Specification (Basic Parameter)

Model	MPR-A400
Support	
Plate Type	6-384 well plates
Accessories	Microplate, Injector
Shaking & Incubation	
Shaking Modes	Linear, orbital, double orbital
Incubation Temperature Range	RT.+4 °C~45 °C
Temperature Uniformity	±0.5°C @37 °C
Software	
Software Interface	English
Screen Size	10-inch
Operation Method	Capacitive touchscreen, mouse
Data Capacity	10GB
Compatibility	Supports PC software, Win7 / Win10, 64-bit
Network Transmission	The test data report can be uploaded to the PC server through FTP
Others	
Instrument Interfaces	2 × USB Type-A ports, 1 × USB Type-B port, 1 × Ethernet port, 1 × RS232 interface (for injector connection)
Power Supply	AC 100-240 V, 50-60 Hz
Dimensions (W*D*H)	420*550*386 mm
Weight	33kg

## Specification (Technical Parameters)

Model	MPR-A400
Absorbance	
Light Source	Xenon lamp
Detector	PD
Wavelength Accuracy	2 nm
Wavelength Repeatability (SD)	0.2 nm
Half Width (FWHM)	<2.5 nm
Wavelength Range	200-1000 nm, 1 nm step
Measurement Range	0-4 OD
Resolution	0.0001 OD
Accuracy @450 nm	96-precision mode: ± (1.0 % + 0.003 Abs) @ (0.0-2.0 Abs) ±2.0 % @ (2.0-3.0 Abs)
Repeatability @450 nm	CV < 1.0 % or SD < 0.003 fast (0.0-3.0 Abs) CV < 0.5 % or SD < 0.003 accurate (0.0-3.0 Abs)
Stray Light	0.1% @220 nm
Linear @450 nm	R2 ≥ 0.999 @ [0.0 - 3.0 Abs]
Reading Time	96-well plate (fast mode): <15 s
Luminescence	
Detector	PMT
Detection Limit	15 amol/well; 5 amol/well (photon PMT)
Linear Dynamic Range	6 logs
Crosstalk	≤ 0.005 %
Wavelength Range	200-850 nm
Fluorescence	
Reading Mode	Top reading
Excitation Light Source	Xenon lamp
Detector	PMT
Wavelength Range	EX: 200-1000 nm; EM: 270-850 nm
Filter EX/EM	3 groups: EX485/EM530, EX523/EM564, EX624/EM692 (Other wavelengths are customizable)
Detection Limit	1 pM
Linear Dynamic Range	6 logs
TRF	
Filter EX/EM	1 group: EX365/EM612
Detection Limit	0.02 pM (under optimized conditions)

# Microplate Reader

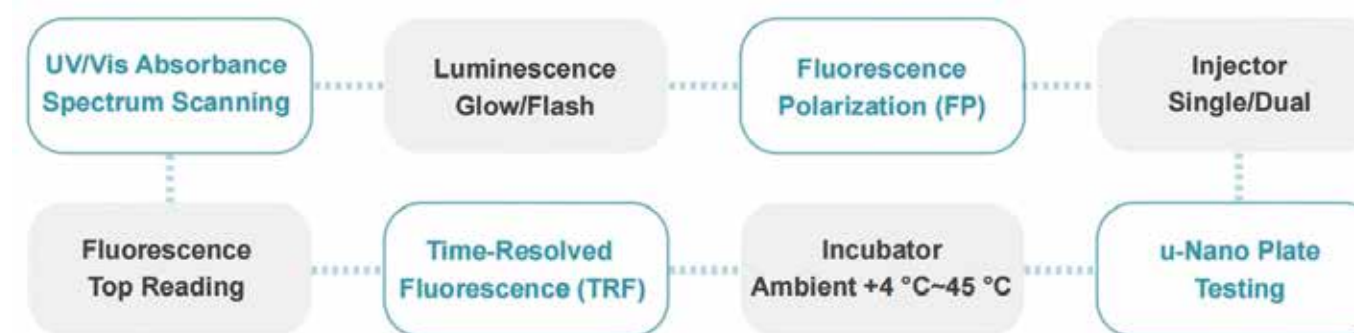
MPR-A500



## Features

- ◆ In addition to standard absorbance, fluorescence, and chemiluminescence detection modes, high-performance fluorescence polarization and time-resolved fluorescence detection can also be selected. The instrument is compatible with the client-side modular upgrade function, and users can upgrade and equip the system with microplates and automatic injectors according to their needs.
- ◆ The absorbance detection is based on a monochromator, which can realize continuous spectrum detection of 200-1000 nm without a filter, which meets almost all absorbance detection applications. Fluorescence detection adopts the detection light path of the filter. The fluorescence path composed of a Xenon lamp, a filter and a PMT can fit the characteristics of fluorescent dyes to the greatest extent, ensuring excellent detection performance and high-quality detection effect. The optimized optical path design can be used for time-resolved fluorescence and fluorescence polarization detection with higher sensitivity requirements. Luminescence detection also uses a PMT as the detector, and the sensitivity can reach a dynamic range of more than 6 orders of magnitude.
- ◆ The detachable modular fluorescence detection filter can identify the filter information simply by scanning the code. The modular design provides convenient filter replacement, reducing operation time.
- ◆ The instrument is equipped with a 10-inch touch screen. According to the researcher's operation habit of the instrument, the screen angle can be converted through the LCD control button to facilitate the researcher's setting of the instrument. The instrument has no need to connect to a computer. The layout, operating parameters, and algorithm and the other settings can be completed by a single machine. The built-in software of the instrument includes multiple algorithm analysis functions of standard curve, qualitative and quantitative, basic calculation, kinetics, spectroscopy and etc, which makes it more convenient for the processing and research of experimental data.
- ◆ Incubation utilizes PID temperature control technology. When the experimental plate is covered or sealed, the edge effect can be minimized through the temperature differential between the top and bottom of the plate, ensuring the data stability of the sample in the process of kinetic analysis.
- ◆ In addition, the instrument has a code scanning function, which can not only identify the filters information, but also create a QR code for the experimental program or standard curve. Researchers can quickly import the experimental program into the instrument through the QR code.

## Flexible and Changeable Upgradability



## UV/Vis Absorbance

Wavelength selection is performed using an advanced monochromator system. Any wavelength from 200 to 1000 nm can be selected. Using the spectral scanning feature, the whole spectrum of a sample can be scanned in 1 nm increments to allow the identification of the optimal measurement wavelength for a new assay.

Long life xenon lamp which can be used for 10<sup>9</sup>

Fast reading mode only need time 15 s for 96-well whole plate

Can be used for spectral scanning, endpoint and kinetic detection



## Fluorescence

The instrument is equipped with filter-based fluorescence optics and dichroic mirrors for screening applications such as fluorescence polarization and TR-FRET. Standard applications such as fluorescence-based DNA/RNA quantification assays are not only supported in microplates, but also in low-volume u-Nano ultra-micro plates.

The independent, removable filter modules make it more convenient for users to replace filters. The filter-based fluorescence optics detection ensures high sensitivity, greater light transmission, precise control over transmitted peak shapes, and excellent blocking of undesired wavelengths. This is ideal for excitation and emission applications. The filters are also the technically preferred and most cost-efficient technology for non-absorbance based assays.



## Luminescence

This series of luminescence microplate readers shows reliable sensitivity and a wide dynamic range in both glow- and flash-based assays. The PMT enhances sensitivity for weak luminescence signals, prevents saturation of strong signals, and effectively expands the detection range. The optimized optical path minimizes signal crosstalk between wells and ensures the accuracy of experimental results. The precise dual-channel injector ensures assay performance even when assaying high-density 384-well plates.



## Time-Resolved Fluorescence (TRF)

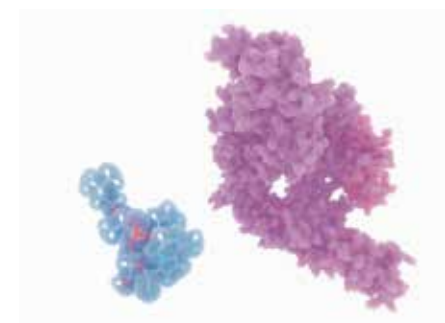
Time-resolved fluorescence is based on lanthanide elements as dyes. When excited, the emission time is much longer than that of ordinary fluorescein. After the excitation light is turned off, the emitted light can still be continuously expressed and released, thereby eliminating the interference of excitation light and scattered light.

Time-resolved fluorescence has high sensitivity, strong specificity, good stability, and a simple operation flow. It is suitable for ultra-micro analysis in biology and medicine, hormone detection, viral hepatitis marker detection, target cell marker detection, and drug screening.



## Fluorescence Polarization (FP)

The optimized optical path design of MPR-A500, combined with the performance of the fast-switching polarizer, effectively reduces the detection deviation. The 10-inch lower computer touch screen can improve the flexibility of experimental parameter setting. This function is often used to detect the interaction between small molecules and macromolecules, such as the determination of drugs and hormones, tyrosine kinase assays, receptor/ligand binding studies, and protein/peptide or DNA/protein interactions.



## Specification (Basic Parameter)

Model	MPR-A500
<b>Support</b>	
Plate Type	6-384 well plates
Accessories	Microplate, Injector
<b>Shaking &amp; Incubation</b>	
Shaking Modes	Linear, orbital, double orbital
Incubation Temperature Range	RT.+4 °C~45 °C
Temperature Uniformity	±0.5°C @37 °C
<b>Software</b>	
Software Interface	English
Screen Size	10-inch
Operation Method	Capacitive touchscreen, mouse
Data Capacity	10GB
Compatibility	Supports PC software, Win7 / Win10, 64-bit
Network Transmission	The test data report can be uploaded to the PC server through FTP
<b>Others</b>	
Instrument Interfaces	2 × USB Type-A ports, 1 × USB Type-B port, 1 × Ethernet port, 1 × RS232 interface (for injector connection)
Power Supply	AC 100-240 V, 50-60 Hz
Dimensions (W*D*H)	420*550*386 mm
Weight	33kg

## Description

The multi-mode microplate reader is specifically designed for medical, biological and pharmaceutical research and development institutions to meet the needs of various drug development and life science research. The reliable detection performance ensures high-quality analysis based on molecular biology, biochemistry and cell biology.

## Specification (Technical Parameters)

Model	MPR-A500
<b>Absorbance</b>	
Light Source	Xenon lamp
Detector	PD
Wavelength Accuracy	2 nm
Wavelength Repeatability (SD)	0.2 nm
Half Width (FWHM)	<2.5 nm
Wavelength Range	200-1000 nm, 1 nm step
Measurement Range	0-4 OD
Resolution	0.0001 OD
Accuracy @450 nm	96-precision mode: ± (1.0 % + 0.003 Abs) @ (0.0-2.0 Abs) ±2.0 % @ (2.0-3.0 Abs)
Repeatability @450 nm	CV < 1.0 % or SD < 0.003 fast (0.0-3.0Abs) CV < 0.5 % or SD < 0.003 accurate (0.0-3.0Abs)
Stray Light	0.1% @220 nm
Linear @450 nm	R2 ≥ 0.999 @ [0.0 - 3.0 Abs]
Reading Time	96-well plate (fast mode): <15 s
<b>Luminescence</b>	
Detector	PMT
Detection Limit	15 amol/well; 5 amol/well (photon PMT)
Linear Dynamic Range	6 logs
Crosstalk	≤ 0.005 %
Wavelength Range	200-850 nm
<b>Fluorescence</b>	
Reading Mode	Top reading
Excitation Light Source	Xenon lamp
Detector	PMT
Wavelength Range	EX: 200-1000 nm; EM: 270-850 nm
Filter EX/EM	3 groups: EX485/EM530, EX523/EM564, EX624/EM692 (Other wavelengths are customizable)
Detection Limit	1 pM
Linear Dynamic Range	6 logs
<b>TRF</b>	
A	1 group: EX365/EM612
Detection Limit	0.02 pM (under optimized conditions)
<b>FP</b>	
Filter EX/EM	1 group: EX485/EM530
Detection Limit	sd ≤ 5 mP @ 1 nm fluorescein sodium

# Microplate Reader

## MPR-F100



### Features



#### Long-Life Xenon Light Source

It uses a high-energy xenon lamp as its light source, enabling high-resolution, high-sensitivity and ultra-fast detection. The lamp lifespan reaches up to 10 years. It requires no warm-up and is ready for detection immediately after power-on.



#### High Performance Filter

Filter-based fluorescence detection offers significant advantages in sensitivity and wavelength selection. Filters provide higher sensitivity, greater light transmittance, better filtering, and faster wavelength selection.

#### Precise Kinetic

MPR-F100 can be used for fast kinetic analysis (such as  $Ca^{2+}$  flux analysis) with a high-precision injector. It can monitor the fast kinetic reaction in time from the beginning of the experiment to ensure the integrity of the experiment.

### Description

This product is an economical, single fluorescence microplate reader. It is designed for bioluminescence scientific research, and can meet the requirements of nucleic acid quantification, fluorescent protein determination, molecular interaction studies,  $Ca^{2+}$  flow analysis, as well as reporter genes, fluorescent kinases and cell-based studies.

- ◆ Single fluorescence microplate reader
- ◆ Plate Type: 6-384 well plates
- ◆ Linear Dynamic Range: 6 logs
- ◆ Detection Limit: 1 pM (under optimized conditions)
- ◆ With long-life xenon light source



### Specification

Model	MPR-F100
Reading Mode	Top reading
Excitation Light Source	Xenon lamp
Detector	PMT
Wavelength Range	EX: 200-1000 nm; EM: 270-850 nm
Filter EX / EM	3 groups: EX485 / EM530, EX523 / EM564, EX624 / EM692 (other wavelengths are customizable)
Detection Limit	1 pM (under optimized conditions)
Linear Dynamic Range	6 logs
Plate Type	6-384 well plates
Accessories	Injector
Shaking Modes	Linear, orbital, double orbital
Incubation Temperature Range	RT.+4 °C~45 °C
Temperature Uniformity	±0.5 °C @37 °C
Software Interface	English
Screen Size	10-inch
Operation Method	Capacitive touchscreen, mouse
Data Storage	10GB
Compatibility	Supports PC software, Win7 / Win10, 64-bit
Network Transmission	The test data report can be uploaded to the PC server through FTP
Instrument Interfaces	2 × USB Type-A ports, 1 × USB Type-B port, 1 × Ethernet port, 1 × RS232 interface (for injector connection)
Power Supply	AC 100-240 V, 50-60 Hz
Dimensions (W*D*H)	420*487*318 mm
Weight	30kg

# Microplate Reader

## MPR-L100

### Description

The MPR-L100 is a compact, high-performance luminescence microplate reader. It supports multiple microplate formats, and its fast read speed paired with an automatic injector effectively enhances your workflow efficiency.



### Product Features



#### (1) High-Sensitivity Detection

It is equipped with a high-sensitivity luminescence detection module, which can realize a variety of throughput detection in 6-384-well plates, and can also accurately quantify micro samples.

#### (3) Standard Filter

The luminescence detection function is equipped with two filters (470 nm and 560 nm), which effectively reduce background noise and enhance sensitivity during luciferase reporter gene assays.



#### (2) Ultra-Low Well-to-Well Interference

The unique optical path design effectively reduces the signal cross-interference between holes, and the cross-talk is less than 0.05%.

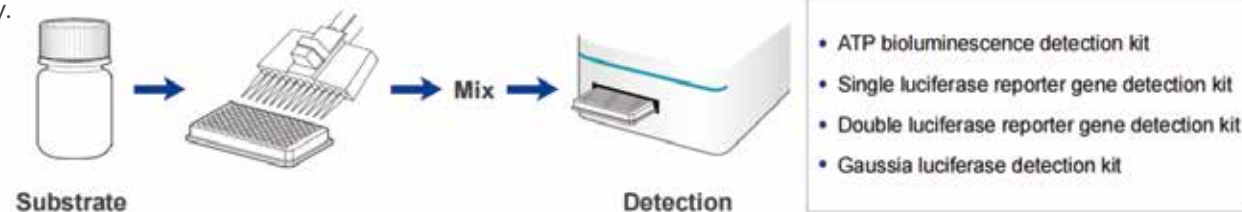
#### (4) Low Noise PMT

With a low-noise PMT, the collected signal is highly accurate, and the detection limit can reach 5 amol/well (ATP).

#### (5) Luminescence Kit

The luminescence series reagent kits are based on the construction, transfection, and expression of luciferase reporter gene vectors. The luciferase can catalyze the conversion of the substrate and emit photons, and finally the detection system is used to obtain the detection data.

The reagent adopts an optimized reaction system, which is easy to prepare, simple to operate and has high accuracy.



### Software Features



#### (1) User Authority Classification

User permissions are divided into four levels with clearly defined access rights.

Each user has an independent account and password to ensure the security and confidentiality of experimental results.



#### (2) Intuitive Interface Display

Intuitive function mode selection and simple parameter setup.

Programs and data are stored independently, making it easy to find the required applications.

#### (3) FTP (File Transfer Protocol)

Data can be uploaded directly to a computer with an FTP server, enabling users to view the results at any time within the authorized folder.

### Specification

Model	MPR-L100
Detector	PMT
Detection Limit	5 amol/well (under optimized conditions)
Linear Dynamic Range	7 logs (flash ATP)
Crosstalk	≤0.05 %
Wavelength Range	200-850 nm
Filter	470 nm, 560 nm
Plate Type	6-384 well plates
Accessories	Injector
Shaking Modes	Linear, orbital, double orbital
Incubation Temperature Range	RT.+4 °C~45 °C
Temperature Uniformity	±0.5 °C @37 °C
Software Interface	English
Screen Size	10-inch
Operation Method	Capacitive touchscreen, mouse
Data Storage	10GB
Compatibility	Supports PC software, Win7 / Win10, 64-bit
Network Transmission	The test data report can be uploaded to the PC server through FTP
Instrument Interfaces	2 × USB Type-A ports, 1 × USB Type-B port, 1 × Ethernet port, 1 × RS232 interface (for injector connection)
Power Supply	AC 100-240 V, 50-60 Hz
Dimensions (W*D*H)	420*487*318 mm
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