ALLSHENG



Microplate Reader
Feyond-M Series

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HANGZHOU ALLSHENG INSTRUMENTS CO., LTD.

Feyond-M Series Microplate Reader

ABS FL LUM TRF FP



The Feyond-M series is a cost-effective multi-mode microplate reader combining economy and high-performance. It is not only suitable for common detection of absorbance, fluorescence and luminescence, but also suitable for detection of time-resolved fluorescence and fluorescence polarization applications with special requirements.

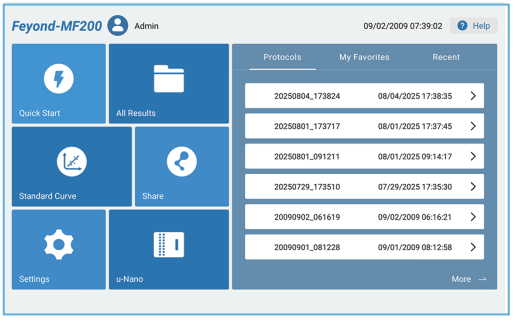
Multiple Models for Choice

Model	Feyond-MF200/280	Feyond-ML200/280	Feyond-M300/380	Feyond-M400/480	Feyond-M500/580
ABS	●	●	●	●	●
FL	●		●	●	●
TRF				●	●
FP					●
LUM		●	●	●	●
Operation method	Touch screen/PC	Touch screen/PC	Touch screen/PC	Touch screen/PC	Touch screen/PC

Diversified Operations

Built-In Intelligent Touch Screen Version

The standard 10-inch rotating touch screen is equipped with built-in software to independently complete parameter setting and data processing; the rotation angle of the screen is ≤90°, and the angle can be manually adjusted to adapt to researchers of different heights.



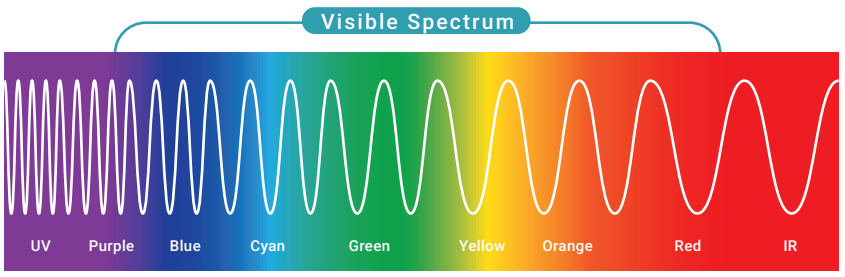
PC Control Version

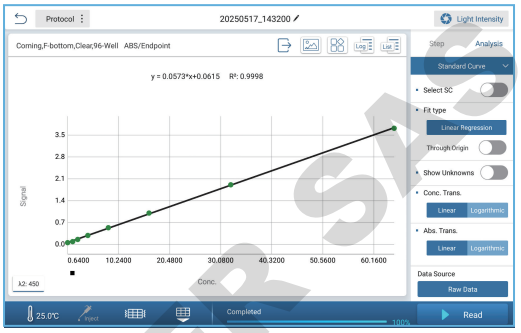
It is suitable for traditional operation habits, and realizes computer control and high-throughput data analysis through Reader It-III software.

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Absorbance

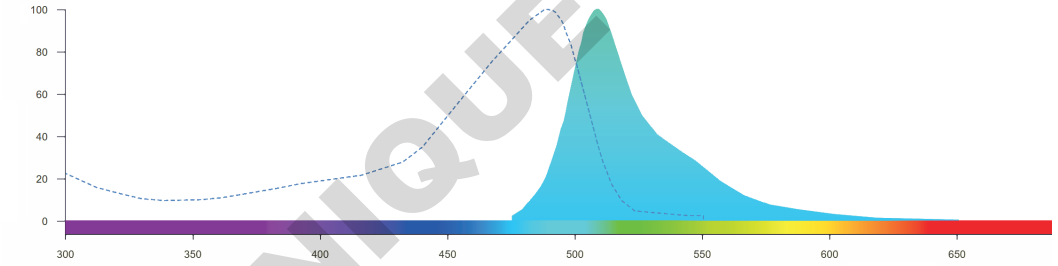
Using the monochromator design, it can achieve continuous spectral scanning with a wavelength range from 190-1000 nm and a step of 1 nm. It supports ultraviolet to near-infrared spectrum analysis, and the wavelength can be freely selected to easily realize various application detection. In addition, the linear correlation coefficient can reach more than 0.999 within 0-3.5 Abs.





Fluorescence

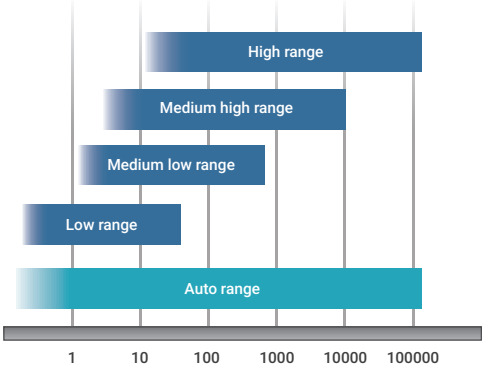
Utilizing a combination of xenon lamps, filters, and high-sensitivity photomultiplier tube (PMT), this system significantly enhances detection sensitivity. The automated filter wheel design supports up to 8 excitation and emission filter combinations, offering 64 customizable configurations without manual module replacement. It enables simultaneous detection of 8 fluorescence channels per cycle, effortlessly achieving both fluorescence intensity and FRET (Fluorescence Resonance Energy Transfer) measurements.
For multi-channel detection applications, the software has two reading modes, which can be selected to read by well or by plate according to experimental needs.





Luminescence

Utilizing a LUM PMT detector with standard 470 nm and 560 nm filters, this system significantly enhances detection of dual luciferase reporter genes. The 8-position filter wheel design allows both direct measurement and customization of alternative wavelength filters. The innovative optical path configuration effectively reduces cross-well signal interference, achieving crosstalk below 0.005%. At the same time, the instrument can be combined with an automatic injector to realize the efficient detection of flash reagent kits.



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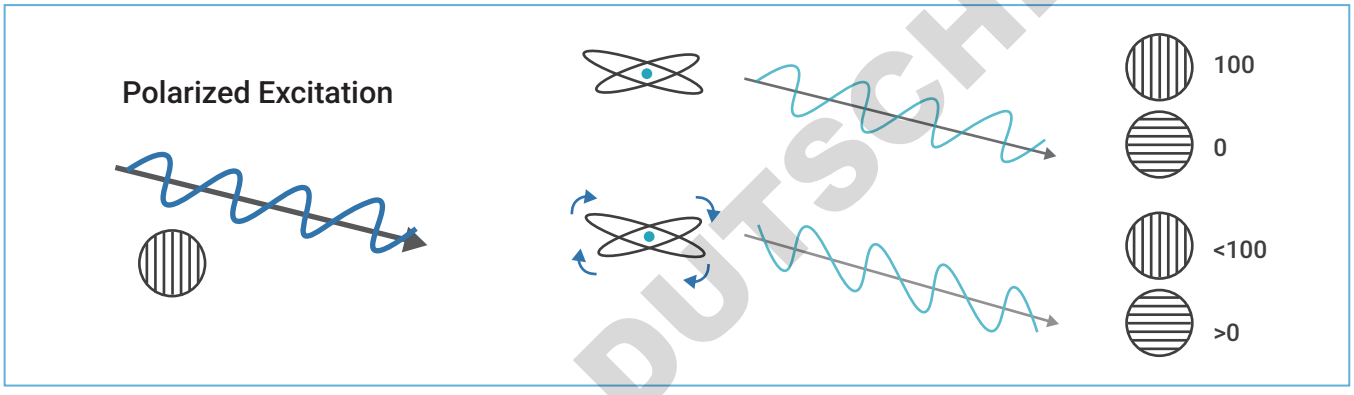
Time-Resolved Fluorescence

The Feyond-M400 / M500 dedicated TRF filter can achieve infrared fluorescence detection, and the 8-position filter wheel design effectively improves the detection speed of TR-FRET.

Lanthanides	58 Ce 140.12 Cerium	59 Pr 140.91 Praseodymium	60 Nd 144.24 Neodymium	61 Pm 145 Promethium	62 Sm 150.36 Samarium	63 Eu 151.96 Europium	64 Gd 157.25 Gadolinum	65 Tb 158.93 Terbium	66 Dy 162.5 Dysprosium	67 Ho 164.93 Holmium	68 Er 1.0079 Erbium	69 Tm 168.93 Thulium	70 Yb 173.04 Yttersium	71 Lu 1.0079 Lutetium
Actinides	90 Th 232.04 Thorium	91 Pa 231.04 Protactinium	92 U 238.03 Uranium	93 Np 237 Neptunium	94 Pu 244 Plutonium	95 Am 243 Americium	96 Cm 247 Curium	97 Bk 247 Berkelium	98 Cf 251 Californium	99 Es 252 Einsteinium	100 Fm 257 Fermium	101 Md 258 Mendelevium	102 No 259 Nobelium	103 Lr 1.0079 Lawrencium

Fluorescence Polarization

Feyond-M500 adopts a unique optical path design to effectively reduce detection bias, and has advantages in studying receptor / ligand binding, protein interaction and DNA / protein binding.



Multiple Shaking Modes

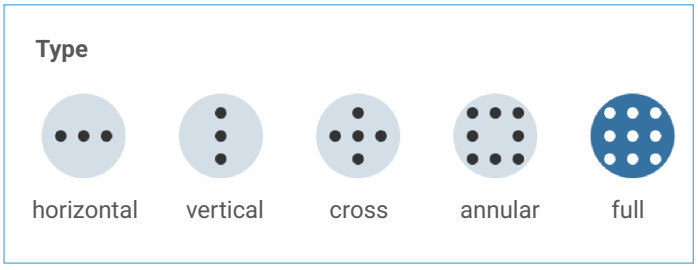


There are three types of shaking modes: linear, orbital and double orbital, and a variety of shaking speeds (rpm) can be freely selected, which is more conducive to the realization of kinetic background vibration of different types of samples.



Well Scanning Function

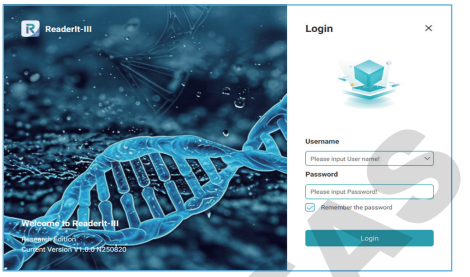
The scanning detection method of up to 900 points per well is realized by using flexible orbital motion and accurate detection site, which reduces the difference reading caused by different positions.



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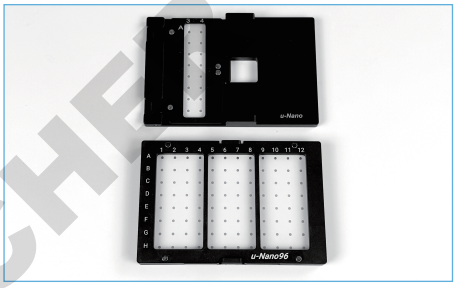
Optional Accessories

ReaderIt-III PC Analysis Software



- The ReaderIt-III PC analysis software is with graphical operation interface design. Data export is convenient and fast. Detailed result reports can be created through built-in tools. ReaderIt-III software can also provide a more comprehensive and complex data analysis algorithm than the instrument APP software. The ReaderIt-III PC software makes more convenient for customers to process assay results.

u-Nano Ultra-Micro Plate



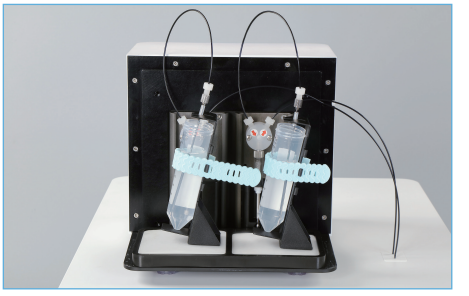
- Quickly complete high-throughput quantification of nucleic acid and proteins without samples dilution.
- 16 / 96 samples can be detected at the same time, only 2~4 μL sample volume is needed.
- No need to calibrate; reliable performance.

ABS Optical Performance Validation Board



- ABS optical performance validation board is mainly used to comprehensively evaluate the performance of absorbance function. It can conveniently, quickly and easily check whether absorbance function of the instrument is working properly. It is suitable for the system check of installation and operation qualification.

MSS-2 Automatic Injector Module



- Equipped with dual automatic injector modules of the instrument is critically important for a myriad of assays, most notably flashluminescence and calcium flux assays etc. The instrument is equipped with a standard injector module, which can meet the precise sample addition operation of 384-well plates and realize the possibility of rapid detection of high-throughput plates.
- The automatic injector module can be purchased at the same time with the device and can also be upgraded later.
- Liquid injection protection: The software has a liquid injection protection function to effectively prevent the risk of sample overflow.

Plate	Waste liquid collection	Quantity	Liquid injection speed	Dispensing volume	Accuracy
6-384 well	25 mL	2 / 1	125-500 μL/s	5-1000 μL, 1 μL increment	±1μL @ 5-50 μL ±2% @ 51-1000 μL

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Technical Parameter

		Feyond-MF200/280	Feyond-M300/380	Feyond-M400/480	Feyond-M500/580	Feyond-ML200/280
ABS	Plate	6-384 well plate, u-Nano16, u-Nano96				
	Light source	Xenon lamp				
	Wavelength accuracy	2 nm				
	Wavelength repeatability (SD)	0.2 nm				
	Half width (FWHM)	<2.5 nm				
	Detector	PD				
	Wavelength range	190-1000 nm, 1 nm step				
	Measure range	0 - 4 OD				
	Resolution	0.0001 OD				
	Accuracy @450 nm	Precision mode: ±(1.0%+0.003) @ (0.0-2.0] ±2.0% @ (2.0-3.0]				
	Repeatability @450 nm	CV < 1.0% fast (0.0 - 3.0] CV < 0.5% accurate (0.0 - 3.0]				
	Stray light	0.1% @220 nm				
	Linear @450 nm	R^2 ≥ 0.999 @ [0.0 - 3.0]				
	Reading time	96-well plate: fast <15s (A1 to H1)				
FL	Reading mode	Top reading				–
	Excitation light source	Xenon lamp				–
	Detector	PMT				–
	Wavelength range	EX: 200 - 1000 nm; EM: 270 - 850 nm				–
	Filter EX/EM	Standard 3 groups: (470/525 nm, 523/564 nm, 624/692 nm) Up to 8 groups can be installed at a time				–
	Detection limit	≤2 pM @96-well black plate (optimization condition)				–
	Linear dynamic range	≥6 logs				–
LUM	Filter	–				470 nm, 560 nm
	Detection limit	–	≤25 amol/well @96-well white plate flash ATP			≤15 amol/well @96-well white plate flash ATP
	Detector	–	PMT			
	Wavelength range	–	200-850 nm			
	Linear dynamic range	–	≥6 logs			
	Crosstalk	–	≤ 0.005% (ATP flash @96-well white plate)			
TRF	Filter EX/EM	–		1 group: EX365/EM612		–
	Detection limit	–		0.02pM (optimization condition)		–
FP	Filter EX/EM	–			1 group: EX485/EM530	–
	Detection limit	–			sd≤5 mP@1 nm fluorescein sodium	–

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Basic Parameter

	Feyond-MF200/280	Feyond-M300/380	Feyond-M400/480	Feyond-M500/580	Feyond-ML200/280
Shaking mode	Linear, circular, double circular (strength and speed adjustable)				
Incubation temperature	RT +4 °C ~ 45 °C				
Temperature accuracy	±0.5 °C @ 37 °C				
Temperature uniformity	1 °C @ 37 °C				
Software interface	Chinese / English				
Screen size	10-inch capacitive screen touch				
Operation method	Touch screen (Android system) / PC (Windows system)				
Data capacity	10 GB				
Network transmission	The test data report can be uploaded to the PC server through FTP				
Instrument port	Touch screen version: 2 USB A ports, 1 USB B port, 1 Ethernet port, Rs232 bus interface PC control version: 1 USB B port, Rs232 bus interface				
Power supply	AC 100-240 V, 2 A, 50-60 Hz				
Weight	≤25 kg				
Dimension (W×D×H)	320×435×332 mm				

Ordering Information

Code	Product description
AS-19110-00	Feyond-MF200 microplate reader
AS-19120-00	Feyond-MF280 microplate reader (without screen)
AS-19130-00	Feyond-ML200 microplate reader
AS-19140-00	Feyond-ML280 microplate reader (without screen)
AS-19150-00	Feyond-M300 microplate reader
AS-19160-00	Feyond-M380 microplate reader (without screen)
AS-19170-00	Feyond-M400 microplate reader
AS-19180-00	Feyond-M480 microplate reader (without screen)
AS-19190-00	Feyond-M500 microplate reader
AS-19200-00	Feyond-M580 microplate reader (without screen)
AS-19051-02	523-564 fluorescence filter (standard)
AS-19051-03	624-692 fluorescence filter (standard)
AS-19111-01	Readerlt-III PC analysis software
AS-19111-02	470-525 fluorescence filter (standard)
AS-19011-02	u-Nano16 ultra-micro plate
AS-19011-03	ABS optical performance validation board
AS-19011-04	MSS-2 automatic injector
AS-19011-05	u-Nano96 ultra-micro plate

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