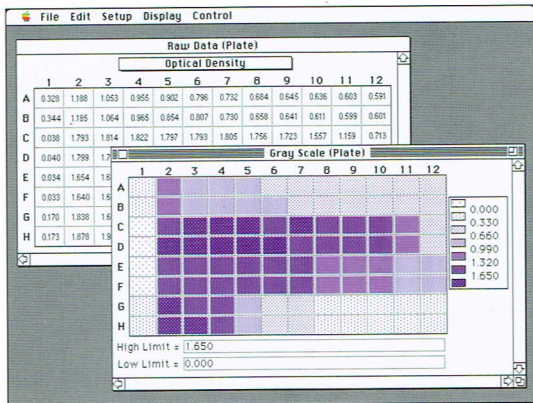


**Simple, reliable
endpoint analysis at
an affordable price.**



Applications.

- Endpoint ELISA (in microplates or as dot blots).
- Total protein assays.
- Quantitation of cytoproliferation by MTT reduction or by staining with crystal violet.

Performance highlights.

- High throughput of up to six plates a minute using five-second read time with SPEED READ option.
- Single- or dual-wavelength measurements.
- As many blank wells as required, anywhere on the microplate.
- Onboard microprocessor. Integrated instrument control and data analysis with SOFTmax® for your IBM® personal computer or Apple® Macintosh® computer.



Emax™ Microplate Reader.



How MAXline microplate readers are unique.

Read low and high concentrations.

Wells are illuminated one at a time with 100% of the available light. The result: enhanced signal-to-noise ratio.

More accurate readings.

Lighttight reading chamber eliminates stray light. The result: linearity to higher ODs.

Minimal temperature effects.

The reading chamber is isothermal at ambient temperature, maintaining consistent temperature of the microplate during reading.

Use any microplate.



Expect the same high performance with round-bottom and flat-bottom microplates. MAXline microplate readers read from the top

down, minimizing well-to-well and plate-to-plate variations due to microplate material. For application information on other microplate options (e.g., half-area well microplates), refer to MAXline Toolbox Series No. 4-1 and MAXline Cell Biology Series No. 1.

Reproducible results.

The data quality obtained by MAXline microplate readers is similar to that from high-quality spectrophotometers. The microplate remains stationary during each read. There is no moving meniscus. The optical pathlength is always the same.

Rugged and reliable.

MAXline microplate readers never require calibration. The Mean Time Between Failure, based on units now in use, exceeds 20,000 hours.

Easy to use.

The touch-control panel is self-explanatory. New users can print out the onboard MINI MANUAL for a quick overview.

SOFTmax[®] for your IBM[®] PC or Apple[®] Macintosh[®] computer.

Powerful curve-fitting routines and statistical analysis take you quickly from data to information. Store and archive everything for retrieval at any time.

Technical Specifications.

Measurement Range
400-750 nm
0.000 to 4.000 OD

Read Times (96-Well Microplate)
Endpoint—Read only: 5 seconds
Calibration: 5 seconds

SPEED READ

Enables rapid reading in endpoint mode

Cross Talk Control

Single well sequential illumination of microplate wells eliminates well-to-well cross talk of stray light

Calculated Mean Time Between Failure (MTBF)
> 20,000 hours

Optical Alignment

No adjustment required during lifetime of instrument

Team up with the bioanalysis specialist. Get the support you need—in applications, training and service—from the company staffed with scientists like yourself. Molecular Devices' commitment to bioanalytical measurements will help you stay on the forefront of new technology.

For a current listing of MAXline Applications Notes and product information on the Emax Microplate Reader, call Molecular Devices today at (800) 635-5577.

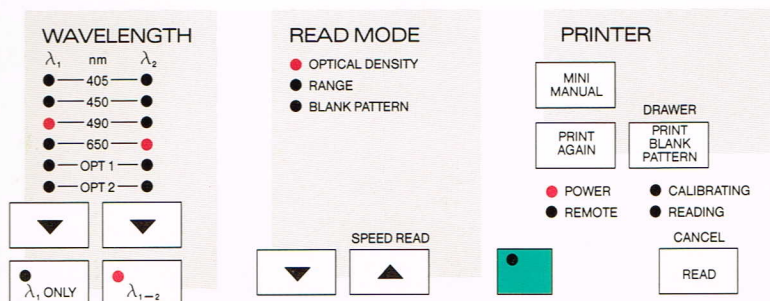


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MAX005 1/97



Sequential illumination. The only way to read microplates.

In just 5 seconds, Molecular Devices' microplate readers read an entire 96-well microplate by lighting each well sequentially. All the available light is transmitted to a single well, so a smaller light source can be used. No stray light from other wells interferes with readings. Heat output is reduced. Isothermal conditions are maintained in the reading chamber. Lamp life is extended. Only on Molecular Devices' microplate readers.

Rapid sequential illumination and reading are accomplished by our unique fiber optic design. A single fiber rotor distributes light to 96 individual fiber optic channels and a reference channel. This means the optics and the reading chamber remain stationary during the read, eliminating meniscus movements and pathlength changes. Also, there are no optical alignment problems. Ever.

Underneath the microplate, a matched set of 97 sequentially

activated silicon detectors ensures complete independence of each optic channel. There is no cross talk between wells. The top-down illumination eliminates light scattering and light piping. Signal is maximized. Noise is minimized.

Sequential illumination and detection. Only on UVmax™, Vmax® and Emax™ microplate readers from Molecular Devices. When every data point is important, when every experiment counts, don't compromise. Contact us now to begin your evaluation of the best microplate technology available.



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UVmax™



Vmax®



Emax™

Vmax is a registered trademark and Emax and UVmax are trademarks of Molecular Devices Corporation.

Technical Specifications.

Photometric Performance

Wavelength Range

340-750 nm (UVmax)
400-750 nm (Vmax, Emax)

Measurement Range

0.000 to 4.000 OD (Vmax, Emax)
0.000 to 4.200 OD (UVmax, THERMOmax)

Read Times (96-Well Microplate)

Endpoint—Read only: 5 seconds
Calibration: 5 seconds
Kinetics (UVmax, Vmax)—5 second minimum interval between readings

Resolution

0.001 OD

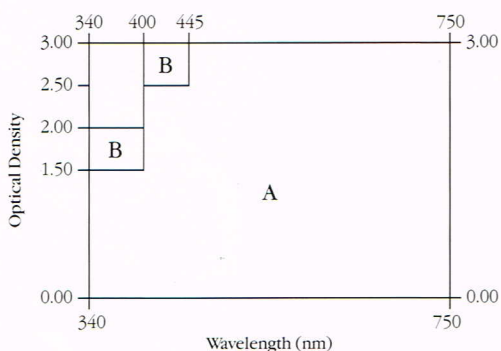
Photometric Analysis Modes

—Single wavelength, optical density
—Dual wavelength, optical density
—Kinetics, Kinetics Graphics (UVmax, Vmax)
—Range
—Blank Pattern

UVmax

Accuracy and Precision (Repeatability)

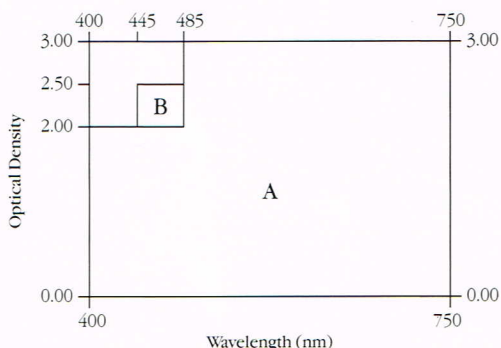
Region	Accuracy	Precision
A	$\leq \pm 1\%$ and ± 0.010 OD	$\leq \pm 1\%$ and ± 0.005 OD
B	$\leq \pm 2\%$ and ± 0.010 OD	$\leq \pm 2\%$ and ± 0.005 OD



Vmax and Emax

Accuracy and Precision (Repeatability)

Region	Accuracy	Precision
A	$\leq \pm 1\%$ and ± 0.010 OD	$\leq \pm 1\%$ and ± 0.005 OD
B	$\leq \pm 1.5\%$ and ± 0.010 OD	$\leq \pm 1.5\%$ and ± 0.005 OD



Specifications for Molecular Devices' microplate readers are for round and flat bottom microplates.

Technical specifications subject to change without notice.

Instrument

Mean Time Between Failure (MTBF)

>20,000 hours

Light Source

Tungsten halogen—25 watts (UVmax)
Tungsten krypton—5 watts (Vmax, Emax)

Average Light Source Lifetime

>750 hours (UVmax)
>4000 hours (Vmax, Emax)

Calibration

Self-calibrating

Drift

Eliminated due to digital signal processing

Optical Alignment

None required during lifetime of instrument

Photodetectors

Silicon (UV enhanced)

Filter Capacity

Six

Optical Filters Supplied (10 nm bandwidth standard)

340, 405, 450, 490, 650 nm (UVmax)
405, 450, 490, 650 nm (Vmax, Emax)

Filter Range Available

340-750 nm (UVmax)
400-750 nm (Vmax, Emax)

Reading Chamber

Lighttight during reads and calibration

Computer Interface

RS-232-C (bidirectional control)

Printer Interface

CENTRONICS parallel

Microplate Carrier

Accommodates all 96-well microplates including strip wells (8's and 12's) and filter bottom microplates

Reading Chamber Temperature Variation

$\leq \pm 1.0$ degrees C of ambient

Well-To-Well Temperature Variation

$\leq \pm 0.4$ degrees C measured on air within the reading chamber

Thermoregulation

May be operated inside an incubator

Warm-Up Time To Meet Specifications

<30 seconds

SPEED READ Capability

Enables faster reading in endpoint mode

AUTOMIX Capability (UVmax, Vmax)

Automatic mixing of well contents prior to a reading and between readings may be selected

Condensation Control

Anticondensation control in reading chamber

Regulatory Approval

CSA Certified File No. LR88026
UL Listed Laboratory Equipment IJ91

Physical

Size

18¼ x 16¼ x 7¾ in/47 x 41 x 19 cm (UVmax)
18¼ x 13¾ x 7¾ in/47 x 34 x 19 cm (Vmax, Emax)

Weight

25 lbs/11.4 kg (UVmax)
22 lbs/10 kg (Vmax, Emax)

Power Consumption

<70 watts (UVmax)
<35 watts (Vmax, Emax)

Line Voltage

90-130 VAC or 180-250 VAC

Line Frequency

50/60 Hz

Operating Temperature

+15 to +40 degrees C (+60 to +105 degrees F)

Operating Humidity

0 to 85% (non-condensing)

Storage Temperature

-20 to +65 degrees C (-5 to +150 degrees F)