PHYSICAL	
Size (h x w x d)	8.6" (220 mm) x 22.8" (580 mm) x 15" (380 mm)
Weight	30 lb (13.6 kg)
Power consumption	< 250 W
Line voltage and frequency	90–250 VAC autoranging, 50/60 Hz

7.4. VersaMax Specifications

Thermal specifications for microplates used in the VersaMax apply to flat-bottom microplates with isolated wells.

All other microplate specifications apply to standard 96-well polystyrene flat-bottom microplates.

Technical specifications are subject to change without notice.

PHOTOMETRIC PERFORMANCE	
Wavelength range	340–850 nm
Wavelength selection	Monochromator tunable in 1-nm increments
Wavelength bandwidth	≤ 2.0 nm full width half maximum
Wavelength accuracy	± 1.0 nm across wavelength range
Wavelength repeatability	± 0.2 nm across all optical channels
Photometric range	0 to 4.000 OD
Photometric resolution	0.001 OD
Photometric accuracy/linearity (microplate), 0–2.0 OD	340–850 nm < ± 1.0% and ± 0.006 OD
Photometric precision (repeatability), 0–2.0 OD	340–850 nm < ± 1.0% and ± 0.003 OD
Stray light	≤ 0.05% at 340 nm
Photometric stabilization	Instantaneous

Photometric drift	None — continuous referencing of monochromatic input
Calibration	Automatic before first kinetic read and before every endpoint reading
Optical alignment	None required
Light source	Xenon flash lamp (5 Watts)
Average lamp lifetime	1 billion flashes
Illumination	Top down
Photodetectors	Silicon photodiode
PHOTOMETRIC ANALYSIS MODES	
Using SoftMax Pro	• Express data as Absorbance or %Transmittance • Single wavelength reading of microplate • Dual wavelength reading of microplate • Kinetic and kinetic graphics of microplate
MEASUREMENT TIME (CALIBRATION OFF)	
Read time (endpoint) — standard read	• 96 wells in 9 seconds (single wavelength) • 96 wells in 19 seconds (dual wavelength, 425 & 650 nm)
Kinetic read intervals	• 96 wells, 9-second minimum interval between readings (single wavelength) • 1 column, 2-second minimum interval between readings (single wavelength)
TEMPERATURE REGULATION	
Reading chamber	Isothermal when temperature regulation is not enabled
Range	4°C above ambient to 45°C when temperature regulation enabled. The ambient temperature must be >20°C to achieve temperature regulation at 45°C.

Resolution	± 0.1°C
Accuracy	± 1.0°C for microplate chamber
Temperature uniformity at equilibrium	± 0.5°C at 37°C
Chamber warm-up time	15–30 minutes (measured on air) after initiation of temperature regulation
Temperature regulation	4 sensors
Drift	± 0.2°C (regulated)
Temperature regulation diagnostics	Temperature regulation system is continuously monitored and updated
Evaporation	Plate lid required to minimize evaporative cooling
Recommended microplate	Flat-bottom microplates with isolated wells and lid
AUTOMIX WITH SOFTMAX PRO	
Plate mixing modes	Selectable: off, once prior to any reading, and once prior to and between kinetic readings
Plate mixing duration	Selectable: 1 to 999 seconds (three-second default)
COMPATIBILITY	
Microplates	Standard and half-area 96-well flat-bottomed microplates (0.3 mL).
GENERAL INSTRUMENT	
Display	2-x-20-character backlit LCD
Operating panel	8-key membrane keypad
Self-diagnosis	Continuous on-board diagnostics
Spill control	Drawer mechanism and reading chamber assembly protected from accidental spillage by drainage ports
Computer interface	8-pin DIN RS-232 serial (double shielding required)

Printer interface	Parallel 25-pin to Centronics (double shielding required)
Microplates supported	All 96-well and strip-well microplates, including lids
ENVIRONMENTAL (FOR INDOOR USE ONLY)	
Operating temperature	5°C to 40°C
Operating altitude	< 2000 m
Installation category	II
Pollution degree	2
Operating humidity	< 80%
Storage temperature	-20°C to 65°C
PHYSICAL	
Size (h x w x d)	8.6" (220 mm) x 22.8" (580 mm) x 15" (380 mm)
Weight	30 lb (13.6 kg)
Power consumption	< 250 W
Line voltage and frequency	90–250 VAC autoranging, 50/60 Hz