7. Specifications

7.1. GEMINI EM SPECIFICATIONS

Technical specifications are subject to change without notice.

FLUORESCENCE PHOTOMETRIC PERFORMANCE	
Wavelength range (Excitation/Emission)	250–850 nm
Wavelength selection	Scanning monochromator tunable in 1-nm increments
Excitation wavelength bandwidth	9 nm
Emission wavelength bandwidth	9 nm
Wavelength accuracy	< ± 2.0 nm
Calibration	Self-calibrating with built-in fluorescence calibrators
Sensitivity (signal 3X STD DEV of baseline)	8.0 fmol/well FITC (bottom read) 3.0 fmol/well FITC (top read)
LUMINESCENCE PHOTOMETRIC PERFORMANCE	
Wavelength range	250–850 nm
Sensitivity (signal 3X STD DEV of baseline)	10 amol/well Alkaline Phos. (obtained with Emerald II reagent from Tropix, an Applera company)
GENERAL PHOTOMETRIC PERFORMANCE	
Microplate formats	6, 12, 24, 48, 96, 384
Light source	Xenon flash lamp (1 joule/flash)
Average lamp lifetime	2 years normal operation (estimate)
Detector	Photomultiplier (R-3896)

Read time	96 wells in < 15 seconds (measurement type may extend read time)
Shaker Time	0–999 seconds
Temperature control (chamber)	Ambient +4°C to 45°C
Ramp up to 37°C	< 20 minutes
ENVIRONMENTAL	
Robot ready	Yes
Turn-on time	< 5 min. to rated accuracy
Operating conditions	15°C to 40°C
Operating humidity	0 to 80% RH non-condensing
Storage temperature	–20°C to 65°C
Operational altitude	< 2000 m
Installation category	II
Pollution degree	2
SYSTEM VALIDATION	Internal standards for fluorescence and wavelength
SOFTWARE	Windows 95/98/NT/2000/XP compliant Macintosh 8.6–9.x; OS X
PHYSICAL	
Size (h × w × d)	13.5" (340 mm) × 16.5" (420 mm) × 16.5" (420 mm)
Weight	35 lb (16 kg)
Power consumption	500 VA maximum
Line voltage and frequency	90–240 VAC, 50/60 Hz