

Synergy™ LX Multi-Mode Reader

Synergy™ LX Multi-Mode Microplate Reader economically automates many common microplate assays. The high quality optical design ensures excellent data in absorbance, fluorescence and luminescence detection modes. Absorbance optics include a xenon flash lamp and monochromator for continuous wavelength selection from the low UV through the visible range to 999 nm. Fluorescence and luminescence measurements are made with filter-based optics for optimal specificity and direct detection to prevent light loss resulting in outstanding accuracy.

The broad wavelength ranges enable many common assays including nucleic acid and protein quantification, ELISA, BCA, Bradford and cell viability. Easily accessible filter cubes make running different assays quick and effortless, while the touchscreen user interface simplifies programming. Immediate data display, plus output to a USB flash drive, printer or Gen5™ Software makes the Synergy LX a versatile assay workstation. An upgradable design allows a lab to buy what is needed today and add other detection modes in the future.



Take3 Micro-Volume Plate
compatible

Features:

- Affordable multi-mode plate reader
- Enables many common end point assays including nucleic acid and protein quantification, ELISA, BCA and Bradford assay, and cell viability assays.
- Micro-volume nucleic acid and protein quantification capability with Take3 plates
- Continuous wavelength selection for UV-Vis measurements; 200 nm to 999 nm in 1 nm increments
- High performance, high-blocking filters for fluorescence and luminescence
- Color touchscreen for quick programming and operation and immediate data display
- Output to USB flash drive, printer or powerful Gen5 Software

Typical Applications:

- ELISA
- Fluorescence ELISA
- Nucleic Acid Quantification (A_{260} and fluorescence-based)
- Nucleic Acid Purity Assessment (A_{260}/A_{280})
- Gene expression (luminescence and fluorescence)
- Cell Viability Assays (absorbance MTT, luminescence ATP, various fluorescence-based)
- Protein Quantification

Configurations:

SLXA	Synergy LX with monochromator-based absorbance from 200 nm to 999 nm.
SLXF	Synergy LX with filter-based top fluorescence and luminescence.
SLXFA	Synergy LX with monochromator-based absorbance from 200 nm to 999 nm, filter-based top fluorescence and luminescence.
SLXATS	Synergy LX with monochromator-absorbance from 200 nm to 999 nm and touchscreen interface.
SLXFTS	Synergy LX with filter-based top fluorescence and luminescence, and touchscreen interface.
SLXFATS	Synergy LX with monochromator-based absorbance from 200 nm to 999 nm, filter-based top fluorescence and luminescence, and touchscreen interface.

Note: All Synergy LX configurations include linear, orbital and double-orbital shaking.

Optional Accessories:

- Take3 Micro-Volume Plates
- Gen5™ Secure (for 21 CFR Part 11 compliance)
- Fluorescence Test Plate
- Absorbance Test Plate
- Luminescence Test Plate
- Product Qualification Package



Specifications:

General

Detection mode:	UV-Vis absorbance, fluorescence intensity, luminescence
Read method:	End point (onboard software) End point, kinetic, area scanning, absorbance spectral scanning (under Gen5 control)
Microplate types:	6- to 384-well plates
Other labware:	Take3 Micro-Volume Plates
Shaking:	Linear, orbital, double-orbital
Software:	End point protocols (onboard software) Full data analysis and reporting (under Gen5 control)

Absorbance

Light source:	Xenon flash lamp
Detector:	Photodiode
Wavelength selection:	Monochromator
Wavelength range:	200 – 999 nm, in 1 nm increments
Monochromator:	
Bandwidth:	≤5 nm
Wavelength accuracy:	±2 nm
Wavelength precision:	±0.2 nm (standard deviation)
Dynamic range:	0 to 4.0 OD
Resolution:	0.001 OD (onboard software) 0.0001 OD (under Gen5 control)
Pathlength correction:	Yes (under Gen5 control)
Optical density:	
Accuracy:	<1% at 2.0 OD <3% at 2.5 OD
Linearity:	<1% from 0 to 2.5 OD
Repeatability:	<0.5% at 2.0 OD
Stray light:	0.03% at 230 nm
Reading speed (kinetic):	96 wells: 12 seconds 384 wells: 23 seconds

Fluorescence Intensity

Light source:	Halogen lamp
Detector:	PMT
Wavelength selection:	Bandpass filters
Wavelength range:	200 – 700 nm (low noise PMT) 200 – 850 nm (red-shifted PMT)
Dynamic range:	7 decades
Sensitivity:	Fluorescein 2 pM
Reading speed (kinetic):	96 wells: 24 seconds 384 wells: 76 seconds

Luminescence

Wavelength range:	200 – 700 nm (850 nm option)
Dynamic range:	7 decades
Sensitivity:	10 amol ATP

Physical Characteristics

Connectivity:	(1) USB 2.0 ports for computer control (2) USB 2.0 ports for printer connection and USB thumb drive (touchscreen configurations only)
Dimensions:	15" H x 15" W x 15" D (with touchscreen) (38.1 cm H x 38.1 cm W x 38.1 cm D) 12" H x 15" W x 15" D (30.5 cm H x 38.1 cm W x 38.1 cm D)
Weight:	≤27 lbs (12.3 Kg)
Power:	External 24VDC power supply compatible with 100-240 volts AC @50-60Hz. 60W maximum consumption.

Regulatory

CE and TUV marked. RoHS compliant. IVD configurations are available.

Preliminary specifications, subject to change.

Performance values represent the average observed factory test values.



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