

VICTOR X

Multilabel Readers



VICTOR™ X multilabel readers are flexible and easy-to-use bench top readers covering all of the main non-radioactive reading technologies. Based on your needs, you can select from a basic luminescence model, to the fully-loaded VICTOR X5. The uniquely designed direct optics ensures the very best sensitivity and working range with all technologies. To measure your assay with VICTOR X, simply load the plate, select a protocol, and start the measurement. Details of the plates, filters and labels you use are all pre-installed.

VICTOR X models accept SBS-compatible microplates from 1- to 1536-wells as well as petri dishes, slides, filters, Terasaki- and PCR plates. Plates can be easily loaded manually, using optional 20- or 40-plate stackers or integrated into a robotic system.

Technologies and reading modes

Fluorescence Intensity (340-850* nm)

- Dual ratio measurements
- Top and bottom fluorescence

Fluorescence Polarization (400-850* nm)

Time-Resolved Fluorescence (TRF)

- Dual window TRF
- Dual emission measurements

Luminescence

- Glow, flash and dual luminescence

Visible Absorbance (340-1000 nm)

UV Absorbance (260 nm/280 nm)

* when using red sensitive PMT.

The VICTOR X family meets all your research needs

	Luminescence (flash, glow, dual)	Fluorescence (top & bottom)	UV/Visible Absorbance	Time-Resolved Fluorescence	Fluorescence Polarization	WorkOut 2.5 Software
VICTOR X Light	X					O
VICTOR X2	X	X				O
VICTOR X3	X	X	X			S
VICTOR X4	X	X	X	X		S
VICTOR X5	X	X	X	X	X	S

O = optional, S = standard

Modernized software

VICTOR X features **NEW** WorkOut 2.5, our most powerful data analysis software package! WorkOut 2.5 includes a renewed “StartWizard” for easy creation of new protocols, or choose from several pre-installed application-based protocols for off-the-shelf use. In addition, intuitive live display with real-time kinetic curve and improved kinetic support capabilities enhance cellular and enzyme assays.

New with VICTOR X

Just introduced with the VICTOR X series are a host of system enhancements including:

- Expanded temperature control (up to +50 °C) for better control of assay conditions
- New excitation filter wheel and expanded absorbance wavelength (up to 1000 nm) enable versatile use of filters and broader spectrum analysis for greater assay flexibility
- Improved chassis design to facilitate maintenance
- Improved dispenser unit for enhanced functionality in kinetics assays

Loaded with standard features

All VICTOR X models are loaded with standard features such as temperature control, shaking, scanning, adjustable measuring height, bottom fluorescence reading, dual label/ratio reading and kinetics. WorkOut 2.5 software comes standard in VICTOR X3, VICTOR X4 and VICTOR X5.

Customize your VICTOR X

A wide range of options is available for the VICTOR X platform that allow you to fully customize your instrument.

- **Dispenser module:** enabling fast kinetics measurements. Select up to four high-quality syringes for optimized kinetics, cell-based and enzyme assays.
- **Stacker assembly:** for additional capacity as your needs evolve. Field-upgradeable 20- or 40-plate stacker units accept SBS-compatible microplates up to 1536 wells, including clear, opaque and filterplates.
- **Bar-code reader:** for walk-away automation and accurate sample tracking.
- **Red-sensitive PMT:** for improved near infrared (NIR) and time-resolved fluorescence assays, including LANCE® and TR-FRET.
- **Optional laptop:** to maximize bench space.
- **Enhanced security option:** for 21 CFR Part 11 compliant operation.
- **Custom optics and filters:** for complete assay customization.

General

Light sources:	Tungsten-halogen lamp – For fluorescence and absorbance measurements. Xenon flash lamp – For TR-fluorescence and UV absorbance measurements.
Detection units:	Photomultiplier tube – For fluorescence, luminescence and TR-fluorescence measurements. Photodiode – For absorbance measurements.
Plate formats:	1 to 1536
Shaking:	Linear, orbital and double orbital. Duration, speed and amplitude are adjustable.
Temperature Control:	
Temperature range:	from 2 °C above ambient up to 50 °C (0.1 °C increments)
Uniformity:	±1 °C
Heating time:	<10 minutes (from RT up to 37 °C)
Dispenser:	The dispenser module consists of 1-4 high quality syringes. Depending on the dispenser option, up to 4 separate channels can be directed to one well (96-well plate).
Dispense volume:	5-350 µL (1 µL increments)
Accuracy typically:	<5% for 5 µL, <0.5% for 50 µL, <0.05% for 350 µL
Precision typically:	<1.4% for 5 µL, <0.2% for 50 µL, <0.02% for 350 µL
Speed:	Minimum and maximum speeds are related to the volume.
Dead volume:	<0.5 mL

Detection limit specifications with default settings

Luminometry 96-well plate	Lower limit of detection (LLD):	total flux of 20,000 photons/s (standard PMT)
		100,000 photons/s (red sensitive PMT)
	ALP:	1 amol/well with AMPPD substrate
	Flash luminescence:	80 amol/well ATP
	Glow luminescence:	0.9 pg/well using britelite™
Fluorometry 96-well black plate (200 µL)	Fluorescein:	<2 fmol/well, 10 pM
	Linearity:	>5 decades
	Crosstalk:	<0.01%
	Umbelliferone:	<200 fmol/well, 1 nM
	Rhodamine:	<100 fmol/well, 0.5 nM
Photometry 96-well plate	Measuring range @ 405 nm:	0-4 A
	Accuracy @ 405 nm:	<2% (or 0.01 A) within 0-2 A
	Precision @ 405 nm:	<0.5% (or 0.01 A) within 0-2 A

TR-Fluorometry 96-well plate (200 µL)	Europium:	<6 amol/well, 30 fM
	Linearity:	>5 decades
	Crosstalk:	<0.01%
	Terbium:	<5 amol/well, 25 fM
	Samarium:	<50 amol/well, 250 fM
	Dysprosium:	<150 amol/well, 750 fM
Fluorescence polarization 384-well black plate	Fluorescein:	1 nM, 40 µL
	Standard deviation:	<5 mP

PC configurations

Minimum requirements for the PC is a Windows® XP/2000 compatible Pentium® computer, minimum 256 MB memory, equipped with CD-ROM, SuperVGA display with minimum 800 x 600 resolution and 256 colors.

Physical data

Dimensions

- Height: 354 mm (13.9"); with stackers 510 mm (20")
- Depth: 595 mm (23.4")
- Width: 493 mm (19.4")
- Weight: 46 kg (101.4 lbs); with stackers 52 kg (114.6 lbs)

Power Requirements

- Power consumption: 400 VA
- Main voltage: 110-120 V/220-240 V, 50/60 Hz

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