

VICTOR³ and VICTOR³ V Multilabel Readers



VICTOR³™ 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 fluorescence and luminescence model, to the fully-loaded VICTOR³ V. The uniquely designed direct optics ensures the very best sensitivity and working range with all technologies. To measure your assay with VICTOR³, simply load the plate, select a protocol, and start the measurement. Details of the plates, filters and labels you use are all pre-installed on VICTOR³.

VICTOR³ models accept all types of 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*

* when using red sensitive PMT.

Fluorescence Polarization (400-850* nm)

Time-Resolved Fluorescence (TRF)

- *Dual window TRF*
- *Dual emission measurements*

Luminescence

- *Glow, flash and dual luminescence*

Absorbance (340-800 nm)

UV Absorbance (260 nm/280 nm)

VICTOR³ comes with several standard features

All VICTOR³ models are loaded with standard features such as **temperature control, shaking, area scanning, adjustable measuring height, below fluorescence reading, dual label/ratio reading and kinetics**. All this is preinstalled. By including the dispenser option, VICTOR meets today's needs of cell-based assays by enabling fast kinetics measurements, enzyme assays and numerous other cell-based drug discovery assays.

The VICTOR³ family meets all your research needs

VICTOR Model	Fluorescence (top & bottom)	Luminescence	Visible Absorbance	UV Absorbance	Time-Resolved Fluorescence	Fluorescence Polarization	Stacker	WorkOut2 Data Analysis Software
VICTOR ³ 1420-032	X	X						
VICTOR ³ 1420-050	X	X	X	X				X
VICTOR ³ 1420-012	X	X	X	X	X			X
VICTOR ³ 1420-033	X	X					X	
VICTOR ³ 1420-051	X	X	X	X			X	X
VICTOR ³ 1420-015	X	X	X	X	X		X	X
VICTOR ³ V* 1420-040	X	X	X	X	X	X		X
VICTOR ³ V* 1420-041	X	X	X	X	X	X	X	X

* Both VICTOR³ V models (1420-040 and 1420-041) also include red sensitive PMT as standard.

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 45 °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

Fluorometry

96-well black plate (200 µL)	Fluorescein:	typically < 2 fmol/well, 10 pM
	Linearity:	> 5 decades
	Crosstalk:	< 0.01 %
	Umbelliferone:	typically < 200 fmol/well, 1 nM
	Rhodamine:	typically < 100 fmol/well, 0.5 nM

TR-Fluorometry

96-well clear plate (200 µL)	Europium:	typically < 10 amol/well, 50 fM
	Linearity:	> 5 decades
	Crosstalk:	< 0.01 %
	Terbium:	typically < 5 amol/well, 25 fM
	Samarium:	typically < 50 amol/well, 250 fM
	Dysprosium:	typically < 150 amol/well, 750 fM

Fluorescence polarization

384-well black plate	Fluorescein:	1 nM, 40 µL
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	Standard deviation:	< 5 mP
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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)
		typically 1 amol/well with AMPPD substrate
	ALP:	typically 80 amol/well in flash assays
	ATP:	0.9 pg/well using steadylite
	Luciferase:	

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

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: 383 mm (15.5"); with stackers 510 mm (20")
- Depth: 590 mm (23.5")
- Width: 485 mm (19")
- Weight: 49 kg (108 lbs); with stackers 59.5 kg (131.2 lbs)

Power Requirements

- Power consumption: 250 VA
- Main voltage: 110-120 V/220-240 V, 50/60 Hz

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