SONY

ID7000™ Spectral Cell Analyzer

The ID7000™ Spectral Cell Analyzer is a high-parameter spectral cytometer designed to deliver comprehensive information from diverse samples, with high sensitivity to detect dim and rare populations. The system can be configured with up to 7 lasers and 186 detectors, the most of any flow cytometer available today. The ID7000 uses spectral technology to generate highly accurate data, and allows use of both spectrally adjacent fluorochromes and fluorescent proteins in a panel. Building on Sony's experience with spectral analysis, the ID7000 simplifies many operations, using updated software tools and automated workflows. The advanced AutoSampler is included and supports a unique, active agitation capability along with an active cooling function to enable walkaway operation.

Specifications

	Item	Specifications
Optics/Performance	Excitation lasers	320 nm, 355 nm, 405 nm, 488 nm, 561 nm, 637 nm, 808 nm
	Detectors	Photomultiplier tubes (32-channel PMTs, single-channel PMTs, and single-channel IR-sensitive PMTs)
	Fluorescence sensitivity (molecules of equivalent soluble fluorochrome) *	FITC ≤ 58 MESF; PE ≤ 4 MESF; APC ≤ 7 MESF *Specifications listed are an average of data obtained from multiple systems.
	Pulse parameter	Area, Height, Width (all channels)
	Signal resolution	Height (20 bit), Area (32 bit) Sampling frequency: 60 MHz
	Detectable particle size	160 nm with SSC
	Fluorescence resolution	CV < 3% for the singlet peak of propidium iodide-stained Chicken Erythrocyte Nuclei (CEN)
	Event rate	40,000 events per second

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Specifications (continued)

	Item	Specifications
Fluidics	Sample flow rate	~33 µL/min–200 µL/min
	Cleaning modes	Priming, Probe Wash, Flow Cell Purge, Decontamination (with bleach), Hardware Shutdown (performed before system shutdown), Automatic Shutdown (programmed system shutdown after completion of Auto Acquisition)
	System fluidics	10-L capacity Sheath Tank and 10-L Capacity Waste Tank Sheath fluid (distilled water or phosphate buffered saline)
System software	Software	ID7000 Acquisition and Analysis Software
	Supported file types	exdat and FCS 3.1
AutoSampler	Sample loading options	Multiwell plates: 96-well plate: standard height flat/V/U bottom, 96-well half deep V bottom, 96-well deep U bottom, 384-well standard flat bottom
		Tubes: 24-tube rack that accommodates 5-mL (12 x 75-mm) polystyrene/polypropylene tubes
	Minimum sample volume*	5-mL tube: 100 µL in standard mode/50 µL in low-volume mode 96-well plate: 55 µL in standard mode/10 µL in low-volume mode 384-well plate: 40 µL in standard mode/10 µL in low-volume mode *Minimum volumes provided for the sample vessel type are averages of data obtained from multiple experiments.
	Carryover	< 0.1% (when measured with inner and outer Probe Wash)
	Throughput	96-well plate in 19 minutes (Based on an acquisition time of 2 seconds per well, no agitation, and no probe wash. The value reported is an average of multiple experiments.)
	Sample agitation	Multiple mixing modes: Once at the beginning of acquisition, Cyclic, or Continuous Mixing
	Temperature control	From ambient temperature to 4°C with a Peltier sample cooling module
Workstation	Specifications	Operating System: Windows® 10 Pro 64 bit Processor: Intel® Xeon® 6248 2.5 GHz 20 Core Memory: 256 GB DDR4 Graphics card: NVIDIA Quadro P2200 Storage: 8TB x3 (RAID5:16TB) HDD 2 Ethernet ports 4 display ports DVD disc drive
Facility requirements	Dimensions	W: 41.7 in (106 cm) x D: 28.3 in (71.9 cm) x H: 29.9 in (76 cm)
	Weight	463 lb (210 kg)
	Power consumption	900 W (2 independent 450-W circuits)
Regulatory requirements	Class 1 Laser Product	
	For non-clinical Research Use Only. Not for use in diagnostic or therapeutic procedures or for any other clinical purpose.	
	United States: Class A digital device Canada: CAN ICES-3 (A)/NMB-3(A) EU: EU Declaration of Conformity 2006/42/EC (Machinery); 2014/30/EU (EMC)	

Laser configurations

Model	No. of lasers, wavelength	No. of detectors*
LE-ID7000A	3LD: 405/488/637	FSC/SSC + 86F
LE-ID7000B	4LD: 405/488/561/637	FSC/SSC + 112F
LE-ID7000C	5LD: 355/405/488/561/637	FSC/SSC + 147F
LE-ID7000D	6LD: 355/405/488/561/637/808	FSC/SSC + 149F
LE-ID7000E	6LD: 320/355/405/488/561/637	FSC/SSC + 182F
LE-ID7000F	7LD: 320/355/405/488/561/637/808	FSC/SSC + 184F

*F = fluorescence