



DxFLEX

Flow Cytometers

TECHNICAL SPECIFICATION



The DxFLEX Flow Cytometer is designed for clinical applications. It offers superior performance, as well as convenient installation and operation. Simplified system settings, data acquisition, and result exporting functions are integrated into the CytExpert software workflow. The DxFLEX Flow Cytometer has a compact

design, integrated excitation and detection optical systems, and a simple but reliable fluidic system. Seven configurations are available with up to 2 lasers and 8 channels. Users can upgrade their configuration at a later date to use more lasers or optical filters.

OPTICAL SYSTEM

LASER SPECIFICATIONS

Blue Laser | Wavelength: 488 nm; Power: 50 mW; Beam spot size: 5 μm x 80 μm

Red Laser | Wavelength: 638 nm; Power: 50 mW; Beam spot size: 5 μm x 80 μm

EMISSION OPTICS

Patent-pending alignment-free integrated optics quartz flow cell design with > 1.3 NA

Flow Cell dimensions: 420 μm x 180 μm internal diameter

FORWARD SCATTER DETECTION

Proprietary Axial Light Loss (ALL) sensor system using silicon photodiodes with built in 488/8 μm band pass filter.

FLUORESCENCE AND SIDE SCATTER DETECTION

Fluorescence and side scatter light delivered by fiber optics to Avalanche Photo Diode detector arrays. Proprietary design ensures high performance, high efficiency, low-noise signal detection. Emission profiles are collected using reflective optics and single transmission band pass filters.

SIDE SCATTER RESOLUTION

< 300 nm

PERFORMANCE

FORWARD AND SIDE SCATTER RESOLUTION

Scatter performance is optimized for resolving lymphocytes, monocytes, and granulocytes as well as nanoparticles.

Scatter performance is optimized for resolving red blood cells and platelets.

CARRYOVER

$\leq 1\%$

SENSITIVITY

FITC: ≤ 30 molecules of equivalent soluble fluorochrome (MESF-FITC)

PE: ≤ 10 molecules of equivalent soluble fluorochrome (MESF-PE)

FLUORESCENCE RESOLUTION

CV $\leq 2\%$

ELECTRONICS

NOMINAL ACQUISITION RATE

30,000 events per second with 15 parameters

SIGNAL PROCESSING

Fully digital system with 7 decades dynamic range

SIGNAL

Pulse area, height for every channel, width for one selectable channel

FLUIDICS

SAMPLE FLOW RATES

Pre-set Flow Rates: 10, 30 and 60 $\mu\text{L}/\text{min}$

FLUID CAPACITY

Standard 4 L tanks

AUTOMATED MAINTENANCE CYCLES

Startup (initialize), sample mix, backflush, prime, shutdown (daily clean), deep clean

SAMPLE INPUT FORMATS

5 mL (12 x 75 mm) polystyrene and polypropylene

1.5 mL and 2 mL microcentrifuge

DATA MANAGEMENT

Software

CytExpert Software, fully featured proprietary application with exportable file formats for offline analysis, if desired.

LANGUAGE

English and Chinese

OPERATING SYSTEM

Windows® 7 Professional 64-bit

FCS FORMAT

FCS 3.0

MINIMUM SPECIFICATIONS

CPU: Intel® I3 @ 2.9 GHz	1 Gigabit Ethernet port
RAM: 4 GB	2 USB 3.0 ports
Storage: 256 GB	4 USB 2.0 ports

COMPENSATION

Automatic full matrix compensation

Manual full matrix compensation

Novel Compensation Library for storage of spillover values of dyes to easily determine the correct compensation matrix with new gain settings

Ability to import/export compensation values between experiments, using compensation library function

Absolute linear gain amplification, enabling the use of compensation settings between experiments and sample types

QUALITY CONTROL

Auto daily QC routine with Levey-Jennings tracking and logging

INSTALLATION

DIMENSIONS (W X D X H)

Cytometer	Tanks and Holder
42.5 cm x 42.5 cm x 34 cm	14 cm x 35.6 cm x 43.4 cm
16.7 in x 16.7 in x 13.4 in	5.5 in x 14.0 in x 17.1 in

WEIGHT

Cytometer: 23.4 kg

POWER SPECIFICATIONS

Voltage: AC 100 V - 240 V ± 10%, 50 Hz/60 Hz ± 1 Hz

OPERATING CONDITION

Temperature: 15-30 °C

Humidity: 15% RH-80% RH, Non-Condensing

CONFIGURATIONS

Three available configurations. Instruments can be easily upgraded with additional lasers and color fluorescent channels.

Part Number	Number of Detectors	FITC	PE	ECD	PC5.5	PC7	APC	APC-A700	APC-A750
		488 nm Laser					638 nm Laser		
		525/40 BP	585/42 BP	610/20 BP	690/50 BP	780/60 BP	660/20 BP	712/25 BP	780/60 BP
B73410	5	●	●	●	●	●			
B73411	4	●	●		●		●		
B73412	6	●	●		●	●	●		●

Learn more: beckman.com/coulter-flow-cytometry/instruments/flow-cytometers/dxflex



DxFLEX is an IVD approved by the CFDA and marketed in China. DxFlex can be imported to India without registration based on the Drugs and Cosmetics Act and Rule in India now.

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