

Reflection™ Instrument Specifications

- **HAPS (Highly Automated Parallel Sort) Modules:** 1 to 4 per instrument
- **Sorting:**
 - ▶ Automated calibration
 - ▶ Automated establishing and controlling droplet break-off
 - ▶ Automated sort region set-up
 - ▶ Automated sort population tracking
 - ▶ Automated sample rate control
 - ▶ Automated sort fault detection and correction via iQ Sort Monitor
- **Analysis Rates:** Greater than 150,000 events per second per HAPS
- **Sort Rates:** Greater than 70,000 events per second per HAPS
- **Sort Purity:** >99%
- **Drop Drive Frequency:** Up to 90 kHz
- **Sort Directions:**
 - ▶ 32 programmable sort streams
 - ▶ Separate streams for empty drops and non-sorted cells
 - ▶ Up to 4 streams collected into tubes
 - ▶ Tubes supported: 0.6 ml, 1.5 ml, 5 ml, 15 ml, 50 ml
 - ▶ Up to 32 discrete streams for either indexed or proportional sorting
- **Fluorescent Detectors:** Up to 48 PMTs
- **Forward and Side Light Scatter Detectors:** Up to 8 PMTs
- **Streaming ADC inputs (105 MHz Sampling Rate, 14 bit Resolution):** Up to 64
- **Standard Pulse Parameters (Features):** Up to 256 (area, height, width, rise time, etc.)
- **Optional Programmable Pulse Parameters (Features) Available**
- **Fluorescence Compensation:** Full matrix among all features
- **Simultaneous Laser Excitation Lines:** Up to five (for example 355, 405, 488, 532, 635)
- **Amplitude Modulation (Either Directly or with EOM) from 7 to 40 MHz**

- **Laser Options:** Any vendor, any configuration with industry standard optical table
- **Nozzle Sizes:** 50 µm to 200 µm
- **Measurement Dynamic Range:** Greater than 10,000 x
- **Measurement Precision:** CV of < 1%
- **Forward Scatter Sensor:** Fiber optic pickup adjustable from 1 to 30 degrees
- **Number of Analysis Regions:** Greater than 512
- **Number of Separate Sort Gates (Based on Boolean Expressions of Region):** Up to 256
- **Collection Optics:** Off-axis parabolic mirror (3x magnification) coupled directly into fiber optic
- **Optical Alignment:** Automated
- **Options:**
 - ▶ AOTF (Acousto-Optical Tunable Filter) with < 3 nm resolution
 - ▶ 16 Channel Spectrometer (370 nm to 730 nm)
 - ▶ Biohazard Containment: Baker SterilGard® III Advance Hood integration
- **Size:**
 - ▶ Main Assembly (W x D x H)
 - 45 x 33 x 57 (inches)
 - 114 x 84 x 145 (cm)
 - ▶ DPA (Digital Processing Assembly) (W x D x H)
 - 30 x 36 x 32 (inches)
 - 76 x 91 x 81 (cm)
 - ▶ FDA (Fluorescence Detection Assembly) (W x D x H)
 - 27½ x 16½ x 13½ (inches)
 - 70 x 42 x 34 (cm)
- **Electrical Requirements:** (2) 20 A 120V dedicated lines
- **Pressure (5 – 100 psi):** House air, nitrogen or optional Jun-Air Compressor
- **Vacuum (12 inches of Hg):** House or optional Jun-Air Compressor



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