

## **Luminex 200 Specifications**

### **Accuracy and Precision**

- Sample uptake volume  $\pm 5\%$
- Classification of microspheres  $>80\%$
- Misclassification of microspheres  $\leq 2\%$ . May vary by xMAP microsphere product lines. Refer to the specific product information sheet for further details.
- Temperature control  $0^{\circ}\text{C}$  to  $+2^{\circ}\text{C}$  of target
- Internal sample carryover  $<0.9\%$
- Soluble background fluorescence emissions at 575 nm automatically subtracted from fluorescence intensity values

### **Sensitivity**

- Detect 1000 fluorochromes phycoerythrin (PE) per xMAP microsphere
- Reporter channel dynamic range: 3.5 decades of detection

### **Optics**

- Reporter laser: 532 nm, nominal output 10 - 15 mW, maximum 500 mW, frequency-doubled diode; mode of operation, continuous wave (CW)
- Classification laser: 635 nm,  $9.1 \pm 6\%$ , maximum output 25 mW, diode; mode of operation, continuous wave (CW)
- Reporter detector: Photomultiplier tube, detection bandwidth of 565 – 585 nm
- Classification detector and doublet discriminator: Avalanche photo diodes with temperature compensation

### **Fluidics**

- Sheath flow rate:  $90 \mu\text{L} \pm 5 \mu\text{L}/\text{second}$
- Cuvette: 200 micron square flow channel
- Sample injection rate:  $1 \mu\text{L}/\text{second}$
- Sample update volume: 20 – 200  $\mu\text{L}$

### **Setup**

- Installation  $< 4$  hours
- System calibration  $< 10$  minutes
- System warm up 30 minutes. Systems that remain inactive for at least four hours will require a warm-up to restart the lasers. After acquiring sample, running system calibrators, running system controls or warming up the instrument, the system resets the four-hour internal clock.

### **Capacity**

- The specifications below reflect minimum capacity values:
- Analyze multiple 96-well plates per batch
- Analyze multiple assay templates per plate
- Automatic sampling from a 96-well plate. The following microtiter plates are compatible with the Luminex XY Platform plate holder: flatbottom, conical,

round, filter bottom, half plates, overall height no more than 0.75" (19mm), any color.

- Sheath container and waste container hold enough volume to run up to two 96-well plates between refills.
- Distinguish a minimum of 1 to a maximum of 100 unique xMAP microsphere sets in a single sample
- Detect and distinguish surface reporter fluorescence emissions at 575 nm on the surface of 1-100 unique xMAP microsphere sets in a single sample

#### **General**

- Operating temperature: 15°C to 30°C (59°F to 86°F)
- Humidity: 20% to 80%, noncondensing
- Altitude: Operation up to 2400 m (7874 ft.) above mean sea level
- Physical dimensions: 43 cm (17 inches) W x 50.5 cm (20 inches) D x 24.5 cm (9.5 inches) H
- Weight: 25 kg (60 lbs.)
- UL Installation Category II, as defined in Annex J of the UL 61010A-1
- UL Pollution Degree 2, as defined in Section 3.7.3.2 of UL 61010A-1
- Luminex 200 analyzer, input voltage range: 100 - 120 V~ ±10%, 1.4 Amp, and 200 - 240 V~ ±10%, 0.8 Amp, 47 – 63 Hz

#### **PC Specifications**

- Intel Pentium IV or equivalent class PC, minimum speed 933 MHz
- Main memory: minimum of 256 MB
- Hard disk drive: 10 GB minimum storage capacity
- Communication/Ports: minimum of one parallel port, 2 RS-232 compatible serial ports, and one USB version 1.1 compatible high speed port
- Read, write and removable media: CDR/W drive
- Operating system: Microsoft Windows XP Pro SP2
- CE marked and UL listed
- Two-button mouse or equivalent