Luminex®

xMAP INTELLIFLEX® System Specifications

General

Physical Dimensions	58.4 cm (23 in.) W x 61 cm (24 in.) D x 76.2 cm (30 in.) H Note: Allow an additional 3.18 cm (1.25 in.) clearance to all dimensions for proper cooling
Weight	54.4 kg (120 lbs)
Operating Temperature	15 to 30°C (59 to 86°F)
Operating Humidity	20 to 80%, non-condensing
Altitude	Operation up to 2,400 m (7,874 ft) above mean sea level
Shipping and Storage Temperature	0 to 50°C (32 to 122°F)
Shipping and Storage Humidity	20 to 80%, non-condensing
System Warmup Time	30 min • Systems that remain inactive for at least 4 hours will require a warmup to restart the lasers • The system resets the 4-hour internal clock after acquiring the sample, running system calibrators, running system controls, or warming up the instrument
System Initialization	<45 min (including laser warmup and weekly calibration)
System Verification	5 min
Temperature Control	Samples are maintained at a constant temperature when using the heater block (from 35 to 60°C (95 to 131°F), +/- 1°C of set point)
Plate Run Time	96-well plate in ~20 min 384-well plate in ~75 min
Side Eject Door	Supports flexible system positioning in relation to external equipment *DR-SE model only*
Automation	Optional REST/OpenAPI interface is available to support integration into automated environments

Electronics

USB for data transfer and connection to optional peripherals (keyboard, mouse, and/or printer)

Input Voltage Range	100–120 V, 6.0 A, 50/60 Hz or 200-240 V, 3.0 A, 50/60 Hz
Installation Category	II - As defined in IEC 61010-1:2017
Pollution Degree	II - As defined in IEC 61010-1:2017

Fluidics

Cuvette	200 µm square flow channel
Sample Injection Rate	2 µL/sec
Sample Uptake Volume	10 to 200 µL
Sheath Flow Rate	7.9 ± 0.9 mL/min, temperature viscosity compensated
Sheath Pressure	8 to 13 psi for normal operations; 15 psi maximum
Piercing Probe Capability	Yes
Auto-Adjusting Capability	Yes

Optics

Classification Laser	637 nm, nominal output 30 mW, diode; mode of operation, continuous wave (CW)
Classification Detector	Avalanche photodiodes with temperature compensation
Reporter Channel Detection	A/D resolution 16 bits
Reporter Channel Dynamic Range (RP1)	≥5.5 decades of detection (verified with beads dyed with a high concentration of organic dye)
Reporter Channel Dynamic Range (RP2) *DR-SE Model Only*	≥4.5 decades of detection (verified with beads dyed with a high concentration of organic dye)
Reporter Laser (RP1)	532 nm diode-pumped solid-state laser (DPSS); mode of operation, continuous wave (CW); output power varies based on mode with maximum output power of 50 mW
Reporter Laser (RP2) *DR-SE Model Only*	405 nm diode laser; mode of operation, continuous wave (CW); nominal output power of 50 mW
Reporter Detector (RP1)	Photomultiplier tube, detection bandwidth of 565 to 585 nm
Reporter Detector (RP2) *DR-SE Model Only*	Photomultiplier tube, detection bandwidth of 421 to 441 nm
Doublet Discrimination Detector	Avalanche photodiodes with temperature compensation

Microspheres

Distinguish 1 to 500 unique xMAP® Microspheres in a single sample.

Classification of xMAP® Microspheres	≥80%
Total System Misclassification of xMAP® Microspheres	≤2%
Well-to-Well Carryover	<4%

RP1 detects a minimum of 50 fluorochromes of phycoerythrin (PE) per xMAP® microsphere.
RP2 detects a minimum of 500 fluorochromes per xMAP® microsphere.
Soluble background fluorescence emissions are automatically subtracted from fluorescence intensity values.

Integrated PC and Integrated Barcode Reader

Ports	USB – 1 port on front of system, 4 ports in rear Ethernet – 1 port in rear of system (CAT5 10/100/1,000 Mbps)
Operating System	Microsoft® Windows® 10 IoT Enterprise LTSC
Screen Resolution	1,366 x 768 pixels
Screen Size	39.6 cm (15.6 in.)
Barcode Reader	For importing target values from the xMAP INTELLIFLEX® Calibration and Performance Verification Kits

The xMAP INTELLIFLEX® System has been tested and complies with the safety requirements for the United States and Canada and is marked with the TUV label. The xMAP INTELLIFLEX® System complies with the European Union (EU) safety requirements and therefore may be marketed in the Europe Single Market. For details on approvals and standards compliance, please contact Luminex Corporation.

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