

# FLEXMAP 3D<sup>®</sup> System Specifications

## For Use With xPONENT<sup>®</sup> Software

This document is intended to provide key system specifications for FLEXMAP 3D<sup>®</sup> instrument hardware, including the minimum specifications of the PC that will run xPONENT<sup>®</sup> Software.

### General

|                                  |   |
|----------------------------------|---|
| Physical Dimensions              | 58.4 cm (23.0 in.) x 65.3 cm (25.7 in.) x 45.7 cm (18.0 in.) (W x D x H)<br>Additional space required for the arm, monitor, keyboard, mouse, and optional barcode scanner does not exceed 64.8 cm (25.5 in.) by 61 cm (24.0 in.) D.<br>Note: Allow an additional 3.18 cm (1.25 in.) clearance to all dimensions for proper cooling. |
| Weight                           | Up to 91 kg (200 lbs), including the instrument, monitor arm, monitor, and accessories, such as the keyboard, mouse, and barcode scanner  |
| Operating Temperature            | 15°—30°C (59°—86°F)   |
| Operating Humidity               | 20—80%, non-condensing  |
| Altitude                         | Operation up to 2,400 m (7874 ft) above mean sea level  |
| Shipping and Storage Temperature | 0—50°C (32°—122°F)  |
| Shipping and Storage Humidity    | 20%—80%, non-condensing   |
| System Warmup Time               | 30 min<br>Systems that remain inactive for at least four hours will require a warmup to restart the lasers. The system resets the four-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 (35—60°C +/- 2°C of set point; 95—131°F)   |
| Plate Run Time:                  | 96-well plate ≤20 min<br>384-well plate ≤75 min   |

### Electronics

*USB 2.0-compatible communications link for fast data transfer*

|                       |   |
|-----------------------|---|
| 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 61010-1:2010                         |
| Pollution Degree      | 2 - As defined in IEC 61010-1:2010                          |

### Fluidics

|                                 |  |
|---------------------------------|--|
| Cuvette                         | 200 micron square flow channel                         |
| Sample Injection Rate           | 2 µL/second  |
| Sample Uptake Volume            | 10—200 µL  |
| Sheath Flow Rate                | 7.9 (± 0.9) mL/min., temperature viscosity compensated |
| Sheath Pressure                 | 8—13 PSI for normal operations; 15 PSI maximum         |
| Piercing Probe Capability       | Yes  |
| Auto-adjusting Probe Capability | Yes  |

## Optics

|                                 |  |
|---------------------------------|--|
| Reporter Channel Detection      | A/D resolution 16 bits   |
| Reporter Channel Dynamic Range  | ≥4.5 decades of detection (verified with beads dyed with high levels of organic dyes)                              |
| Reporter Laser                  | 532 nm, nominal output 15.0+5%/-0% mW, diode pumped; mode of operation, continuous wave (CW); maximum output 17 mW |
| Classification Laser            | 638 nm, nominal output 12.0 to 12.5 mW, diode; mode of operation, continuous wave (CW); maximum output 15 mW       |
| Reporter Detector               | Photomultiplier tube, detection bandwidth of 565 to 585 nm   |
| Classification Detector         | Avalanche photodiodes with temperature compensation  |
| Doublet Discrimination Detector | Avalanche photodiodes with temperature compensation  |

## Microspheres

- Distinguish 1 to 500 unique xMAP® microspheres in a single sample
- Detects a minimum of 500 fluorochromes of phycoerythrin (PE) per xMAP® microspheres
- Soluble background fluorescence emissions at 575 nm automatically subtracted from fluorescence intensity values

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

## PC and Monitor Specifications

|                   |   |
|-------------------|---|
| Processor         | 3.0 GHz Intel Core i5 (or higher)   |
| Main Memory       | 8 GB RAM  |
| Hard Drive        | 1 TB Hard drive space (or higher)   |
| Ports             | 1x USB 3.1 Type-C<br>5x USB 3.1 Type-A<br>4x USB 2.0 Type-A<br>2x Display ports<br>1x VGA port<br>1x DVD R/W type drive |
| Operating System  | Microsoft® Windows® 10 Professional 64 bit, version 1709 or greater   |
| Screen Resolution | SXGA 1,280 x 1,024, 32 bit color  |
| Screen Size       | 48.3 cm (19 in.)  |
| Display Settings  | 96 DPI Font<br>Default Windows® 10 theme  |

All Luminex instrumentation is CE and Safety Agency marked (MET and/or UL and/or TUV and/or NEMKO) to electrical/safety device standards. For details on approvals and standards compliance, please contact Luminex.

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**For more information, please visit: [www.luminexcorp.com/FLEXMAP-3D/](http://www.luminexcorp.com/FLEXMAP-3D/)**

Products are region specific and may not be approved in some countries/regions. Please contact Luminex at [support@luminexcorp.com](mailto:support@luminexcorp.com) to obtain the appropriate product information for your country of residence.

The FLEXMAP 3D is a Class 1 Laser Product.

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HEADQUARTERS

UNITED STATES

+1 512 219 8020

[info@luminexcorp.com](mailto:info@luminexcorp.com)

EUROPE

+31 73 800 1900

[europa@luminexcorp.com](mailto:europa@luminexcorp.com)

CANADA

+1 416 593 4323

[info@luminexcorp.com](mailto:info@luminexcorp.com)

CHINA

+86 21 8036 9888

[info@luminexcorp.com](mailto:info@luminexcorp.com)

JAPAN

+81 3 5545 7440

[info@luminexcorp.com](mailto:info@luminexcorp.com)

FL431888