

# Microplate Instrumentation & Software



### Lionheart™ FX Automated Live Cell Imager



- ▶ Automated image capture, analysis, annotation and movie making on a single platform
- ▶ Up to 100x oil immersion; brightfield, color brightfield, phase contrast and fluorescence
- ▶ Z-stacking and z-projection, montage and stitching
- ▶ Time lapse imaging of short- to long-term kinetics
- ▶ Image-based and laser autofocus, auto LED intensity, auto exposure
- ▶ Live cell assays support: incubation to 40 °C and CO<sub>2</sub>/O<sub>2</sub> control

### Cytation™ 5 and Cytation 3 Cell Imaging Multi-Mode Readers



- ▶ Fluorescence and brightfield imaging up to 60x, phase contrast and color brightfield (Cytation 5)
- ▶ Single and multi-color, montage, time lapse, z-stacking methods and z-projection
- ▶ Patented Hybrid Technology™ combines filter-based and monochromator-based optics
- ▶ Variable bandwidth monochromators for fluorescence (Cytation 5)
- ▶ Laser-based excitation for Alpha assays (Cytation 5)
- ▶ CO<sub>2</sub>/O<sub>2</sub> control, incubation and shaking, incubation to 65 °C (Cytation 3: 45 °C)

### Synergy™ Neo2 Multi-Mode Reader



- ▶ Patented Hybrid Technology™ combines filter-based and monochromator-based optics
- ▶ Scientific quad-monochromators with 3 – 50 nm continuously variable bandwidth
- ▶ High performance filter system uses multiple PMT detectors
- ▶ Ultra-fast plate processing speeds
- ▶ Live cell options: temperature and CO<sub>2</sub>/O<sub>2</sub> control, direct bottom illumination

### Synergy™ H1 Multi-Mode Reader



- ▶ Patented Hybrid Technology™ combines filter-based and monochromator-based optics
- ▶ Top/Bottom fluorescence, UV-Visible absorbance, luminescence, FP, TRF and TR-FRET
- ▶ Gas Controller available for Synergy H1: Controls and monitors CO<sub>2</sub> and O<sub>2</sub> in the system

### Synergy™ HTX and Synergy™ 2 Multi-Mode Readers



- ▶ Top/bottom fluorescence, UV-Vis absorbance and luminescence in 6- to 384-well plates
- ▶ AlphaScreen®/AlphaLISA® detection
- ▶ Linear and orbital shaking, incubation; available dual reagent dispenser
- ▶ Take3 Micro-Volume Plate compatible

### FLx800™ Fluorescence Reader



- ▶ Fluorescence/Luminescence microplate reader
- ▶ High sensitivity and quality at an affordable price
- ▶ Incubation and reagent injection options available

### PowerWave™ HT Microplate Spectrophotometer



- ▶ Continuous wavelength selection from 200 – 999 nm, without filters
- ▶ Reads 96- and 384-well plates in as little as 5 seconds (96 wells)
- ▶ Incubation to 50 °C and user programmable shaking

### Epoch™ 2 Microplate Spectrophotometer



- ▶ Large color touch screen interface with Gen5 software onboard
- ▶ Filter-free 200 – 999 nm wavelength range
- ▶ Reads 6- to 384-well plates and 2 µL samples with Take3 Plate
- ▶ Shaking and incubation to 65 °C with Condensation Control™



### Epoch™ Microplate Spectrophotometer

- ▶ Select individual wavelengths from 200 – 999 nm without filters
- ▶ Perform spectral scans, end point, kinetic, or well area scans



### ELx808™ Absorbance Reader

- ▶ 380 – 900 nm (340 – 900 nm option)
- ▶ 96-well plate reading of fast kinetics or end point assays
- ▶ Incubation to 50 °C (option) and shaking



### ELx800™ Absorbance Reader

- ▶ Reads plate types from 6- to 96-well (384-well option)
- ▶ Wavelength range from 400 – 750 nm (340 – 750 nm option)
- ▶ For clinical and research use



### Take3™ and Take3 Trio Micro-Volume Plates

- ▶ Up to 16 or 48 2 µL samples for nucleic acid and protein quantification, without dilution!
- ▶ Use with Epoch, Epoch 2, Synergy and Cytation readers (with absorbance detection module)
- ▶ Pre-programmed protocols in Gen5 software for easy multi-sample measurements

## L I Q U I D H A N D L I N G



### EL406™ Washer Dispenser

- ▶ 96-, 384- and 1536-well microplates
- ▶ Combines fast microplate washing with up to three reagent dispensers in one, compact instrument
- ▶ Optional buffer switching for up to 4 buffers, biomagnetic separation and vacuum filtration modules
- ▶ Typical applications: ELISAs, cell-based assays, MSD automation, magnetic/polystyrene bead assays



### 405™ Touch and 405 LS Washer

- ▶ 96- and 384-well microplates
- ▶ High resolution, LED backlit touch screen user interface for intuitive onboard washer control (405 Touch)
- ▶ USB flash drive ports enable file transfer and storage (405 Touch)
- ▶ Patented Verify™ clog detection technology for dispense and aspiration tubes
- ▶ Gentle dispense for non-disruptive cell washing
- ▶ Magnetic and polystyrene bead assays, along with conventional ELISAs



### ELx405™ Select Deep Well Washer

- ▶ 96- and 384-well deep well and standard height microplates
- ▶ Built-in ultrasonic cleaner option for effortless maintenance
- ▶ Wash cell assays with extra low flow option



### ELx50™ Washer

- ▶ Strip washer with 8-, 12- and 16-channel manifold options for 96- and 384-well microplates
- ▶ Syringe pump provides precise and accurate dispensing
- ▶ Optional buffer switching for up to 3 buffers, biomagnetic separation and vacuum filtration modules
- ▶ For clinical diagnostics and research



### MultiFlo™ FX Multi-Mode Dispenser

- ▶ 6- to 1536-well microplates in low profile, standard height and deep well formats
- ▶ 500 nL to 3 mL dispensing; from 1 to 4 reagents
- ▶ Single-channel dispense to individual wells with available RAD™ module
- ▶ Available wash module for 6- to 384-well plates
- ▶ Unique combination peristaltic pump and syringe drive technologies, fully modular and upgradable



### MicroFill™ Dispenser

- ▶ 24-, 96- and 384-well microplates; 5 µL to 6 mL dispense volume
- ▶ No re-calibration required
- ▶ Completely autoclavable fluid path for guaranteed sterility



## Precision™ Pipetting Systems

- ▶ Perform routine tasks typically done with handheld multi-channel pipettes
- ▶ Compatible with a variety of labware including sample tubes and 6- to 384-well plates
- ▶ Optional autoclavable and 100% DMSO compatible reagent dispenser
- ▶ Precision Power™ software for flexible experimental design
- ▶ Typical applications: Sample processing, hit picking, serial dilutions, reagent addition

# S O F T W A R E & R O B O T I C S



## BioSpa™ 8 Automated Incubator

- ▶ Complete workflow automation, sample prep to detection
- ▶ Temperature, CO<sub>2</sub>/O<sub>2</sub> control; humidity monitoring
- ▶ Records environment conditions; automated alerts
- ▶ Compact for biosafety cabinet use
- ▶ Uncomplicated software and simple integration



## BioStack™ Microplate Stacker

- ▶ <10 seconds plate exchange time
- ▶ De-lidding capability with BioStack4
- ▶ 24-, 48-, 96-, 384- and 1536-well plate compatible (BioStack model dependent)
- ▶ Direct control through washer and dispenser interface or via LHC or Gen5 software
- ▶ Compatible with BioTek readers and liquid handlers (except ELx50, ELx800, ELx808, FLx800)



## Gen5™ Microplate Reader and Imager Software

- ▶ Control of all BioTek microplate readers and imagers
- ▶ Intuitive interface for protocol and data reduction and results output
- ▶ Powerful analysis of absorbance, fluorescence, luminescence and image data
- ▶ 21 CFR Part 11 compliance available with Gen5 Secure
- ▶ Advanced image analysis with Gen5 Image+



## Liquid Handling Control™ (LHC) Software

- ▶ Full control for EL406, 405 Touch, 405 LS, ELx405 and MultiFlo FX
- ▶ Intuitive StepWise™ protocol creation with an unlimited number of methods included
- ▶ Custom maintenance reminders for continued instrument performance in busy laboratories
- ▶ 21 CFR Part 11 compliance and additional security with LHC™ Secure

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