bmseed
BioMedical
Sustainable Elastic Electronic Devices

Technical Specification Sheet
MEASSuRE models

Features and Benefits

- **Improving predictive value of in vitro research to predict in vivo behavior**
- Concurrent and independent control of **bio-mechanics, electrophysiology, and imaging**
- **Normalization** of post-stretch cellular electrophysiology to pre-stretch level (build-in control)
- Image cells **before, during, and after stretching**
- **Physiologically relevant** bio-mechanical environment
- **Convenient, time saving, customizable**
- **Applications:** e.g., neurotrauma research and drug screening, tissue engineering, regenerative medicine, organ-on-a-chip models, mechanobiology

Technical Specifications			
Model	**MEASSuRE-Mini** 	**MEASSuRE-Premium** 	**MEASSuRE-X** 
Mechanics Module	**Mini**	**Premium**	**X**
Maximum strain (radial)	20%	50%	50%
Maximum strain rate	1/s	50/s	80/s
Strain profiles	radial, linear (75%), custom		
Strain patterns	impulse, square, cyclic, symmetric, asymmetric, customizable		
Stroke (travel)	6mm	25mm	32mm
Smallest motion	1.6µm	6µm	8µm
Power (voltage, current)	150W (48V, 3.2A)	500W (48V, 10.2A)	2000W (130V, 15A)
Space	incubator	benchtop	benchtop
Imaging Module	**same options for all models**		
Camera	most cameras with F- or C-mount can be used		
Magnification	up to 16x		
Positioning	micro-adjustable platform		
Modality	optical and fluorescence imaging		
Electrophysiology Module	**same options for all models**		
Electrophysiology	recording and stimulation		
Channels	120 (4 ports with 30 channels each)		
Sampling rate	20kHz, 25kHz, 30kHz		
Stimulation shape	monophasic, biphasic, triphasic		
Stimulation current	10nA to 2.55mA		
Stimulation electrodes	any electrode or combination of electrodes can be used to stimulate		
Stimulation triggers	keystroke, analog, digital		

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