



SPECIFICATIONS

Visualize live cell function at scale with Pixel

Pixel™ enables high-resolution, multiplexed, real-time assessment of live-cell characteristics, providing deeper understanding of cell function. Pixel consists of plate and reader options to suit your application from low-throughput research to high-throughput screening.



Pixel Octo Pixel Primo

Product Highlights		
Benefits	▪ Multiplexed live-cell readouts	▪ Applicable across cell and organoid models
	▪ Resolution at single-cell scale	▪ Built to scale with cloud services
	▪ High-dimensional functional phenotyping	
Application Modules	▪ Electrical imaging (impedance)	▪ Neural (electrophysiology)
	▪ Cardiac (electrophysiology & contractility)	
Selected Applications	▪ Endothelial & epithelial biology	▪ Cardiac function
	▪ Cancer cell biology	▪ Cardiac toxicology/safety
	▪ Stem cell biology	▪ Neuron function

Pixel System Specifications		
Reader	Pixel Primo	Pixel Octo
Plate Capacity	1 plate	Up to 8 plates
Well Count per Plate	96 or 384	96 or 384
Operation	In-incubator	Benchtop
Environment Control	Temperature	Temperature, CO ₂ /O ₂ , & humidity
Dimensions (l x w x h)	35.8 cm x 12.5 cm x 7.7 cm	64.2 cm x 32.5cm x 62 cm
Data Storage	CytoTronics-AWS cloud	CytoTronics-AWS cloud
Connection Speed	Ethernet 1 Gbps	Ethernet 1 Gbps
Offline Storage Buffer	512 GB (>500 single plate electrical imaging scans, or >20 single plate one-minute electrophysiology scans)	4,096 GB (>5,000 single plate electrical imaging scans, or >150 single plate one-minute electrophysiology scans)



Pixel Microplate Specifications		
Product	Pixel-96	Pixel-384
Well Count	96	384
Electrode Count	138,000 per well	34,500 per well
Electrode Pitch	12.5 μ m	12.5 μ m
Recording Area	≥ 3.5 mm \times 3.5 mm	≥ 1.5 mm \times 1.5 mm
Plate Surface Material	Glass	Glass
Electrode Material	Gold	Gold
Working Well Volume	150 μ L	35 μ L
Max Well Volume	170 μ L	50 μ L



Pixel Application Specifications		
Plate Type	Pixel-96	Pixel-384
Electrical Imaging (Impedance)	Electrodes: $\geq 69,000$ per well Spatial Resolution: 12.5 μ m Frequency Range: 250Hz - 60kHz	Electrodes: $\geq 17,250$ per well Spatial Resolution: 12.5 μ m Frequency Range: 250Hz - 60kHz
Electrophysiology	Recording channels: >64 Spatial resolution: 400 μ m Sampling rate: 12.5 kHz	Recording channels: >16 Spatial resolution: 400 μ m Sampling rate: 12.5 kHz
Electrical Stimulation	Electrodes: Defined patterns (all electrodes stimulation capable)	Electrodes: Defined patterns (all electrodes stimulation capable)
Cardiac Contractility	Sampling rate: 2.5 kHz (400 μ s response)	Sampling rate: 2.5 kHz (400 μ s response)

