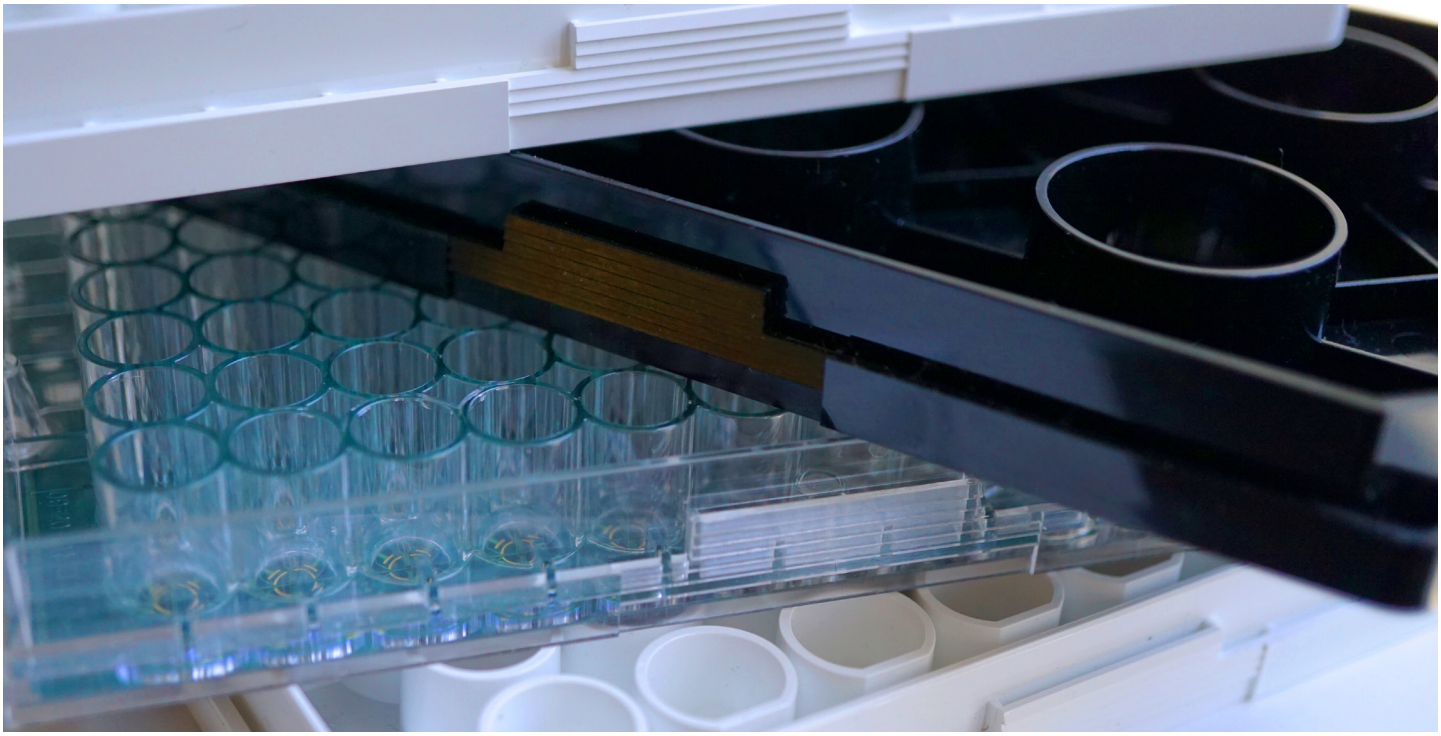
AXION BIOSYSTEMS



AXION MEA PLATES

INDUSTRY-LEADING 768 ELECTRODES AT THE THROUGHPUT YOU NEED

When your research requires insightful, high-quality data from microelectrode arrays (MEAs), Axion BioSystems' MEA plates provide the right balance of throughput, electrode count, and ease of use for your experiments. With our breakthrough MEA technology, access enhanced network-level signaling to make the most out of every assay.

Axion's MEA plates bring flexibility to your cellular assays. Each electrode on the plate is capable of recording or stimulation. With MEA's non-invasive electrodes, cell cultures may be measured repeatedly for additional data on the same population of cells. Axion's MEA plates are perfectly suited for acute or chronic time courses studies.

AXION MEA PLATES

- Up to 768 low-noise electrodes
- 6-, 24-, 48-, or 96-well formats
- Recording or stimulation capability for each electrode
- Integrated, independent ground electrodes
- Conical shaped wells
- Evaporation-reducing lids
- Built-in humidity chambers

AXION BIOSYSTEMS

BIOCIRCUIT MEA

High-quality MEA results for every assay

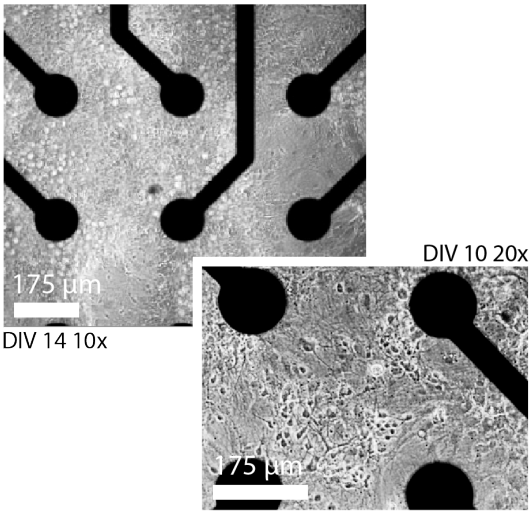
BioCircuit MEA plates deliver high-quality results together with industry-leading throughput at the lowest cost per well. BioCircuit MEA plates have low-noise recording electrodes, dedicated stimulation electrodes (24- and 48-well versions only), and on-plate spotting guides to simplify plate preparation. BioCircuit MEA plates are available in 96-, 48-, and 24-well formats.

BioCircuit MEA 96 plate (M768-BIO-96).

CYTOVIEW MEA

Cell visualization and assay multiplexing

The premium Maestro plates, CytoView MEA plates combine unparalleled access to cellular electrical activity with a thin, transparent plate bottom. Similar to Axion's other MEA plates, CytoView MEA plates contain the same industry-leading electrode count per well, low-noise signal, and retain the ability to be read over days, weeks, or months. The innovative, transparent bottom offers assay flexibility, including cell visualization and assay multiplexing. Black or white walls enable fluorescence- or luminescence-based assay multiplexing to probe complementary endpoints in your MEA study. Confirm cell placement accuracy, and correlate cell culture health and connectivity with MEA results. CytoView MEA plates are available in 96-, 48-, 24-, and 6- well formats.

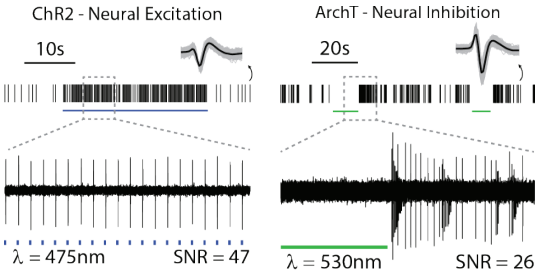


Bright field images of primary rodent cortical neurons at DIV14 (10x magnification) and DIV10 (20x) in a CytoView MEA 48 – Black plate (M768-tMEA-48B).

LUMOS MEA

Multiwavelength optical stimulation

Lumos MEA plates combine high-quality MEA results with highly optimized optical performance. The custom Lumos lid and specially formulated plate walls have been optimized to maximize light delivery to your cell culture and minimize well-to-well crosstalk. The transparent bottom allows for cell visualization and assay multiplexing with fluorescence, luminescence, and other reporter-based assays. Lumos MEA plates are available in 96-, 48-, and 24-well formats, for use with Axion's Lumos multiwell light delivery systems which allow independent and simultaneous activation of four different LEDs per well.



When expressed in neurons, ChR2 can be used to activate neurons *in vitro* in response to blue light, whereas ArchT suppresses neural activity upon incident green light.

ADVANCED FEATURES

ACCUSPOT

Superior cell placement

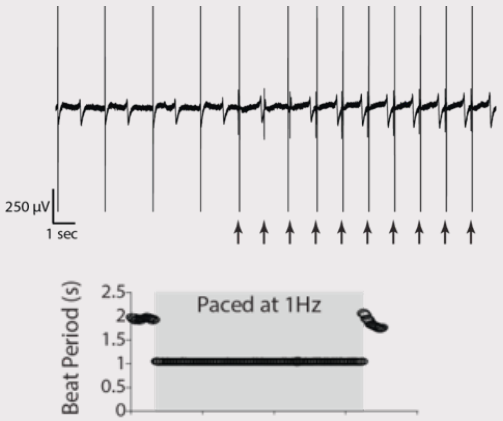
Plating cells centered over the electrode array conserves cells and ensures robust electrical activity near the recording electrodes. To make MEA plate preparation quicker and easier, Axion developed AccuSpot, on-plate spotting guides in the bottom of each well. Pipetting cells within the AccuSpot region centers the cells over the recording electrodes, ensuring a perfect droplet in every well. This makes cell plating easier and more precise. AccuSpot is included on BioCircuit MEA 96, BioCircuit MEA 48, and BioCircuit MEA 24 plates.

Base of the BioCircuit MEA 24 plate (M384-BIO-24) with the wells removed. On-plate spotting guides center the droplet over the recording electrode array, increasing plate preparation speed and accuracy.

DEDICATED STIMULATION ELECTRODE

Improved electrical stimulation capacity

Cardiomyocytes cultured on Axion MEA plates create an accessible platform for studying heart beats in a dish. Cardiomyocyte assays rely on evaluation of parameters, such as repolarization timing, that are tightly coupled to beat rate. Controlling beat rate allows the user to increase physiological relevance and reduce well-to-well variability. CytoView MEA 24, BioCircuit MEA 24, BioCircuit MEA 48, and Lumos MEA 24 plates include a large dedicated stimulation electrode in each well for superior stimulation capacity and reliable capture. Seamless integration with AxIS Navigator software makes stimulation simple yet customizable, while optimized artifact elimination and automated detection of electrophysiological features make analysis easy, efficient, and reproducible.



Cardiomyocyte spontaneous beats followed by beats paced at 1 Hz (top, arrows) using the dedicated stimulation electrode. Beat period quickly adapts to set pacing rate (bottom).

	Assay Requirements						
Plate Technology	Field Potential	Action Potential (LEAP)	Contractility	Propagation	Electrical Stimulation	Optical Stimulation	Impedance
BIOCIRCUIT MEA For lowest cost per well MEA assays	●	●		●	●		
CYTOVIEW MEA For MEA & cell imaging assays	●	●	●	●	●		
LUMOS MEA For optical stimulation MEA assays	●	●	●	●	●	●	
LUMOS OPTICLEAR For optical stimulation imaging assays						●	

BIOCIRCUIT MEA

The BioCircuit MEA plates deliver high-quality results together with industry-leading throughput at the lowest cost per well

Plate	Cat No.	Wells	Electrodes /well	Electrode layout*	Bottom	Walls	Maestro Edge	Maestro Pro	Maestro Z/ZHT	Maestro Original
BioCircuit MEA 24	M384-BIO-24	24	16 Gold		Opaque	Clear	●	●		
BioCircuit MEA 48	M768-BIO-48	48	16 Gold		Opaque	Clear		●		●
BioCircuit MEA 96	M768-BIO-96	96	8 Gold		Opaque	Clear		●		●

CYTOVIEW MEA

The CytoView MEA plates combine robust data collection with a transparent well bottom for cell visualization and assay multiplexing

Plate	Cat No.	Wells	Electrodes /well	Electrode layout*	Bottom	Walls	Maestro Edge	Maestro Pro	Maestro Z/ZHT	Maestro Original
CytoView MEA 6	(a) M384-tMEA-6B (b) M384-tMEA-6W	6	64 PEDOT		Transparent	(a) Black (b) White	●	●		●
CytoView MEA 24	M384-tMEA-24W	24	16 PEDOT		Transparent	White	●	●		
CytoView MEA 48	(a) M768-tMEA-48B (b) M768-tMEA-48W	48	16 PEDOT		Transparent	(a) Black (b) White		●		●
CytoView MEA 96	(a) M768-tMEA-96B (b) M768-tMEA-96W	96	8 PEDOT		Transparent	(a) Black (b) White		●		●

LUMOS MEA

The Lumos MEA plates combine the robustness and assay flexibility of a CytoView MEA plate with white walls and a custom optical lid for optimal light delivery in each well

Plate	Cat No.	Wells	Electrodes /well	Electrode layout*	Bottom	Walls	Maestro Edge	Maestro Pro	Maestro Z/ZHT	Maestro Original
Lumos MEA 24	M384-tMEA-24OPT	24	16 PEDOT		Transparent	White	●	●		
Lumos MEA 48	M768-tMEA-48OPT	48	16 PEDOT		Transparent	White		●		●
Lumos MEA 96	M768-tMEA-96OPT	96	8 PEDOT		Transparent	White		●		

LUMOS OPTICLEAR

The Lumos OptiClear plates for imaging assays with white walls and a custom optical lid for optimal light delivery in each well

Plate	Cat No.	Wells	Electrodes /well	Electrode layout*	Bottom	Walls	Maestro Edge	Maestro Pro	Maestro Z/ZHT	Maestro Original
Lumos OptiClear 24	OPT-24	24	0		Transparent	White				
Lumos OptiClear 48	OPT-48	48	0		Transparent	White				
Lumos OptiClear 96	OPT-96	96	0		Transparent	White				

*Schematic of well illustrating recoding electrodes (blue), grounds (orange), and where present, a large dedicated stimulation (blue), and on-plate spotting guides (gray).

FAQs:

Are plates sold individually or in groups?

All plates are sold in packs of 5 so a minimum order is 5 plates.

Can plates be ordered in bulk?

Yes. Ask your sales representative about bulk ordering options and pricing information.