M768-GLx

PLANAR MICROELECTRODE ARRAYS
MULTIWELL GLASS SERIES

***In vitro* high-throughput MEAs for network electrophysiology:**

- Higher-Throughput 12 well configuration
- 64 low-noise microelectrodes per well
- 4 integrated ground electrodes per well
- 300 µm transparent glass substrate
- Nano-porous Platinum or Au electrodes
- Clear or Black ANSI compliant well plates
- Evaporation-reducing lid
- Automatic plate recognition in Axion Maestro™ systems

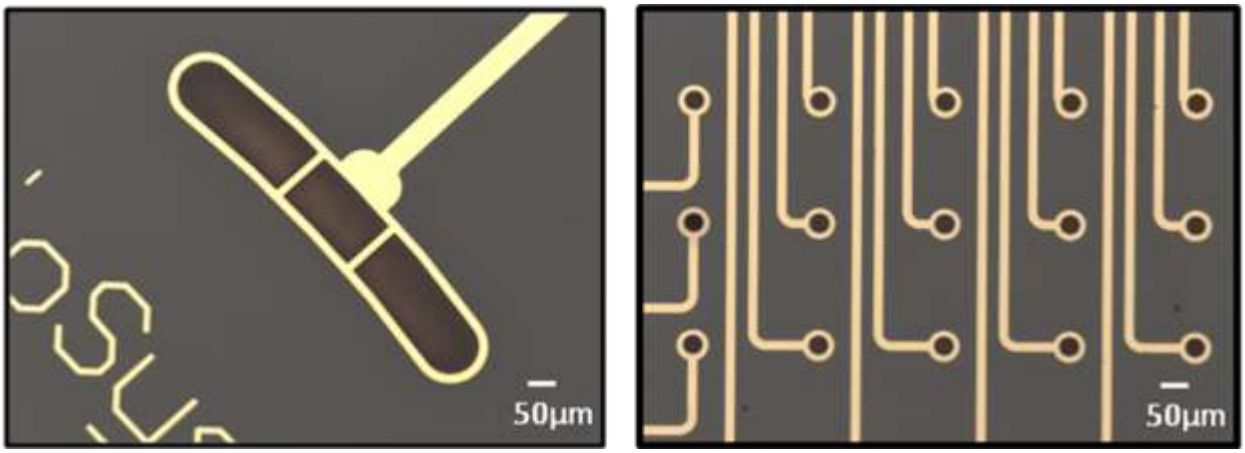
Description

The M768-GLx glass series of high throughput microelectrode arrays (MEAs) are ideally suited for the investigation of electroactive cells and tissue (e.g., neural, cardiac, muscle, and spinal tissue). The MEA-wells are organized in an ANSI/SLAS compliant format, compatible with traditional plate readers and automated instrumentation. Within each well, 64 individual embedded microelectrodes are capable of simultaneously monitoring the activity of a dozen or more cells. The arrangement of these electrodes into a grid extends the recording range across a 2 x 2 mm area, providing concurrent access to both single-cell and network-level activity. The Axion M768-GLx product line is available in a variety of electrode (Nano-porous Pt and Au electrodes) and insulation (polymer SU-8) materials.

Features

- 64 microelectrodes in an 8x8 configuration in each well (768 total microelectrodes)
- Ergonomic, ANSI/SLAS compliant multiwell configuration in clear or black polystyrene
- 30µm microelectrode diameter
- 200µm electrode spacing (center-to-center)
- 4 GNDs per well (2 Stimulation & 2 Recording GNDs)
- Nano-porous Platinum or Gold microelectrodes
- Optically clear polymer insulation (SU-8)
- Autoplate recognition in Axion Maestro™ systems
- Simultaneous stimulation and recording capabilities in Axion systems
- Industry standard plate configurations to accelerate throughput and provide compatibility with plate readers
- Integrated heating pads & evaporation-reducing lids
- Elevated, bottom-side electrical contacts to prevent residue buildup
- 300µm glass substrate to facilitate inverted microscopy with small working distance objectives
- Alignment features to ensure proper array orientation
- Custom application, specific geometries and materials available

MEA Materials and Specifications



Images of MEAs: Ground electrode (left) and Nano-porous Platinum (low-impedance) microelectrodes (right).

The M768-GLx MEAs are available with either Gold or Nano-porous Platinum electrodes. For most applications, where minimizing recording noise and maximizing current stimulation safety limits is desirable, nano-porous Pt electrodes are recommended. Axion will continue to expand the portfolio of available MEAs in the future. For additional information, please send enquiries to info@axionbio.com.

Part Number	Substrate	Electrode Material	Insulation Material
M768-GL1-30Au200	Glass	Gold	SU-8 (Polymer)
M768-GL1-30Pt200	Glass	Nano-porous Platinum	SU-8 (Polymer)

Culture Well Geometry

The M768-GLx microelectrodes are packaged into an ergonomic polystyrene well with a matching lid for reducing media evaporation. Within each culture-well, a smaller inner well accommodates reduced liquid volumes, ensuring that surface coatings and suspended cells remain in the vicinity of the electrodes. Electrical connections to external stimulating and recording electronics are located on the bottom-side of the device (all units are in mm).