

M768-KAP

PLANAR MICROELECTRODE ARRAYS MULTIWELL KAPTON SERIES



In vitro high-throughput MEAs for network electrophysiology:

- Higher-Throughput 48 well configuration
- 16 low-noise microelectrodes per well
- 4 integrated ground electrodes per well
- Opaque Kapton® substrate
- Nano-textured gold electrodes
- Clear or Black ANSI compliant well plates
- Evaporation-reducing lid
- Automatic plate recognition in Axion Maestro™ systems

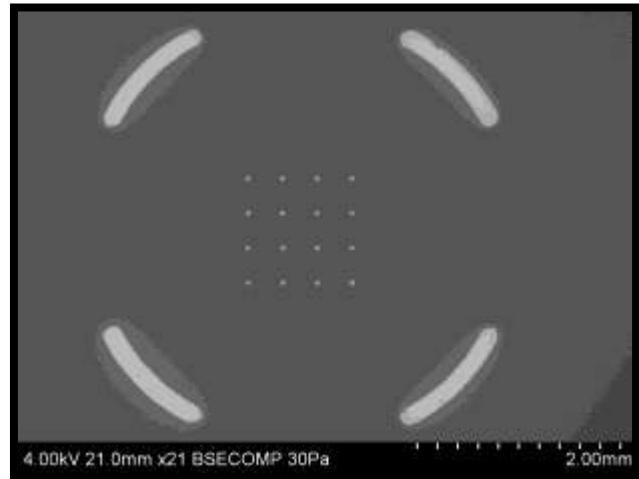
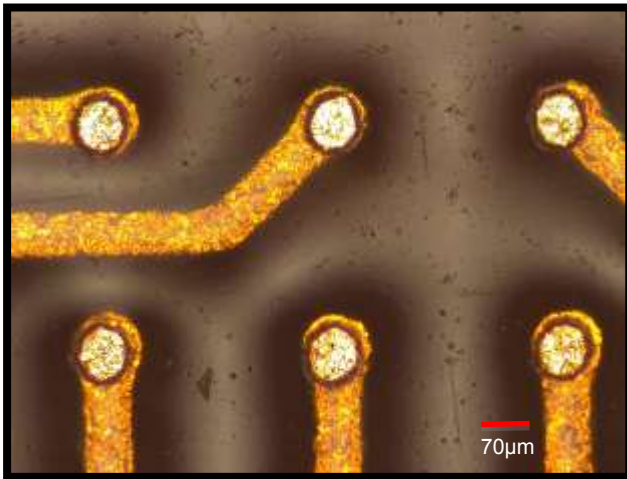
Description

The M768-KAP Kapton® 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, 16 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 1.2 x 1.2 mm area, providing concurrent access to both single-cell and network-level activity. The Axion M768-KAP product line is available with nano-textured Au microelectrodes and Kapton® insulation.

Features

- 16 microelectrodes in an 4x4 configuration in each well (768 total microelectrodes)
- Ergonomic, ANSI/SLAS compliant multiwell configuration in clear or black polystyrene
- ~40-50µm microelectrode diameter
- 350µm electrode spacing (center-to-center)
- 4 GNDs per well (2 Stimulation & 2 Recording GNDs)
- Nano-textured Gold microelectrodes
- Polymer (Kapton®) insulation
- 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
- Top-side microscopy compatible (note: insulation layer is opaque)
- Alignment features to ensure proper array orientation
- Custom application, specific geometries and materials available

MEA Materials and Specifications



Images of MEAs: Optical Micrograph of Nano-Textured Gold Microelectrodes (left) and variable-pressure scanning electron microscopic image (right).

The M768-KAP MEAs are available with Nano-textured Gold microelectrodes. Nano-texturing of gold is achieved by Axion's proprietary processes. This nano-texturing increases the surface area of gold thereby lowering the electrode impedance and noise. 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-KAP-50Au350	FR4 epoxy resin	Nano-textured Gold	Kapton®

Culture Well Geometry

The M768-KAP 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).

