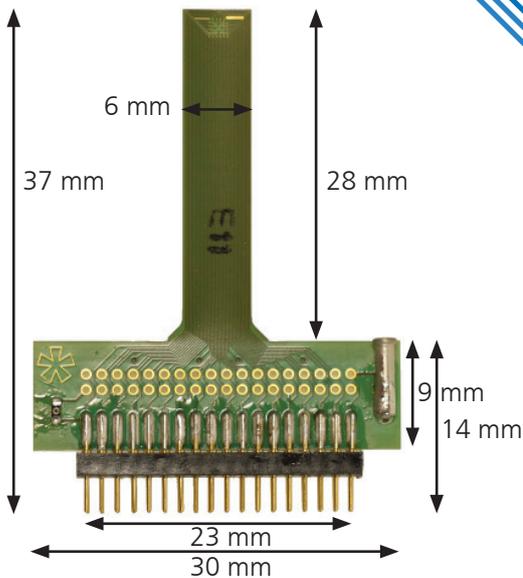


## EcoFlexMEA36

Flexible Microelectrode Array with 36 Electrodes for Use with ME2100-HS32 Headstage or 32-Channel Miniature Preamplifier MPA321 for *in vivo* or *in vitro* applications.

### Layout



Connect the EcoFlexMEA36 directly to a ME2100-HS32 or 32-Channel Miniature Preamplifier. Insert the EcoFlexMEA36 into the MPA321 with the electrode field up. The additional connector can be used for connecting a silver pellet or a silver wire for grounding the bath.

### Advantages

- EcoFlexMEAs made of flexible polyimide (Kapton) are perfect for *in vivo* and specific *in vitro* applications.
- EcoFlexMEAs are very cost efficient and more robust than FlexMEAs from polyimide foil.
- The electrodes and tracks and contact pads are made of pure gold.

### Technical Specifications

Temperature compatibility	0 - 125 °C
Dimensions (W x D x H)	37 mm x 30 mm
Thickness of the electrode field	50 µm
Base material	Polyimide (Kapton)
Weight	< 10 g
Track material and contact pads	Gold (Au)
Electrode diameter	50 µm
Interelectrode distance (center to center)	300 µm
Diameters of the holes	100 µm
Electrode height	Planar
Electrode material	Gold (Au)
Isolation material	Polyimide (Kapton)
Electrode impedance	< 150 kΩ
Electrode layout grid	6 x 6
Number of recording electrodes	32
Number of reference electrodes	2 internal reference electrode (iR)
Ground electrodes	2 ground electrodes
Software	
Multi Channel Experimenter	MEA Configuration
MC_Rack	1 dimensional or Configuration
Channel map	EcoFlexMEA36.cmp

### Cleaning

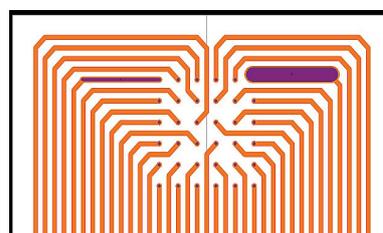
Rinse with distilled water, optional with ethanol 70 %. Do not autoclave EcoFlexMEAs made from Polyimide (Kapton).

## EcoFlexMEA36

Flexible Microelectrode Array with 36 Electrodes for Use with ME2100-HS32 Headstage or 32-Channel Miniature Preamplifier MPA32I for *in vivo* or *in vitro* applications.

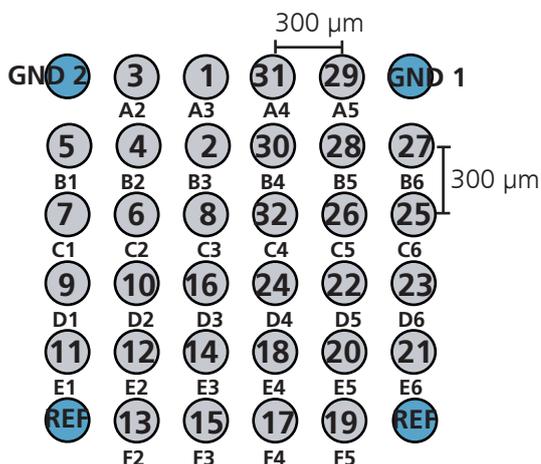
### Layout

**Important:** The data acquisition channel map is constructed by looking on the back side of the electrodes, because the FlexMEA electrodes are placed on the preparation upside down!



### Electrode field:

1800 x 1800  $\mu\text{m}$ ,  
32 recording electrodes  
2 reference electrodes,  
2 ground electrodes.



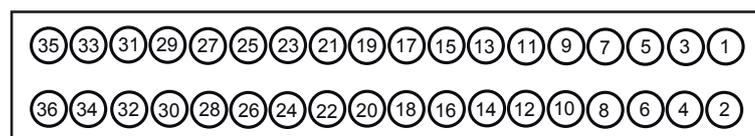
GND 1 is a large ground electrode connected to pin 1 of the MPA32I input connector. GND 2 is a second ground electrode connected to pin 36. The REF electrodes are reference electrodes connected to pin 2 and 35, respectively. Both ground inputs and both reference electrode inputs are equal, that is, they are connected to each other inside the standard MPA32I. Please see the MPA32I manual for details.

### Numbering

The numbers in the electrodes are the recording channel numbers that refer to the channel numbers of the data acquisition program. For MC\_Rack, please make sure that you have selected "Configuration" in the "Channel Layout" under "Data Source Setup" with a total number of 64 channels. In "Amplifier", please choose FA32I/S or FA64I/S and in "MEA" EcoFlex-MEA36. In Layout tab of the display, please click "Default Map".

### Pin Layout

EcoFlexMEA36 Input Pins



EcoFlexMEA36 Input Pins

Pin 1	GND (Ground)
Pin 2	Reference input
Pin 3 to 34	Recording channels 1 to 32
Pin 35	Reference
Pin 36	GND (Ground)



**Warning:** The device may only be used together with the ME2100-HS32 headstage or th MPA32I (-Flex) from Multi Channel Systems MCS GmbH, and only for the specified purpose. Damage of the device and even injuries can result from improper use.