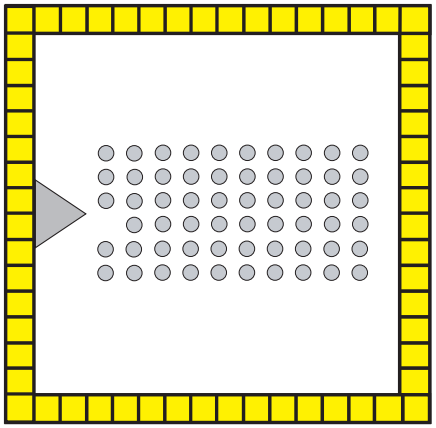
60pMEA100/30iR-Ti

60pMEA100/30iR-Ti

Layout



Technical Specifications

Temperature compatibility	0 - 50 °C
Dimensions (W x D x H)	49 mm x 49 mm x 1 mm
Base material	Polyimide foil (2611) on glass or ceramic carrier
Perforation:	
Diameter of innermost area	2 mm
Total area of holes	24 % (according to 2 mm)
Diameter of holes	10, 12, 12.5, 17, 19, 22, 23.3, 23.5, 36, 44 µm
Track material	TiAu (Titan, Gold)
Contact pads	TiAuTi (Titan, Gold, Titan)
Electrode diameter	30 µm
Interelectrode distance (center to center)	100 µm
Electrode height	Planar
Electrode material	TiN (Titanium nitride)
Isolation material	Polyimide foil (2610) isolator
Electrode impedance	< 100 kΩ
Electrode layout grid	10 x 6
Number of recording electrodes	59
Number of reference electrodes	1 internal reference electrode (iR)
Software	
Multi Channel Experimenter	MEA Configuration
MC_Rack	2 dim. (MEA) or Configuration
Channel map	Default

Advantages

- Acute slice recordings on common glass MEAs are done from the cells at the bottom of the slice, which are in contact with the MEA electrodes.
- These cells get less oxygen and nutrients from the perfusion medium, and therefore are likely to give smaller signals and might eventually die first.
- Perforated MEAs present a solution to this problem as they allow a perfusion of the tissue from both sides at the same time, thereby optimizing the oxygen supply of the acute slice.

MEA Perfusion Chamber

(w/o) Without ring
(gr) Glass ring ID +/- 19 mm, OD +/- 24 mm, height 6 / 12 mm
(pr) Plastic ring without thread ID 26.5 mm, OD 30 mm, height 6 / 15 mmm
(pr-T) Plastic ring with thread ID 26 mm, OD 30 mm, height 6 / 15 mmm

December 2019

Multi Channel Systems
MCS GmbH
Aspenhaustrasse 21
72770 Reutlingen
Germany

Phone +49-7121-909 25- 0
Fax +49-7121-909 25-11

sales@multichannelsystems.com
www.multichannelsystems.com

60pMEA100/30iR-Ti

60pMEA100/30iR-Ti

Layout

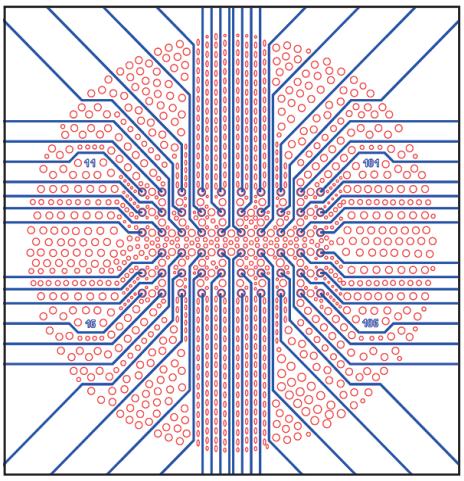
Cleaning

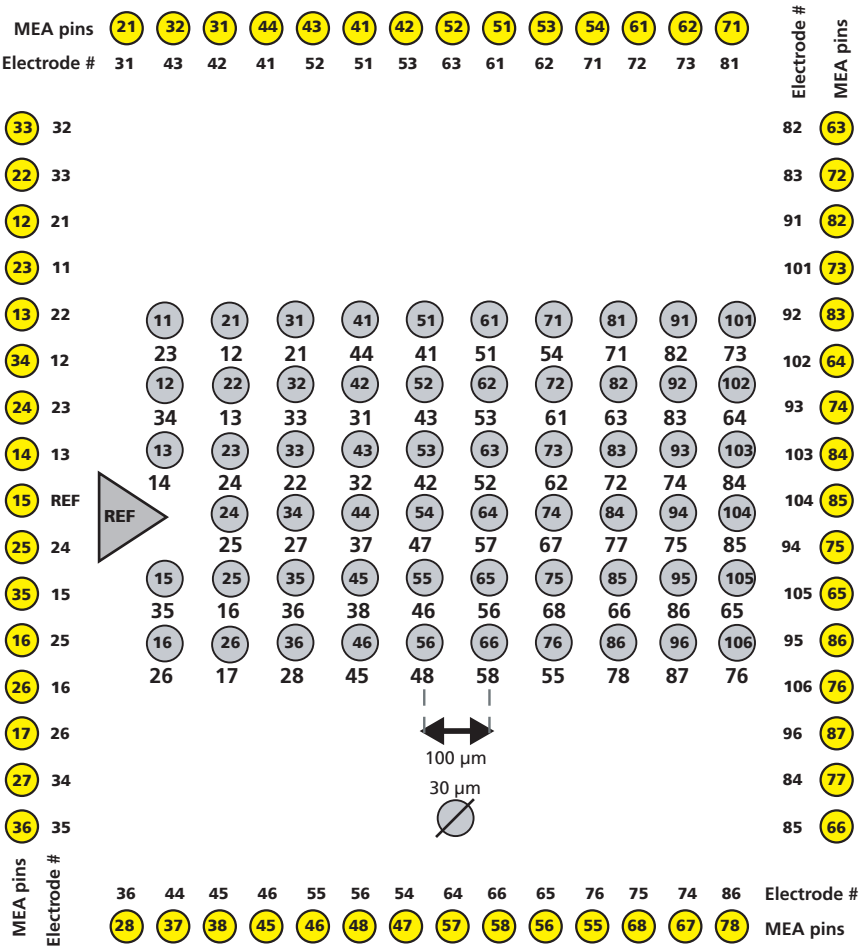
Rinse with distilled water.
Do not use ultrasonic bath!
These pMEAs are not heat stable, and should not be autoclaved!

Numbering

The numbering of MEA electrodes in the 10 x 6 grid follows the standard numbering scheme for square grids:

The first digit is the column number, and the second digit is the row number. For example, electrode 23 is positioned in the third row of the second column.





MEAs are not symmetrical!
MEAs with internal reference electrode should be placed with reference electrode to the left side when looking directly to the opened amplifier.

The specified MEA pin numbers (1 dim. or 2 dim.) are the channel numbers that are used in the data acquisition program, when using the 1 dimensional layout or the 2 dimensional layout (or Configuration) in the "Data Source Setup". The electrode 14 is missing in MEAs with internal reference electrode. It is replaced by a big internal reference electrode, connected to pin 15 of the amplifier.

December 2019

Multi Channel Systems
MCS GmbH
Aspenhaustrasse 21
72770 Reutlingen
Germany

Phone +49-7121-909 25- 0
Fax +49-7121-909 25-11

sales@multichannelsystems.com
www.multichannelsystems.com