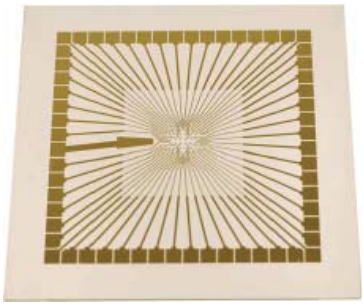
multichannel systems

Innovations in Electrophysiology

60EcoMEA-Glass

Layout



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.

Technical Specifications

Temperature compatibility	0 - 125 °C
Dimensions (W x D x H)	49 mm x 49 mm x 1 mm
Base material	Glass
Track material	Gold
Contact pads	Gold
Electrode diameter	100 µm
Interelectrode distance (center to center)	700 µm
Electrode height	Planar
Electrode material	Au (Gold)
Isolation material	SU-8 (photoresist, 1 - 2 µm)
Electrode impedance	< 100 kΩ
Electrode layout grid	8 x 8
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

- Very cost efficient and robust EcoMEAs on glass base.
- For applications with lower spatial resolution and higher throughput.
- Established for cardiomyocyte cultures and large slices.
- Glass base facilitates view on sample under the microscope.

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

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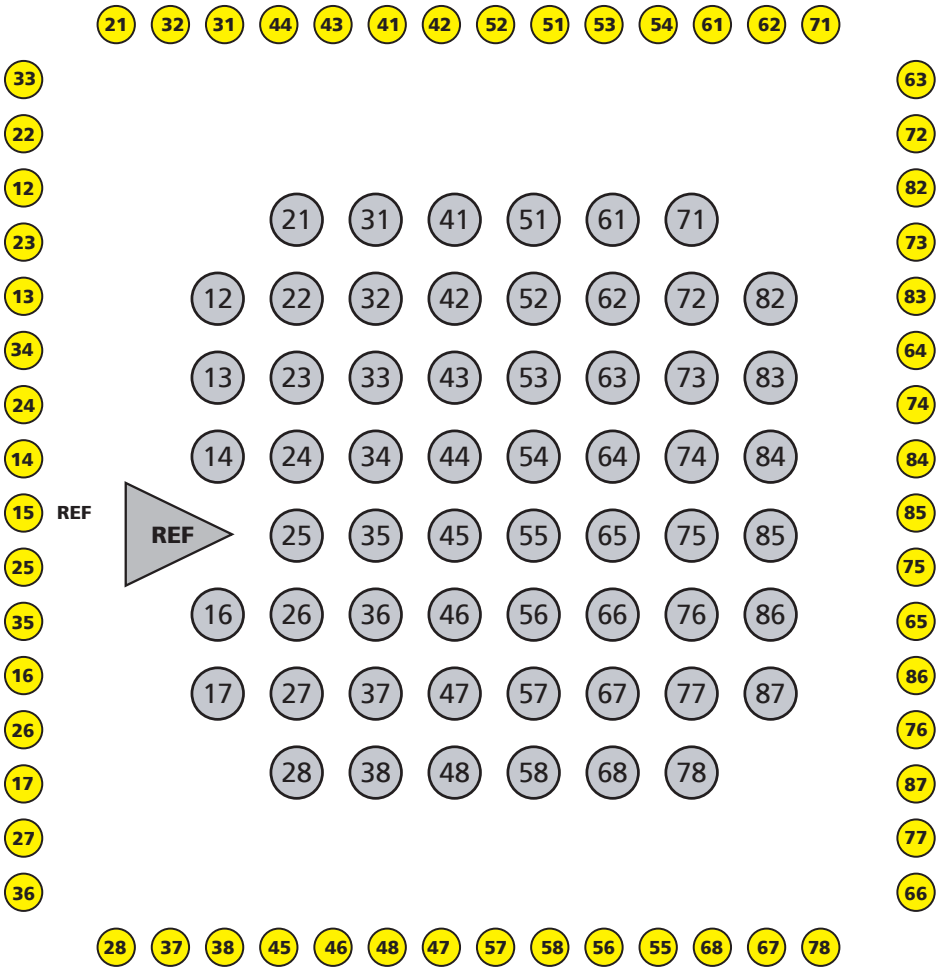

Numbering

The numbering of MEA electrodes in the 8 x 8 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.

The MEA Electrode IDs are the channel numbers that are used in the data acquisition program. When using MC_Rack software, please select the 2 dimensional layout (or Configuration) in the "Data Source Setup". Electrode 15 is missing in this MEAs. It is replaced by a big internal reference electrode, connected to pin 15 of the amplifier.

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