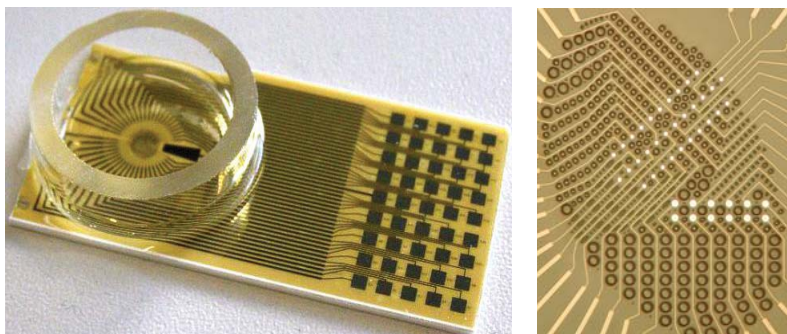



pMEA32S12 Layout 1

Perforated MEA for use with MEA2100-32- and USB-MEA32-STIM4-System

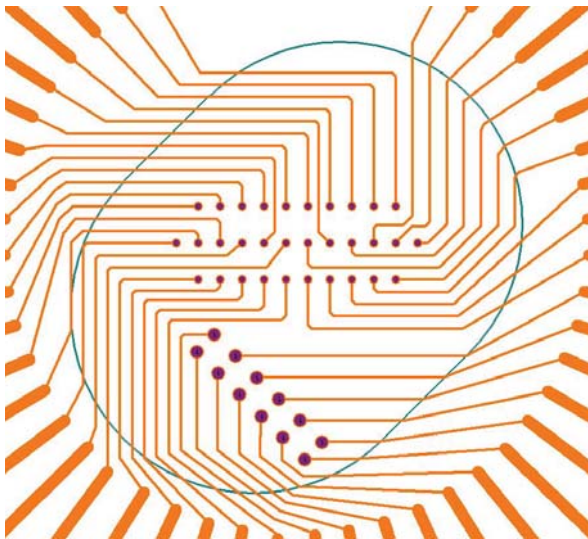


Technical Specifications pMEA32S12 Layout 1

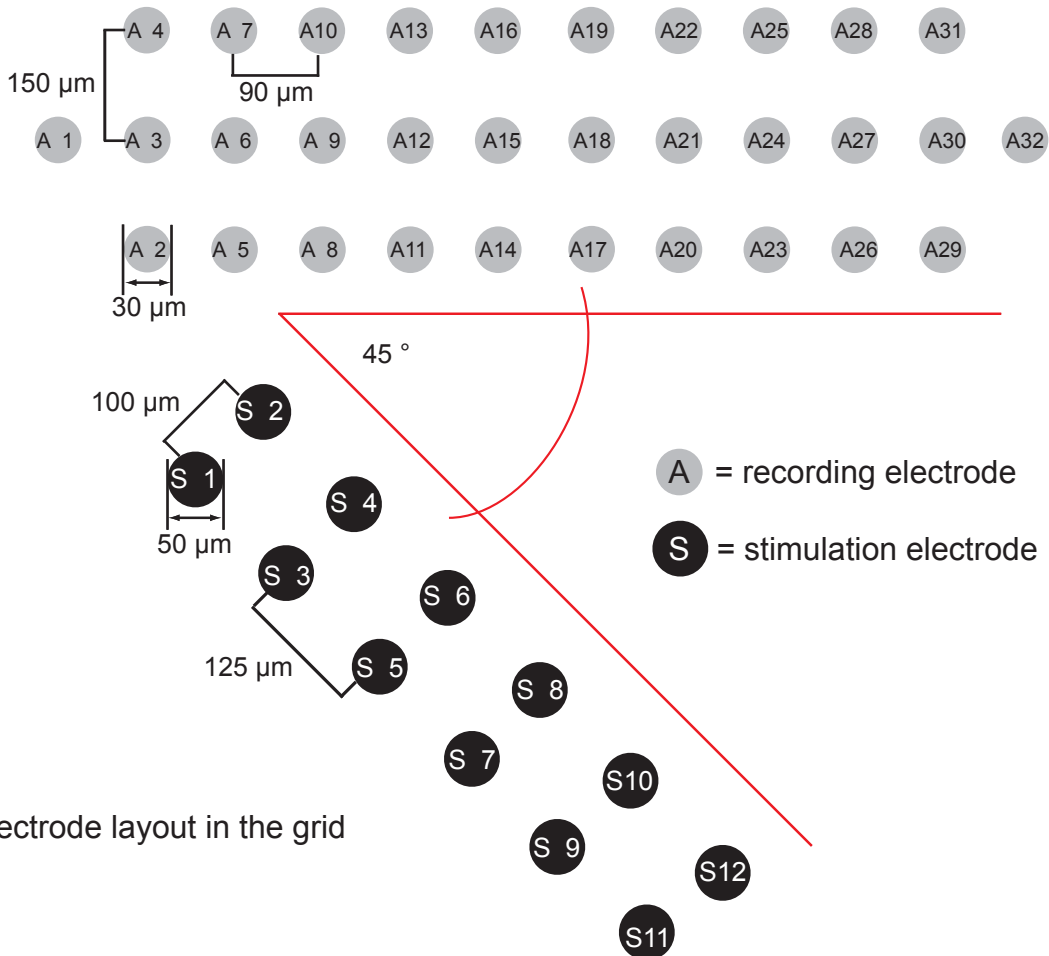
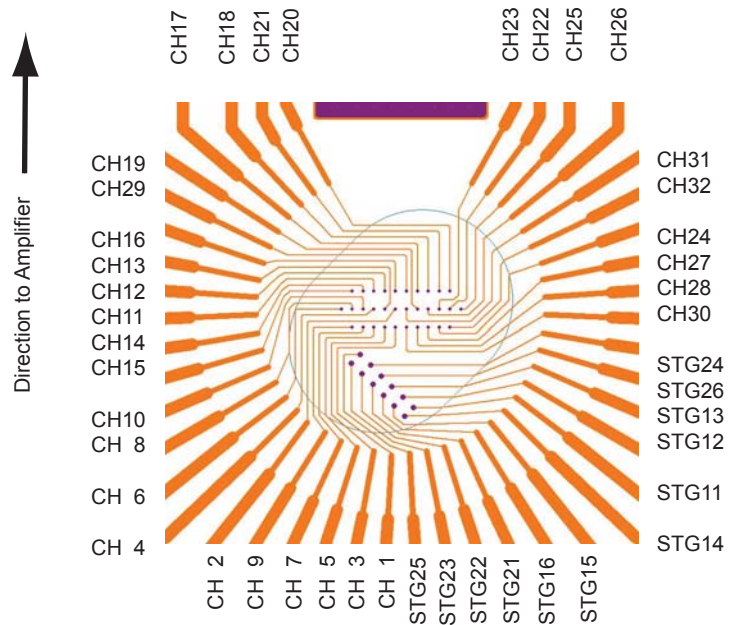
Temperature compatibility	10 - 50 °C
Dimension (W x D x H)	49 mm x 25 mm x 1.8 mm
Base material	Polyimide foil on ceramic carrier with perforation
Perforation:	
Total area of holes	0.8 mm ²
Diameter of the holes	90, 75, 50, 30, 20 µm
Track material	Ti (Titanium)
Contact pads	TiN (Titanium nitride)
Electrode diameter	30 µm (recording electrodes) 50 µm (stimulation electrodes)
Interelectrode distance (centre to centre)	90 µm and 150 µm (recording electrodes), 100 µm and 125 µm (stimulation electrodes)
Electrode height	Planar
Electrode type	TiN (Titanium nitride) electrodes
Isolation type	Polyimide foil
Electrode impedance	Approximately 30 - 50 kΩ
Electrode layout grid	1 x 10 + 1 x 12 + 1 x 10 (recording electrodes), 2 x 6 (stimulation electrodes)
Number of recording electrodes	32
Number of stimulation electrodes	12
Number of reference electrodes	1 internal reference electrode
MC_Rack "Source layout" in "Data Source Setup"	Configuration (MEA2100-32)
Channel map	1 dimensional, no digital channel (USB-MEA32-STIM4) pMEA-32S12-L1_12x3.cmp
Cleaning	 Rinse with distilled water. Do not use ultrasonic bath! Do not autoclave or sterilize pMEAs by heat. These MEA types are not heat-stable and will be irreversibly damaged!
pMEA perfusion chamber	(w/o) Without ring (gr) Glass ring: ID +/- 19 mm, OD 24 mm, height 6 / 12 mm

pMEA32S12 Layout 1

Perforated MEA for use with MEA2100-32- and USB-MEA32-STIM4-System



The oval area of the pMEA chip is perforated



Electrode layout in the grid

pMEA32S12 Layout 1

Perforated MEA for use with MEA2100-32- and USB-MEA32-STIM4-System

MC_Rack channel map: pMEA-32S12-L1_12x3.cmp

	15	14	11	12	16	29	17	18	21	20	
6	8	10	4	13	2	31	19	26	23	22	25
	9	7	5	3	1	30	28	27	24	32	

The MC_Rack channel map is build analog to the layout of the recording electrodes in the grid.

	A 4	A 7	A 10	A 13	A 16	A 19	A 22	A 25	A 28	A 31	
A 1	A 3	A 6	A 9	A 12	A 15	A 18	A 21	A 24	A 27	A 30	A 32
	A 2	A 5	A 8	A 11	A 14	A 17	A 20	A 23	A 26	A 29	


Table:

Correlation of MC_Rack channels and recording electrodes

A = Number of recording electrode, CH = Channel number in MC_Rack

S = Number of stimulation electrode, STG = Internal stimulus generator connection

REF = Reference electrode

S 1	STG 23		STG 16	S 7
S 2	STG 25		STG 13	S 8
S 3	STG 22		STG 15	S 9
S 4	STG 24		STG 12	S 10
S 5	STG 21		STG 14	S 11
S 6	STG 26		STG 11	S 12

A 1	CH 6	CH 30	A 17
A 2	CH 9	CH 31	A 18
A 3	CH 8	CH 29	A 19
A 4	CH 15	CH 28	A 20
A 5	CH 7	CH 19	A 21
A 6	CH 10	CH 17	A 22
A 7	CH 14	CH 27	A 23
A 8	CH 5	CH 26	A 24
A 9	CH 4	CH 18	A 25
A 10	CH 11	CH 24	A 26
A 11	CH 3	CH 23	A 27
A 12	CH 13	CH 21	A 28
A 13	CH 12	CH 32	A 29
A 14	CH 1	CH 22	A 30
A 15	CH 2	CH 20	A 31
A 16	CH 16	CH 25	A 32