multichannel systems

perforated MEA (Microelectrode Array) for MEA2100-32- and USB-MEA32-STIM4-System

pMEA for use with MEA2100-32- and USB-MEA32-STIM4-System	**pMEA-32S12 Layout 1**	**pMEA-32S12 Layout 2**	**pMEA-32S12 Layout 3**	**pMEA-32S12 Layout 4**
				
Temperature compatibility	10 °C – 50 °C	10 °C – 50 °C	10 °C – 50 °C	10 °C – 50 °C
Dimension (W x D x H)	49 x 25 mm x 180 µm	49 x 25 mm x 180 µm	49 x 25 mm x 180 µm	49 x 25 mm x 180 µm
Base material	Polyimide foil on ceramic carrier with perforation	Polyimide foil on ceramic carrier with perforation	Polyimide foil on ceramic carrier with perforation	Polyimide foil on ceramic carrier with perforation
Perforation:				
Total area of perforation	0.8 mm^2	0.8 mm^2	0.8 mm^2	0.8 mm^2
Diameter of the holes	20, 30, 50, 75 and 90 µm	20, 30, 50, 75 and 90 µm	20, 30, 50, 75 and 90 µm	20, 30, 50, 75 and 90 µm
Contact pad	Titanium nitride (TiN)	Titanium nitride (TiN)	Titanium nitride (TiN)	Titanium nitride (TiN)
Track material	Titanium (Ti)	Titanium (Ti)	Titanium (Ti)	Titanium (Ti)
Electrode diameter	30 µm (recording electrode) 50 µm (stimulation electrode)	30 µm (recording electrode) 50 µm (stimulation electrode)	30 µm (recording electrode) 50 µm (stimulation electrode)	30 µm (recording electrode) 50 µm (stimulation electrode)
Interelectrode distance	90 and 150 µm (record. electrode) 100 and 125 µm (stim. electrode)	90 and 150 µm (record. electrode) 90 and 150 µm (stim. electrode)	90 and 150 µm (record. electrode) 90 and 100 µm (stim. electrode)	100 and 100 µm (record. electrode) 100 and 100 µm (stim. electrode)
Electrode height	Planar	Planar	Planar	Planar
Electrode type	Titanium nitride (TiN)	Titanium nitride (TiN)	Titanium nitride (TiN)	Titanium nitride (TiN)
Isolation type	Polyimide foil	Polyimide foil	Polyimide foil	Polyimide foil
Electrode impedance	30 – 50 kΩ	30 – 50 kΩ	30 – 50 kΩ	30 – 50 kΩ
Electrode layout grid	1x10+1x12+1x10 (record. electr.) 2x6 (stimulation electrodes)	1x10+1x12+1x10 (record. electr.) 2x6 (stimulation electrodes)	1x10+1x12+1x10 (record. electr.) 3x4 (stimulation electrodes)	4x8 (recording electrode) 2x6 (stimulation electrodes)
Number of electrodes	32 recording electrodes 12 stimulation electrodes 1 internal reference electrode	32 recording electrodes 12 stimulation electrodes 1 internal reference electrode	32 recording electrodes 12 stimulation electrodes 1 with internal reference electrode	32 recording electrodes 12 stimulation electrodes 1 internal reference electrode
Ring	Without ring Glass ring	Without ring Glass ring	Without ring Glass ring	Without ring Glass ring