



MEA Microelectrode Array

MEA type	TiN electrodes, SiN isolator, and Ti contact pads 100/10-Ti, 200/10-Ti, 200/10iR-Ti, 200/30-Ti, 200/30iR-Ti, 200/30-Ti-stim (with 8 add. stimulating electrodes), 500/10iR-Ti, 500/30iR-Ti, HexaMEA-Ti (10, 20, 30)	TiN electrodes, SiN isolator, and ITO contact pads 100/10-ITO, 200/30iR-ITO, HD30/10-ITO, HexaMEA-ITO (10, 20, 30)	ThinMEA ThinMEA (180 µm) 100/10-ITO, ThinMEA (180 µm) 200/30iR-ITO	3-D MEA-gr	EcoMEA	FlexMEA
Temperature compatibility	0 °C to 125 °C	0 °C to 125 °C	0 °C to 125 °C	0 °C to 80 °C	0 °C to 125 °C	10 °C to 40 °C
Dimensions (W x D x H)	49 mm x 49 mm x 1 mm	49 mm x 49 mm x 1 mm	49 mm x 49 mm x 180 µm (glass part)	49 mm x 49 mm x 1 mm	49 mm x 49 mm x 1 mm	12 µm height
Weight	8 g	8 g	8 g	8 g	8 g	< 1 g
Base material	Glass	Glass	Glass (on a ceramic carrier)	Glass	Gold	Polyimid 2611
Contact pad and track material	Titanium	Indium tin oxide	Titanium	Platinum	Gold	Gold
Electrode diameter	As specified; 10, 20, and 30 µm available	As specified; 10, 20, and 30 µm available; for HD30/10-ITO: 10 µm	As specified; 10 and 30 µm available	40 µm (at base)	100 µm	30 µm
Interelectrode distance	As specified; 100, 200, and 500 µm available; not applicable to Hexa (10, 20, 30) MEA layout	As specified; 100 and 200 µm available; for HD30/10-ITO: 30 µm; not applicable to Hexa (10, 20, 30) ITO MEA layout	As specified; 100 and 200 µm available	200 µm	700 µm	200 µm (16 electrode version), 300 µm (36 electrode version), 600 to 700 µm (72 electrode version)
Electrode height	Planar	Planar	Planar	Approx. 50 µm to 70 µm	Planar	Planar
Electrode type	Titanium nitride	Titanium nitride	Titanium nitride	Platinum	Gold	Titanium nitride
Isolation type	Silicon nitride 500 nm (PEVCD)	Silicon nitride 500 nm (PEVCD)	Silicon nitride 500 nm (PEVCD)	SU-8		Polyimid 2611
Electrode impedance	30 kΩ to 400 kΩ, depending on electrode type and diameter	30 kΩ to 400 kΩ, depending on electrode type and diameter	30 kΩ to 400 kΩ, depending on electrode type and diameter	approx. 400 kΩ (range from 250 to 500)	approx. 30 kΩ	approx. 50 kΩ
Electrode layout grid	100/10, 200/10, 200/10 i. r., 200/30, 200/30 i. r.: 8 x 8, 500/10 i. r., 500/30 i. r.: 6 x 10, Hexa (10, 20, 30): hexagonal	100/10, 200/30 i. r.: 8 x 8; HD30/10/ITO: 2 x (5x6); Hexa (10, 20, 30): hexagonal	8 x 8	8 x 8	8 x 8	4 x 4 (14 electrode version), 6 x 6 (32 electrode version), 9 x 8 (72 electrode version)
Number of electrodes	60 i. r. = with internal reference electrode Optional: with 8 stimulating electrodes	60 i. r. = with internal reference electrode	60 i. r. = with internal reference electrode	60	60	Versions with 14, 32, and 72 electrodes available 14 and 32 electrode versions with 2 reference electrodes 32 electrode version with 2 ground electrodes

The product type specifies the interelectrode distance and the electrode diameter, that is, 100/10 means 100 µm interelectrode distance and 10 µm electrode diameter.

Culture chambers for MEAs

	Glass ring (-gr)	Plastic ring without thread for a lid (-pr)	Plastic ring with thread for a removable lid (-pr-T)	No ring for custom use (-w/o)
Inner diameter (ID)	19 (+/- 0.1) mm	26 mm	26 mm	-
Outer diameter (OD)	24 (+/- 0.1) mm	30 mm	30 mm	-
Height	6 mm	6 mm	6 mm	-
			with screw thread for lid	