

120tMEA100/30iR-ITO

Microelectrode Array with transparent Electrodes for Use with MEA2100-120-System

Layout

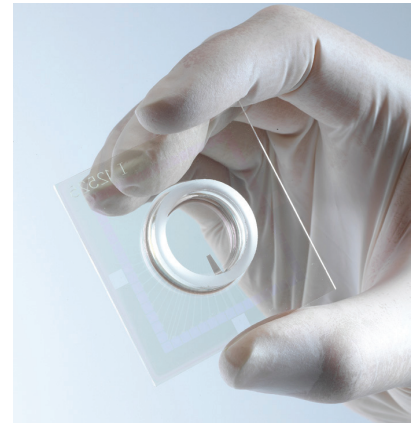


Photo above: 60tMEA200/30iR-ITO

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	ITO (Indium tin oxide)
Contact pads	ITO (Indium tin oxide)
Electrode diameter	100 µm
Interelectrode distance (center to center)	30 µm
Electrode height	Planar
Electrode material	transparent TiN (Titanium nitride)
Isolation material	Silicon nitride 500 nm (PEVCD)
Electrode impedance	< 250 kΩ
Electrode layout grid	12 x 12
Number of recording electrodes	120
Number of reference electrodes	4 internal reference electrode (iR)
Contact pads for reference electrodes, connected to ground	4
Software	
Multi Channel Experimenter	MEA Configuration
MC_Rack	Configuration
Channel map	MEA120

Important: Please do not treat a MEA with transparent electrodes in a Plasma Cleaner! To make it hydrophilic use PBS over night.

Advantages

- 120tMEAs with 12 x 12 layout grid for use with MEA2100-120-System only.
- 12 x 12 grid results in a large recording field, while keeping a high resolution.
- Optimized for large slices and cultures.
- Electrodes, contact pads and tracks are transparent, for a perfect view of the specimen 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 mm
- (pr-T) Plastic ring with thread ID 26 mm, OD 30 mm, height 6 / 15 mm

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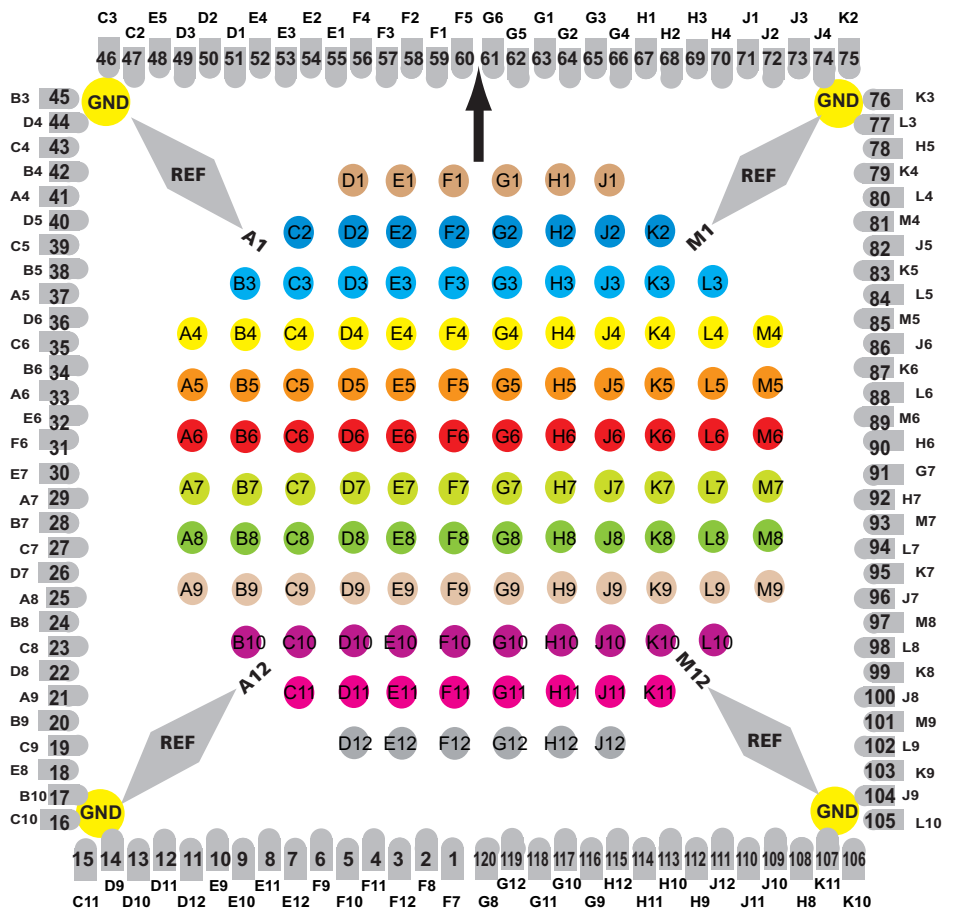
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Orientation

Please insert the 120tMEA in correct orientation: When looking from the front into the opened headstage, the small arrow near to the contact pads of the 120tMEA faces upwards. Under microscope control you can read the markers A1 and A12, M1 and M12 as shown on the diagram.

Sterilization and Handling

The same material is used for standard MEAs and 120tMEAs. Therefore, they are equally robust and heat-stabilized. They can be autoclaved and coated with different procedures for cell and tissue cultures.



The letter digit code is the electrode identifier, and refers to the position of the electrode in the 12 x 12 layout grid. The number code is the hardware identifier of the electrode. The reference electrodes (REF) are connected to ground (GND).

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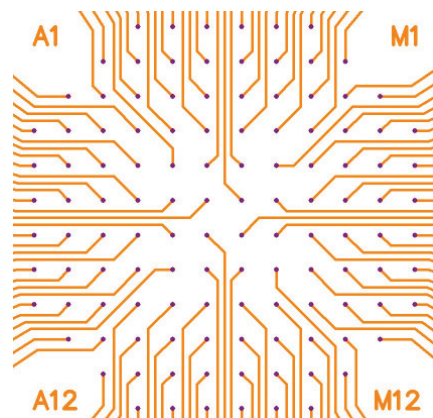


Table: Hardware ID and Electrode ID

HW ID	EL ID	HW ID	EL ID	HW ID	EL ID	HW ID	EL ID
120	G8	90	H6	60	F5	30	E7
119	G12	89	M6	59	F1	29	A7
118	G11	88	L6	58	F2	28	B7
117	G10	87	K6	57	F3	27	C7
116	G9	86	J6	56	F4	26	D7
115	H12	85	M5	55	E1	25	A8
114	H11	84	L5	54	E2	24	B8
113	H10	83	K5	53	E3	23	C8
112	H9	82	J5	52	E4	22	D8
111	J12	81	M4	51	D1	21	A9
110	J11	80	L4	50	D2	20	B9
109	J10	79	K4	49	D3	19	C9
108	H8	78	H5	48	E5	18	E8
107	K11	77	L3	47	C2	17	B10
106	K10	76	K3	46	C3	16	C10
105	L10	75	K2	45	B3	15	C11
104	J9	74	J4	44	D4	14	D9
103	K9	73	J3	43	C4	13	D10
102	L9	72	J2	42	B4	12	D11
101	M9	71	J1	41	A4	11	D12
100	J8	70	H4	40	D5	10	E9
99	K8	69	H3	39	C5	9	E10
98	L8	68	H2	38	B5	8	E11
97	M8	67	H1	37	A5	7	E12
96	J7	66	G4	36	D6	6	F9
95	K7	65	G3	35	C6	5	F10
94	L7	64	G2	34	B6	4	F11
93	M7	63	G1	33	A6	3	F12
92	H7	62	G5	32	E6	2	F8
91	G7	61	G6	31	F6	1	F7