

120MEA

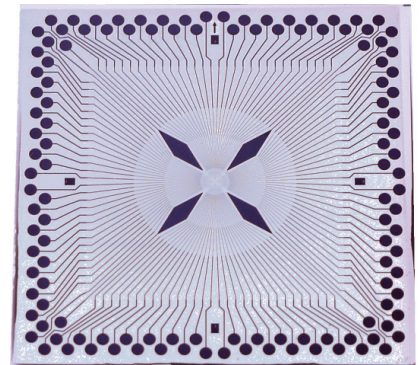
120MEA200/30iR-Ti

120MEA100/30iR-ITO

120MEA30/10iR-ITO

For Use with MEA2100-120-System

Layout



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 | Ti (Titanium) or ITO (Indium tin oxide) |
| Contact pads | Ti (Titanium) or ITO (Indium tin oxide) |
| Electrode diameter | 10 µm or 30 µm |
| Interelectrode distance (center to center) | 30, 100 or 200 µm |
| Electrode height | Planar |
| Electrode material | TiN (Titanium nitride) |
| Isolation material | Silicon nitride 500 nm (PEVCD) |
| Electrode impedance | < 100 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 |

Advantages

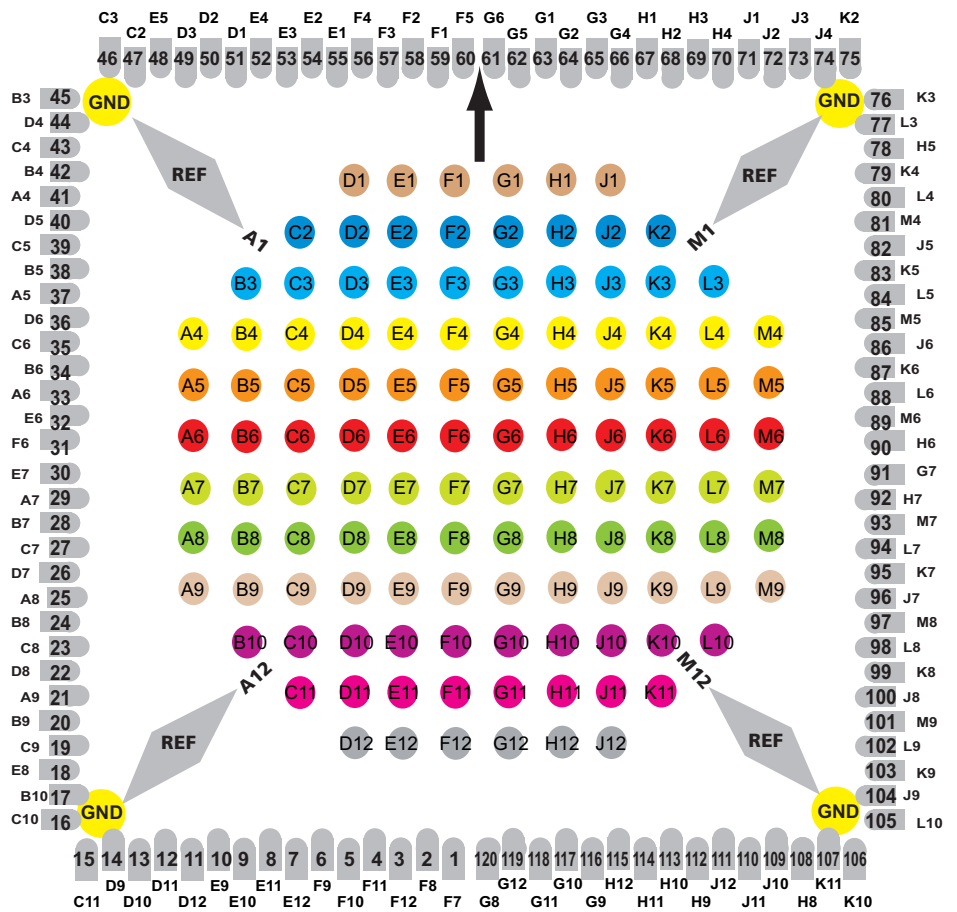
- 120MEAs with 12 x 12 layout grid for use with MEA2100-120-System only.
- 12 x 12 grid results in a large recording field, while keeping a high resolution.
- Optimized for large slices and cultures.
- ITO contact pads and tracks are transparent, for a perfect view of the specimen under the microscope.

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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Orientation

Please insert the 120MEA in correct orientation: When looking from the front into the opened headstage, the small arrow near to the contact pads of the 120MEA faces upwards. Under microscope control you can read the markers A1 and A12, M1 and M2 as shown on the diagram.

Sterilization and Handling

The same material is used for standard MEAs and 120MEAs. 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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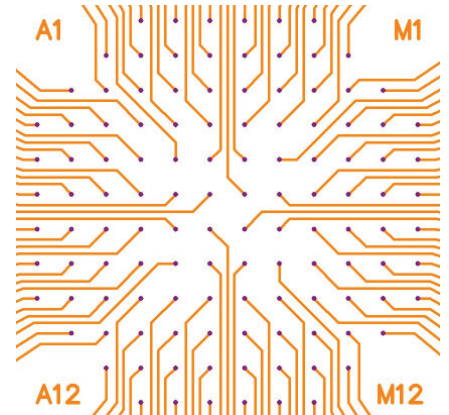


Table: Hardware ID and Electrode ID

| 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 |