

Overview MEAs




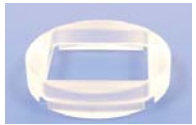






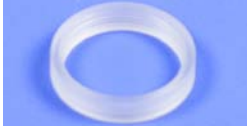






| Product name | Electrode grid | Total # of electrodes | Electrode spacing (µm) | Electrode diameter Ø (µm) | ITO tracks option | Culture chamber interface options* | | | | |
|---|-----------------|-------------------------|------------------------|---------------------------|-------------------|------------------------------------|------------|-----------------------------|--------------------------|---------------|
| | | | | | | w/o ring | glass ring | plastic ring without thread | plastic ring with thread | macrolon ring |
| Standard MEAs: TiN electrodes, SiN isolator, opaque or transparent contact pads (TiN or ITO) and tracks (Ti or ITO) | | | | | | | | | | |
| 60MEA100/10 | 8x8 | 60 | 100 | 10 | ○ | ○ | ○ | ○ | ○ | |
| 60MEA200/10 | 8x8 | 60 | 200 | 10 | ○ | ○ | ○ | ○ | ○ | |
| 60MEA200/30 | 8x8 | 60 | 200 | 30 | ○ | ○ | ○ | ○ | ○ | |
| 60MEA500/10 | 6x10 | 60 | 500 | 10 | ○ | ○ | ○ | ○ | ○ | |
| 60MEA500/30 | 6x10 | 60 | 500 | 30 | ○ | ○ | ○ | ○ | ○ | |
| SquareMEAs: TiN electrodes, SiN isolator, opaque or transparent contact pads (TiN or ITO) and tracks (Ti or ITO) | | | | | | | | | | |
| 60SquareMEA | 8x8 | 60 | 200 | 50 | | ○ | ○ | ○ | ○ | |
| PedotMEAs: PEDOT-CNT electrodes, gold contact pads and tracks | | | | | | | | | | |
| 60PedotMEA200/30 | 8x8 | 60 | 200 | 30 | | ○ | ○ | ○ | ○ | |
| High Dense MEAs: TiN electrodes, SiN isolator, transparent (ITO) contact pads and tracks | | | | | | | | | | |
| 60HDMEA30/10 | 2x (5x6) | 60 | 30 | 10 | ● | ○ | ○ | ○ | ○ | |
| HexaMEAs: hexagonal layout. TiN electrodes, SiN isolator, opaque or transparent contact pads (TiN) and tracks (Ti) | | | | | | | | | | |
| 60HexaMEA | hexagonal | 60 | 30, 60, 90 | 10, 20, 30 | ○ | ○ | ○ | ○ | ○ | |
| 60HexaMEA40/10 | hexagonal | 60 | 40 | 10 | ● | ○ | ○ | ○ | ○ | |
| pMEAs: Polyimide foil with perforation on glass carrier, TiN electrodes, SiN isolator, opaque contact pads (TiN) and tracks (Ti) | | | | | | | | | | |
| 60pMEA100/30 | 6x10 | 60 | 100 | 30 | | ○ | ○ | ○ | ○ | |
| 60pMEA200/30 | 8x8 | 60 | 200 | 30 | | ○ | ○ | ○ | ○ | |
| 120pMEA100/30 | 12x12 | 120 | 100 | 30 | | ○ | ○ | ○ | ○ | |
| 120pMEA200/30 | 12x12 | 120 | 200 | 30 | | ○ | ○ | ○ | ○ | |
| pMEAs for acute hippocampal slices for use with USB-MEA32-STIM4-System: Polyimide foil with perforation on glass carrier, TiN electrodes, SiN isolator, opaque contact pads (TiN) and tracks (Ti), four layouts L1 to L4 | | | | | | | | | | |
| pMEA32S12 | 10+12+10 or 4x8 | 32 (rec.) 12 (stim.) | 90, 100, 125, 150 | 30 (rec.) 50 (stim.) | | ○ | ○ | | | |
| 120MEAs: TiN electrodes, SiN isolator, opaque or transparent contact pads (TiN or ITO) and tracks (Ti or ITO) | | | | | | | | | | |
| 120MEA30/10 | 12x12 | 120 | 30 | 10 | ● | ○ | ○ | ○ | ○ | |
| 120MEA100/30 | 12x12 | 120 | 100 | 30 | ● | ○ | ○ | ○ | ○ | |
| 120MEA200/30 | 12x12 | 120 | 200 | 30 | | ○ | ○ | ○ | ○ | |
| 256MEAs: TiN electrodes, SiN isolator, transparent (ITO) contact pads and tracks | | | | | | | | | | |
| 256MEA30/8 | 16x16 | 252 | 30 | 8 | ● | ○ | ○ | ○ | ○ | |
| 256MEA60/10 | 16x16 | 252 | 60 | 10 | ● | ○ | ○ | ○ | ○ | |
| 256MEA100/30 | 16x16 | 252 | 100 | 30 | ● | ○ | ○ | ○ | ○ | |
| 256MEA200/30 | 16x16 | 252 | 200 | 30 | ● | ○ | ○ | ○ | ○ | |
| EcoMEAs: Polyimide or glass base, gold electrodes, contact pads, and tracks | | | | | | | | | | |
| EcoMEA | 8x8 | 60 | 700 | 100 | | ○ | ○ | ○ | ○ | |
| ThinMEAs: 180µm glass, TiN electrodes, SiN isolator, transparent (ITO) contact pads and tracks | | | | | | | | | | |
| 60ThinMEA30/10 | 2x(5x6) | 60 | 30 | 10 | ● | ○ | ○ | ○ | ○ | |
| 60ThinMEA100/10 | 8x8 | 60 | 100 | 30 | ● | ○ | ○ | ○ | ○ | |
| 60ThinMEA200/30 | 8x8 | 60 | 200 | 30 | ● | ○ | ○ | ○ | ○ | |
| 256ThinMEA | 16x16 | 252 | 200 | 30 | ● | ○ | ○ | ○ | ○ | |
| 6-wellMEAs: TiN electrodes, SiN isolator, opaque contact pads (TiN) and tracks (Ti) | | | | | | | | | | |
| 60-6wellMEA | 6x(3x3) | 54 | 200 | 30 | | ○ | | | | ○ |
| 256-6wellMEA | 6x(7x6) | 252 | 200 | 30 | ● | ○ | | | | ○ |
| 9-wellMEAs: TiN electrodes, SiN isolator, opaque contact pads (TiN) and tracks (Ti) | | | | | | | | | | |
| 256-9wellMEA | 9x(6x5) | 252 | 300 | 30 | | ○ | | | | ○ |
| 4Q MEAs: 4 quadrants, TiN electrodes, SiN isolator, opaque contact pads (TiN) and tracks (Ti) | | | | | | | | | | |
| 4QMEA1000 | 4 quadrants | 60 | 200, 500, 1000 | 30 | | ○ | ○ | ○ | ○ | |

● = fixed, ○ = optional, * Please see next page for ring heights and culture chamber options.

Materials:

| | |
|---|--|
| SiN (Silicon nitride): very hard material, high strength over a broad temperature range, very high fracture toughness | Ti (Titanium): opaque tracks are visible and trace to contact pads for stimulation can be found easily |
| TiN (Titanium nitride): very stable material, long life, can be reused several times | ITO (Indium tin oxide): perfect view of the specimen under the microscope |
| Gold: low spatial resolution, useful for medium throughput screening, low cost | PEDOT-CNT (carbon nano tubes): ideal for stimulation and low noise recordings |

MEA Ring Options

| | Glass rings (-gr) | Plastic rings (-pr) | Plastic rings with thread (-pr-T) | | 6-well rings | 9-well rings |
|---|---|---|--|------------------------|--|---|
| Culture chambers/ lids to be placed on rings | ALA MEA-MEM ID: 24.5 mm, OD: 31 mm  | | Culture chamber lid (CCL)  | } Culture chamber (CC) | Culture chamber (6well-CC) + ALA MEA-MEM-SHEET  | Culture chamber (9well-CC) + ALA MEA-MEM-SHEET  |
| | ALA MEA-INSERT  | | Culture chamber interface ring (CCIR)  | | Set of 5 culture chambers (6well-CC-Set)  | |
| | ALA MEA-MEM-PL  | | | | | |
| Rings (standard) | Glass ring (-gr) 6 mm high ID: 19 mm, OD: 24 mm  | Plastic ring (-pr) 6 mm high ID: 26.5 mm, OD: 30 mm  | Plastic ring with thread (-pr-T) 6 mm high ID: 26 mm, OD: 30 mm  | | Triangle chamber ring (-tcr), 10 mm high OD: 30 mm  | Plastic quadrate (-mq), 9 mm high OD: 24 mm  |
| | | | | | Round chamber ring (-rcr), 10 mm high OD: 30 mm  | |
| Rings (optional, on request) | Glass ring 12 mm high ID: 19 mm, OD: 24 mm  | Plastic ring 3 mm high ID: 26.5 mm, OD: 30 mm  | Plastic ring with thread 15 mm high ID: 26 mm, OD: 30 mm  | | | |