

## 24-Well Plate 24W300/30G-288-opto

## 24-Well Plate with Glass Base for Use with the Multiwell-MEA-System and LED Stimulator MW24-opto-stim

### Advantages

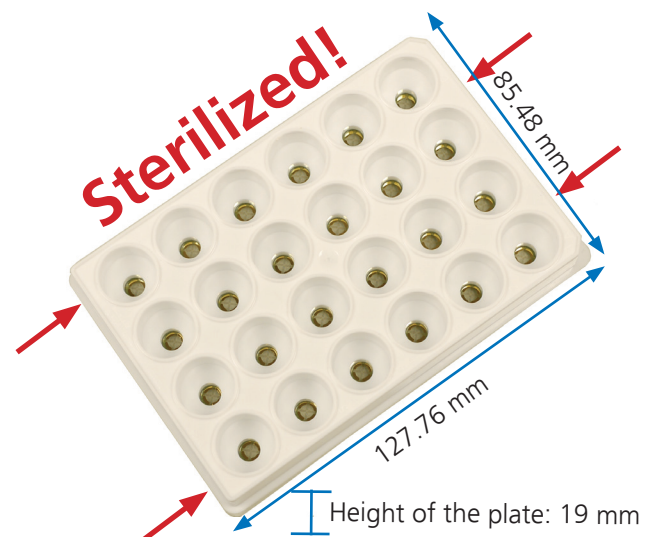
- Non-transparent well plate to avoid optical radiation from well to well in case of optical stimulation via MW24-opto-stim device.
- Comes with lid which can be kept in place during recording to enable repeated recordings under sterile conditions.
- 4 ground electrodes per well.
- Each electrode selectable for stimulation.
- Well plates come sterilized by gamma radiation, ready for use.

### Technical Specifications

Base material	Glass
Isolator	SU-8 (Photoresist)
Track material	Au (Gold)
Contact pads	Au (Gold)
Electrode material	Au coated with PEDOT (poly 3,4-ethylene-dioxythiophene)
Diameter of the electrodes	30 $\mu$ m
Interelectrode distance (center to center)	300 $\mu$ m
Electrodes per well	12 + 4 reference
Area of each well bottom	32 mm <sup>2</sup>

### Note

The period of shelf-life for multiwell plates is six month from the date of delivery. We generally recommend to always use new multiwell plates for your recordings. However, repeated use is possible when paying attention to the cleaning and sterilization procedures. The number of cycles depends on the experimental design. Repeated use of multiwell plates is on customer's own risk.



### Important

- Do not autoclave well plates.
- Do not clean wells mechanically.
- Do not expose to temperatures over 40 °C.
- Do not apply alcohol longer than 30 minutes to the wells.

### Well Plates are not symmetrical!

All types of well plates have two holes on each of the short sides on the bottom, one pair wider apart, one pair closer together. They fit on corresponding bolts on the Multiwell-MEA headstage. Only if the well plate sits on those bolts, and cannot be moved laterally, the brackets of the headstage close properly.

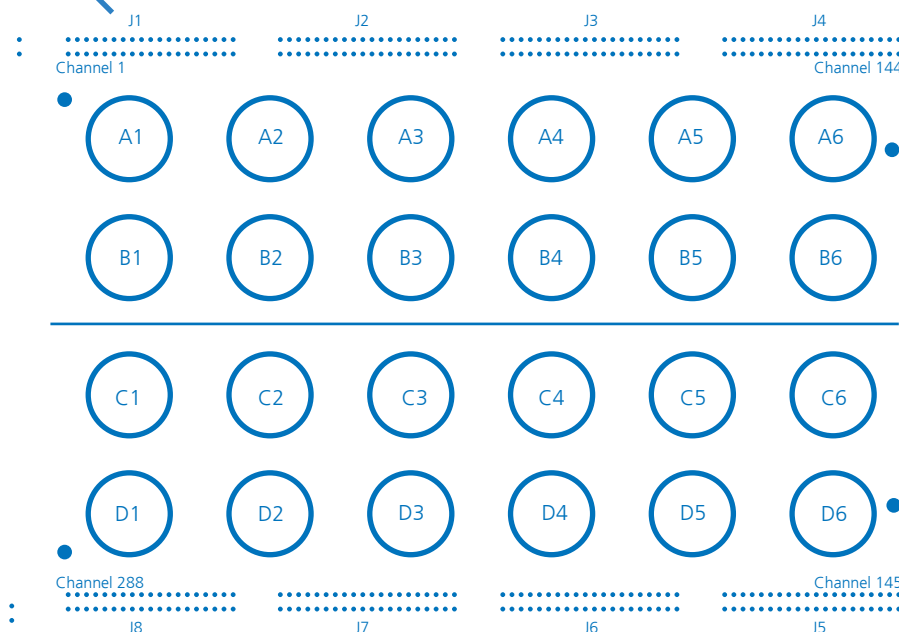
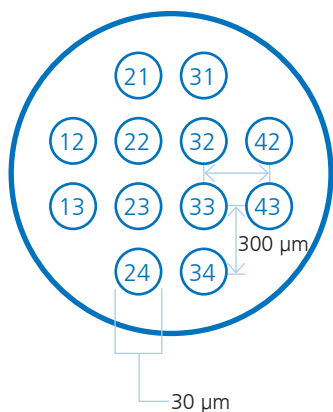
March 2021

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Pin Layout of the 24-Well Plate with Glass Base  
for Use with the Multiwell-MEA-System  
and LED Stimulator MW24-opto-stim

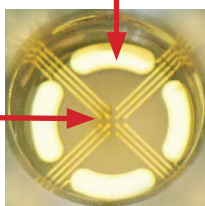
### Dimensions of one Well

Height: 17.3 mm  
Diameter base: 6.4 mm  
Diameter opening: 16 mm  
Total volume: 2.43 ml



4 reference electrodes

12 recording electrodes  
in 4 x 4 grid



### Electrode ID per Well

Inside each well the numbering of MEA electrodes in the 4 x 4 grid follows the standard numbering scheme for square grids: The first digit is the column number and the second digit is the row number. These electrode IDs are displayed in the channel map of the Multiwell-Screen software.

### Use of Multiwell Plates

**Pretreatment** to increase the hydrophilicity: Fill dry wells with PBS and place the well plate at 30 °C on a heating plate for at least five hours before using. Close lid to avoid drying out. Alternatively treat the well plates in a plasma cleaner.

**Cleaning** (on user's risk):

**TergAZyme:** Rinse the multiwell plate with distilled water and fill wells with TergAZyme solution afterwards, wait 12 hours at room temperature before washing the wells (2 x 30 min) with distilled water.

**Ethanol:** Fill the wells with 70 % Ethanol for at least 20 minutes, keep the lid closed. Then rinse the wells three times with distilled water, dry overnight.

**Sterilization:** Please use ultraviolet light as well as alcohol for sterilization.

**Storage:** Please store used well plates cleaned, at room temperature and in a dark and dust free place.

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