LED Stimulator MW24-opto-stim for Multiwell-MEA-Systems

LED Stimulator controlled via Multiwell-Screen Software, can also be used as stand-alone opto Stimulator.

Applications

The MW24-opto-stim features three independently controllable LEDs with different wavelength for optical stimulation for each well of a 24 well plate.

LED Type

The provided LEDs are listed below. Please select up to three types of LEDs.

<table>
<thead>
<tr>
<th>Color</th>
<th>Wavelengths</th>
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</thead>
<tbody>
<tr>
<td>Red</td>
<td>590 nm (MW LED5 red 590nm) 615 nm (MW LED5 red 615nm)</td>
</tr>
<tr>
<td>Blue</td>
<td>428 nm (MW LED5 blue 428nm) 470 nm (MW LED5 blue 470nm)</td>
</tr>
<tr>
<td>Green</td>
<td>527 nm (MW LED5 green 527nm)</td>
</tr>
</tbody>
</table>

Other LED types are available on request, contact support@multichannelsystems.com

LED Stimulator

Place the MW24-opto-stim device upside down accurately on the 24-well plate in the headstage of the Multiwell-MEA-System, so that the LEDs are exactly over the wells of the 24-well plate. Please see the pictures beside.

Do not look at the power LED flashes without eye protection!
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Operation of the MW24-opto-stim Device via Multiwell-Screen Software

Setup

Connect the MW24-opto-stim device to any USB 2.0 or 3.0 connector. Connect the device to a power supply.

The Sync Out ports need to be connected to three of the Digital In ports of the Multiwell-MEA interface board with a Lemo-Lemo cable to be able to record light stimulation time points as triggers in the Multiwell-Screen software.

Optionally connect the Digital In port to trigger the MW24-opto-stim from an external device.

Technical Specifications

- Operating temperature: 0 - 50 °C
- Storage temperature: 0 - 50 °C
- Relative humidity: 10 % - 85 %
- Dimensions (W x D x H): 170 mm x 108 mm x 26.5 mm
- Weight: 611 g
- USB type C: USB 2.0 or USB 3.0 port
- 1 x Digital In: Lemo connector 1, EPL.00.250 NTN
- 3 x Sync Out: Lemo connector 2, 3 and 4, EPL.00.250 NTN
- Power supply: 24 VDC, 2.5 A
- Power consumption: n/a
- Current resolution: 0.01 mA
- Max. current: depends on the type of LED
- Time resolution: 1 ms

Multiwell-Screen Software

Please control the LED Stimulator device via the Multiwell-Screen software. The software allows you to define independent stimulation patterns for all three LED types and to activate or deactivate LEDs individually for each well.