

# Mupid™ LED Illuminator

## Instruction Manual



Catalogue Number MU4

Version 03/2020

## Hardware Instruction Manual

This LED illuminator is suitable for research use only.

It must be used by specialized personnel that know the health risks associated with blue light irradiation and with the reagents that are normally used with this instrument. Human naked eyes with long time irradiation of blue light may have the probability of suffering from retina diseases. The amber filter provides blue light protection. However, it does not guarantee complete protection. It is designed to shield the person working at the LED illuminator only.

### WARRANTY

The LED illuminator is warranted against defects in materials and workmanship for 1 year. If any defects occur in the instrument or accessories during this warranty period, Nippon Genetics Europe will repair or replace the defective parts at its discretion without charge. The following defects, however, are specifically excluded:

1. Defects caused by improper operation.
2. Repair or modification done by anyone other than Nippon Genetics Europe or an authorized agent.
3. Damage caused by substituting alternative parts.
4. Use of fittings or spare parts supplied by anyone other than Nippon Genetics Europe.
5. Damage caused by accident or misuse.
6. Damage caused by disaster.
7. Corrosion caused by improper solvent or sample.

For any inquiry or request for repair service, contact your local Nippon Genetics Europe office. Inform Nippon Genetics Europe of the model and serial number of your instrument.

### REGULATORY NOTICE

**IMPORTANT:** This Nippon Genetics Europe instrument is designed and certified to meet safety standards and EMC regulations. Certified products are safe to use when operated in accordance with the instruction manual. This instrument should not be modified or altered in any way. Alteration of this instrument will:

1. Void the manufacturer's warranty
2. Void the safety and EMC certification
3. Create a potential safety hazard

Nippon Genetics Europe is not responsible for any injury or damage caused by the use of this instrument for purposes other than those for which it is intended, or by modifications of the instrument not performed by Nippon Genetics Europe or an authorized agent.

### IMPORTANT NOTICE

Please, read the installation instruction carefully before installing the LED illuminator. This instrument is intended for clinical and research laboratory use with DNA gel activation and it must be operated only by specialized personnel aware of the potential risks associated with

the chemical and biological agents normally used with this unit. This instrument is meant for use only by specialized personnel that know the health risks associated with blue light radiation and with reagents that are normally used with this instrument. The amber filter provides some blue light protection. However, it does not guarantee complete protection, and it is designed to shield only the person working in front of the system, also to observe the DNA gel fluorescence emission clearly.

## SPECIFICATIONS

- Dimensions (mm): 166D x 183W x 51H
- Viewing surface (mm): 150 x 60
- LED wavelength (nm): 470
- Filter: amber filter
- Filter surface: Anti-fog treatment
- PCBA surface: Anti-moisture treatment
- LED arrangements: LED matrix for two-side illumination
- LED lifetime: 50,000 hours
- Power: 24V DC 1 A power adaptor
- Sensitivity (ng): 2
- Compatibility: with *Mupid™ ONE*, *MUPID™ exU* and *MUPID™ ACE* electrophoresis tanks
- Weight (Kg): 0.96

## INSTALLATION

Carefully unpack the illuminator as follow:

1. First remove the bubble material at the top.
2. Remove the illuminator from the two bubble material shells and place it on a stable, horizontal surface.
3. Remove the plastic protection film from the transparent viewing surface.

Stand-alone installation

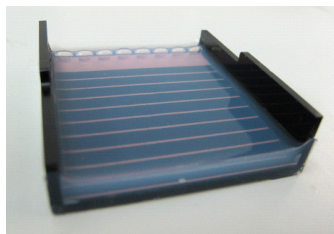
1. The instrument must be placed on a bench leaving at least 10 cm of space all around in order to avoid any obstacle that may reduce the ventilation.
2. Connect the instrument to the power using the annexed cable. The power font must be able to deliver at least 250 VA with a voltage between 100 and 240 Vac. The plug must have a ground connection. The adaptor supplies 24 V DC voltage.

## GENERAL PRECAUTIONS

- Plug the illuminator on an electric line with ground connection.
- The illuminator is equipped with thermal protection to prevent overheating.
- Do not pour liquids directly on the illuminator.
- Switch off the instrument immediately after its use.
- Position the illuminator to prevent harm to nearby operators.
- The switch of the illuminator is a push-on button. If continuously or frequently making LED lighting for electrophoresis of gels, it may decay the DNA gel fluorescence intensity gradually through electrophoresis duration.

## Using the illuminator

**Step 1: Use Nippon Genetics Europe black gel tray to make gel with loading wells**



**Step 2: Put the gel with gel tray in Mupid™ tank and perform dye loading**



**Step 3: Move the MUPID™ LED Illuminator above Mupid™ tank**



**Step 4: Make sure the power safety buttons of Mupid™ One have been pressed by the 2 hooks on sidewall of the MUPID™ LED Illuminator**

**Step 5: Plug power line into MUPID™ LED Illuminator and Mupid™ One**

**Step 6: Push the ON/OFF button of MUPID™ LED Illuminator for real-time fluorescence observation**

## TECHNICAL SUPPORT

Nippon Genetics Europe GmbH offers technical support for all of its products. If you have any questions about the product's use or, operation, please contact Nippon Genetics Europe GmbH at the following info.

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