3B SCIENTIFIC® PHYSICS

Parallel beam optical lamp N (230 V, 50/60 Hz) 1022611
Parallel beam optical lamp N (115 V, 50/60 Hz) 1022612

Instruction manual

10/19 ML/GH

1 Outlet for divergent light beam
2 Change-over switch divergent/parallel beam
3 Plug-in power supply
4 Outlet for parallel light beam
5 Slide holder
6 Optical lamp

1. Safety instructions

This optical lamp conforms to safety regulations for electrical measurement, control and lab equipment as stipulated in European standard EN 61010 Part 1. It is designed for use in dry, indoor conditions suitable for electrical equipment.

Safe operation of the equipment is guaranteed as long as it is used as stipulated. Safety cannot be guaranteed, however, if the equipment is used in an incorrect manner or is handled carelessly.

If there is any suspicion that it is no longer possible to operate the equipment safely (e.g. if there is any visible damage), it should be disconnected and withdrawn from use immediately.

- Never look directly into the light beam from the optical lamp.
- If the beam should shine directly into someone's eyes, that person is likely to be dazzled.
- The equipment may only be used in dry, indoor conditions.
- Do not apply any external voltage to the output sockets.
- Do not use with any power supply other than the plug-in unit with which it is delivered.
- Do not cover the optical lamp or its power supply and always ensure they are well ventilated.

2. Description

Two high-powered LEDs of a neutral white colour are incorporated into the lamp. The lamp has an outlet for a parallel beam with a holder for slides or filters on one side and an outlet for a divergent beam on the other side. On the base of the plastic casing there is a magnet for attaching the optical lamp to various metallic surfaces. It is suitable for experiments on ray optics, in conjunction with optical bench N (4003987) for example.
Power is provided by means of a 5 V DC plug-in power supply adapter.
Parallel beam optical lamps designated 1022612 (Optical lamp N - 115 V, 50/60 Hz) also have a US electrical supply adapter included.

3. Technical data

Power supply:	Via plug-in supply adapter, 5 V DC, 1 A
Socket type:	Co-axial connector, 5.5 mm x 2.5 mm
Colour temperature:	4000 K (neutral white)
Ambient temperature:	5°C to 40°C
Atmospheric humidity:	80%
Protection class:	2
Contamination level:	2
Protection type:	IP20

Electromagnetic compatibility

Interference emissions:	EN 55011:2009
Immunity to interference:	EN 61326 -1:2013

Electrical safety:

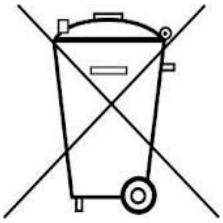
Safety requirements:	DIN EN 61010-1:2010
Dimensions:	122x90x51 mm approx.
Weight:	260 g approx. (including plug-in supply adapter)

4. Operation

Plug the power supply adapter into the mains and connect the optical lamp to it.
A change-over switch is provided in order to swap between parallel and divergent beams. Both LEDs are deactivated when the switch is in its centre position. Always unplug the optical lamp if it is not going to be used for a lengthy period.

5. Storage, cleaning and disposal

- Keep the optical lamp stored in a clean, dry and dust-free location.
- Always disconnect from the power supply before cleaning.
- Do not use any aggressive cleaning agents or solvents to clean the lamp.
- For cleaning use a soft, damp cloth.
- Packaging should be disposed of at local recycling centres.
- If the lamp itself is to be disposed of, it must not be placed in normal household refuse. If used in private premises, it can be disposed of by authorised public disposal agents.



- Comply with local regulations for disposal of electrical waste.