Optical Halogen Lamp 1003188

Instruction Sheet

10/13 ALF

1 Hole diaphragm
2 Rod
3 Condenser
4 Retaining ring
5 Lamp housing
6 Air slits

1. Safety instructions

Caution. Lamps get hot when they are switched on for a long period of time.

- When handling the lamp during the experiment, use a cloth or other protection.
- After the experiment leave the lamp to cool.
- Do not cover the air slits.
- Do not supply the lamp with an operating voltage in excess of 12 V.

2. Description

The optical halogen lamp is an ultra-bright light source for experiments on optical bench and for projection.

It consists of a metal housing with a built-in condensing lens and integrated cooling fan. The knob on the rear for moving the lamp bulb makes it possible to obtain a parallel light beam. To reduce the intensity of the light beam, a hole diaphragm can be attached to the condensing lens by means of a retaining ring. The handling rod can be unscrewed if necessary.

3. Accessories

Spare halogen lamp, 12 V, 50 W	1002837

4. Technical data

Halogen lamp:	12 V, 50 W
Connection:	4-mm safety jacks
Condenser focal length:	75 mm
Condenser diameter:	45 mm
Rod:	120 mm x 10 mm diam.
Dimensions:	approx. 190x125x110 mm³

5. Operation

5.1 General notes

Suitable voltage sources for operation of the halogen lamp are, for example

Transformer 12 V, 60 W (230 V) 1000593
or
Transformer 12 V, 60 W (115 V) 1006780

- Do not allow the lamp to suffer mechanical shocks.

5.2 Producing a parallel light beam

- Set up the optical lamp on the optical bench or clamp it in a barrel foot and connect it to the voltage source.
- Set up the screen at the required distance from the lamp.
- Loosen the locking screw of the bulb movement knob on the rear of the lamp.

Fig. 1 Rear side of the lamp: 1 fan, 2 locking screw, 3 bulb movement knob, 4 sockets

- Slide the bulb movement knob forward or backward until a sharp image of the bulb filament is obtained on the screen.
- Re-tighten the locking screw.
- To reduce the intensity of the light beam, attach the hole diaphragm to the condenser lens using the retaining ring.

5.3 Changing the bulb

Any deposits of fat from the skin on a halogen lamp bulb cause the glass to become fogged and significantly reduce the life of the bulb.

- Do not touch the glass bulb of the halogen lamp with fingers.
- Remove the four securing screws and remove the lid of the casing.
- Take out the defective halogen bulb.
- Holding the 12 V, 50 W replacement bulb with a cloth or other protective material, push the connecting wires into the socket.
- Screw the lid back on.

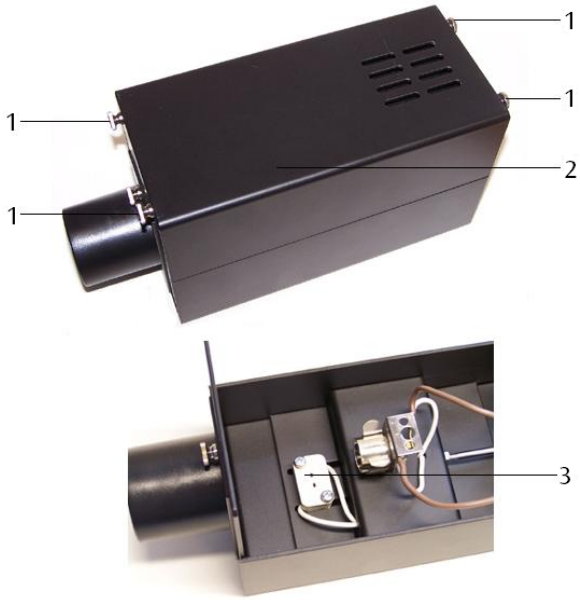

Fig. 2 Changing the bulb: 1 securing screws, 2 lid of the casing, 3 socket

5.4 Setting up on the optical bench

- Screw the handling rod into the base of the optical lamp.
- Fix the optical lamp into the rider on the optical bench.

Fig. 3 Setting up on the optical bench