

G 171 Otoflash UV-flash-device for Light Curing

Instruction Manual

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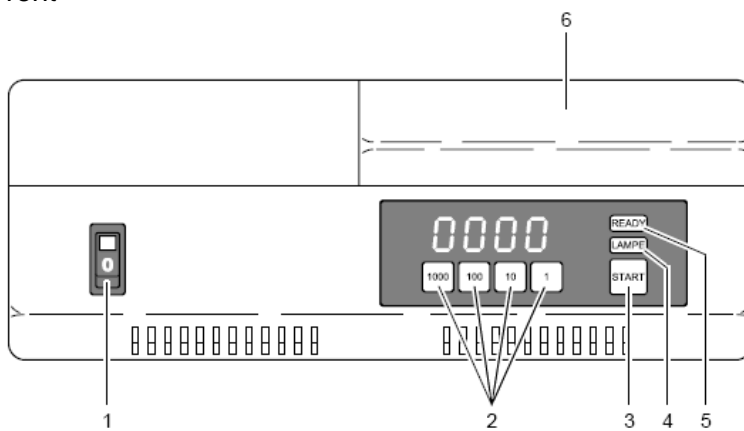
1) General Information

The device G 171 Otoflash is a light polymerisation device for the curing of light-curable resins (e.g. for otoplastic). It has two flash bulbs at the bottom which are operated at a frequency of 10 flashes per second in the work mode. During the flashing, the flash bulbs generate a very intensive light radiation which ranges from 300 to 700 nm. As a result of this concentrated radiation a better and more thorough curing of the materials with very good physical values and reduced remainder monomer content is achieved with respect to other lamps.

2) Initial Operation of Device

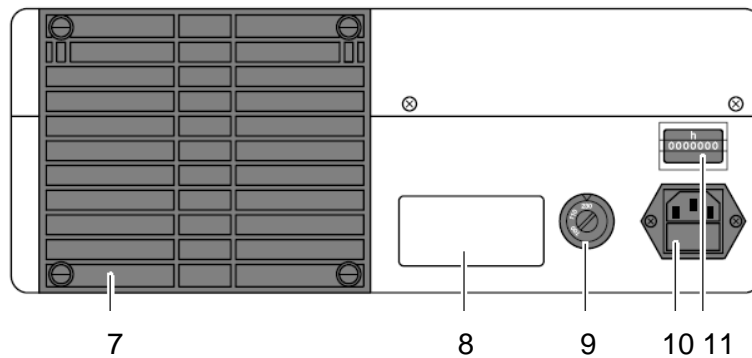
- Adjust to the correct voltage with the selection switch (back of device) before initial operation.
- After long exposure to low temperatures (e.g. transport in the winter), allow the device to acclimatise for app. 2 hours in the operation room and only then switch it on. Otherwise there is danger of a condensation-induced short-circuit.

Front



- (1) Main switch
- (2) Display with keypad
- (3) Start button
- (4) Lamp control light
- (5) Ready display
- (6) Polymerisation chamber

Back



- (7) Ventilator
- (8) Identification plate
- (9) Transformer switch
(100,115,230 V)
- (10) Socket with fuse
- (11) Operating hour counter

3) Important Notes

- **Do not look directly into the radiation of the flash bulbs due to the risk of eye damage.**
- **Longer irradiation may substantially heat up the polymerisation space. Therefore, it is advisable to wait a few seconds before opening the lid (fan continues working).**
- **For the operation of the device, the flash module must always be completely inserted. The lid must always be completely shut.**
- **Never operate the device without flash module.**
- **The dust filter (5) on the front of the device behind the display should always be kept clean (danger of over-heating and contamination.)**
- **Depending on dust accumulation, clean or replace the filter regularly.**

4) Use with timer

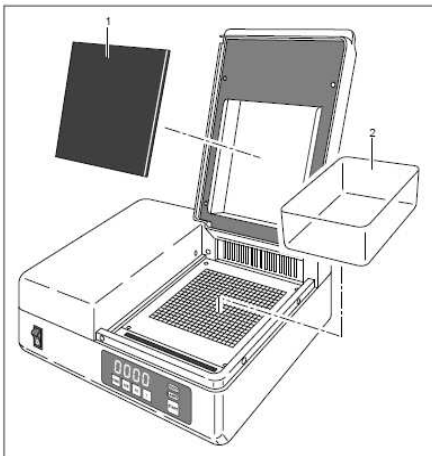
• Programming the Timer

The device is switched on with the main switch (1). The green display lights up indicating the word “ready” (5) and four digits appear on the display (2). This display indicates the number of flashes. These can be programmed by pressing the 1000, 100, 10 and 1 key to any number between zero and 9999.

• Work mode

Press the start button to start the programme. The timer will subsequently count down by units of one for each flash. When the programmed flashes have finished a triple acoustic signal sounds and the word “end” appears on the display. The timer then jumps back to the previously programmed number of flashes. If the lid is lifted while the programme is running the whole device except for the timer is immediately cut-off from the mains. The word “open” appears on the display and a long acoustic signal will sound. This shows that the programme may be interrupted at any time by opening the lid. After closing the lid again, the programme reverts back to the originally programmed number of flashes.

Optional: Inhibition of radiation from above



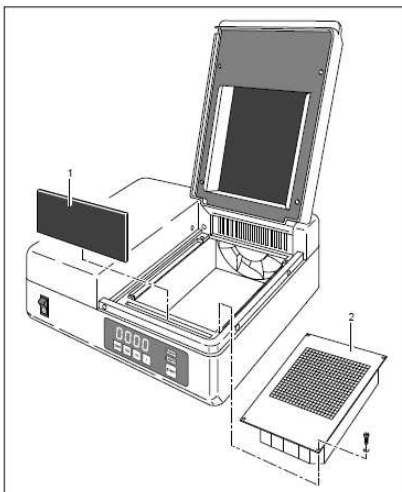
A black absorption filter is fitted to the reflector in the lid. The purpose of this black absorption filter is to prevent any light radiation from reflecting from above, for instance in the production of ear moulds by which only radiation from below or from the sides is required. This filter can be removed if any radiation from above is required (e. g. finishing-curing).

• Error Signal

The red field on the display with the word “Lampe” (4) lights up when one or both of the lamps are defective.

5) Exchanging the flash module

- **Attention:** Before any service work, the device must be cut-off from the power supply.
- The flash bulbs can only be changed as a complete flash module.
- If needed, allow old flash bulbs to cool down. (Run the device in the stand-by mode for app. 1 minute.)
- Turn off device.
- Open the lid
- Loosen the four screws in the device and pull the flash module upwards. Insert the new module in reverse order.
- Never touch the flash bulbs with your fingers. Otherwise fingerprints will burn into the surface. If this does happen accidentally, be sure to clean the bulb by a soft lint-free cloth and isopropanol or ethyl alcohol.
- Disposal of the flash bulbs: Used flash bulbs are hazardous waste and must be disposed of in accordance with official regulations.



6) Maintenance

- **Dust filter:**

The filter fleece directly behind the display (accessible via opened lid) should be cleaned by blowing or exchanging regularly, depending on the amount of dust.

- **Cleaning:**

All outside surfaces can be wiped down with alcohol or household cleaners. Be careful: Do not let any liquid enter into the main switch or the inner device.

The flash module may only be blown-out with compressed air using slight over-pressure.

Never clean the flash bulbs with cleaning fluids or tissues. Clean the reflector surfaces only with lint-free cloth.

- **Service/Maintenance:**

Servicing may only be carried out by NK-Optik GmbH or authorised persons.

7) Transport, Storing Disposal

- Transport

For transport and storing of up to 6 months, the following conditions hold:

Temperature: 0°C - 70°C

Relative humidity: 10% - 80%

Afterwards, values from operation conditions hold.

Temperature: + 10°C - 30°C

Relative humidity: 20% - 80%

Storing is only permissible in closed rooms.

Protect device from humidity and wetness.

Do not expose device to strong jolts.

- Disposal of the device:

Once plastic parts and/or air grille are dismantled, floor and lid plates, as well as the anodized inner parts, flaps and tray are to be disposed of as metal waste. The rest is to be disposed of as electronic waste.

Environment relevant materials:

| Component: | Material used: |
|---------------------|---|
| Metal chassis parts | Aluminum |
| Housing parts | ABS |
| Transformer | Copper, iron, polyamide, polyurethane |
| Capacitors | Aluminum, polypropylene, polyurethane, resin with castor oil |
| Conductor board | Epoxy resin |

The disposal is to occur according to the respective national regulations.

Relevant disposal organizations are to be consulted.

All devices or components may also be sent back to the manufacturer for disposal purposes.

Shipping and handling is covered by distributor.

8) Technical Data

| | |
|---------------------------------|---|
| Voltage: | 100,115,230 Volts AC |
| Frequency: | 50/60 Hz |
| Power consumption: | ca. 250 Watts |
| Dissipated power: | ca. 200 Watts |
| Flash frequency: | 10 flashes per second |
| Life duration of flash bulbs | approx. 250 hours |
| Digital timer: | programmable from 1 to 9999 flashes |
| Size of polymerisation chamber: | ca. 120 x 120 x 50 mm |
| Spektral distribution: | 300 - 700 nm, maximum between 400 and 500 nm |
| Measurements: | ca. 310 x 310 x 140 mm |
| Weight: | ca. 6 kg. |

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