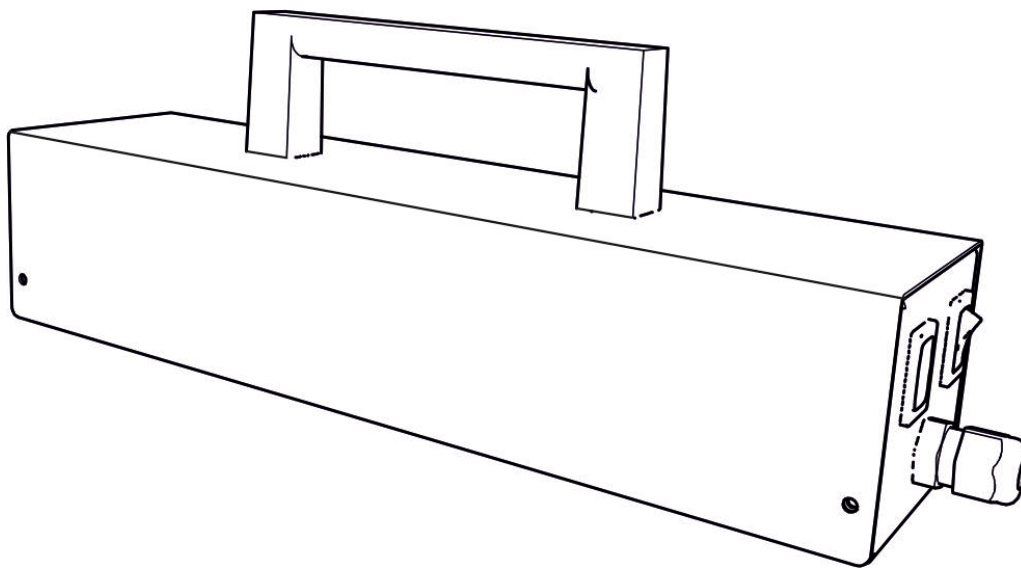


Mains-powered hand lamp

Instructions



Version 1.0.0

Opsytec Dr. Gröbel GmbH
Am Hardtwald 6-8
D-76275 Ettlingen
info@opsytec.de
www.opsytec.de
Phone: +49(0)7243 / 9 47 83-50

1 Table of contents

1	Table of contents	2
2	Foreword.....	3
3	Guidelines and standards	4
4	Identification.....	5
4.1	Manufacturer, ordering spare parts and customer service.....	5
4.2	Change history.....	5
4.3	Copyright	5
4.4	Device identification.....	6
4.5	Intended use - Intended use	6
4.6	Warranty conditions	6
5	General.....	7
5.1	Information about this manual	7
5.2	Information about the symbols	9
5.3	Owner/operator information.....	11
5.4	Personnel requirements.....	12
5.5	Personal protective equipment	14
6	Safety instructions and residual risk.....	15
6.1	General	15
6.2	Safety instructions in relation to normal operation	16
6.3	Radiation safety	17
6.4	Safety instructions in relation to service and repair work	19
7	Description of the system and overview of functions	20
8	Technical data	22
8.1	Cooling the hand lamps.....	23
9	Commissioning	24
10	Operation	25
11	Spare parts	26
12	Maintenance	27
13	Transportation, storage and disposal	29
14	Inserting and replacing lamps	30
14.1	Handling lamps when cold.....	30
14.2	Release of mercury.....	31
15	Lamp nreplacement	32
16	Declaration of conformity	33
17	NOTES.....	34

2 Foreword

Dear customer!

Thank you for choosing a product manufactured by us!

Please take some time to read this manual carefully. Please pay particular attention to the safety instructions.

This is a prerequisite for safe handling and safe operation of the system and its components.

If you have any questions that are not answered in this manual, please do not hesitate to call us. We will be happy to help you.

Our products are subject to constant further development; therefore, there may be slight differences between your system and the illustrations in this operating manual.

We will be happy to help you with any questions or problems. You can reach us at the address below. We are also always happy to receive suggestions or ideas for improvement.



Please note that the manufacturer of this device accepts no liability for the quality of the irradiation result of the irradiated object, as this depends on many factors. Always check the irradiation result after irradiation and adjust the irradiation if necessary.

**THESE INSTRUCTIONS CONTAIN IMPORTANT SAFETY INSTRUCTIONS.
KEEP THESE INSTRUCTIONS IN A SAFE PLACE.**

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Opsytec Dr. Gröbel GmbH

Am Hardtwald 6-8

D - 76275 Ettlingen

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3 Guidelines and standards



The system is a machine in accordance with Annex II A of the Machinery Directive and is therefore supplied with a Declaration of Conformity and a CE marking (in accordance with the Machinery Directive).

Guidelines	
EU Directives	06/42/EC (machinery) (partially applicable) 2014/30/EC (EMC) 2014/35/EC (low voltage)
Harmonized standards	
EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 61000-6-2:2005	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
EN 61000-6-4:2007 + A1:2011	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission for industrial environments

4 Identification

4.1 Manufacturer, ordering spare parts and customer service

Opsytec Dr. Gröbel GmbH
 Am Hardtwald 6-8
 D - 76275 Ettlingen
 Phone: +49(0)7243 / 9 47 83-50
 info@opsytec.de
 www.opsytec.de

4.2 Change history



We reserve the right to make changes to the content. Opsytec Dr. Gröbel GmbH is not liable for any errors in this documentation. No liability is assumed for indirect damages arising from the delivery or use of this documentation, to the extent permitted by law.

Version	Processor	Date	Amendment
1.0.0	Paravia	16.02.2023	Red. Changes

4.3 Copyright



Opsytec Dr. Gröbel GmbH shall retain the copyright for this operating manual. The operating manual is intended for the owner/operator and his personnel.

Copyright in accordance with DIN ISO 16016:

Reproduction and copying of this document, use and disclosure of the contents herein are strictly prohibited unless expressly authorized.

Non-compliance may lead to a claim for damages. All rights in the case of a patent application, utility model or design are reserved.

Violations may be subject to criminal prosecution.

4.4 Device identification

Information for internal use:

Description of the machine:	UV hand lamps
Year of construction:

4.5 Intended use - Intended use

High-energy UV radiation is generated during operation.

The hand lamp is a light source for the inspection of documents and banknotes, irradiation of biological, pharmaceutical and medical samples, material testing, leak detection, detection of impurities, fluorescence excitation and / or trace detection.

The system is intended solely for industrial use in ordinary locations as defined by the National Electric Code (NEC), NFPA 70. It is prohibited to use the devices in potentially explosive atmospheres or for general lighting.

It is prohibited to use the devices in potentially explosive atmospheres or for general lighting

- Installation, commissioning, operation, maintenance and service work may only be carried out by trained and qualified personnel who comply with all safety guidelines and standards.
- Responsibility: Damage resulting from unintentional or unauthorized tampering terminates any right to assert warranty or liability claims against the manufacturer.
- Warranty exclusion: The use of all non-original parts invalidates the warranty.
- Environmental protection: Defective parts that contain environmentally harmful substances must be disposed of accordingly.
- During operation, high-energy UV and / or visible radiation is generated.
- Operation is only permitted in a dry environment. The installation is horizontal.
- Only suitable for operation in closed rooms.
- A high UV irradiance is achieved at the output of the hand lamp.
- Before opening, the system must be disconnected from the power supply and it must be checked that no voltage is present.
- Wear gloves for maintenance and cleaning.
- The system must not be cleaned when it is in operation.
- Any use other than that mentioned above will result in damage to the product. Furthermore, this is associated with hazards such as short circuits, fire and electric shock. The entire appliance must not be altered and/or modified! The safety instructions must be observed at all times.

4.6 Warranty conditions

The warranty conditions are subject to the German Civil Code (BGB) of the Federal Republic of Germany. The warranty period is 1 year, unless otherwise agreed in the purchase documents.

5 General

IMPORTANT SAFETY INSTRUCTIONS

WARNING - The following basic precautions must always be observed when using electrical appliances:

- a) Read all instructions before using the appliance.
- b) This device may only be used by qualified and trained personnel.
See the training section in this manual.
- c) Know how to switch off the product.
Familiarize yourself thoroughly with the controls.
- d) Stay alert - watch what you are doing.
- e) Do not use the product if you are tired or under the influence of alcohol or drugs.
- f) Keep all persons away from the danger zone.
- g) Do not place the appliance on an unstable surface.
- h) Follow the maintenance instructions given in the operating instructions.
- i) Keep these instructions in a safe place.

5.1 Information about this manual

This manual is intended to make the handling of this system and its components safe and efficient. This manual is part of the system and must be kept in its immediate vicinity where it is accessible to personnel at all times.

This documentation contains the necessary information for the intended use of the system described. It is intended for technically qualified personnel who have been specially trained for operation, quality assurance, laboratory, maintenance and repair.

Personnel must read this manual carefully and understand its contents before starting any work. The basic requirement for safe working is that all the safety and operating instructions in this manual are observed.

Knowledge and technically correct implementation of the instructions, safety requirements and warnings are a prerequisite for safety during operation, maintenance and repair. Only qualified personnel have the necessary expertise to apply the safety instructions, safety instructions and warnings specified in this operating manual in a general manner in a specific situation.

In addition, the local accident prevention regulations and the general safety regulations for the area of application of the system apply.

Illustrations in this manual are for the purpose of general understanding; they may differ from the actual version.

Apart from this manual, the instructions for the installed components contained in the appendix apply.

This operating manual cannot cover every possible maintenance case. If you require further information or if specific problems arise that are not covered comprehensively enough in this manual, please request the necessary information from the manufacturer.



For ease of description, the above components are referred to collectively as a system.


5.2 Information about the symbols


5.2.1 Safety instructions


In this manual, the safety instructions are represented by symbols. The safety instructions are preceded by signal words that indicate the extent of the danger.

To avoid accidents and damage to persons or property, always follow the information and act with caution.

Throughout the text you will find the following pictograms with the following meanings:

	⚠ DANGER
	<p>IMMINENT DANGER</p> <p>Possible consequences: Death or serious injury.</p> <ul style="list-style-type: none"> • Prevention

	⚠ WARNING
	<p>DANGEROUS SITUATION</p> <p>Possible consequences: Death or serious injury.</p> <ul style="list-style-type: none"> • Prevention

	⚠ CAUTION
	<p>POSSIBLE SITUATION</p> <p>Possible consequences: Slight or minor injuries. Sometimes also used as a warning of material damage.</p> <ul style="list-style-type: none"> • Prevention



Note

Information on the application or useful, important information

5.2.2 Prohibition signs



General "prohibition sign"

5.2.3 Warning signs



Warning of optical radiation (e.g. UV, visible radiation, IR)



Warning of electricity!

5.2.4 Attention



Wear eye protection!



Disconnect the mains plug from the socket!



Disconnect before carrying out maintenance or repairs!



Wear hand protection!



Refer to the instruction manual/booklet

5.2.5 Optional function

* Optional function, not available for every system.

5.3 Owner/operator information

The system is used in a commercial environment. The owner/operator of the system is therefore subject to legal obligations with regard to occupational safety.

In addition to the safety information in this manual, the generally applicable regulations that are valid for the area of application of the system with regard to safety, prevention of accidents and protection of the environment must be observed and complied with.

The following applies in particular:

The owner/operator must obtain information on the applicable health and safety regulations and carry out a risk assessment to identify additional hazards that have arisen due to the specific operating conditions at the system's place of use. He must implement these in the form of operating instructions for the operation of the system and specifically for the individual workstations.

The owner/operator is obliged to check during the entire service life of the system whether the operating instructions that he has developed comply with the current status of the regulations and must update them if necessary.

The owner/operator must clearly assign and define the responsibilities for installation/operation, troubleshooting, service and cleaning.

The owner/operator must ensure that all personnel involved with the system have read and understood this manual. Furthermore, he is obliged to offer staff training at regular intervals and to provide information about the risks and hazards.



The owner/operator must provide the necessary personal protective equipment for their personnel. Furthermore, the owner/operator is responsible for ensuring that the system is always in perfect technical condition. To ensure this, the service intervals specified in this manual and in the technical documents for the individual system must be observed and all safety installations must be checked regularly for function and completeness.




The owner/operator must regularly check that all safety devices are functioning and complete.

The owner/operator must ensure that the operating personnel have knowledge of first aid measures and the local rescue equipment.

5.4 Personnel requirements

5.4.1 Qualifications

	 WARNING
	<p>RISK OF INJURY IF THE PERSONNEL ARE INSUFFICIENTLY QUALIFIED!</p> <p>If unqualified personnel carry out work on the system or are in the danger zone of the system, risks arise that can cause serious injuries and serious material damage.</p> <ul style="list-style-type: none"> • Have all measures carried out only by personnel who are qualified to do so. • Keep unqualified personnel away from the danger zone.

 	 WARNING
	<p>RISK OF INJURY WHEN TOUCHING LIVE PARTS OR HOT SURFACES</p> <p>In general, low-voltage devices such as this system may have dangerous live parts and hot surfaces. All transportation, installation, commissioning, start-up and maintenance work must be carried out by suitably trained and responsible personnel (in accordance with EN 50110-1 (VDE 0105-100); IEC 60364). Inappropriate behavior can lead to serious injury or damage.</p>

The handbook lists the personnel qualifications for the various areas of activity below:

5.4.2 Qualified electrician

Due to their training, competence, experience and knowledge of the relevant standards and regulations, qualified electricians carry out work on the electrical systems and recognize and avoid risks independently.

Qualified electricians are specially trained for the working environment in which they work and are familiar with the relevant standards and regulations. Qualified electricians must meet the requirements of the applicable legal regulations for accident prevention.

5.4.3 Qualified specialist

Qualified specialists are or can be trained by Opsytec Dr. Gröbel GmbH in the advanced operation and parameterization of the system, as well as in the performance of preventive service work.

In addition to their technical training, competence and experience, as well as their knowledge of the relevant standards and regulations, they are able to carry out the work assigned to them and independently recognize and avoid potential hazards.

5.4.4 Operator

Operators use and operate the system within the scope of its intended use. They are trained by the owner/operator in the work assigned to them and informed about possible hazards.

5.4.5 Training and qualification of staff

Operating personnel must be informed of the specific risks and hazards involved in working with and handling the system in regular instructions and training sessions.

The instruction and training should have the following content:

- Dangers when working with the system during normal operation.

- Hazards in connection with service, repair and cleaning activities.

- Behaviour to minimize the consequences of accidents.

- Behavior in the event of accidents.

- Rescue of injured persons.

- Working without personal protective equipment can lead to damage to health. The company supervisor is instructed to ensure that personnel wear personal protective equipment.

- Special hazards when working on electrical systems.

- Meaning of the information and warnings; the correct behavior is explained here.

The instructions and training must be carried out at regular intervals by the owner/operator. For better tracking, the implementation of the instructions and training should be recorded.

5.5 Personal protective equipment

The purpose of personal protective equipment is to protect personnel from hazards that could affect their safety or health at work.

When carrying out various activities on and with the system, personnel must wear personal protective equipment. This is repeatedly referred to in the individual chapters of this manual. The personal protective equipment is explained below:

5.5.1 Protective gloves

Protective gloves are used to protect the hands from visible and/or invisible radiation, friction, abrasions, punctures and deep injuries.

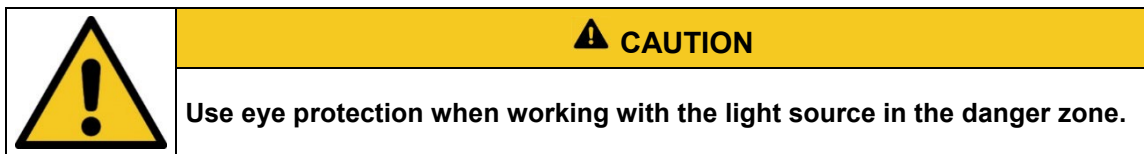
5.5.2 Safety goggles

Safety goggles are used to protect the eyes from visible and/or invisible radiation.

Safety spectacles and storage boxes can be ordered from Opsytec Dr. Gröbel GmbH, Am Hardtwald 6-8, 76275 Ettlingen, Germany or UVEX AREITSSSCHUTZ GMBH, Würzburger Str. 181 - 189, 90766 Fürth, Germany:

Protective eyewear part number: 9169065

Storage box part number: 9957502



5.5.3 Safety shoes


Safety shoes are worn as protection against heavy parts that could fall and against slipping on slippery surfaces.

6 Safety instructions and residual risk

6.1 General

The system is state of the art and has been built in accordance with recognized safety regulations. Nevertheless, its use may pose risks to the lives and limbs of operating and repair personnel (service personnel) or third parties, or impairments to the machine. Only operate the system if its safety devices are in perfect condition. Faults that impair its safety must be rectified immediately.

The following safety information must be strictly adhered to in order to avoid damage to the machine and personal injury!

	⚠ WARNING
	<p>Risk of injury if personnel do not read the operating manual!</p> <p>Read the operating manual completely before commissioning and operation. Read all safety information and instructions. Failure to observe the safety information and instructions may result in electric shock and/or serious injury.</p>

6.2 Safety instructions in relation to normal operation

A brightness of at least 300 lux should be provided for activities in normal operation.

Access to the machine is only permitted to operating personnel and authorized personnel.

Only instructed operating personnel are permitted to operate the machine.

Personal protective equipment (e.g. safety goggles and hand protection) must be worn when working on the system.

If a protective device or equipment fails or becomes faulty, this must be reported immediately to the plant supervisor. They will then decide on the further procedure.







Please note that the manufacturer of this device accepts no liability for the quality of the irradiation result of the irradiated object, as this depends on many factors. Always check the irradiation result after irradiation and adjust the irradiation if necessary.

6.3 Radiation safety

UV radiation is invisible! Any visible light is only luminescence that is excited by the UV. This luminescence is usually much weaker than the exciting UV!

UV radiation can cause cataracts in the lens of the eye and inflammation of the retina. Always use suitable UV protective goggles when operating the appliance. UV radiation also causes skin discoloration and skin aging. Please use suitable clothing, gloves and/or sunscreen depending on the irradiation dose. The UV irradiance of the device is several hundred times stronger than that of sunlight!

	 DANGER
	<p>RISK OF INJURY TO PERSONS</p> <ul style="list-style-type: none"> • Ultraviolet radiation emitted by this product. Avoid exposure. <p>ALWAYS WEAR PROTECTIVE CLOTHING. EXPOSURE CAN LEAD TO CANCER AND PREMATURE SKIN AGING. ALWAYS WEAR SAFETY GOGGLES. NON-OBSERVANCE CAN LEAD TO SEVERE BURNS OR LONG-TERM INJURIES TO THE EYE AND SKIN.</p> <p>Never look directly into the lamp. As with natural sunlight, exposure can lead to eye and skin allergies and allergic reactions. Medications or cosmetics may increase your sensitivity to ultraviolet radiation. Consult a doctor before using this product if you are taking medication, have skin problems or feel particularly sensitive to sunlight.</p>



	 WARNING	
	<p>The devices were classified in risk group 3 according to DIN EN 62471:2009-03 "Photobiological safety of lamps and lamp systems".</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: yellow; text-align: center; padding: 5px;"> <p>DIN EN 62471:2009-03 Risk group 3: Luminaires pose a hazard even for fleeting or brief exposure. Use in general lighting is not permitted.</p> </td> <td style="background-color: yellow; text-align: center; padding: 5px; width: 200px;"> <p>Beware of dangerous ultraviolet radiation</p> </td> </tr> </table>	<p>DIN EN 62471:2009-03 Risk group 3: Luminaires pose a hazard even for fleeting or brief exposure. Use in general lighting is not permitted.</p>
<p>DIN EN 62471:2009-03 Risk group 3: Luminaires pose a hazard even for fleeting or brief exposure. Use in general lighting is not permitted.</p>	<p>Beware of dangerous ultraviolet radiation</p>	



The risk assessment for the workplace is the responsibility of the customer. This requires measurements/estimates in accordance with DIN EN 14255-1:2005-06 "Measurement and assessment of personal exposure to incoherent optical radiation - Part 1: Ultraviolet radiation emitted by artificial sources at the workplace".

DIN 14255-1 itself does not contain any limit values. These are given in Directive "2006/25/EC of the European Parliament and of the Council on the minimum health

and safety requirements regarding the exposure of workers to the risks arising from physical agents (artificial optical radiation)".

6.4 Safety instructions in relation to service and repair work

	 WARNING
	<p>Risk of injury when touching live parts</p> <p>Before opening the lamp, disconnect all components from the supply voltage and check that no voltage is present.</p>

	 CAUTION
	<p>Risk of damage</p> <ul style="list-style-type: none"> • Skin grease and dirt are absorbent in the UV and visible spectral range. • Avoid leaving fingerprints on the bulb and filters. If necessary, the components must be carefully cleaned with isopropanol.

Service, repair and cleaning work may only be carried out by authorized and specially trained technicians. The system must be de-energized and secured before any major work (including cleaning) is carried out.)

Carry out the prescribed adjustment, service and inspection work according to the plan.

Only qualified electricians may carry out work on the electrical system.

Safety devices may only be removed during service and repairs if the system has been switched off beforehand and brought into a safe state.

Important safety installations may no longer function during service and maintenance work. This type of work therefore requires particular caution.

7 Description of the system and overview of functions

The handy UV hand lamps are intensive UV radiation sources for the UV-A and UV-C spectral range. Thanks to their high irradiance, they enable the sensitive detection of luminescent and fluorescent substances.

The UV hand lamps are available in three versions. The UV-A and UV-C hand lamps are each equipped with two UV lamps to achieve the highest possible irradiance on the sample. The UV-A/C hand lamp can be switched between UV-A and UV-C.

All hand lamps have VIS filters that effectively filter the visible light of the hand lamps. This means that even weak luminescence of the sample can be optimally detected.

We recommend an additional angle stand for the hand lamps. By attaching the lamp, you get a table lamp and have both hands free for examinations.

General product description:

- Irradiance of approx. 500 $\mu\text{W}/\text{cm}^2$ at a distance of 10 cm
- Visible light blocking filter for extremely high detection efficiency
- Long service life
- Optional switchable emission

The following components are supplied:

- Hand lamp
- Mains connection cable (terminated)
- this documentation



For ease of description, the above components are referred to collectively as a system.

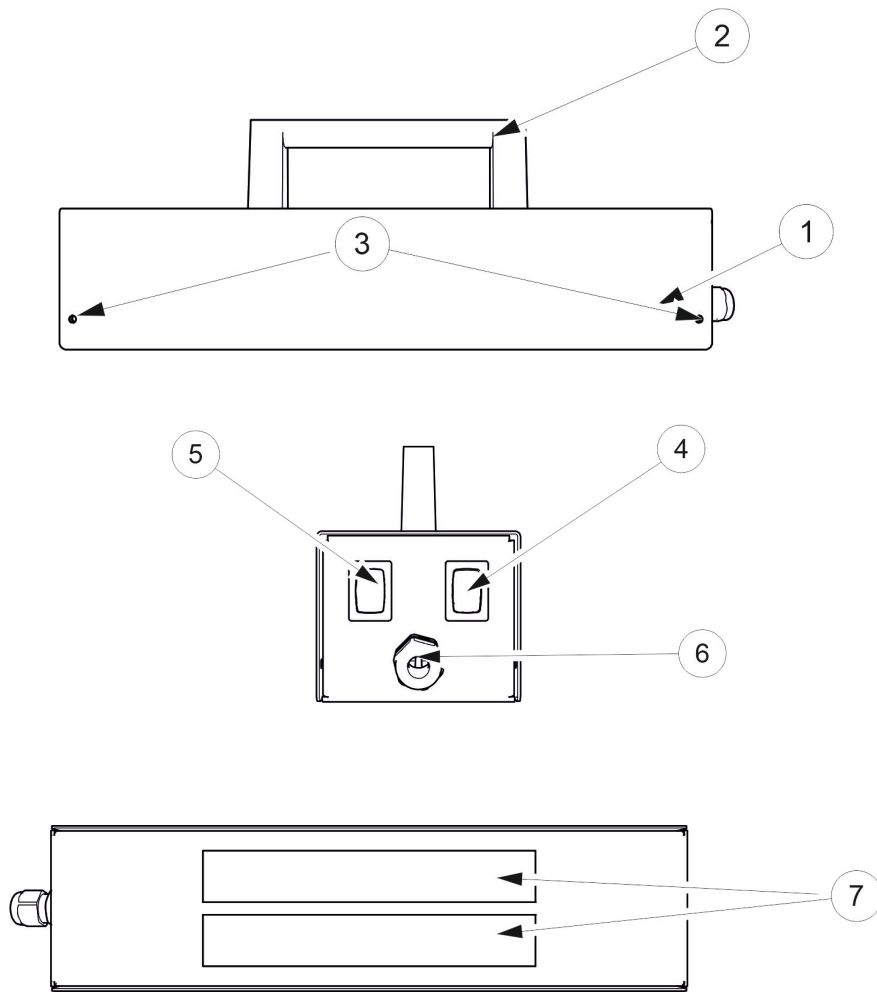
The following components are required by the customer:

- Personal protective equipment



Please note that the manufacturer of this device accepts no liability for the quality of the irradiation result of the irradiated object, as this depends on many factors. Always check the irradiation result after irradiation and adjust the irradiation if necessary.

Views:



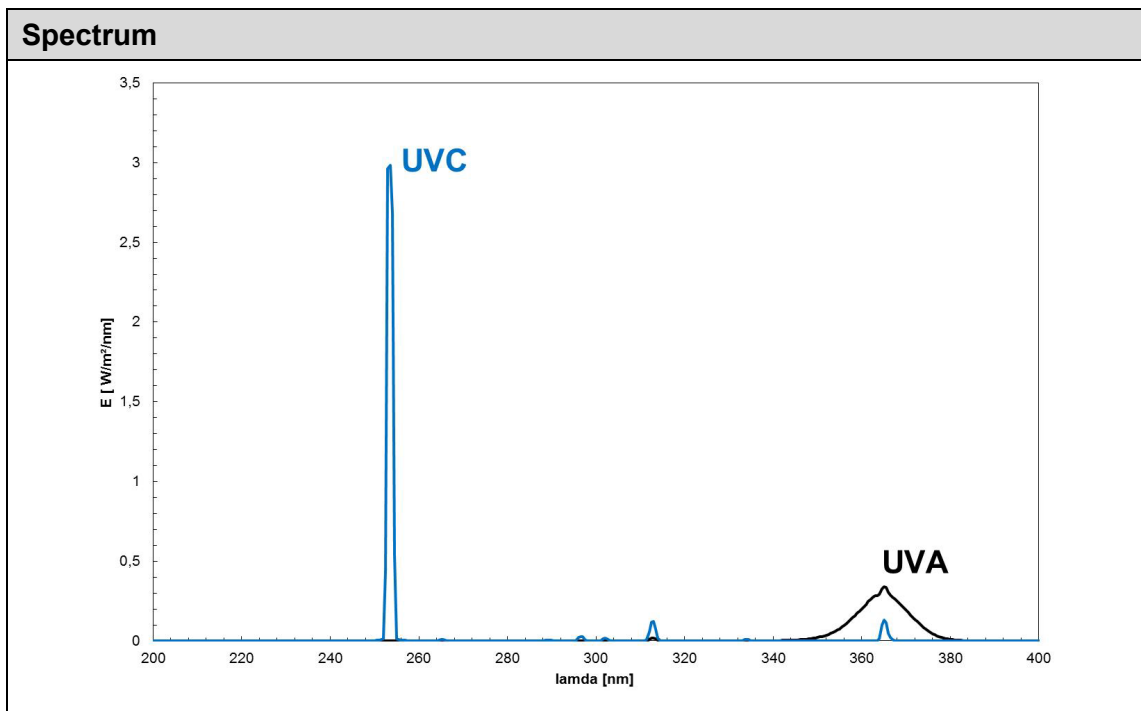
Pos.	Designation	Pos.	Designation
1	Hand lamp	2	Handle
3	Screws for lamp replacement	4	On/off switch
5	On/off switch, optional	6	Mains cable
7	Filter		

8 Technical data

General data	
Wavelength	254 nm or 365 nm
Max. Irradiance	500 $\mu\text{W}/\text{cm}^2$ in one
	Distance of 10 cm
Illuminated surfaces	2, each 148 x 23 mm
VIS filter	2 pieces
Lamp wattage	2 x 6 W
Dimensions	280 x 86 x 65 mm
Weight	approx. 1400 g
Classification	Risk group 3 according to DIN EN 62471:2009-03
Operating temperature	5 to 40 °C
Storage temperature	-10 to 60 °C
Air humidity	<80%, non-condensing

Mounting position, minimum distances	
Body position	horizontal
Minimum distances, top	4 cm
Minimum clearances, lateral	4 cm

Connections	
Mains voltage and frequency	100-240VAC / 50/60 Hz
Maximum input power	See type plate
Fuse	none



8.1 Cooling the hand lamps

The hand lamp requires passive air cooling / convection.

To prevent thermal overheating, adequate ventilation must be ensured at all times.

9 Commissioning

- Unpack all components and remove the packaging materials.
- Position the hand lamp at the desired position.
- Connect the hand lamp to the supply voltage.
- Switch on the hand lamp using the switch on the back.

10 Operation

Switch the hand lamp on and off using the switch on the back.

The UV hand lamps are available in three versions. The UV-A and UV-C hand lamps are each equipped with two UV lamps to achieve the highest possible irradiance on the sample. The UV-A/C hand lamp can be switched between UV-A and UV-C.

A/C hand lamps have two separate mains switches for the UVA and UVC lamps,

11 Spare parts



Please contact us for replacement orders:

Opsytec Dr. Gröbel GmbH

Am Hardtwald 6-8

76275 Ettlingen

Germany

Phone +49 - 7243 - 94 783 - 50

Visit us on the Internet: www.opsytec.de

12 Maintenance

Switch off the hand lamp using the mains switch. Pull the mains plug out of the socket.

The hand lamp is a combined system that only requires cleaning and lamp replacement for maintenance.

We recommend that cleaning is only carried out on request and not on a regular basis.

Please use isopropanol in a UV-IR quality to clean the hand lamp.

The mirrors are cleaned ONLY AS NEEDED with compressed air or isopropanol and a very soft paper towel.

The filters are cleaned AS NEEDED with compressed air or isopropanol and a very soft paper towel.

UV lamps are also cleaned with compressed air or isopropanol and a very soft paper towel.

The following table contains some maintenance steps as a recommendation:

No.	Maintenance item	Procedure	Recommended frequency
1	General inspection and cleaning	Check for rust, peeling paint, leaks, broken switches and damaged covers, replace if necessary.	Half-yearly
2	Cleaning optical components	Visual inspection of mirrors. The mirrors must be clean. Minor soiling is acceptable as the mirrors are sensitive to scratches. Cleaning only as required.	Monthly
		If cleaning is required, use compressed air or isopropanol (UV-IR quality) and a very soft paper towel. Soft, clean mirror from left to right, top to bottom. Must be free of cracks and dirt, otherwise replace with new.	as required
3	Checking the intensity	Check and determine the actual irradiance using a UV sensor (must be calibrated).	Monthly
4	Lamp replacement	Replace UV lamps if the irradiance is not high enough.	as required
5	Checking the cabling	Check all cable connections for possible damage or loose contacts. Replace them if necessary.	Every 6 weeks
6	Cleaning	Clean the housing (outside) with a dry cloth to remove dust and dirt.	Half-yearly

Carry out cleaning work as required. This will give you the best possible stability. Only clean with isopropanol (UV-IR-GRADE), oil-free compressed air or clean, lint-free cloths.


Wear clean, lint-free gloves.

Only apply the cleaning agent to the cloth, only moisten it.

The cleaning agent could get inside and cause material damage.

Wipe in a circular motion over the surfaces with little pressure.

Then remove all residues of the cleaning agent.

CAUTION	
	<p>Risk of damage</p> <ul style="list-style-type: none">• Skin grease and dirt are absorbent in the UV and visible spectral range.• Avoid leaving fingerprints on the lamp. If necessary, the components must be carefully cleaned with isopropanol.

13 Transportation, storage and disposal

The conditions of the technical data apply to transportation and storage. Storage is only permitted in closed rooms. Protect the system from moisture or wetness. Do not expose the system to strong vibrations.

Disposal of the device: Once the plastic parts have been removed, the housing and the anodized aluminium parts are disposed of as scrap metal. The rest must be disposed of as electronic scrap.

Environmentally relevant materials: aluminum, ABS, copper, PTFE, polyamide, polyurethane, polypropylene, epoxy resin

Disposal in accordance with national legal regulations. If necessary, consult an appropriate disposal company. The system can also be returned to the manufacturer for disposal. The transportation costs shall be borne by the sender.

14 Inserting and replacing lamps

Before replacing the lamp, be sure to read the following safety instructions, which are also supplied with the lamp.

The useful life of the lamps (UV low-pressure lamps) depends on the operating mode (ON/OFF switching cycles, dimming, cooling, soiling).

Frequent switching on/off of the lamps can lead to short service lives.



The bulbs must be replaced if they no longer light or the desired irradiance is no longer achieved. Dispose of the lamps properly. They do not belong in the residual waste.





	 WARNING
	<p>Risk of injury when touching live parts</p> <p>Before opening the hand lamp, disconnect all components from the supply voltage and check that no voltage is present.</p>

14.1 Handling lamps when cold

- Cold lamps have no excess gas pressure and can be handled without any problems.
- The lamp may be touched at the base.
- Please do not contaminate the bulb (discharge vessel) with fingerprints, grease stains or other dirt. Before using the lamp, please remove any dirt with isopropanol or ethanol, or with other suitable agents that do not leave any residue on the bulb.

	 CAUTION
	<p>Risk of damage</p> <ul style="list-style-type: none"> • Use gloves for changing lamps • Skin grease and dirt are absorbent in the UV and visible spectral range. • Avoid leaving fingerprints on the lamp bulb and the filters. If necessary, the components must be carefully cleaned with isopropanol.

- The lamps contain mercury. If the lamp breaks, it may be released into the environment. In this case, please proceed as described below.

	 CAUTION
	<p>Risk of damage</p> <ul style="list-style-type: none"> • Do not operate the lamp if it is visibly broken or cracked or if the bulb is loose in the reflector.

14.2 Release of mercury

In the unlikely event that a lamp breaks, mercury will be released. Take the following precautions:

- People in the immediate vicinity should move away immediately to avoid inhaling mercury vapor.
- The room must be thoroughly ventilated for at least 30 minutes.
- After the lamp housing has cooled down, any mercury residues that have deposited inside the lamp housing can be collected using adsorbents available from chemical retailers. Commercially available preparations, such as Mercurisorb from Karl Roth GmbH & Co KG, Karlsruhe, are suitable for this purpose.

15 Lamp nreplacement

1. Switch off the appliance and allow it to cool down.
2. Now disconnect the mains plug from the appliance.
3. Open the four screws on the housing wall.
4. Remove the housing panel. The lamp in the lamp holder is now visible.
5. If necessary, remove the old bulbs. This is done by turning the bulb by 90°. Make a note of the lamp position and the lamp type. Replace the lamp only with a lamp of the same type
6. The hand lamp may have two lamp types. Always insert the lamps correctly if you are using two different types. Open the front door and insert the lamps into the lamp sockets. This is done by turning the lamp through 90°.
7. Now replace the housing wall.
8. Refit the four screws on the side housing wall.
9. Plug the mains plug back into the appliance.
10. Switch the device on.
11. Dispose of the old lamp properly.
12. The lamp replacement is now complete.

16 Declaration of conformity



Manufacturer:	Company name: Opsytec Dr. Gröbel GmbH Street: Am Hardtwald 6-8 Place: 76275 Ettlingen Country: Germany
Authorized person for compiling the technical documentation:	Company name: Opsytec Dr. Gröbel GmbH Street: Am Hardtwald 6-8 Place: 76275 Ettlingen Country: Germany
Product:	UV hand lamp
Type number:	862506 XXXX, 862507 XXXX, 862508 XXXX

The manufacturer hereby declares that we have developed, designed and produced the above-mentioned product(s) under our sole responsibility and that the product complies with the following standard(s) or directive(s) in this declaration:

2014/35/EU

"Directive of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to the making available on the market of electricity
Equipment intended for use within certain voltage limits on the market (Low Voltage Directive)".

2014/30/EU

"Directive of the European Parliament and of the Council on electromagnetic compatibility (EMC Directive, recast)"

2015/863/EU "Directive of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (ROHS Directive III)"

Ettlingen, 16.02.2023

signed. Dr. Mark Paravia

This document is also valid without a signature if the person responsible for the release is named in plain text.

