

OPERATING INSTRUCTIONS

ONSERT® SL ONE  
UV polymerisation light

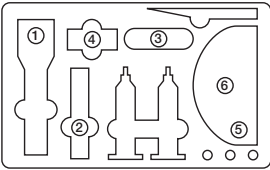
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Delivery scope

- Storage case
- UV polymerisation light SL ONE (1)
- Dosing flask (2)
- Charging cable (3), 1 m
- Li-ion battery, 3.7V, 5,500 mAh, protected (4)
- Spare O-rings for protective screen (5 pcs; 5)
- Safety glasses (6)
- Operating instructions



Additional accessories available

- Exchange unit for bolts (M4, M5, M6)
- Removal wedge

Intended use

The device has been developed for industrial use and is exclusively intended for the application of ONSERT® fasteners on suitable materials. The materials must be suited for the DELO Photobond® adhesive and the exposure to UV blue light. Materials which are not definitely suited for the application of ONSERT® fasteners must not be used. The device is unsuitable for children. Small parts can be swallowed, therefore keep out of the reach of children.

Note on environmental conditions

The product may only be used within the operating temperature range of +10 °C to +40 °C. The UV polymerisation light may not be exposed to strong vibrations, solvents or vapours or operated in explosive atmospheres.

General information

Please read the operating instructions carefully before using the UV polymerisation light and keep them in a safe place, e.g. in the case compartment.

If basic safety and warning instructions are not observed, there is a risk of serious personal injury and damage to property. No liability is accepted for any resulting damage.

Safety instructions

UV light systems can generate very intense radiation that can damage the eyes if used incorrectly.

The UV polymerisation light produces a very bright ultraviolet and invisible light. Therefore, never look directly into the UV lamp and DO NOT point the light beam at the eyes of people or animals. When using the UV polymerisation light in free mode, the supplied safety glasses must be worn. Otherwise, the reflected UV radiation can damage the eyes, especially when in direct proximity to the object. The UV polymerisation light may only be used in accordance with the technical data and safety instructions. The safety instructions refer to the entire life cycle of the UV light.

The suitability of the product for the intended individual use, taking into account all general conditions, must be verified by the user.

The risk assessment for the workplace must be carried out by the customer. This requires measurements/assessments in accordance with DIN EN 14255-1:2005-06. DIN 14255-1 itself does not contain any limit values. Those are specified in Directive 2006/25/EC.

Use the UV polymerisation light only if it is in proper technical condition.

It may only be operated with the supplied rechargeable battery or a suitable replacement battery. Only use the charging cable included in the scope of delivery to charge the battery.

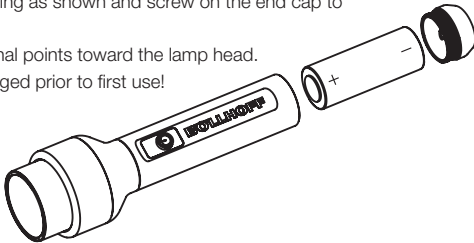
If the UV polymerisation light is not used for a longer period of time (1 week max.), we recommend to store the battery outside the UV light in the storage case. The UV polymerisation light must not be opened. Unauthorised modifications to the UV polymerisation light are prohibited.

Inserting the battery

Remove the device from the case and screw off the end cap. Insert the supplied battery into the housing as shown and screw on the end cap to close the housing.

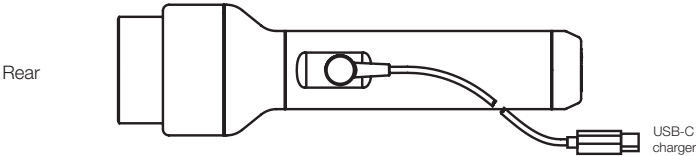
Ensure that the positive terminal points toward the lamp head.

The battery must be fully charged prior to first use!



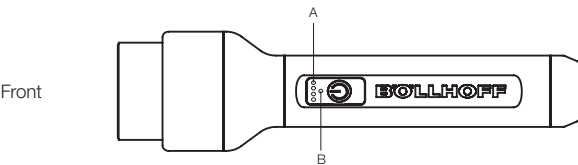
Charging the polymerisation light

During charging, the Li-ion battery remains inside the housing. To charge the polymerisation light, connect the supplied USB cable to a USB port and connect the charging contact of the USB cable to the charging contact located on the rear of the light. The chaser light of the LEDs (A) signals the charging process.



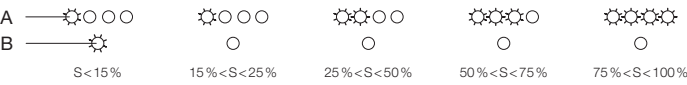
Operating states

The UV polymerisation light can indicate various states by means of the integrated LEDs. The four blue LEDs on the front indicate the battery states and the set exposure time (A). The red LED below is the warning LED (B).



Battery status and state of charge

When the UV polymerisation light is switched on, the battery status S is indicated during 5 seconds. The four blue LEDs (A) and the red warning LED (B) blink to indicate the status.



Charging is indicated by means of a chaser light of the four blue LEDs. The current battery status is not indicated during charging. The light must be switched on to indicate the battery status. When the battery is fully charged, up to 120 exposures of 20 seconds can be performed.

Operation

All functions of the UV polymerisation light are controlled by pressing the I/O button on the front. They are indicated by the different status LEDs.

Turning on the lamp

Press the I/O button for ≤2 seconds. The status of the light changes from standby mode to “active”. Exposure time, battery status and warning are indicated.



I/O-Button

Exposure

To start the exposure, press and hold the I/O button again for ≤2 seconds after turning on the UV polymerisation light. The start of the exposure is confirmed with a single acoustic signal tone. After the exposure time has ended, a double beep signals the end of the exposure.

**NOTE:** Exposure is only possible if the temperature at the LEDs is within the specification and the light sensor enables the exposure. If the warning LED flashes for five seconds, this indicates that the relevant limit value has been exceeded and no exposure will be performed.

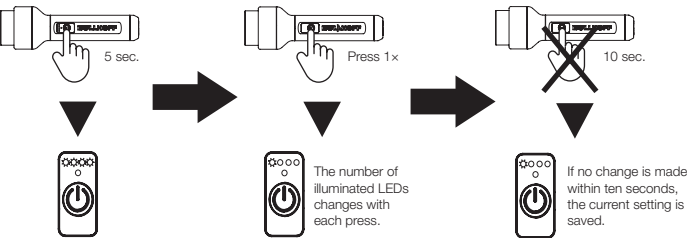
Turning off the lamp

If the light is not used for a period of three minutes, it automatically switches to standby mode. There is no active turn-off. If the battery remains inside the device for more than a week, it is automatically discharged.

Setting the exposure time

To set the exposure time, press and hold the I/O button for ≥5 seconds until the four exposure time LEDs (A) start to flash. The desired exposure time can now be set by pressing the button again. This is indicated by the number of flashing LEDs. If the button is not pressed within ten seconds, the last selected time window is saved. The LEDs now light up again continuously in the number of the set exposure time.

The set exposure time is indicated by means of four LEDs next to the I/O button.



Exposure time	LED1	LED2	LED3	LED4	Warning LED
5 sec.	ON	OFF	OFF	OFF	OFF
10 sec.	ON	ON	OFF	OFF	OFF
15 sec.	ON	ON	ON	OFF	OFF
20 sec.	ON	ON	ON	ON	OFF
Free mode	OFF	ON	ON	OFF	ON

Free mode



The light sensor is disabled in free mode! **For this mode, the safety glasses must be worn and areas of skin must be protected against “sunburn” through suited measures.** Make sure that no one can be blinded or hurt by the emitted light. Any non-observance is gross negligence. All safety instructions must be observed!

The free mode is intended for bonding on corners and glass. Further uses are cases for which incident light cannot be avoided.

The free mode is set in the same way as the exposure time and indicated by the blue LEDs (A). When the mode has been selected, the second and third blue LED are illuminated. In addition, the red warning LED (B) flashes. The exposure is started at the press of the button. The maximum exposure time in free mode is 60 seconds. At another press of the button, the exposure can be aborted early. For safety reasons, the free mode only lasts for one exposure. After that, the previously set exposure time is activated again. For another exposure in free mode, the mode must be activated again.

Determining the exposure time

The following guide values for the exposure time of ONSERT® joints can be tested as basic settings.

1. 5 sec. for thin-profile solid plastic parts
2. 10 sec. for ONSERT® studs with an in-moulded metal blank when using the exchange unit and pressing
3. 10 sec. minimum for all components without exchange unit and without pressing (e.g. ONSERT® for cable management and ONSERT® nuts)

To test the guide values, a transparent film can first be placed on the substrate on which bonding is then performed. After bonding, the film is pulled off the component or adhesive. The exposure time must be increased if the adhesive remains liquid or pasty in the centre or in the area of the adhesive bead.

Bonding of ONSERT® fastening elements

Please consult our Technical Manual, product catalogue or explainer videos for the precise details about bonding fasteners.

Technical data	
Item code	4850 100 0001
Designation	UV polymerisation light ONSERT® SL ONE
Light colour	Ultraviolet, 405nm
Luminous power	4000mW
Beam angle	120°
Risk category	RC3
Approved battery	26650 Li-ion battery, 3.7V, protected
Operating temperature	+10 °C to +40 °C
Degree of protection	IP50
Material	Aluminium/acrylic glass
Dimensions	Ø53.5 × 187 mm
Weight	370 g
Charging time	5h
Operating time	120 exposures of 20 sec. each