

EndoLight[®]

RECHARGE. RELAX. RECOVER.

User Guide



by weber medical GmbH

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1. General information

Your EndoLight®

From now on, the EndoLight® is your daily companion, enhancing your well-being on all levels.

You can wear it anytime and anywhere: At home, in the office, at the gym, in a café, while traveling or on the go.

Attention: Take a moment to carefully read all the important information in these instructions, especially the "Safety" chapter.

Accessories



EndoLight® with pre-installed wristband



Additional wristband for smaller wrists



Adapter for smaller wrists



Power adapter plug

Europe: 220VAC to 5V 1A
USA: 110VAC to 5V 1A



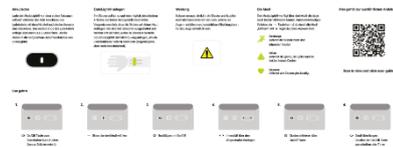
Universal charger and data cable
USB-C to USB Type A



Travel and storage case



Cleaning cloth



Quick Guide

Intended Use

The EndoLight® is a portable device that is based on the principles of Low-Level Laser Therapy (LLLT). It is worn around the left wrist for a duration of 30 min/day.

The EndoLight® has 7 laser diodes and one LED diode that are grouped in two light units. They are positioned so that the light hits the main arteries in the wrist (Arteria Ulnaris and Arteria Radialis) for an effect on the entire body.

The diodes irradiate the circulating blood with different wavelengths of light and intensities, depending on the user settings.

The device is powered by a built-in lithium-ion battery.

The EndoLight® is intended for private use only and not for industrial/commercial use. According to the Product Safety Act, the EndoLight® is not a medical product but a wellness product. Its intended use is for the improvement of general well-being and was not designed to diagnose, cure, alleviate, or treat any disease, symptoms, or other medical problems.

Please note that in the event of improper use, liability is void.

Contraindications

Use in infants and children under 16 years of age, pregnant women and in case of pre-existing conditions only after consultation with a doctor.

2. Safety

Signal words and warning symbols



WARNING

A WARNING message contains special safety emphasis and must be observed at all times. Failure to observe a WARNING message could result in serious personal injury.



CAUTION

Failure to observe a CAUTION associated with use could result in minor injury.



NOTICE

Please observe the following instructions carefully to avoid property damage.



ADVICE: Please observe the information of this user guide. Do not use the EndoLight® without reading this guide.



Electrical voltage warning



EndoLight® not for general waste.



Li-Ion

Battery not for general waste.

General



Some basic safety precautions must be taken into consideration when using electrical equipment. Failure to take precautions outlined in this section could result in fire, electric shock, other injuries, damage to the EndoLight® or other property. Please read the following safety instructions carefully before use.

This information relates to the EndoLight®, the charging and data cable, the power adapter, and all accessories.

Always keep these operating instructions on hand and store them in a safe place so that you can pass them on to the new owner in the event of a sale.

Safe use of the EndoLight® is the primary responsibility of the user. If the EndoLight® appears to be operating incorrectly, please refer to the troubleshooting guide. Contact us if the problem persists.

Safety instructions

⚠ CAUTION

This hazard warning indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Skin reactions

Wearing the EndoLight® can cause skin irritation or allergic reactions. To avoid this, you should always keep the device clean and dry. Please do not wear it too tight around your wrist.

If the irritation persists, take the EndoLight® off your wrist, and contact your doctor if the symptoms persist for more than 3 days.

If you experience pain, numbness, or a burning or tingling sensation while or after wearing the device, remove it immediately.

Due to the high-power output, it is normal that the EndoLight® generates heat (approx. 40 degrees Celsius or 104 degrees Fahrenheit). Skin with a higher proportion of melanin absorbs a higher amount of laser light and can therefore heat up more likely. Observe your skin reaction particularly carefully if you have dark skin (skin type V or VI).

If the EndoLight® becomes uncomfortably hot while it is being used or charged, or if it produces unusual noises or smoke, immediately remove it from your wrist or unplug it from the socket.

Physical discomfort

Consult your doctor and temporarily stop using the device if you experience physical symptoms such as seizures, fainting, eye aches or headaches that you suspect may be caused using the EndoLight®.

Product damage

If your EndoLight® has been damaged, do not use it anymore.

To avoid injury, do not try to open or disassemble the EndoLight® yourself.

Handling

Handle your EndoLight® with care. Do not drop it or expose it to an open flame.

Do not use accessories or detachable parts not described in this user guide.

Do not interconnect the EndoLight® with other equipment not described in this user guide or modify it in any way.

⚠ WARNING

This WARNING message contains valuable safety information, and it must be taken seriously at all times. Failure to observe this WARNING message could result in serious personal injury.



Never look directly into the diodes – visible and invisible laser radiation may be harmful to the eye.

The use of controls, adjustments, or performance of procedures other than those specified in this user guide may result in exposure to hazardous laser radiation.



Suitable for mains supply voltages 110-240 V/AC.

Authorized and non-authorized users

The EndoLight® may be used by children under 16 years and persons with limited physical, sensory or motor skills and inexperienced/untrained individuals, provided they are supervised or instructed by a responsible adult regarding the safe use of the device and are aware of the possible risks. Use in children under 16 years only after consultation with a doctor.

Cleaning and care must not be carried out by children without supervision.

The EndoLight® must not be used as a toy. If the device is used by children or in their vicinity, carefully supervise the situation. Children cannot always correctly recognize possible dangers.

Keep the EndoLight® away from babies, infants and young children. Packaging materials or components that come loose can pose a choking hazard.

The charging cable poses a strangulation risk. Store appropriately when not in use.

Battery

The EndoLight® is powered by a rechargeable lithium-ion battery. Please do not try to change the battery yourself. Doing so may result in a hazard. Only trained and authorized service personnel may change the battery. Contact our service team to have it replaced.

Charge the battery of your EndoLight® according to the instructions (see chapter 4). Use only the supplied data/charging cable and the associated power supply unit.

The EndoLight® is disabled for use during charging. It automatically turns itself off as soon as it is connected to a charger. When connected to a charger, it is not possible to turn the EndoLight® on.

If the EndoLight® becomes damp or wet, the battery must not be charged.

The battery contains lithium. In the case of fire use an ABC or BC type fire extinguisher.



ADVICE: This notice indicates possible damage to property, which may occur if the safety measures are not followed.

ATTENTION! Please observe the following instructions to avoid damage to property:

Do not try to open or disassemble the EndoLight® yourself to repair it. Disregarding this can lead to void guarantee and overheating. Always contact customer service representatives in case your EndoLight® requires repair or maintenance.

If an electrostatic discharge should occur, the EndoLight® turns off automatically. You can simply turn it on again by pressing the On/Off button.

The EndoLight® offers no special protection from water (IP Class IP0X). So please be careful that it does not get damp or wet. For example, do not use it outside in the rain, when exercising on / in the water, when showering, bathing, in the sauna or steam room. Do not use the EndoLight® if moisture has penetrated.

Do not expose the EndoLight® to extreme temperatures or direct sunlight. It is designed for ambient temperatures and storage temperatures between 0°C and 30°C (32°F and 86°F). Operating or storing outside of these temperatures can damage the EndoLight® and reduce battery life. Do not expose the EndoLight® to direct sunlight or sudden changes in air temperature or humidity (permissible relative humidity: 8 % – 90 %).

Maximum operating altitude is 3,000 m above sea level, without pressure compensation.

Avoid contact with dust or sand.

Never use force when pressing the buttons or connecting a cable or plug as this may cause damage that is not under guarantee. If the plug does not connect easily, it is likely not compatible with the EndoLight® or the charging port is blocked. Make sure that you are only using the accessories provided and that the charging port is free from debris.

To prevent the cable from breaking, roll it up after use instead of folding the cable.

Disposal



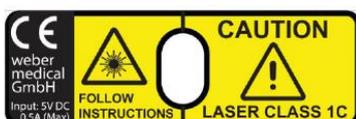
When the EndoLight® has reached the end of life, do not dispose of in general waste, take it to an e-waste recycler.



Dispose of the EndoLight® and the battery separately from household waste and in accordance with the applicable environmental laws and regulations. Improper disposal can have significant negative effects on the environment.

Batteries are not accepted via household recycling collections however they can be recycled at your local recycling center or nearest battery recycling collection point found in most supermarkets.

Type label



Guidelines, regulations and standards

This device is classified as a wellness device and meets UL/CE standards.

The EndoLight® is compliant according to:

- IEC EN 60335 1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 – EN 62233:2008 Safety of household and similar electrical appliances

It complies with all European regulations on electromagnetic compatibility (EMC):

- Emission EN 61000-6-3:2007 + A1:2011
- Immunity EN 61000-6-1:2007
- EN 55032:2015 + A11:2020 FCC CFR 47 part 15 subpart B ICES-003:2016 updated April 2019

The EndoLight® is RoHS 3 compliant and contains no toxic chemicals.

CE-Konformitätserklärung
CE Declaration of Conformity
CE Déclaration de Conformité
CE Dichiarazione di Conformità

CE

Der Hersteller / The manufacturer / Le fabricant / Il fabbricante

W Medical Systems GmbH
Lönstr. 10
37697 Lauenförde

erklärt hiermit, dass das Produkt
herewith declares that the product
déclare par la présente que le produit
dichiara che il prodotto

EndoLight®

den Anforderungen der folgenden EG-Richtlinien entspricht.
meets the provisions of following EC-Directives.
remplit les exigences des Directives CE suivantes.
soddisfa tutte le disposizioni dalle Direttive CE.

2014/35/EU, 2014/30/EU, 2011/65/EU

Angewandte Normen:	EN 60335-1:2012/A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021
Applied standards:	EN 62233:2008
Normes appliquées:	EN 61000-6-3:2007 + A1:2011
Norme applicate:	EN 61000-6-1:2007 EN 55032:2015 + A11:2020 FCC CFR 47 part 15 subpart B ICES-003:2016 updated April 2019

Diese Erklärung gilt für das oben genannte Produkt ab dem Unterzeichnungsdatum.
This declaration is valid for the above-mentioned product after the signature date below.
La présente déclaration est valable à partir de la date de signature.
Questa dichiarazione vale per il suddetto prodotto dalla data di firma.

Lauenförde, 01.09.2022
Ort / place / lieu / luogo
Datum / date / data / data

Weber
Unterschrift / signature / signature / firma

Robert Weber
Name / name / nom / nome:
(Geschäftsführer / management / directeur / delegato)

Graphic 1: CE Declaration of Conformity

3. Your EndoLight®

Material

The structure of the EndoLight® is made from aluminum.

The wristbands are made of a hard-wearing silicone rubber that is particularly comfortable to wear thanks to its high-quality material properties.

Other materials used are quartz glass and medical grade polycarbonate plastic.

All materials are BPA-free.

If the original wristband is too large for you, you can replace it with the smaller one, which is included with the EndoLight®. Please refer to chapter 4 on further information on how to change the wristband.

The buckle that fastens the wristband is made of stainless steel.

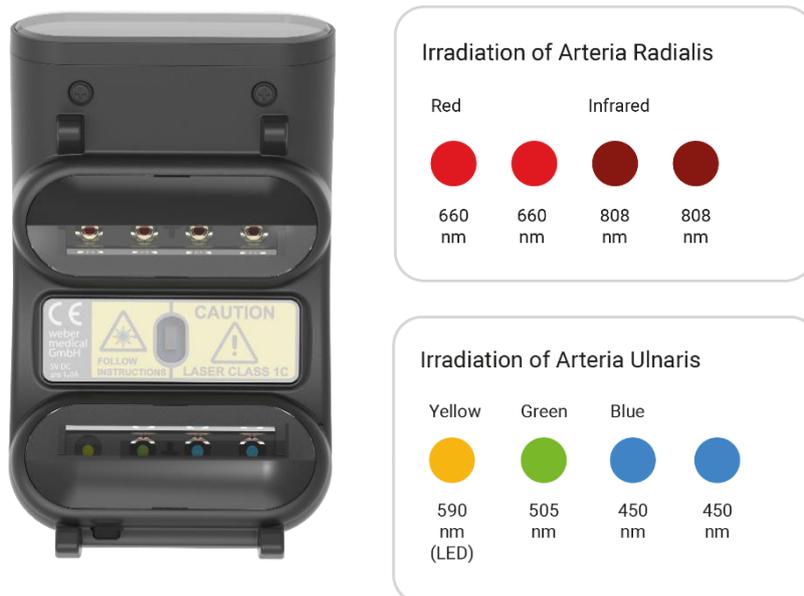
Diodes

The device is a Class 1C laser device. Special proximity sensors ensure that the diodes are only activated when they are in contact with skin. This reduces the risk of eye damage to the user or a bystander through direct exposure to LED or laser light.



Graphic 2: Safety label on proximity sensor

The core feature of the EndoLight® are the two uniquely designed diode units that deliver their power in an optimally dosed manner. Special lenses collimate and guide the light directly through the skin, into the arteries. This lens is made of PMMA and has features that, in addition to the contact sensor, ensure user safety.



Graphic 3: Diode set-up



Warning: Please never look directly into the light and do not shine the light into anyone else's eyes, as this can lead to serious eye damage.

Display

The EndoLight® features an IPS LCD panel.

Battery

The EndoLight® is powered by a rechargeable lithium-ion battery.

4. Setup

Charge your EndoLight®

Fully charge your EndoLight® before first use:

- Connect the USB Type A end of the charging cable to the power adapter and plug the adapter into a socket. Alternatively, plug the Type A end into the USB port on a computer.
- The other end of the charging cable has a USB Type C connector. Plug it into the connection socket provided on the EndoLight® (see graphic 4):



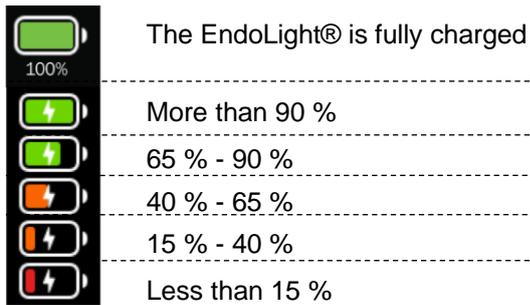
Graphic 4: USB Port

When the device is powered off and a charger is connected, the screen shows the charge level.



Graphic 5: Battery display

Charge time is approx. 2 hours from 0 % - 100 %. You can view the current charge status by pressing one of the buttons.



Graphic 6: Battery charging status

The charging process is complete when a fully charged battery symbol appears on the display.

A fully charged EndoLight® has a battery life of 2-3 days when worn 30 minutes/day in “Recover” mode at full intensity.

The EndoLight® will go into low power mode (low screen brightness) when battery level is less than 15 %. It will shut down when battery level is less than 2 %.

Put your EndoLight® on



Place the device around your left wrist and fasten the buckle.

The EndoLight® should sit comfortably on your wrist, about one finger's breadth below the palm. The diodes rest on the arteries inside the wrist. If the display is upside down, the EndoLight® has been put on the wrong way. The display is located on the extension of the thumb.

If the wristband is too wide, see the instructions for changing the wristband (chapter 4).

Graphic 7: EndoLight® at wrist

Make sure the diodes are resting on your skin. The EndoLight® is equipped with a contact sensor and is only activated when contact with skin is made.

The EndoLight® must not be too tight so as not to hinder blood circulation (tight, but not constricting).

Additional adapter

In case you have small wrists, and you feel like light is leaking, please apply the adapter as shown on graphics 8 and 9:

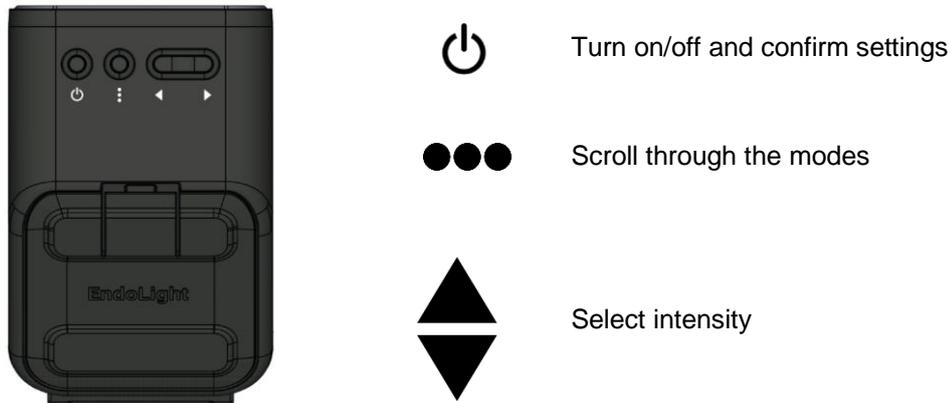
Graphic 8: Adapter covers bottom diode row



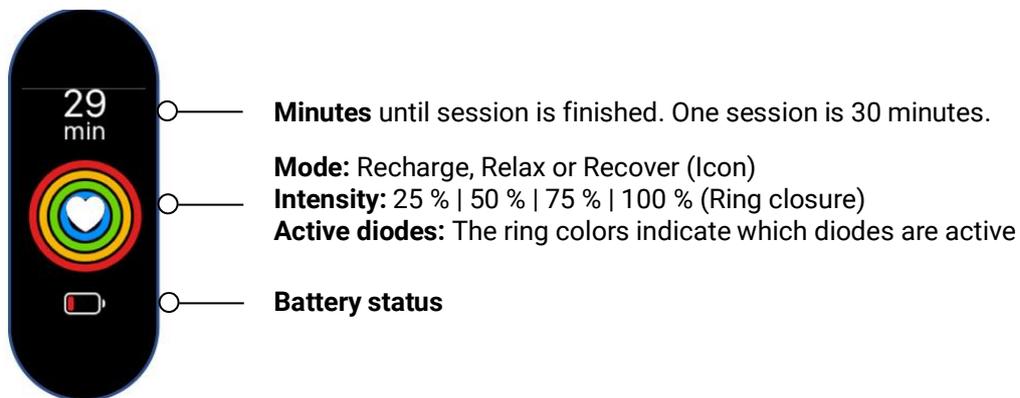
Graphic 9: Adapter covers upper diode row



Function overview



Graphic 10: Buttons



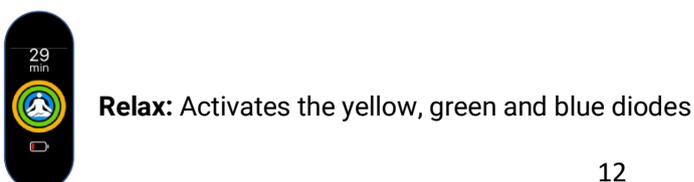
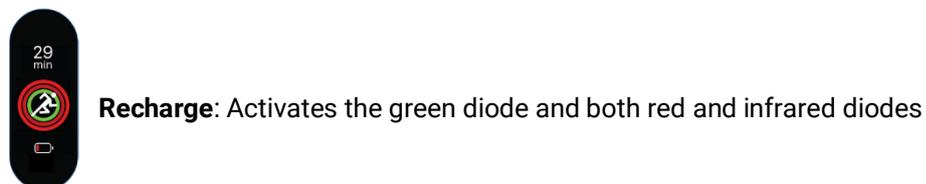
Graphic 11: Display

Turn on

Briefly press the On/Off button to turn on. 

Select mode

The EndoLight® has the following three operating modes that you can choose based on your wellness goals:





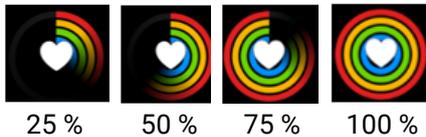
Recover: Activates all diodes simultaneously

Graphic 12-14: Modes

Press the ●●● button to "scroll" through the modes. Confirm your selection with On/Off.

Select intensity and start session

Set intensity via the rocker switch. You can choose from the following intensity levels:



Graphic 15: Intensity

The ▲ button increases the intensity. The ▼ button decreases it. Press the On/Off button to confirm your selection and start the session.

The selection applies to all diodes simultaneously. Individual diodes cannot be selected separately.

Turn off

After 30 minutes the EndoLight® beeps three times before turning off automatically. Alternatively, you can end the session early by pressing and holding the On/Off button.



If the contact sensor is not near the skin, the diodes will not turn on, or stop if already on. The timer will pause, and this screen will show up together with an acoustic signal.
Please correct the fit on your wrist to start or continue the session.

Graphic 16: Notice Contact sensor

Change the wristband

You do not need any tools to replace the wristband.

Detach the wristband

Both parts of the wristband have a small spring lock that secures the band to the device. To mount the smaller wristband, you only need to detach the part with the holes.

Slide the silver spring pin of the band down to release it. You can use your finger or a pointed object.

Mount the wristband

The new wristband is clicked back into place at the bars. First insert the lower end of the spring pin into the hole provided. Slide the spring pin down and position it over the upper hole. Release the spring pin so that it falls into the hole and fixes the band.

Important: MAKE SURE THAT THE PIN HAS FALLEN SECURELY IN POSITION TO AVOID ACCIDENTAL DETACHMENT AND DROPPING OF THE DEVICE.

5. Recommendations for use

Wear your EndoLight® whenever you want it to support you in everyday life. We recommend one daily session of 30 minutes. Maximum sessions per day: 2.

At the beginning, start with low intensity (25 % - 50 %) and observe your reaction. You can then gradually increase the power from session to session depending on how you feel.

6. Storage and cleaning

Store your EndoLight® in the provided storage case when not in use to prevent dust and debris getting inside the device.

Perspiration can develop during the session. We recommend wiping the surfaces after use with the provided cleaning cloth. Alternatively, you can use an abrasion-resistant, lint-free cloth for cleaning. You can use water or cleaning alcohol (such as isopropanol 70 %) to moisten the cloth. First spray this onto the cloth and not directly onto the device. Make sure that the cloth is only damp and not wet.

Never spray cleaner directly on the device. Damage due to the ingress of liquids or solvents will void the manufacturer's guarantee. Use of other cleaning products may damage your EndoLight®.

The EndoLight® should only be cleaned when it is turned off and not while it is charging.



CAUTION: Do not use cleaning products that contain ammonium chloride. These chemicals may cause cracking of the material.

7. Product durability

The EndoLight® is designed to be durable under typical use.

The device is equipped with parts that are subject to natural wear and tear (e.g., the rechargeable battery). The service life of these parts depends either on their frequency of use or is limited in time. These parts can possibly be replaced by our service team.

8. Firmware update procedure

If a firmware update becomes necessary, please follow the steps listed below.

Boot Version: 1.00.00.04

Main Version: 1.00.01.04

Firmware Erase:

1. Power off the device.
2. Press and hold down both arrow buttons and On/Off button.
3. The device will power up and start a long beep after 10 seconds.
4. Release all buttons.

Firmware Download:

1. Copy the update utility (WeberUsbFw.exe) and firmware file (WW100007.bin) to the same folder.
2. Press On/Off button.
3. The device will start in BOOT mode.
4. Connect USB cable to PC.
5. The PC will show a new device detected message, only at first time, and install drivers automatically.
6. When done, run the update utility (WeberUsbFw.exe).
7. Click "Start". The utility and the device screen both will show the download progress.
8. When done, the device will show a success message.
9. Disconnect USB cable.
10. The device will power off.
11. Press On/Off button to turn on the device in normal mode.

Note: the device will again power on in BOOT mode if the firmware file is not compatible with the device's serial number, or download process interrupted.

Retrieving Information:

In BOOT mode:

Press and hold down On/Off button at any time to show BOOT serial number and firmware revision.

In normal mode:

Power up the device while pressing and holding down the power button for 10 seconds. Serial number and firmware revision will appear at the bottom of the screen.

9. Troubleshooting

Problem	Possible cause	Solution
The EndoLight® ... does not turn on	Empty battery	Make sure the battery is charged and try again.
	Device is charging (usage during charging is disabled for safety)	Wait until the device is fully charged, disconnect from USB cable and try again.
does not turn off	Software error	Wait for the battery to drain until the EndoLight® turns itself off. Fully charge it and turn it back on/off.
gets very hot (a slight warming is normal)	Battery is overheated	Unplug the EndoLight® from the power supply if you are charging it. Turn it off and only turn it on again once it has cooled down completely.
does not respond to button presses	Software error	Turn off the EndoLight® and try again to adjust your settings.

If troubleshooting does not solve the problem, please contact customer service.

10 . Warranty and guarantee

Warranty

We grant you a 24-month warranty. This covers manufacturing defects in your EndoLight® from the date of purchase that were already present at the time of purchase.

Guarantee

What is covered by the guarantee?

The guarantee period for material and manufacturing defects under normal use is one year and begins from the date of purchase. This applies to both the EndoLight® and any accessories.

No new guarantee period begins after repairs or replacements.

What is not covered?

We do not guarantee the repair or replacement of a product if the defect is due to:

- Accidental damage caused by improper care or misuse, as well as careless use or operation which is not in conformity with this user guide.
- Use of the product beyond "normal use", which corresponds to more than 1 hour a day.
- Use of parts that have not been assembled or installed in accordance with the manufacturer's guidelines.
- Use of parts and accessories from other manufacturers.

- Repairs or changes that have not been made by the manufacturer or its authorized partners.
- Incorrect setup
- Normal wear and tear

Please contact our service team if you are unsure which cases are covered by your guarantee.

Replacement or repair of defective devices within the guarantee period

During the guarantee period defective devices or device parts can be sent to one of our service addresses. Repair or replacement of the EndoLight® is at the discretion of the manufacturer.

Before returning a device, please contact us and have your purchase receipt or delivery note ready. Therefore, please keep the invoice and delivery note carefully as proof of purchase. Without these documents, you will be charged for the costs of all work involved.

We will then inform you about the further procedure.

Replacement or repair of defective devices outside of the guarantee period

Even after the guarantee period has expired, you can send the defective device for repair. Please contact us first before sending in the device.

Repairs or replacements that occur after the guarantee period are subject to a charge.

11. Quality system - Serial number

During production, the device is assigned a serial number for traceability:

You can find it under the USB port door.

In case you experience a warranty or guarantee issue, please have the serial number of your EndoLight® ready.

12. Manufacturer and service contact details

Manufacturer address:

Weber medical GmbH

Sohnreistr. 4

37697 Lauenförde

Germany

Website: www.webermedical.com

Service address for USA:

Weber Laser Systems

Attn: Repairs

1926 Bonus Drive

San Diego CA 92110

USA

General service address for all other countries:

W Medical Systems GmbH

Lönsstr. 10

37697 Lauenförde

Germany

Tel.: +49 5273 3894506

Email: info@wmedicalsistemas.comWebsite: www.wmedicalsistemas.com

If you require any help with the setup, use or maintenance of your EndoLight®, or to report unexpected operation or events, please contact the **general service address**: info@wmedicalsistemas.com

13. Product specifications

Diode color	Diode type	Quantity	Wavelength
Infrared	Laser	2	808 nm
Red	Laser	2	660 nm
Yellow	LED	1	590 nm
Green	Laser	1	505 nm
Blue	Laser	2	450 nm

Output power per diode*	8,75/17,5/26,25/35 mW
Total output power*	70/140/210/280 mW in Recover mode
Input voltage	110-240VAC
Duration per session	30 minutes
Permissible environment temperature	0°C - 30°C (32°F - 86°F)
Permissible relative humidity	8 % - 90 %
Power source	Lithium-ion battery
Weight	0.13 kg

*Dependent on the selected intensity (25 % | 50 % | 75 % | 100 %)