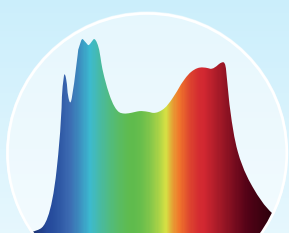


SPECTRASOL
PROCOGNITIVE LIGHTING



PHOTOTHERAPEUTIC PANEL



developed and verified
in collaboration with

NU^DZ
NÁRODNÍ ÚSTAV DUŠEVNÍHO ZDRAVÍ



USER MANUAL

Device Description

The portable phototherapeutic device SPECTRASOL (hereinafter referred to as the "device") is a portable device the size of cabin baggage (65 x 35 x 16 cm) designed as a metal case to ensure good portability and durability. The device consists of two wings – left and right. The dominant part of the surface of both wings is formed by a diffuser scattering light from LED modules integrated inside the device, thus forming the main – radiating part of the therapeutic aid. When opened, the total radiating area is 53.5 x 60 cm. The opened device can be stably placed on a table so that the light surface is at the eye level of a seated person. In the lower part of the left wing, there is a connector for connecting the power cable, a Main switch, control button, and indicator lights. The device, weighing 8 kg, can be safely carried using a solid handle. The device is equipped with technology ensuring safe and reliable operation, including adequate light output.

Intended Use

The device is intended to support mental health, as a support for treatment, or as the prevention of seasonal affective disorder (SAD) through the stabilization of circadian rhythms.

Instructions for Use

For proper use and to ensure the specified lifespan of the device, read these instructions for use carefully before first use. The manufacturer bears no responsibility for damages or health injuries caused by failure to follow the instructions provided in this manual. The manual includes a description of the device and instructions for its use and maintenance. However, the instructions for use in no way replace the recommendation of a physician with knowledge of the issue (hereinafter referred to as a "professionally qualified person").

Warning: As part of the therapy, the light case cannot be used otherwise than according to the instructions of a professionally qualified person. The device is used exclusively in the morning and forenoon hours. Exposure at an inappropriate time can have a strong negative effect on the circadian rhythm and thus on emotional stability, therefore never use the device in the evening and at night!

Indications

Thanks to its patented spectral composition, this device simulates the natural biological effectiveness and other properties of sunlight. It thus compensates for the lack of light during dark seasons. Especially in the winter season, when for sensitive individuals the lack of daylight and solar radiation is insufficient to synchronize biological rhythms in the body. Exposure to bright light emitted by the device acts as a signal for the biological clock, supporting the correct secretion of day and night hormones. Daily exposure in the morning hours helps maintain the regularity of the sleep and wake rhythm, thereby supporting mental health and acting as the prevention of seasonal depression.

Possible Contraindications for Use

- A side effect of some medications can be, for example, photophobia. Therefore, inform a professionally qualified person whether and what painkillers, antidepressants, and other prescription medications you are taking.
- A patient with any eye disease (= glaucoma and cataracts, retinal inflammation, ...) must consult an ophthalmologist before using the device for the first time.
- A patient with any neurological disease (especially migraines) must consult a neurologist before using the device for the first time.
- The device is intended for the continuation of clinical or outpatient care in a home environment. Its use must be in accordance with the initiated medical treatment and the recommendation of a professionally qualified person.

Possible Side Effects:

- Always follow the instructions of a professionally qualified person! Always consult any problems with a professionally qualified person.
- If you notice mild difficulties such as headache or burning eyes – avoid looking directly into the light surface, adjust (increase) the distance of the device's light surface from your eyes, and take a break for a few days until the symptoms disappear.
- If moderately severe to severe difficulties occur, such as nausea or sleep problems, stop therapy immediately, verify whether you are using the device according to the instructions of a professionally qualified person, and consult further use of the device with a professionally qualified person.

PUTTING INTO OPERATION

Device operation:

1. Place the case on a firm surface, for example, a table (see figure 1). For correct orientation, check that the UP arrow on the sticker on the outside of the case points towards the ceiling and the DOWN arrow points towards the surface on which the case is being opened. Open the device along the vertical axis. Remove the power cable from the compartment in the left wing of the device and plug it into the connector in the panel of the right wing. The center of the illuminating surface should be at your eye level. Sit or stand approx. 50 cm from the center of the radiating surface (approximately an arm's length). Positioned this way, the device has optimal efficiency. Observe the basic requirements set out in the article "Information on EMC – electromagnetic compatibility"

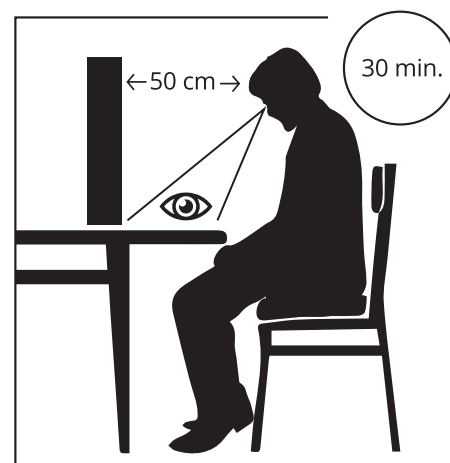


Fig 1: Model situation of recommended use

2. Plug the power cord into the mains and turn the device on using the main switch on the panel in the lower part of the left wing next to the connector where the power cable is connected.

3. During therapy, you can read, write, make phone calls, or do your work. Avoid looking directly into the light source. However, try to maintain the recommended eye distance in front of the device at a distance of 50 cm (see Fig. 1 Model situation of recommended use). At the same time, however, you must ensure that objects (book, newspaper, etc.) do not block more than $\frac{1}{4}$ of the radiating area. The recommended therapy time is determined by a professionally qualified person. Therapy should not exceed 60 min./day. Under no circumstances leave the device unattended during therapy.

4. After the therapy is finished, turn off the device with the switch in the lower part of the left wing, then unplug the plug from the socket, and subsequently unplug the power cord from the connector in the left wing. Store the power cord in the compartment in the right wing and secure it properly in the cable holder. Then close the case. When closing, it is necessary to consider the risk of damaging (pinching) the cable and the string for determining the distance. Put the closed case away so that it does not hinder the normal operation of the room and to minimize the risk of accidental damage.

Warning

If the light seems too intense to you after starting the device, wait for about 5 minutes; in most cases, the eyes will adapt during this time. If the feeling of too high brightness persists, it is possible to adjust (increase) the distance of the light surface of the case from the eyes. If you decide to do so, note this fact in a diary for later consultation with a professionally qualified person. During the first few uses, due to the unusually high intensity, eye and head aches may occur, which will, however, cease in subsequent uses. In case the difficulties persist, stop using the device and contact a professionally qualified person.

Device Maintenance

- The device does not require, apart from keeping it clean, any special maintenance (i.e., adjustment, calibration, etc.).
- Before cleaning and maintenance, make sure that the device is turned off and disconnected from the mains.
- Clean the device only with a damp cloth.
- After cleaning, make sure that no water or other liquid has entered the device.
- If you do not use the device for a longer period of time, store it in a dry place out of the reach of children.
- Do not leave the device connected to the mains by the power cord if you will not be using it for a longer period of time.

SAFETY INSTRUCTIONS

- Never use the device in damp places and do not immerse it in water or other liquids.
- Before use, remove all packaging and check the device to ensure it is not damaged in any way.
- The device may only be used by a person for whom therapy has been prescribed by a professionally qualified person.
- Children near the device should be supervised during use. It is not a toy!
- Keep the power cord away from heat and open flames.
- Do not disassemble the control panel or other parts of the device.
- The operating voltage must correspond to the values specified in the technical data sheet.
- Never touch the device with wet hands. Do not allow any liquid to get onto the device. The device can only be used if it is completely dry.
- Protect the device from strong impacts, internal components could be damaged.
- If the power cord is damaged, stop using the device immediately and contact a professionally qualified person. The cable must be replaced immediately. Never attempt to repair the power cord yourself.
- If the device suffers accidental mechanical damage, e.g., falling off a table, the device must not be used further without its basic functions being tested by the manufacturer or an authorized service center.

Repairs

- Do not attempt to repair the device yourself. This could lead to serious injuries and financial damage.
- If the device is damaged in any way before first use or does not function correctly, stop using it and contact the manufacturer of the device.

TROUBLESHOOTING

fault	Possible cause	Solution
Therapeutic panel does not light up	Device is turned off	Turn on the device
	Device is not connected to the mains	Connect the device to the mains
	Damage to the power cord	Request a replacement power cord from a professionally qualified person
	Damage to the power connector	Contact a professionally qualified person, arrange to hand over the device and request a repair
	Failure of the LED module or electronics	Contact a professionally qualified person, arrange to hand over the device and request a repair

SAFETY INSTRUCTIONS

The device is classified as electrical and electronic equipment and must not be disposed of with household waste at the end of its normal service life. Disposal and recycling are regulated by the Waste Electrical and Electronic Equipment (WEEE) Directive No. 2002/96/EC. You can obtain information on the disposal of waste electrical and electronic equipment from your local authorities.

TECHNICAL DATA

Light parameters	
Light distribution	direct
Optical system	opalescent PS cover
CCT measured	5000 K
CCT real	4500 K
CRI	80
Flicker	Flicker Free
Emission area	535 x 600 mm (3210 cm ²)
Relative melanopic effect (melanopic DER)	0,934 lx
Photopic Illuminance*	3000 lx
Equivalent melanopic illuminance by daylight*	2900 lx
Electric parameters	
Voltage	100–260 V 50–60 Hz
Connection	IEC 14
Power	max 60W
Mechanical parameters	
Body	Al extrusion, Al sheet
Dimensions (when closed)	648x355x157 mm
Material finishing	Anodised Al with adhesive cover
Weight	8 kg
IP coverage	IP20
Maximal ambient temperature	25 °C
Calculated life span	L80B20 70.000h

*in recommended distance of use(50 cm)

Information on EMC - Electromagnetic compatibility

The device meets the requirements for electromagnetic immunity according to IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8 and IEC 61000-4-11. It can therefore be used in environments where the power supply network quality is typical for a home healthcare environment and a professional healthcare facility environment. In the event of electrostatic discharge, a situation may occur where the ongoing therapy stops. After the electrostatic discharge has passed, restart the device. After restarting, the selected program will automatically start again.

Wireless communication technology devices, such as wireless home networks, mobile phones, cordless phones and their base stations, and portable radios, can affect this device and must be located at a distance of at least 1 m from this device. Similarly, the device itself can cause radio interference to surrounding devices. The principle of appropriate placement applies here as well.

Service center - Spectrasol, s.r.o.
<https://spectrasol.eu/contact/>



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Report any adverse effects to the contact: info@spectrasol.cz



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