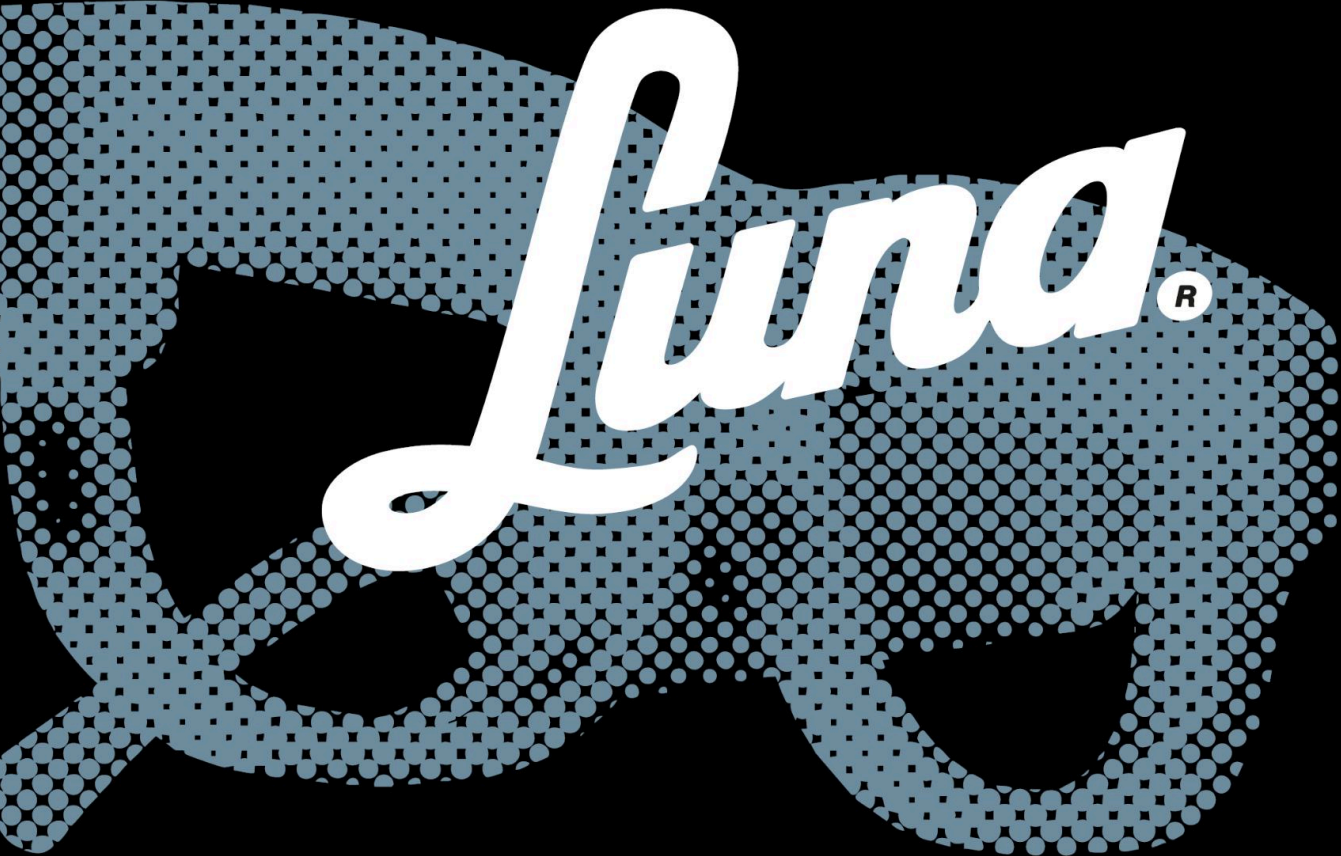




Digital version



*Luna*<sup>®</sup>

**Luna Glass**  
Product manual

*Luna.*



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02

Welcome to Luna  
Glass

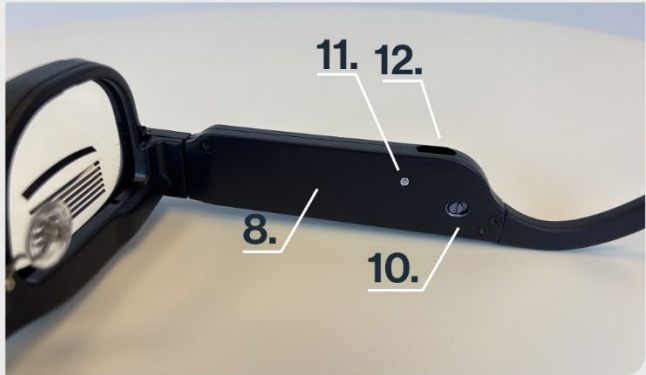
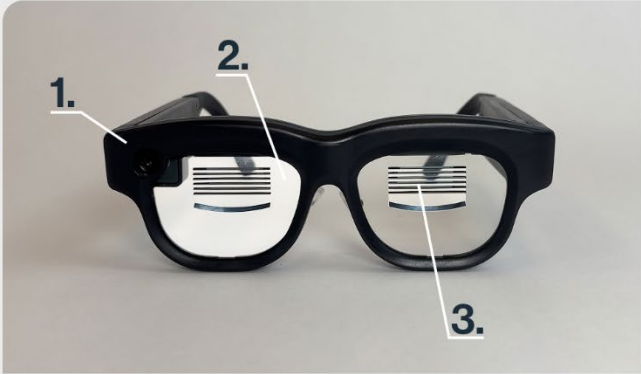
Luna Glass enhances vision in low-light conditions. Luna Glass is a pair of glasses that incorporates:

- A camera which captures the world in front of the user;
- A computer embedded in the temple of the glasses that processes the camera images;
- Displays that show the processed images to the user by projecting them onto the lenses of the glasses.

When using Luna Glass, the wearer can see a brighter representation of their environment in near real time. It looks as if the dark surroundings are illuminated, making it easier to see in dark environments. The glasses are designed to be fitted, set up and operated by the user, without the need for any help from professionals.

An overview of Luna Glass and all its parts is provided in the next table and figure.

1	<b>Camera</b>	A low-light camera used for capturing the environment in front of the wearer.
2	<b>Combiners</b>	Optical elements that project the video in front of the wearer's eyes.
3	<b>Display regions</b>	Region of mirror bars through which the enhanced camera image is visible in front of the wearer.
4	<b>Nose arms</b>	Adjustable arms that rest on the nose to support the frame and improve fit and comfort.
5	<b>Rocker button</b>	Button used for adjusting the light level and entering the settings menu.
6	<b>Action button</b>	Used for entering low-light mode and navigating through the settings menu.
7	<b>Power button</b>	Used for checking the battery life and turning Luna Glass on and off.
8	<b>Temples</b>	Plastic parts that fit on the face and protect the electronics from outside influence, such as rain and dust.
9	<b>Temple tips</b>	Adjustable, flexible supports that rest behind the ears to help stabilize Luna Glass.
10	<b>Battery switch</b>	A switch used for completely disconnecting Luna Glass's battery, allowing for long-term storage.
11	<b>Charging LED</b>	An indicator light used to show whether or not the battery is currently charging
12	<b>USB-C port</b>	A USB port used for charging and updating Luna Glass.



# 03

What's in  
the box?

- 1 A **carrying case** for safely storing Luna Glass and all its accessories.

---

- 2 A **microfiber cloth** to clean Luna Glass.

---

- 3 The **manual** with a description of Luna Glass and its accessories, instructions for how to use and troubleshoot Luna Glass.

---

- 4 A **safety and warning sheet** containing all the warnings and safety information also included in this manual.

---

- 5 **The Luna Glass device.**

---

- 6 Two **templates for prescription lenses** that can be used by an optician to cut prescription lenses to fit in the lens holders.

---

- 7 The **prescription lens holders** that can be attached to Luna Glass and can fit your prescription

---

- 8 **USB-C cable** for charging and updating Luna Glass. The cable has a USB type-C connector on both ends.

---

- 9 A **shoulder strap** that can be attached to the carrying case.

1.



2.



3.



9.



8.



7.



6.



5.



4.



*Luna.*



# 04

**Getting started  
with Luna Glass**

## 4.1 Switching on Luna Glass

Before fitting Luna Glass to your specific needs, Luna Glass needs to be switched on. To switch on Luna Glass, first check which position the power switch is in. The power switch can be found on the inside of the left temple and is used to disconnect the battery and turn the glasses completely off. This is ideal if you want to store Luna Glass for a longer period of time. If the power switch is set to “inactive” (switched towards the front of the glasses), Luna Glass can be turned on by switching the power switch to “active” (switched towards the temple tip). If there is enough power in the battery Luna Glass will automatically turn on. If there is not enough power in the battery, connect Luna Glass to a power source using the accompanying charger and USB cable.

If the power switch is set to “active” and Luna Glass is off, you can switch on Luna Glass by pushing and holding the power button for 3 seconds.

You will know you have successfully switched on Luna Glass when Luna Glass vibrates and the displays light up and show the environment.

After switching Luna Glass on, you can proceed to the first step of the fitting process - adjusting the temple tips.



The switch is set to “off”



Flicking the switch



The switch is set to “on”

## 4.2 Adjusting the temple tips

The temple tips of Luna Glass can be adjusted to ensure the right fit. To adjust the temple tips, follow these instructions to avoid damaging Luna Glass and achieve a correct fit. The pictures also show how to perform the adjustments.

- 1 Put the glasses on to determine where the adjustable hook needs to bend to effectively wrap around the ear.

---
- 2 Take the microfiber cloth provided with Luna Glass and put it on a flat surface.

---
- 3 Put Luna Glass upside down and facing away from you on the microfiber cloth. The underside of the glasses (with the buttons and USB-port) should now be facing up, and the tips pointing towards you.

---
- 4 Put your thumb on the underside of Luna Glass at the start of the ear hook (where the rubber adjustable tip meets the hard plastic of the temple). Apply moderate pressure, pushing it against the flat surface.

---
- 5 Straighten any bend in the ear hook so they lay flat on the table. This is to ensure the hooks only bend in one place and have a smoother curve.

---
- 6 Use your other hand to place another finger on the ear hook directly next to the position where you want the ear hook to bend and provide moderate pressure.

---
- 7 Use that same hand to bend the ear hook at the desired location and give it the desired angle. The angle can be adjusted vertically to control how steep it wraps around the ear.

- 8 Bending the ear hooks at a slight horizontal angle can help secure Luna Glass by making the hooks wrap around the back of the head.
- 
- 9 Repeat the above steps for the other hook. To ensure Luna Glass sits straight on the head, try to match the bending position and angle of both tips. You can also put on the glasses intermittently to check for the fit.

This process has been completed correctly when Luna Glass sits comfortably and doesn't move on your head during use. You can check this by shaking your head or looking down and feeling whether the glasses are sufficiently secure.

If the fit feels unsecure, try adjusting the temple tips in such a way that the bending point is closer to your ear. The angle of the bend may also be adjusted, so the tip goes around your ear with a steeper angle. Lastly, a slight bend inward can make an improvement because it helps the glasses wrap around the back of your head.

**Note:** avoid bending the temple tips to a position that results in a constant moderate

to strong pressure at the back of your ear while wearing Luna Glass as this may cause discomfort and damage to the glasses.

The temple tips are designed to be adjusted once to the desired fit. This can involve multiple attempts to bend the tips in the correct position. However, bending them very often may weaken or damage the temple tips.



**Applying pressure on the temple tip**



**Bending the temple tip around your thumb**

### 4.3 Adjusting the nose arms

This step will cover the adjustment of the nose arms, with the goal of aligning the display region formed by Luna Glass' lenses with your vision.

Alignment of the display region is important since it affects both the quality of the image and size of the window through which Luna Glass makes the environment brighter.

To personalize this alignment, the nose arms of Luna Glass can be adjusted. The nose arms should be adjusted to position the display region so that when looking straight ahead, the pupil is vertically in the middle and there are no black bars visible when looking at the display. We recommend you ask somebody to help you when adjusting

the nose arms to confirm the position is correct.

The position of the displays relative to the eyes can be changed by widening or closing the distance between the nose arms. This will make the glasses sit higher or lower on the face, as well as further or closer to the eye, depending on the angle the nose arms are bent at.

**Note:** the horizontal position of the pupil in the display region does not need to be adjusted.



**Applying pressure on the nose arms to bend them inwards**



**The nose arms have been bent inwards**

#### 4.4 Fitting the prescription lenses

Luna Glass comes with a set of holders for prescription lenses. Your optician can cut your required prescription lenses in the right size and snap them into the lens holders. Make sure to bring the prescription lens blanks to them. These have been designed to fit into most lens grinding machines. When the lenses are done, you can carefully snap them into the lens holders using the groove. The lens holder with the square cut-out should be fitted to the right lens and the lens holder without the cut-out to the left lens.

- 1 Take the lens holder and maneuver it around the nose pad to the back side of the frame. Align the top of the lens holder with the inside of the frame at an angle. When correctly aligned, the tabs on the top of the lens holders fit into the lens holder insert slots. If the tabs do not align, try flipping the lens holder over.

---

- 2 Once the top of the lens holder is slotted into the frame securely, push the bottom of the lens holder down until it snaps into place. It is normal to encounter some slight resistance during this operation.

---

- 3 Feel and make sure the lens holder is pushed in all the way. To do this, run your finger along the edges of the lens holder and push it down at the locations where the lens holder is not inserted all the way.



**Placing the lens holder in the slots in the frame**



**Pressing down on the lens holder**

## **4.5 Adjusting the display brightness**

The display brightness dictates how much light is emitted by the displays. You can increase the display brightness using the forward rocker button. The display brightness can be decreased by using the backward rocker button. A short press will adjust the display brightness by a bit, while holding the button will increase or decrease it continuously. When the limit of the adjustment value is reached, a vibration will indicate you cannot change it any further. Please note that the brightness level will impact battery life.



**The front button on the rocker increases the display brightness**



**The back button on the rocker decreases the display brightness**

## 4.6 Configuring the display positioning

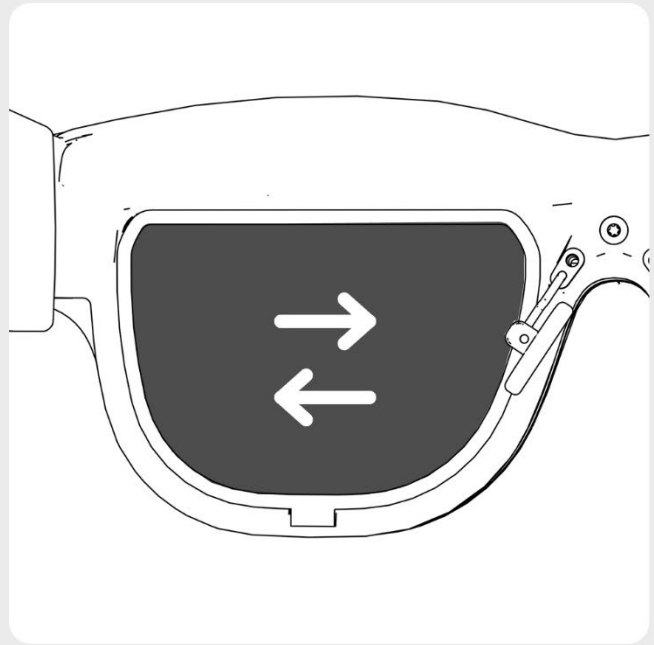
Luna Glass shows a near-live feed from its camera inside of the glass in front of you. Since the position of the camera is different from the eye, you will need to adjust the image's position in order to not see double. For the best experience, it is important that the image displayed by Luna Glass overlaps with the background as much as possible. This adjustment is personal for each user and therefore needs to be finetuned.

To adjust the image, enter configuration mode. Configuration mode is accessed by pressing and holding both sides rocker button for more than five seconds. Luna Glass will vibrate and show an icon of two arrows pointing left and right to confirm that you have entered configuration mode.

The first of these is shifting the displayed image left (forward rocker button) or right (backward rocker button). Confirm the setting and proceed to the next step by pressing the action button.



**Hold both sides of the adjustment rocker for more than 5 seconds to enter setup mode**



**The icon showing the horizontal adjustment will show**

Before beginning the configuration process, take note of the following, concerning the adjustment of the display overlay:

We recommend you adjust the overlay to match the view of your best or dominant eye through the lens. If both eyes are the same, adjust the overlay to match the view of your right eye through the right lens.

For easy alignment, we recommend you find an object with high contrast with the background at a distance of 3-5 meters. Before entering configuration mode make sure you can see the object through the lenses of the glasses and the display at the same time, then during configuration mode try to overlap the two views of the object. Setting the display brightness to a lower value may help when trying to see both objects at the same time.

The display overlay should be re-configured after any adjustment of the nose arms.

It is not possible to perfectly align the display to the background at all distances and there will always be a mismatch, especially at shorter distances. Be aware that your hand-eye coordination will be affected by this.

The configuration process is made up of three separate steps. To confirm settings and move on to the next step, press the action button; Luna Glass will vibrate and show the next icon (the icons can be seen on the opposing page) to confirm you have proceeded to the next step. To go back to a previous step, hold the action button for five seconds.

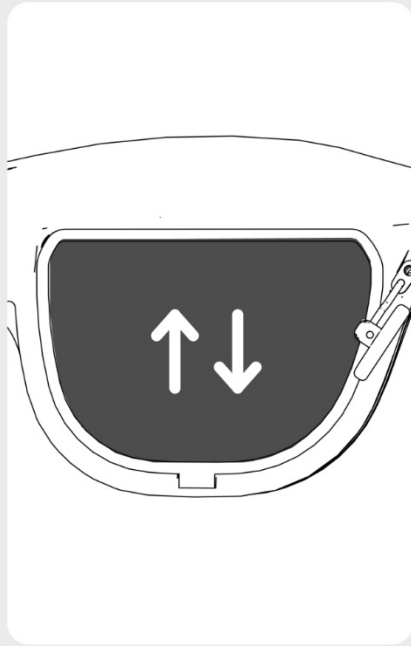
- 1 The first step is shifting the displayed image left (forward rocker button) or right (backward rocker button).

---

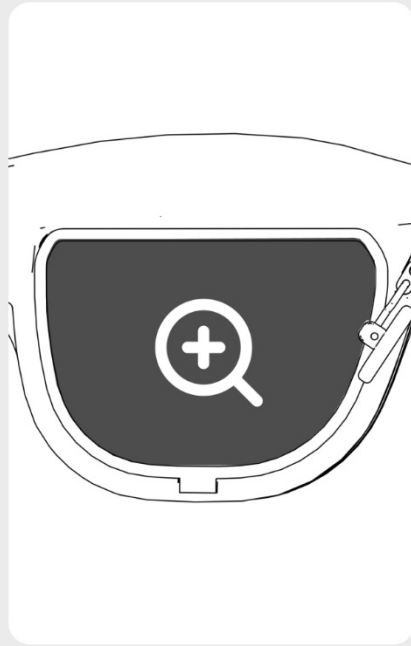
- 2 The second step involves shifting the displayed image up (rocker backward) or down (rocker forward).

---

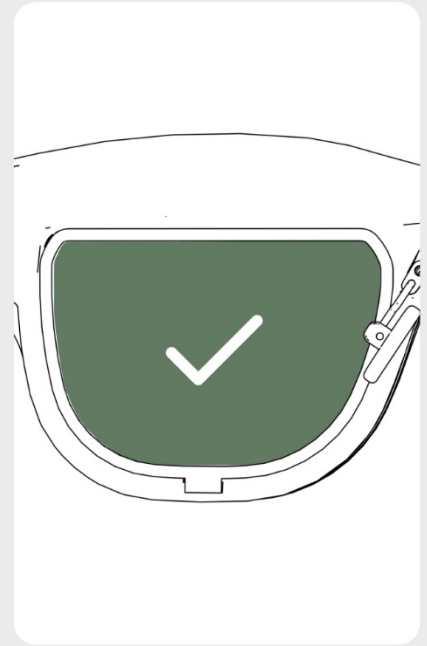
- 3 The third and last step of the setup process is setting the correct size of the displayed image by increasing (forward rocker button) or decreasing the size (backward rocker button). Confirm the setting using the action button to exit configuration mode.



**The icon showing you have entered the vertical adjustment step**



**The icon showing you have entered the zoom adjustment step**



**The icon showing you have finished the setup procedure**

# 05

Using  
Luna Glass

## 5.1 Before use

Before using Luna Glass, make sure the temple tips and the display region are adjusted and if required the lens holders with prescription lenses are fitted. The methods of making these adjustments are described in chapter 4.

Make sure the glasses are configured, the battery switch is set to “active” (towards the back of Luna Glass) and the battery is fully charged. We strongly advise to always bring the carrying case for safe storage, the provided USB-C cable and a suitable and certified power bank and a flashlight with you when using Luna Glass. Please note that some smartphones provide the capability of being used as both a power bank and flashlight.

Now turn on Luna Glass using the power button and set the display brightness.

## 5.2 Lighting conditions

Luna Glass amplifies light in the environment and automatically adapts to the lighting conditions. Please be aware that Luna Glass can only function when there is enough light in the environment to amplify. Examples of environments where Luna Glass functions are:

- Night-time neighborhood streets with street lighting;
- Night-time City streets with street lights;
- Indoor spaces with light sources like lamps or windows.

Examples of environments where the glasses do not function are:

- Night-time country roads without street lights;
- Night-time forests;

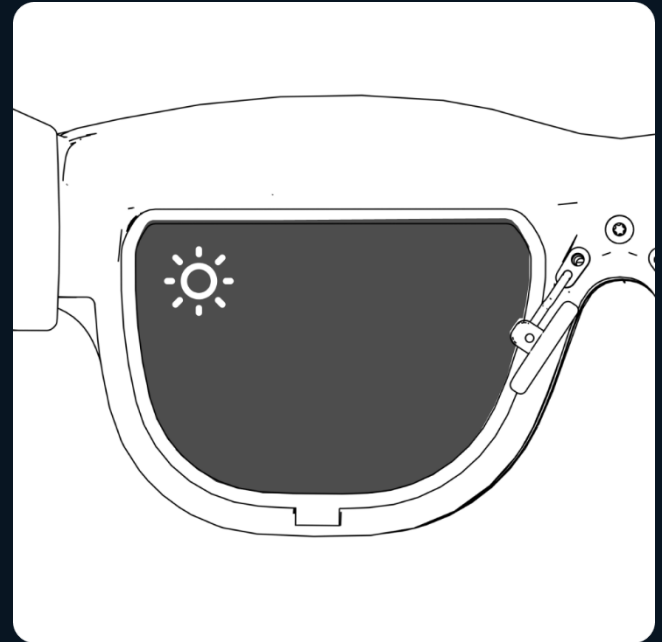
- Indoor spaces without windows or light sources.

In very dark conditions, more light amplification is needed, which also amplifies noise that appears as “snow” on the display. The more snow you see, the darker the environment is. If you notice a lot of snow, use caution because visibility is limited. If the environment becomes even darker, the glasses may no longer function properly or provide an accurate view of your surroundings. Please only move while using Luna Glass when you can adequately perceive your surroundings and when you are certain you can move safely. If there is too little light in order for Luna Glass to function, please use a flashlight to provide some light for the glasses to amplify.

### 5.3 Low-light mode

The low-light mode increases the light amplification properties of Luna Glass at the cost of a reduced refresh rate. It can be used when the environment is too dark for the glasses to function. To engage low-light mode, hold down the action button. Low-light mode is switched off once the action button is released. While low-light mode is active, an icon of a sun will be visible in the top left corner of the display.

Be aware that to increase the light amplification on the glasses, the camera takes more time to gather light thereby significantly slowing down the speed at which the glasses update the view of the environment. This makes low-light mode unsuitable for use while moving. The intended use for this mode is to get an overview of the environment.





**The action button is to confirm settings during the onboarding,  
and to engage low-light mode**

## **5.4 Battery life**

The internal battery of Luna Glass can provide one hour of battery life (depending on the display brightness). When the battery level hits 10%, Luna Glass will emit a low battery warning through a long vibration and a red battery icon. We recommend you immediately connect Luna Glass to a power bank as soon as the battery life warning is provided.

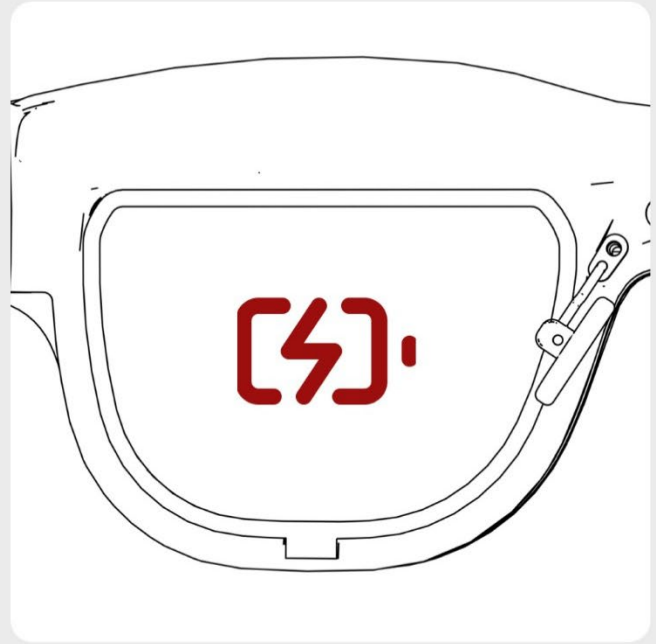
The power bank can be used to extend the usage time of Luna Glass and simultaneously charge the internal battery. Luna Glass will continue to work normally while plugged into the power bank and, when sufficiently charged, Luna Glass can be unplugged, after which it can operate on the internal battery. The current battery level can be requested by pressing the power button.

After a few seconds, Luna Glass will indicate the battery level using the following indications:

<b>Battery level</b>	<b>Indicator</b>
Above 75%	Three strong vibrations followed by one soft vibration
Between 75% and 50%	Two strong vibrations followed by two soft vibrations
Between 50% and 25%	One strong vibration followed by three soft vibrations
Under 25%	One strong, long vibration



**The power button is used to turn the device on or off, and to request battery level**



**A red battery icon will show when the battery is critically low**

## 5.5 Charging

To charge Luna Glass, connect it to a power source using the provided USB cable. When connected, Luna Glass will vibrate and the LED indicator on the inner side of the left temple will blink. Once Luna Glass is fully charged, the LED will stay on and you can unplug Luna Glass. Always use a suitable and certified charger or power bank and the supplied cable when charging Luna Glass. Suitable chargers and power banks that have a 5V DC USB-C output and at least 1A output current. Figure 5 shows an example of the markings of such a charger. Higher maximum currents, e.g. 3A, may also be used. Higher voltages, e.g. 12V, may not be used.

Certified chargers and power banks can be identified by the markings declaring CE or FCC compliance, meaning that

they are safe to use according to respectively European and United States regulatory authorities. Never use a charger or power bank that does not have these markings on it.

Please be aware that some power banks require the user to press a button on the power bank before it starts supplying power to the connected device. Please do not charge Luna Glass inside the protective carrying case to prevent Luna Glass from overheating.



**Inserting the USB-C cable**



**The LED blinks, indicating the device is charging**

## **5.6 Factory reset**

To reset Luna Glass to factory settings, press and hold the rocker forward button and the action button for 15 seconds. After this, the glasses will shut down and the factory reset process will begin.

## **5.7 Using the power switch**

If Luna Glass will not be used again for several days or longer, flip the battery switch to “inactive”. The switch can be found on the inside of the left temple of Luna Glass. This disconnects the battery, which prevents the battery from draining during the time Luna Glass is not in use. It is best to charge the battery first, before flipping the switch and storing Luna Glass, so that it will be ready for use the next time.

# 06

## Troubleshooting

## **6.1 Use environments**

Luna Glass is designed to operate safely between 5 °C to 40 °C with a relative humidity of 20 to 80% (non-condensing) and can be stored in temperatures from -10 °C to 50 °C with a relative humidity of 40 to 70% (non-condensing).

Never leave Luna Glass in direct sunlight or in very humid environments, even when it is turned off or in its carrying case, as excessive heat can warp the plastics and high humidity can damage the electronics. Staying within these ranges helps ensure Luna Glass performs reliably and remains in good condition.

## **6.2 Charging and storage**

Luna Glass is an electronic device that can malfunction or get damaged if it isn't stored and cleaned properly. When

it is not cared for properly, dust, lint and water can get into the electronics and can potentially lead to damage to the electronics.

### **6.3 Safe storage**

When storing your Luna Glass, please keep the following in mind:

- Always store Luna Glass in its protective carrying case when not in use. The glasses should be placed upside down within the case;
- Avoid exposure to extreme heat or direct sunlight, as this may damage Luna Glass;
- If you won't be using Luna Glass for more than a week, set the battery switch to "inactive" (switched towards the front of the glasses) and make sure the USB-C cable is not plugged in.

### **6.4 Cleaning and care**

Luna Glass should not be cleaned in the same way as a regular pair of glasses. Due to the delicate nature of the optical components and electronics, special

care should be taken when cleaning Luna Glass. Before cleaning Luna Glass, disconnect the USB-cable and set the battery switch to "inactive" (switched towards the front of the glasses) and make sure Luna Glass is turned off.

To clean Luna Glass please take the following steps:

Use compressed air (commonly used for cleaning electronics like cameras) to blow off any dust particles from Luna Glass. If you notice liquid is forming on Luna Glass, please stop and let Luna Glass dry before continuing or turning it on.

After dust particles have been removed, use the microfiber cloth provided with Luna Glass to clean Luna Glass. If needed, only a slight bit of moisture should be used to clean Luna Glass. Avoid using liquids or detergents, as this may damage Luna Glass.

Ensure Luna Glass is completely dry before plugging the USB cable in or turning it on.

Other than cleaning, no other maintenance may be done by the user or any third parties. In case of service or maintenance is needed, this must be done by the manufacturer.

### **6.5 Charging Luna Glass**

If Luna Glass is plugged in but not charging, please check if the battery switch is set to “active”. Please note that this is required in order for Luna Glass to charge.

### **6.6 Seeing with Luna Glass**

If you see visual noise (snow) on the display it means there is only a little bit of light that Luna Glass is amplifying. If the view of the

surroundings is inadequate, please turn on a flashlight or use low-light mode.

In some cases, when Luna Glass is turned on it is possible to see dark bars running horizontally through the displayed image (like looking through blinds). To mitigate this issue, widen the nose arms a little bit and straighten the temple tips to provide more space for you to position Luna Glass in front of your eyes. Try moving Luna Glass up and down, forward and back, and at different angles to find the position in which the bars are not visible or their presence is minimized. After finding this position try to maintain it by re-fitting Luna Glass. Please take note of the steps detailed in chapter 4 to guide this process. If the issue persists, try lowering the display brightness, as this may result in the bars disappearing in some cases.

## 6.7 Turning Luna Glass on and off

If Luna Glass is not turning on, please check if the battery switch is set to "active" (switched towards the temple tip) and connect Luna Glass to a power source using the USB-C cable. Please let Luna Glass charge for one hour.

If Luna Glass, at any point during use, becomes unresponsive, try turning it off by holding the power button for more than three seconds. Once Luna Glass is off, press and hold the power button again to turn Luna Glass back on. If the power button is unresponsive, disable the battery by setting the battery switch to "inactive" and wait for ten seconds. You can then set the battery switch to "active" and hold the power button to switch on Luna Glass.

If the image is frozen, you can hold the power button for ten seconds to reset

them. This will only work when the image freeze occurs.

Please be aware that you should under no circumstances open the internals of Luna Glass. If after going through this troubleshooting section an issue persists, please contact the support team at [support@lunaglasses.nl](mailto:support@lunaglasses.nl) or visit <https://www.seewithluna.com/contact>.

**07**

**Additional  
information**

## 7.1 Display specifications

<b>Display type</b>	Organic Light-Emitting Diode (OLED)
<b>Resolution</b>	1920x1080 pixels
<b>Aspect ratio</b>	16:9
<b>Brightness</b>	0-1250 nits (adjustable by the wearer)
<b>Type of combiner used</b>	Waveguide
<b>Field of view</b>	45 degrees diagonal
<b>Interpupillary distance</b>	66mm

## 7.2 Power specifications

<b>Battery type</b>	Lithium polymer
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<b>Voltage</b>	3.7V
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<b>Capacity</b>	500mAh
-----------------	--------

## 7.3 Camera specifications

<b>Resolution</b>	1920x1080 pixels
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<b>Frame rate</b>	5-60 frames per second
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<b>Focus range</b>	1.5m to infinity (fixed)
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<b>Minimum illumination</b>	0.022cd/m <sup>2</sup> (~ 1 lux)
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## 7.4 Physical specifications

<b>Width</b>	150mm
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<b>Depth</b>	180mm
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<b>Height</b>	55mm
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<b>Mass</b>	0
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## 7.5 Customer support and warranty

For questions about or assistance with your Luna Glass device, contact the support team at [support@lunaglasses.nl](mailto:support@lunaglasses.nl) or visit <https://www.seewithluna.com/contact>.

All Luna Glass units sold within the European Union are covered by a two-year legal warranty, as required under EU consumer protection laws. This warranty covers any manufacturing defects or non-conformity that exist at

the time of delivery. Damage caused by misuse, accidents, or unauthorized modifications is not covered. The full terms and conditions may be found at <https://www.seewithluna.com/terms-and-conditions> If you would like to request warranty service, please contact us directly at [support@lunaglasses.nl](mailto:support@lunaglasses.nl) or visit <https://www.seewithluna.com/contact>.

# 08

**Warnings and  
safety**

## **8.1 Warnings**

Read this important safety information before using Luna Glass and follow the instructions and guidance contained within it. Failure to do so may result in damage to Luna Glass or surrounding property, or personal injury. The term “device” as used in this document refers to Luna Glass and its accessories. This chapter holds the complete list of warnings on safety and residual risks at the time of writing. Check <https://www.seewithluna.com/safety> for the latest up-to-date version of this list.

### **8.2 Key warnings**

**Do not attempt to fold the hinges.**

**Do not use while driving.**

**Luna Glass is an assistive device provided to early adopters. It is not**

**a medical device, does not diagnose, treat, cure, or prevent any disease or condition, and is not intended to replace natural vision, corrective lenses, or clinical care.**

**Some risks, failure modes, and long-term effects may not yet be known. By using this device, you acknowledge that unexpected behavior or malfunction may occur.**

**Please handle Luna Glass with care. As a first-generation early adopter device, it contains delicate optics and electronic components that require careful handling to prevent scratches or damage.**

**Please take some time to get comfortable using Luna Glass in a safe and familiar setting before relying on it in public or unknown environments.**

### 8.3 Intended use

Luna Glass is intended to be used to support people who want to improve performing various activities of daily living (excluding driving, operating machinery or other visually demanding activities for which there is an inherent risk of injury or death). Luna Glass is not recommended for people that have a sensitivity to light.

When used as intended, Luna Glass supports users by providing real-time enhancement of low-light scenes. The purpose of Luna Glass is to increase low-light vision by projecting a camera image into the wearer's eye. This camera image is an adjusted live image of that which the wearer is looking at. This presents the wearer with a version of their environment that is not only brighter, but also offers more color and contrast.

The expected benefits include:

- Improved visibility of objects and surroundings in dim or nighttime conditions;
- Enhanced contrast perception, making features, edges and obstacles easier to detect.

There are no limits to the use frequency or duration of use of Luna Glass, although we do recommend that users do not use Luna Glass for longer than two hours without a break.

Do not use Luna Glass while fatigued, under the influence of alcohol, drugs or medication, or in any other condition that may impair your ability to correctly perceive and interpret visual information. Use under such conditions may increase the risk of falls, collisions or other injury.

## 8.4 Activities

Luna Glass may be used both indoors and outdoors, unless otherwise specified in the rest of this chapter, but never in situations that become dangerous if Luna Glass malfunctions. For example, Luna Glass may not be used by the driver of a vehicle or the operator of machinery.

Here are some specific instructions for using Luna Glass in activities:

Luna Glass is not a substitute for the use of a white cane, symbol cane or guide dog. Luna Glass can be used hands-free and we recommend you use it in addition to other assistive tools and services;

Never use Luna Glass while operating any vehicle or engaging in dangerous tasks, such as those that demand physical (hand-eye) coordination or

concentration. This includes, but is not limited to, activities such as driving, running, cycling, participating in sports, preparing food, cutting with sharp tools like knives or scissors, or handling power equipment;

Do not use Luna Glass in areas where environmental awareness is crucial, such as near high-traffic zones or active construction sites;

Luna Glass limits peripheral vision outside of its display region. To stay safe, stay conscious of your environment and look around by turning your head rather than moving only your eyes.

Be particularly cautious when walking, climbing stairs or stepping over curbs when using Luna Glass, because your depth perception can be affected by Luna Glass and it can be difficult to

accurately judge the position of objects;

If you notice a lot of visual noise (which appears as snow on the display), use caution, because visibility is limited. If the environment becomes even darker, the glasses may no longer function properly or provide an accurate view of your surroundings. Only move while using Luna Glass when you can adequately perceive your surroundings and when you are certain you can move safely. If there is too little light in order for the glasses to function, use a flashlight to provide some light for the glasses to amplify;

Do not move while using low-light mode;

Do not move during configuration;

It is not possible to perfectly align the display to the background at all distances and there will always be a

mismatch, especially at shorter distances. Be aware that your hand-eye coordination will be affected by this;

Luna Glass has been designed to withstand light rain. Despite this, it is still not recommended for use in rain or wet conditions, as moisture exposure may affect performance or safety;

Luna Glass is not built for use in conditions of heavy rain or snow; exposure to extreme rain or snow can damage Luna Glass, potentially causing malfunctions that could lead to injury, depending on the activity you're engaged in;

Do not submerge Luna Glass or use it underwater;

Luna Glass is designed and tested to meet international electromagnetic compatibility standards. While it is unlikely to interfere with other devices, performance may be affected if it is

used near equipment that does not meet recognized EMC standards. Increasing the distance between Luna Glass and other electronic devices can help reduce any potential interference.

## **8.5 Battery safety**

Luna Glass contains a sealed, rechargeable lithium-ion battery that is permanently enclosed and not accessible or replaceable by the user. It has been tested for electrical and thermal safety in accordance with international standards. To ensure safe use and ensure device performance, please observe the following warnings and precautions:

Do not expose Luna Glass to temperatures over 50°C or place, store or charge Luna Glass in or near a heat source, in a high-temperature location or in strong direct sunlight. Doing so could cause Luna Glass or its battery to

overheat, which could cause fire or smoking, which could result in damage to Luna Glass or surrounding property, or personal injury.

Do not open Luna Glass and pierce, open or attempt to service the battery;

If the battery leaks and you come into contact with the leaked fluids, rinse thoroughly with water and seek medical attention immediately;

Discontinue use immediately if Luna Glass becomes excessively hot, emits smoke or odor, or shows signs of swelling or leakage. Store Luna Glass in a fire-safe environment and contact the customer support team at [support@lunaglasses.nl](mailto:support@lunaglasses.nl), or visit <https://seewithluna.com/contact>.

If Luna Glass has been exposed to extreme heat or cold, allow it to return to room temperature before use or charging;

Do not pierce Luna Glass, as this might compromise the battery. If Luna Glass has been pierced, this may cause fire, either directly or later. Ensure that Luna Glass is in a fire-safe environment, contact the customer support team at [support@lunaglasses.nl](mailto:support@lunaglasses.nl), or visit <https://www.seewithluna.com/contact>.

## **8.6 Electrical safety**

Luna Glass contains low-voltage electronic components and embedded circuitry designed in accordance with international safety standards. While Luna Glass is safe for everyday use under normal operating conditions, please observe the following electrical safety precautions to prevent damage, malfunction, or injury.

- Always use the accompanying cable to charge Luna Glass.

- Only use certified chargers to charge Luna Glass.
- Do not immerse Luna Glass in water or expose it to liquids or rain.
- Check Luna Glass and charging components before each use. Do not use Luna Glass if any part of it is broken, damaged or loose.
- Do not attempt to take apart, service or modify Luna Glass.
- Do not plug in or operate Luna Glass with wet hands.
- Ensure that connectors and ports are free of dust or debris before plugging the cable into Luna Glass.
- If Luna Glass exhibits signs of electrical malfunction (e.g., flickering display, unresponsive controls, abnormal heat), discontinue use and contact support.

## **8.7 Personal discomfort**

Luna Glass is designed for prolonged contact with the skin and uses biocompatible materials (POM, TPU and silicone) to minimize the risk of skin reactions. Luna Glass also contains embedded electronics and a rechargeable battery, which may generate mild surface warmth during extended use or charging.

## **8.8 Skin irritation**

Discontinue use if you experience redness, swelling, itching or a rash at contact points. Wait until symptoms resolve before resuming use. If irritation persists, consult a healthcare professional.

Do not wear Luna Glass if it is not properly adjusted or if it applies excessive pressure to your head. Excessive pressure may cause skin

indentation, discomfort or pressure marks.

Ensure that contact surfaces remain clean and dry. Moisture or dirt buildup may increase the risk of irritation.

User-contacting components of Luna Glass are made from materials selected for safe skin contact and assessed in accordance with the applicable product safety requirements and technical documentation.

## **8.9 Heat**

During normal use, Luna Glass may become warm. This is expected and remains within safe limits.

If Luna Glass becomes unusually hot, power it off and discontinue use. Overheating may indicate a malfunction. Before further use, contact the customer support team at

support@lunaglasses.nl, or visit <https://www.seewithluna.com/contact>.

Luna Glass automatically stops charging when the battery reaches an internal temperature of 65°C.

Luna Glass will automatically shut off when the battery reaches an internal temperature of 150°C.

Luna Glass will automatically shut off when the microcontroller reaches an internal temperature of 65°C.

### **8.10 Place out of reach of children and pets**

The charging cable and carrying strap may pose a strangulation hazard. Do not wrap around the neck. Keep out of reach of children.

Do not allow children or pets to play with Luna Glass or its accessories. Allowing children or pets to play with or have access to Luna Glass or its

accessories could result in damage to Luna Glass and personal injury.

### **8.11 Residual risks and side effects**

Using Luna Glass can come with some minor side effects. These are listed below.

Eye strain and fatigue due to the large contrast between the bright digital overlay and the dark environment around it.

Motion sickness due to latency between the head movement and the images being shown.

Depth perception and spatial awareness errors due to only using a single camera.

Nausea due to parallax caused by a mismatch between the camera's position and the eye's position.

Parallax mismatch could cause dangers during navigation. Please set the parallax to overlap with the environment as closely as possible. This can be done in the configuration mode.

Even after rigorous testing and risk mitigation, some residual risk is still inherent in using Luna Glass. These residual risks are listed below.

### **8.12 The camera may stop working**

This will result in no image being displayed. This will result in Luna Glass no longer aiding in navigation and obstacle detection.

The camera image may freeze or turn green.

This will result in either a non-updating displayed image or the displayed image being full green. This will result in Luna Glass no longer aiding in the navigation and obstacle detection. You can hold

the power button for ten seconds in the event of an image freeze.

### **8.13 Glasses can turn off unexpectedly**

Unexpected failures in the electronics or software of Luna Glass may cause Luna Glass to turn off automatically. This will result in Luna Glass no longer aiding in the navigation and obstacle detection.

### **8.14 Hinge breaking**

Repeated or high strain on the hinges, mostly due to overextension of the temples, may cause inner parts to get loose. This will result in the user no longer being able to secure Luna Glass on their head. Additionally, this may result in damage to the electronics when continuing to handle Luna Glass.

### **8.15 Temple tips snapping loose during adjustment**

Temple tips may break off or come loose when they are not properly held during adjustment. This will result in the user no longer being able to secure Luna Glass on their head.

Should any of these risks occur, please refer to chapter 6 (troubleshooting). If problems persist, reach out to customer support via [support@lunaglasses.nl](mailto:support@lunaglasses.nl) or <https://www.seewithluna.com/contact>.

9

**Regulatory  
compliance**

## **9.1 Conformity statement**

The object of this declaration is Luna Glass, as described in this manual. The product is intended for use by adult consumers in indoor and outdoor environments under normal or low-light conditions and provides a see-through display with enhanced brightness overlay.

The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

Low Voltage Directive

(2014/35/EU); Electromagnetic Compatibility Directive

(2014/30/EU); Restriction of Hazardous Substances Directive (2011/65/EU), including applicable amendments.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation

## **9.2 Harmonized standards applied**

The harmonized standards that were applied during the development of this product are stated below. Listed are the standards, their titles and to what aspect of Luna Glass they apply.

**EMC Directive:**

- EN 55032:2015/A11:2020 — Emissions
- EN 55035:2017/A11:2020 — Immunity

**Safety:**

- IEC 62368-1:2018 — Audio/video and ICT equipment safety
- CSA/UL 62368-1:2019 – Optional safety testing for the USA

**Battery:**

- EN 62133-2:2017 — Safety requirements for portable batteries
- UN38.3 – Battery transportation safety

**Materials:**

- EN IEC 63000:2018 — RoHS technical documentation

### **9.3 Glossary of icons used**

Both Luna Glass and its packaging use harmonized and non-harmonized icons. The table below provides an overview of these icons and describes what they are used for.

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Icon	Description
	<p><i>The Conformité Européenne (European Conformity) marking, used to indicate a product meets European Economic Area (EEA) standards</i></p>
	<p><i>Indicates that the operating instructions should be considered when operating Luna Glass.</i></p>
 	<p><i>Mandatory EU-wide labeling symbol for the separate disposal of electrical appliances.</i></p>
	<p><i>Indicates the package should not be opened when damaged.</i></p>

#### **9.4 Manufacturer information**

Luna (Angstone B.V.)

Willemsplein 4

6811KA Arnhem

The Netherlands

Email: [support@lunaglasses.nl](mailto:support@lunaglasses.nl)

Website: <https://www.seewithluna.com>

#### **9.5 Declaration of Conformity**

An EU Declaration of Conformity has been issued for this product in accordance with the applicable EU legislation, including the directives mentioned in section 9.2.

#### **9.6 Post-market surveillance and contact**

Luna monitors product feedback, complaints and safety-related reports to help identify potential product issues and improve future versions of Luna

Glass. For questions, product feedback or customer support, please contact us at [support@lunaglasses.nl](mailto:support@lunaglasses.nl) or visit <https://www.seewithluna.com/contact>.

#### **9.7 Complaint and incident reporting**

Report any deficiencies in the quality, durability, safety or effectiveness of Luna Glass to customer support using the contact information provided in paragraph 9.4.

Please report any safety incident related to Luna Glass to customer support and the regulatory authority regulating electronic devices in your country. A safety incident means an event where Luna Glass directly or indirectly led, might have led or might lead to a person's death, injury or temporary or permanent deterioration in health.

## **9.8 Environmental and disposal compliance**

This marking on the product, accessories or literature indicates that the products should not be disposed of with other household waste.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchases this product or their local government office, for details on where and how they can take these items for environmentally safe recycling.

This product and all its accessories are RoHS compliant.

## **9.9 Warranty and legal guaranty**

Luna Glass is covered by a one-year legal guarantee unless local regulations dictate otherwise. This guarantee covers any non-conformities or manufacturing defects that were present at the time of delivery. The guarantee does not apply to damage resulting for misuse, accident, unauthorized modifications or normal wear and tear. Please find the terms of the warranty at <https://www.seewithluna.com/terms-and-conditions>

For warranty claims, questions or service requests, contact the customer support team at [support@lunaglasses.nl](mailto:support@lunaglasses.nl). Always retain the original packaging and proof of purchase.

## 9.10 Terms and conditions

You can view the terms and conditions associated with Luna Glass at all times at <https://www.seewithluna.com/terms-and-conditions>.

## 9.11 U.S. Disclaimer

The Product is offered in the United States as a **consumer electronic assistive device** and **not as a medical device**.

The Product:

- Has **not been cleared or approved** by the U.S. Food and Drug Administration (FDA);
- Is **not intended to diagnose, treat, cure, or prevent any disease**;

- Is intended solely to **enhance low-light visual perception** for general assistive use.

Luna does not make any medical claim or representation.



*Luna.*

