Doculus Lumus® User Manual

With Doculus Lumus® it only takes 30 seconds to examine a document and to determine whether a falsification is at hand. No matter if you are a border guard, security printer, customs official or document trainer. Doculus Lumus® is your reliable, robust tool to examine passports, ID cards, bank notes or any other official document.

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See the Truth Inside …" in 30 seconds.

Doculus Lumus® is designed in cooperation with document specialists from Austria and many other document experts from all over the world.

Border guard officers and all people who have to check official documents use the mobile document checking device Doculus Lumus® to prove the documents authenticity.

Experienced document specialists know what they need to look for. Often the place where fake documents are analysed in more detail is an office far away from the border posts. So fake documents must be identified by the frontlines at the border, on the motorway, on the train or at the airport. Usually only 30 seconds are available for the examination of a document and to decide whether a fake is present or not. Frontline counts!

Your new Doculus Lumus®

Congratulations for purchasing your new mobile document checking device Doculus Lumus® which is available in several unique versions and colours.

When and where to use your Doculus Lumus®

You are the expert! Doculus Lumus® is a high-quality mobile document checking device with which it is possible to identify falsifications in less than 30 seconds!

The device helps you to check travel documents, driving licenses, banknotes, signatures and similar items for authenticity, whether you are in a train, a car, a plane or even on the countryside. Different light modes reveal the security features very well. Doculus Lumus® is available in different versions which support best all kind of document experts around the world.

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Package Contents

Doculus Lumus® Set

- Doculus Lumus® mobile document checking device + 2 batteries
- Lens cleaning cloth
- Hand strap
- Quickguide
- Referral card
- USB-C charging cable (only with option LI)

Included Accessories

- Smartphone Clip
- Visa Sticker Specimen
- Reticle Card (only with Expert Edition (options FUV RFID AS IR UVB/C LI))

Optional Accessories (see the respective user manuals)

- Doculus Lumus® Bag
- Snap&Go Adapter
- Snap&Cam Set
- Eneloop rechargeable batteries incl. charger

Doculus Lumus® Features

Standard Features

- 15x or 22x magnification with a high-quality glass lens system
- Field of view: 15x Ø 20 mm or 22x Ø 15 mm
- Robust housing: drop-proof from a hight 1.5 m
- 4 LEDs for white incident light
- 8 LEDs for rotating oblique light (right or left)
- 4 UV-LEDs (365 nm) for extra strong UV light
- Torchlight mode
- Left/right hand mode
- Steady light mode for documentation purpose (30 seconds or 5 minutes)
- Auto power-off functionality
- Constant LED brightness due to intelligent energy management

Optional Features

- FUV Front UV Torch
- RFID RFID Quick Check
- AS IR Laser (980 nm) for Anti-Stokes
- IR IR LED (870 nm)
- UVB/C 2 LEDs for 313 nm and 2 LEDs for 254 nm features
- LI Lithium-Ion accumulator (rechargeable via USB-C)

Frontline Edition

Expert Edition

For your device's specifications, refer to the serial label on the Doculus Lumus® box or under the battery cover.

About this User Manual

Notation

FUV: Sections of this user manual that refer to optional features are always marked with the respective feature name and an orange triangle.

WARNING: Safety-related information

Note: Important additional information for correct use

Advice: Useful hints, as well as recommendations from the developers

Video Tutorial: Link to a short, explanatory YouTube video for more instructions

Buttons

This user manual refers to the 4 buttons on the Doculus Lumus device (2 on each side). To change the button assignment, see the section "Right/Left Hand Mode".

The following button names refer to the function of the Right Hand Mode.

1. Incident light button (operation with your thumb)
2. UV light button (operation with your thumb)
3. Oblique light button (operation with your index finger)
4. RFID button (operation with your middle finger)

1. Safety Instructions

The following safety and danger information is not only for protecting the device, but also your health. You will find specific information in the following chapters of this manual. Doculus Lumus GmbH shall not be held liable for any manual damages. Please read all statements carefully!

Explanation

- DANGER: Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
- WARNING: Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
- CAUTION: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
- NOTICE: Indicates information considered important but not hazard related.

General Hazards

WARNING: Endangerment of children and other persons! Improper usage can lead to injuries and damage of property.

This product and its package are no toy and may not be used by children. Children cannot assess the hazards that can result from operating electrical appliances and/or packaging material. Always take care to keep the product and the package out of the reach of children. Batteries and accumulators may not be in children's hands. Leaked or damaged batteries or accumulators can cause cauterization when touching them.

Optical, Electrical and Mechanical Hazards

Endangerment by optical radiation and UV radiation (explanation of risk group marking and explanation corresponding to norm IEC 62471:2006 and supplementary sheet 1 IEC 62471-2:2009) as well as laser radiation (explanation corresponding to norm IEC 60825-1:2014)

WARNING: Improper handling with LED light and UV radiation can damage your skin and your eyes!

Do not directly look into the LED light. Continuous strong white light can damage your eyes. Direct UV radiation irritates and damages the eyes (danger of blindness) and the skin (danger of burning and/or induction of skin cancer).

WARNING: UV radiation from this product. Exposition can lead to irritation of eyes or skin. Aim light source only to documents or use suitable shielding!

WARNING: Possibly dangerous optical radiation. Do not look into the lamp for a longer period during operation. Can be dangerous for the eyes!

Endangerment can occur though ultraviolet radiation by improper usage of the device, as well as an endangerment of the retina through blue light. For this device, the risk group 2 has been determined, if somebody looks directly from a very short distance into the light source from the wrong side (device held upside down and directly in front of the eyes). Always avoid longer glimpses into the light sources as well as longer exposures of the skin without protection. At correct handling, the device is photobiologically safe.
UV radiation is not visible for the human eye, even at full power the UV LEDs only shimmer slightly blue violet. A function test and the examination of the light intensity can be done easily by aiming the light at white standard paper (no security paper) or white cloths. The optical lighteners are stimulated strongly by the UV light.

WARNING: Endangerment of objects and persons! Improper usage can lead to a burning glass effect.

Devices that are not in use have to be covered with a protective cover or have to be kept in a light tight container to prevent the inflammation of objects by focused sunlight.

WARNING: Endangerment by magnetic field!

This device generates a weak magnetic HF field (13.56 MHz) during operation. Please keep some distance to other electronic and especially medical devices. Special caution is necessary at heart pacemakers and implanted defibrillators as well as with hearing aids.

WARNING: Exhaustion of the eyes!

Certain persons may have a feeling of exhaustion or discomfort after longer usage of magnification systems. Please observe the following remarks to prevent your eyes to become exhausted:

- Independent from your feeling you should take a break of 10 to 15 minutes each hour.
- If you feel some discomfort while using the device or after a longer time, interrupt working with the device and consult a doctor.

WARNING: Invisible laser radiation (980 nm) – laser class 3R. Avoid direct irradiation of the eyes. Do not expose your eyes or skin to the laser beam!

Optionally (AS Option), the device has a laser with invisible radiation in the near infrared range (wavelength 980 nm). This laser radiation is dangerous for eyes and skin! Be careful not to look into the aperture on the bottom of the unit. This device may only be used by appropriately trained personnel. Use the device only on flat documents and ID cards, the opening must be completely covered by the document being examined. When the laser is active (red LED on the top of the device lights up permanently), always hold the device horizontally with the opening facing downwards. Never point the bottom of the device at people. The buttons to activate the laser must not be clamped under any circumstances.

Whether you have a device with or without the Anti-Stokes laser in front of you is indicated by the printing on the side of the housing (laser warning symbol) and by the note "AS" on the label in the battery cover and on the packaging.

CAUTION: Risk of damage by misuse! Improper usage of the device can lead to damages.

- The device is not water resistant! Do not immerse the device into water and protect it from water (rain or see water).
- Do not reach into the device while operating it and do not insert anything into the case.
- Do not open the device. Improper intrusion can impair the functionality of the device.
- Use the device only for document checking purposes. Other types of usage can lead to damage of the device.
- Do not expose the device to extreme heat or cold.
- Do not use cleaning sprays, aggressive, alcohol-containing or other inflammable solutions.
- Please remove the batteries when the unit is not in use for a longer period of time to avoid leakage.

CAUTION: Danger of explosion at improper exchange of the batteries!

Pay attention on the correct polarity (plus pole + / minus pole -) of batteries or accumulators. Remove batteries and accumulators if the device is not used for a longer time. Always replace the pair of batteries at a time. Do not short circuit batteries and accumulators.

Environmental Conditions

The device may only be operated within the allowed scope of environmental conditions:

- Surrounding temperature: -20 to +55 °C (approx. 0 to 130 F)
- Humidity: ≤ 80 % relative humidity, non-condensing

NOTICE: Disposal of used batteries as directed!

Do not dispose batteries and accumulators through regular household waste, they should be disposed to collecting containers which are available at every battery vendor. If there is no collecting container near your location, you can also dispose batteries and accumulators at the hazardous waste collection centre of your municipality or send them to us.

Disposal

Within the EU the device and its accessories have to be collected and disposed separately. Devices that are marked with the crossed-out bin on wheels may not be disposed with normal household waste. Please contact your dealer or dispose the products at the electronic waste collection centre of your municipality.

Declaration of Conformity

CE Declaration

Herewith the manufacturer of the device declares that this device conforms to the requirements and all other policies. A copy of the entire declaration can be provided on demand.

RoHS Conformity

The product conforms to the requirements of the RoHS directive on the reduction of hazardous substances.

FCC Notice

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

THIS DEVICE COMPLIES WITH PART 15 OF 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
WARNING: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Industry Canada / Industrie Canada

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

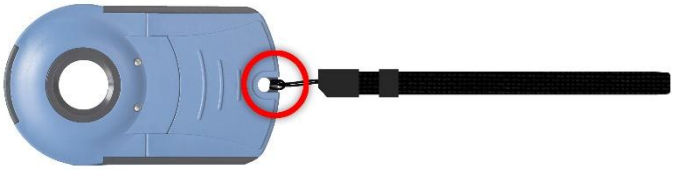
2. Initial Start-Up

Please read the following information to operate Doculus Lumus® for the first time. For your safety, please read the above safety instructions on the usage of the device.

Attaching the Hand Strap

The safety hand strap features a connector that comes apart when pulled with force. If someone tries to grab the Doculus Lumus® aggressively, the connector releases and protects the user.

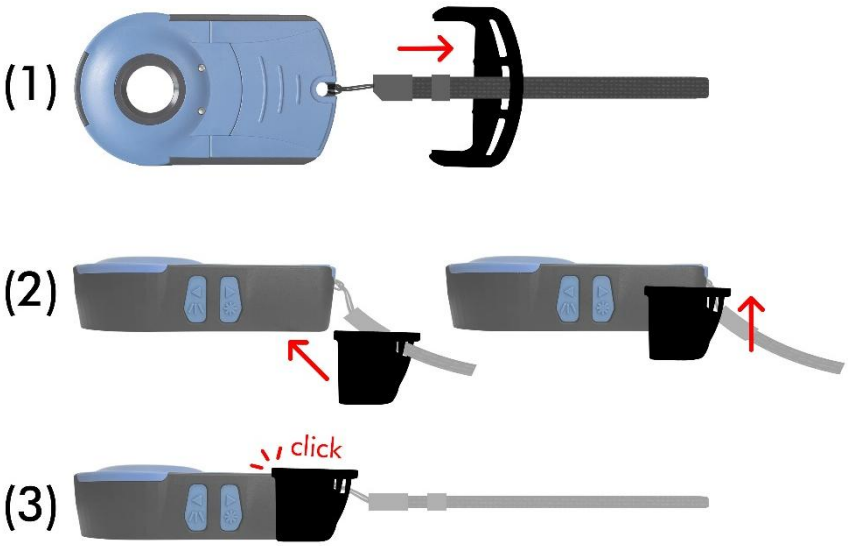
(1) Take the hand strap out of the packaging box and attach it at the location in the rear part of the device by threading the thin end through the eyelet and then threading the whole strap through the loop.



Attaching the Smartphone Clip

The Doculus Lumus® Smartphone Clip ensures easy documentation with any smartphone. Simply place your phone on the clip and capture images of ID-documents through the lens.

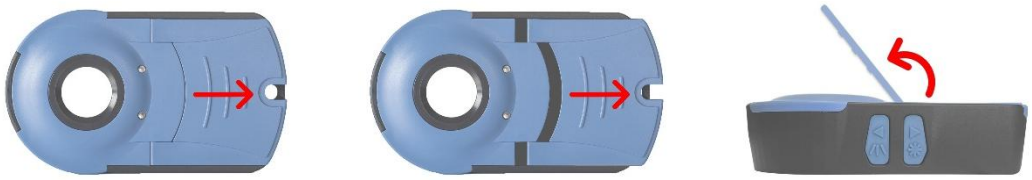
(2) Thread the hand strap through the large centre opening of the smartphone clip.
(3) Place the smartphone clip underneath the device and push it firmly upward into position.
(4) Once the clip is correctly aligned, it will click into place.



Video Tutorial

Accessing the Battery Compartment and Lithium-Ion Battery

(1) Slide the battery cover outside
(2) Tilt the battery cover upwards



Option LI: Additional Energy Source: Lithium-Ion Battery)

If your device includes the LI option, continue with this step. If not, skip ahead to the next section, "Insert Batteries."

The Doculus Lumus® with the LI option operates using a built-in pre-charged lithium-ion battery and can alternatively be powered by two AAA/LR03 batteries (1.5V each). Use the lithium-ion battery until it is fully discharged. Afterwards, you may switch to standard AAA batteries as described in the following section, until the lithium-ion battery can be recharged.

As noted on the LI information banderol, before first use, open the battery compartment and connect the white plug to the mainboard. Then, fully charge the lithium-ion battery.

To charge the lithium-ion battery, use the included USB-C cable and connect it to the appropriate port. While charging, a red LED inside the device will illuminate. The LED turns off once the battery is fully charged.

For more information on power supply and charging behaviour, please refer to the chapter "Energy Management."

Insert Batteries

WARNING! Make sure that the batteries are inserted correctly in the device battery holder!

The supplied batteries must be properly inserted in the device. Please always insert the batteries with the positive and negative pole in the correct direction. Inserting batteries, the wrong way is dangerous and is not covered by the warranty.
The device operates with two AAA/LR03 batteries with 1.5 volts each. Always use alkaline batteries! The usage of accumulators or rechargeable batteries is possible but could result in incorrect indication of low batteries.

(1) Access the battery compartment as stated above
(2) Insert the two AAA batteries that came with the device

Always pay attention to the correct polarity of the batteries corresponding to the markings within the device. The plus poles of the battery (marked with a "+") should match the "+" marking near the battery clips.

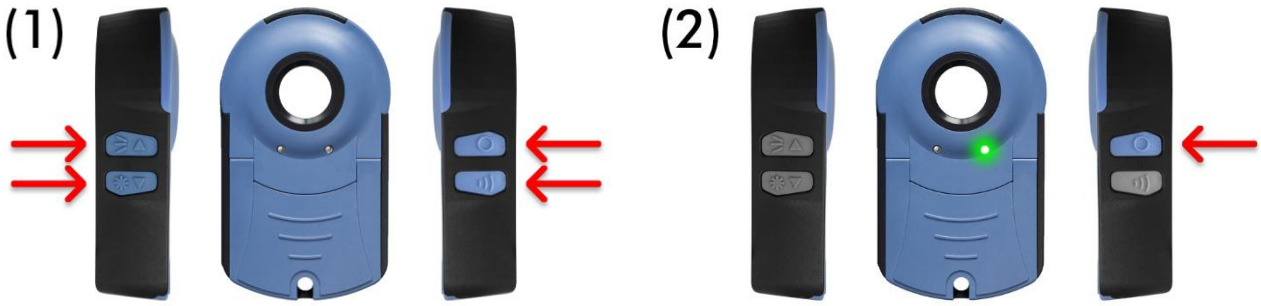
Do not dispose the old batteries through regular household waste and check your country regulations if batteries must be recycled or dropped off at a designated facility.

Right/Left Hand Mode

By default, the assignment of the buttons is prepared for right-handedness. In most cases left-handed persons prefer operating incident light, UV light and torchlight with the thumb. To enable this, please conduct the following steps:

Video Tutorial

(1) Shortly press all 4 buttons simultaneously to activate the test and setup mode
(2) Then keep the oblique light button held for a few seconds until the light test has finished. The green LED will be kept on shortly to indicate that the setting has been saved.



Now you can use the device with the left hand and can operate the incident light with the former oblique light button. All other buttons are mirrored similarly.

Note: To reset the device to right-handed mode, please conduct the steps again but now keep the original incident light button pressed until the end of the test.

3. Button Functions and Areas of Operation

Always place the device directly onto the document to be checked and move your eye very close to the lens to obtain an optimal and distortion-free image.

Advice: You can use the included Visa Sticker Specimen to test all features of the Doculus Lumus® device. The location of each feature on the specimen will be indicated in this user manual.

Incident Light Mode

White incident light from 4 powerful LEDs (bright-field illumination) allows you to inspect even the finest printed details, such as microtext or nano text.

Video Tutorial

(1) Press the incident light button to activate the incident light mode

Visa Sticker Specimen

Austrian Passport

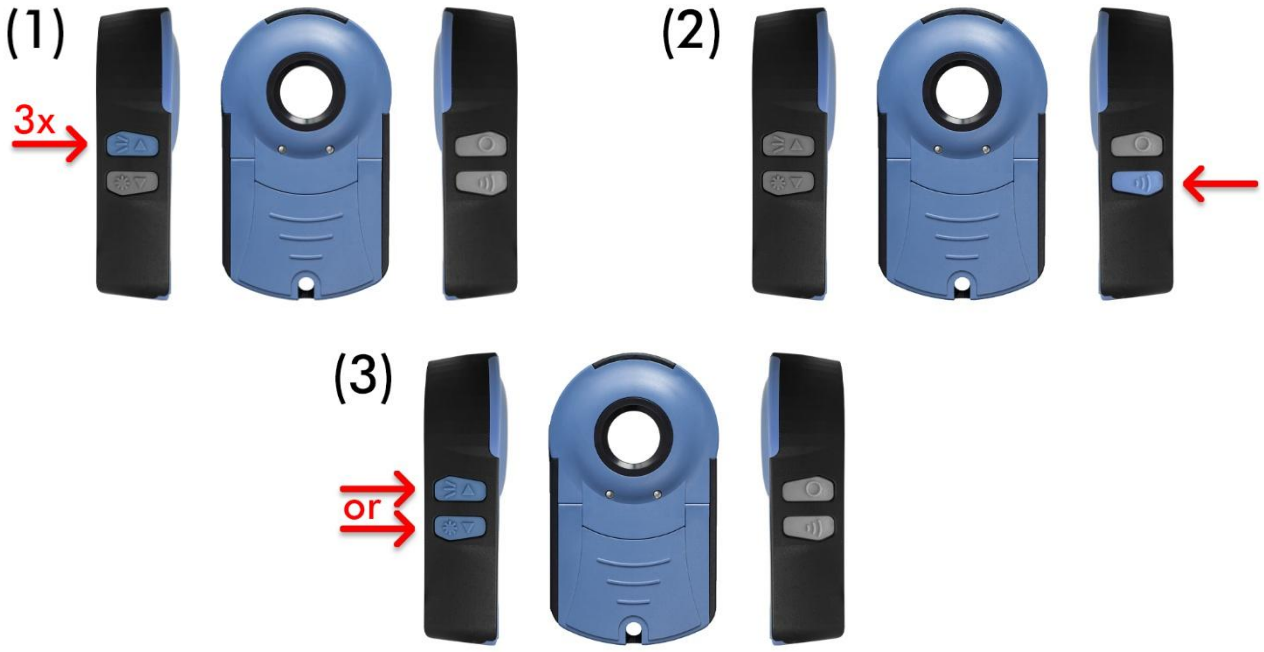
Rotating Incident Light

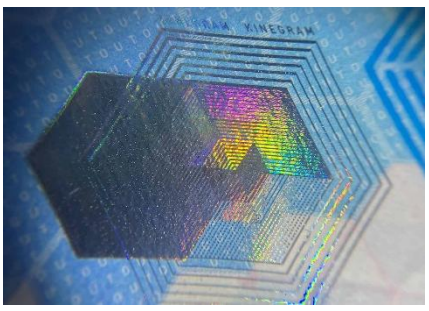
The rotating incident light allows you to identify identigrams or large-area holograms. With the aid of 4 white LEDs that successively shine on the document in 90° steps, light shadows are generated (dark field illumination). Colour changing elements look different depending on the angle of light incidence.

Video Tutorial

(1) Press the incident light button **3x** to activate the steady light mode
(2) Press the RFID button **1x**
(3) Press the right or left arrow button **1x** to move the light one position further clockwise or counterclockwise.
(4) Keep the corresponding arrow button pressed to move the light further automatically.

By pressing the button with the curved lines again, you can switch back to full incident light mode.





Visa Sticker Specimen

German ID Card

UV Light Mode

The UV light mode with its 4 strong UV LEDs (365 nm) allows an optimal depiction of UV security inks through the lens.

Video Tutorial

(1) Press the UV light button to activate the UV light mode

Visa Sticker Specimen

Austrian Car Registration

Advice: Also use the UV light mode from the side at a short distance, as shown in the image below.

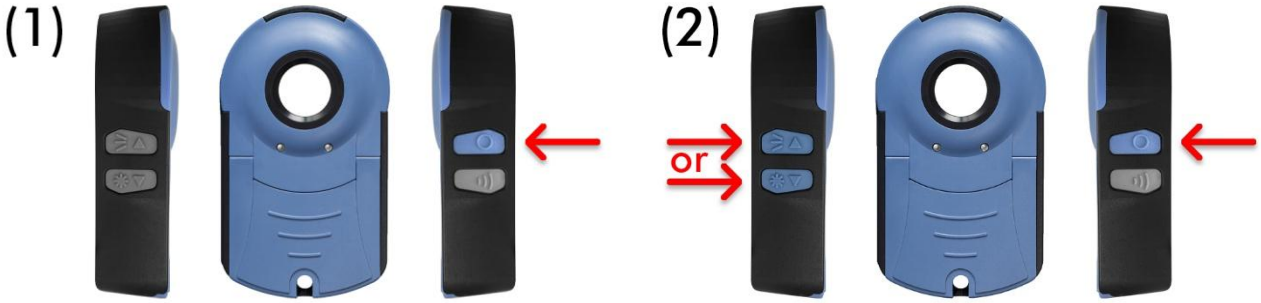
Austrian passport (issued until 2024)

Oblique Light Mode and Rotating Oblique Light

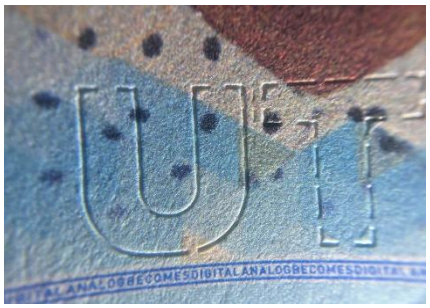
The oblique light mode allows you to identify intaglios, embossing and colour changing holograms. With the aid of 8 LEDs that successively shine on the document in 45° steps, shadows are created at heightened or deepened features (dark field illumination). Colour changing elements look different depending on the angle of light incidence.

Video Tutorial

(1) Press the oblique light button with your forefinger.
(2) Additionally press the right or left arrow button **1x** to move the light one position further clockwise or counterclockwise.
(3) Keep the corresponding arrow button pressed to move the light further automatically



Visa Sticker Specimen



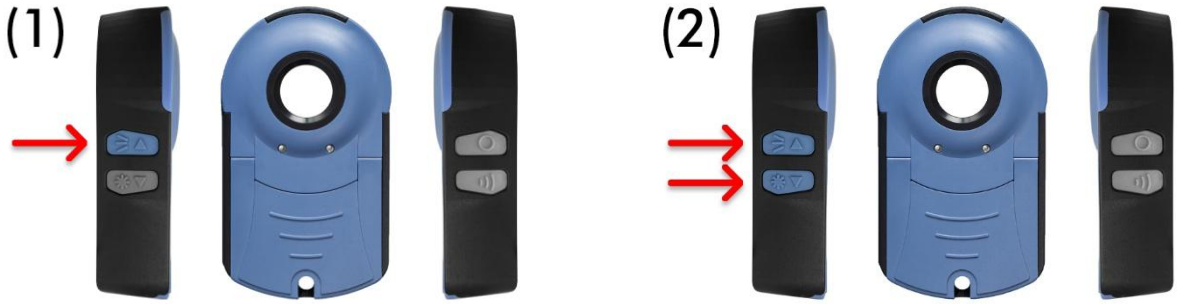
50€ banknote

Torchlight Mode

In certain situations—such as bright sunlight—the standard incident light mode may appear too dim. A higher light intensity is also required to effectively reveal watermarks. The torchlight mode provides optimal illumination even in very bright environments.

Video Tutorial

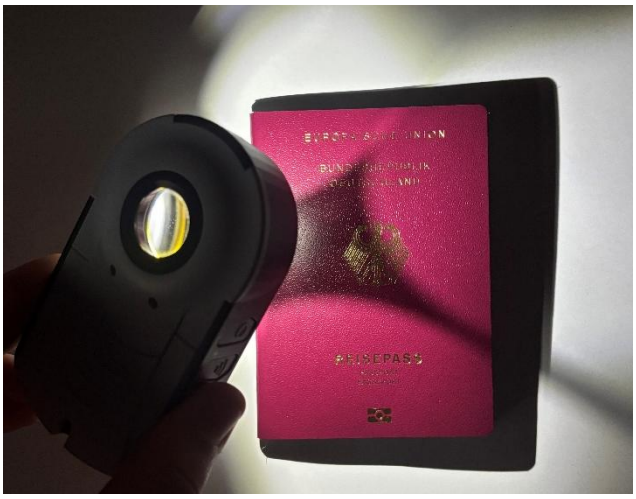
(1) Press the incident light button with your thumb
(2) Additionally press the UV light button with your thumb too



Visa Sticker Specimen

100 USD Banknote

Advice: In low-light conditions, the torchlight mode can also be used as a torch in light sensitive areas.



Steady Light Mode / Documentation Mode

The steady light mode and documentation mode are particularly useful for hands-free inspection of documents or objects, as you don't need to keep the button pressed.

As an example, they can also be used when taking snapshots through the lens with a smartphone or with the optional Snap&Cam accessory (sold separately).

- Press any light button **3x** quickly to activate the **steady light mode** for 1 minute
- Press any light button **4x** quickly to activate the **trainer mode** for 5 minutes

AS: The steady light mode and documentation mode are not available for the Anti-Stokes-Laser (AS option).

Snap&Cam accessory used for inspecting an Austrian Passport (sold separately)

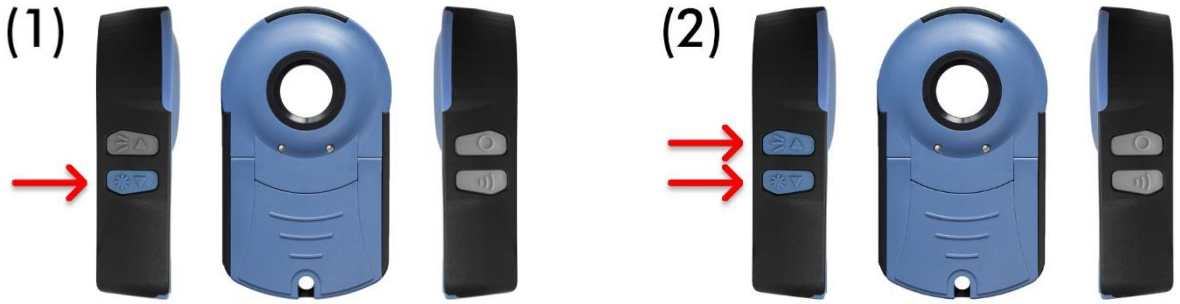
Advice: To exit steady light mode or documentation mode press the same button again.

Option FUV: Front UV Torch 365 nm

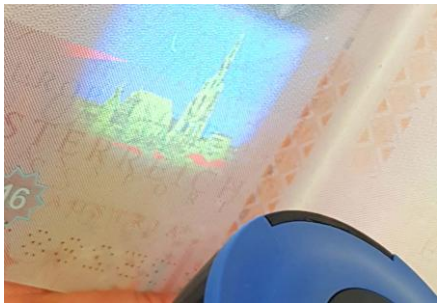
The Front UV Torch with an extra strong 365 nm UV LED in the front of the device allows a quick and easy check of UV security inks and fibres from a distance.

Video Tutorial

(1) Press the UV light button with your thumb
(2) Additionally press the incident light button with your thumb too



Visa Sticker Specimen



Austrian Passport

Advice: If you are left-handed and prefer to operate the front UV torch with your thumb, activate left-handed mode as described in the previous chapter.

Option RFID: RFID-Transponder Quick Check

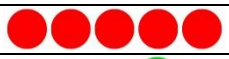
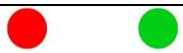
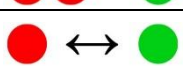
The RFID transponder quick check allows verifying the transponders that are integrated in passports or ID cards. Therefor you can check authenticity, proper function and transponder type in a second. Please keep in mind that in some passports a shielding prevents reading from outside. Just open the document to check it from the inside.

Video Tutorial

(1) Press and hold the RFID button with your middle finger to activate the electromagnetic field — the red LED will blink rapidly. The device searches for nearby RFID transponders as long as the button remains pressed.

Advice: The optimal distance to read a RFID chip is 3–5 cm (~1–2 inches) from the bottom of the device to the document.

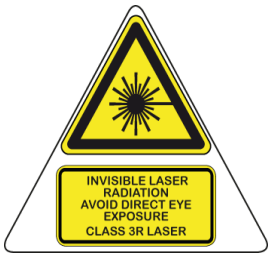
If a transponder is detected, the electromagnetic field automatically switches off to conserve energy. The result remains visible as long as you continue to press the button. To perform another scan, simply press the radio wave button again.

RFID transponder found	LED pattern	Explanation
The device searches for a RFID transponder		Red LED blinks fast
ICAO Type A for valid ID documents*		Green LED blinks once recurring
ICAO Type B for valid ID documents*		Green LED blinks twice recurring
Type A for valid ID cards*		Red and green LED blink once recurring
Type B for valid ID cards*		Red and green LED blink twice recurring
A transponder was found, but it is no valid passport transponder (e.g. credit card)		Red and green LED blink alternating

Other LED patterns	LED pattern	Explanation
Low battery / empty LI accumulator		Red LED blinks slowly
IR LED / AS Laser is active		Red LED is steadily on

*according to ISO 14443

Option AS: IR Laser for Anti Stokes 980 nm



WARNING: To operate Doculus Lumus® with IR laser (980 nm) please read this chapter carefully. For your safety never look into the laser at the opening on the bottom of the device while the laser is active.

Named after physicist Sir George Gabriel Stokes, the Anti-Stokes effect occurs when rare-earth fluorescent particles are irradiated with high-wavelength light, causing them to emit at lower wavelengths—from infrared to visible light. Particles usually appear yellow or green. The effect requires sufficient energy, provided by a 980 nm infrared laser.

Video Tutorial

WARNING: Always place the device directly and plane onto the document to be checked. The laser exit opening on the bottom of the device must be completely covered for safety reasons.

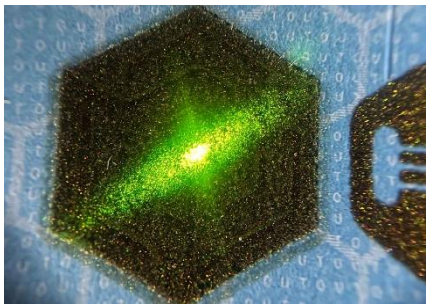
WARNING: The laser radiation itself is invisible to the human eye, so rely on the red LED to check the function and never look into the device from the bottom while the laser is active. Devices equipped with the AS-Laser option feature a built-in filter glass within the lens system, protecting the user from radiation harmful to the skin and eyes when looking through the lens.

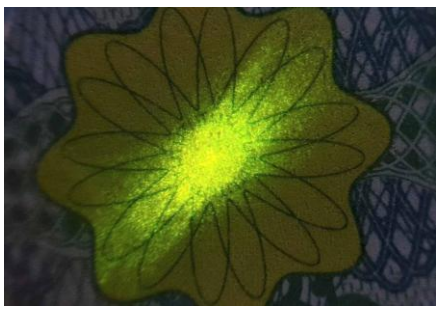
(1) Press the oblique light button and the RFID button with your index and middle finger. When the IR laser is activated, the red LED on the top of the device lights up.

Note: This button combination prevents accidental use. For safety reasons, steady light and documentation modes are disabled on the Anti-Stokes Laser (AS) option.

Advice: Some documents have only small or no particle areas. Check the document's features or test with a known sample before assuming a device malfunction. Use the included Visa Sticker Specimen for testing.

Visa Sticker Specimen





Customs Seal for Cigarettes

Option IR: Infrared light emitting diode 870 nm

The IR LED with a centre wavelength of 870 nm is perfectly suited to display IR security features in the 830 to 925 nm range. Since wavelengths in the infrared range are invisible to the human eye, an additional camera sensor is needed for visualization. For this, it is recommended to use a smartphone or the Snap&Cam Set to take a picture through the lens.

Video Tutorial

(1) Press the RFID button **3x** quickly with your middle finger. When the IR LED is activated, the red LED on the top of the device lights up permanently.

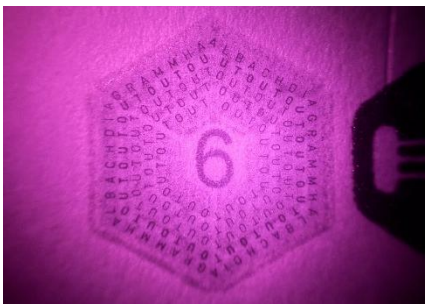
Advice: On devices with IR (but not RFID) option, pressing the RFID button 1x activates the IR LED.

The application is not harmful to the eyes. Nevertheless, we recommend not to look into the device from below while the IR LED is active. Devices equipped with the UVB/C option feature a built-in filter glass within the lens system, protecting the user from radiation harmful to the skin and eyes when looking through the lens.

Depending on the camera sensor, the image is colourless or has a pink tint. If the latter is the case, simply switch to black and white view of your smartphone for easier recognition.

Note: This option requires a camera without an infrared filter. iPhone 7 / 7 Plus and older models (except the iPhone SE) include this filter and will not display the image correctly.

Visa Sticker Specimen



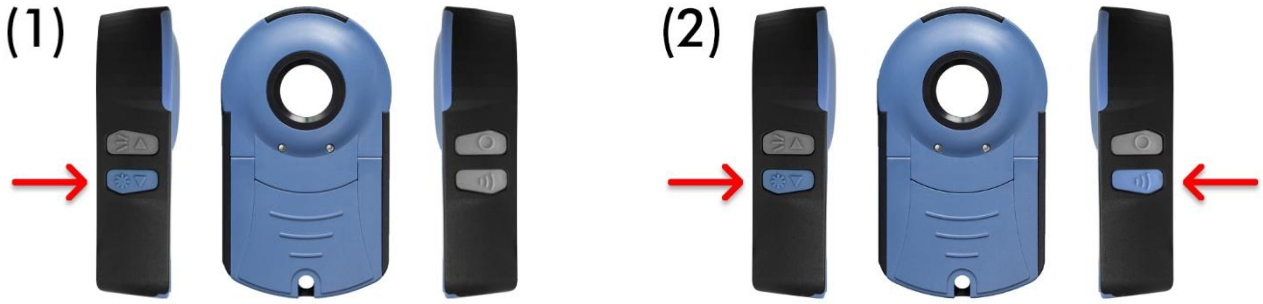
10€ Banknote

Option UVB/C: UV for 313 nm and 254 nm features

This option integrates two UVB LEDs (for 313 nm features) and two UVC LEDs (for 254 nm features), making security elements in the 254 nm range clearly visible. The LEDs ensure optimal brightness, especially for prints on polycarbonate. Compared to conventional UVC ring tubes, these LEDs offer enhanced illumination and greater durability — they are far less likely to break if dropped.

Video Tutorial

(1) Press the UV light button with your thumb
(2) Additionally press the RFID button with your middle finger



Advice: An alternative way to activate UVB/C light is to first enable steady UV mode by pressing the UV light button three times, then press the RFID button 1x to switch to UVB/C (and back).

Visa Sticker Specimen

Austrian ID Card

4. Energy Management

Doculus Lumus® is equipped with intelligent energy-saving technology, enabling operation for several months on a single set of batteries.

Battery Level

The red LED blinks 3 times slowly after releasing a button if battery is low. Please plan to change batteries soon and carry a set of replacement batteries with you.

If the energy in the batteries is too low for proper function of the device, the red LED starts to blink at a button press, and the light functions remain switched off.

Option LI: Charging the Lithium-Ion battery

To charge the lithium-ion battery, use the included USB-C cable and connect it to the appropriate port. While charging, a red LED inside the device will illuminate. The LED turns off once the battery is fully charged.

To extend the life of the lithium-ion battery and prevent premature aging, the battery should be charged regularly. Therefore, please fully charge the battery at least every 2-3 months (for about 6 hrs. or until the red LED goes off) to maintain the warranty claim.

Automatic Power-Off

If a button is pressed accidentally (for example, while inside a case), the device will automatically turn off after 1 minute to save battery. When steady light mode or documentation mode is active, the device will also turn off automatically after 1 minute or 5 minutes, respectively, to conserve power.

Constant brightness

By using state-of-the-art microprocessor technology and an electronic current regulation system, the brightness of the LEDs remains constant, regardless of battery level (patent pending).

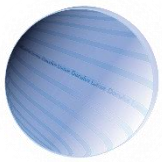
5. Service and Maintenance

- Clean the device only with a soft moist cloth. Do not use any detergents or solvents since they could damage the device or leave stains on the plastics.
- Clean the lens system only with the accessory lens cleaning cloth or a lint-free soft cloth. You can remove fingerprints or fatty stains with a cotton bud soaked with isopropyl alcohol.
- If you move your device from the cold into a warm room, condensate water can blur the lens. Please wait until the lenses are free again before operating the device.
- If the device becomes damp or wet, please remove the batteries and let it dry for at least one day before using it.

Service and Warranty

You purchased a high-quality product of Doculus Lumus GmbH that is produced under a strict quality inspection. If there are still some problems with the product or if you have some questions about the usage of the product you will find all contact information on the homepage www.doculuslumus.com.

Doculus Lumus GmbH grants a warranty of 24 months after the date of purchase on material and production of Doculus Lumus®. The customer has the right to get rework. Doculus Lumus GmbH may, instead of reworking, deliver replacement devices. Exchanged devices pass into the ownership of Doculus Lumus GmbH. Warranty is void if the device is opened by the buyer or other non-authorized third parties. Damages caused by improper handling, operation, storage (e.g. leaking batteries) as well as by force majeure or other external influences (e.g. water damage, extreme humidity, heat or cold) are not covered by the warranty.



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