

Digital microscope

LABOTRIX MICRO D2

PRODUCT PASSPORT

Kyiv

2026

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1. General Information about the Product

- 1.1. **Product name** — Digital microscope.
- 1.2. **Trademark** — Labotrix.
- 1.3. **Model** — Micro D2; full trade designation — LABOTRIX MICRO D2.
- 1.4. **Manufacturer** — Labotrix Group Limited, China.
- 1.5. **Intended use:** the device is used to observe small objects and phenomena in the natural sciences: insects, plants and their parts, microstructures, jewelry items, coins, stamps, and material samples. The device is suitable for educational observations in schools, out-of-school education institutions and club activities, as well as for individual use. The device allows photographing and recording video of the observed object, saving files to a memory card, and exporting them via USB connection to a computer for further processing in other programs.
- 1.6. **Design features:** the device is equipped with a 5-inch IPS screen for instant viewing of results, built-in LED illumination with adjustable brightness, mechanical focusing within 10–70 mm, and powerful digital zoom up to 1500×. The battery provides up to 1 hour of autonomous operation, and the built-in connectors allow the device to be connected to a TV and a computer.

2. Technical Specifications

- Brand — Labotrix
- Model — Micro D2
- SKU — LTX-MICRO-D2
- Sensor — Sony, 5 MP
- Optical zoom — from 10× to 600×
- Digital zoom — up to 1500×
- Display for image viewing — IPS type, diagonal 5.0 inches, resolution 480 × 854 dots
- Photo resolution — 12 MP, 10 MP, 8 MP, 5 MP, 3 MP, 2 MP
- Video recording resolution — 1080p HD or 720p
- File formats for photos and video — photos in JPG format, videos in AVI format
- Focusing range (mm) — from 10 to 70
- Light source — 8 LEDs with brightness control
- Battery — lithium type 18650, 3.7 V, 2000 mAh
- Continuous operation time (hour) — 1
- Full charging time (hour) — 5
- Memory card — TF, capacity up to 32 GB (not included in the kit)
- Operating conditions — premises of an educational institution, air temperature from +5 to +40 °C, relative humidity from 40 to 60 % without condensate
- Dimensions (millimeter) — 155 × 134 × 240
- Mass (gram) — 660
- Language of marking and operating documentation — Ukrainian
- Product marking — trademark, model and a space for the inventory number
- Packaging — individual box of corrugated cardboard with the contents secured

- Documentation supplied — product passport with warranty card and operating manual
- Surface care — the screen and lens may be wiped with a dry or slightly damp lint-free cloth
- User requirements — children under 14 years of age use the device only under adult supervision
- Connection to an external screen — via the HDMI and RCA cables included in the kit
- Service life (year) — 5
- Warranty period (month) — 12

3. Package Contents

- Digital microscope — 1 pcs
- Battery, lithium type 18650 — 1 pcs
- Charging power unit (adapter) — 1 pcs
- USB cable for charging and connecting to a computer — 1 pcs
- HDMI cable for connecting to a TV with an HD input — 1 pcs
- RCA (TV) cable for connecting to a TV with a standard input jack — 1 pcs
- Soft cloth wipe for cleaning the screen and lens — 1 pcs
- Product Passport and Warranty Card — 1 pcs
- Individual transport packaging — 1 pcs

The TF memory card is not included in the kit and is purchased separately. The device does not require assembly before use.

4. Safety Precautions

4.1. General requirements

- The device is used by teachers, researchers, and persons who have completed the appropriate instruction.
- Children under 14 years of age may use the device only under adult supervision.
- Before first use, read this passport and keep it together with the product.
- Do not subject the device to impacts, drops, or prolonged mechanical pressure.
- Regularly check the integrity of the housing, screen, cables, and sockets.

4.2. Electrical safety

- Before charging, make sure the battery is installed correctly according to polarity.
- Use only charging devices that are included in the kit or recommended by the manufacturer.
- Do not remove the battery from the device while the charging process is in progress.
- Do not experiment with alternative power sources and do not short-circuit the battery terminals.
- Do not leave the device in the sun or near heat sources while charging.

4.3. Working with the optical system

- Do not look directly into the lens under bright LED illumination, to avoid damaging your eyesight.
- Do not point the lens at a source of direct sunlight.
- Carefully clean the lens and screen without touching them with your fingers.
- Make sure water, dirt, or foreign objects do not get into the device.

4.4. It is strictly prohibited

- Disassembling the device or attempting to modify its construction.
- Pouring water on the device, washing it under running water, or immersing it in liquid.
- Using aggressive chemicals, solvents, or alcohol for cleaning.
- Leaving the device in a humid environment without protection.
- Heating the device over an open flame, on radiators, or in a microwave oven.
- Unscrewing permanently fixed parts or tearing off covers/panels.

5. Preparation for Use

- 5.1. Free the device from its packaging and inspect it for mechanical damage, cracks, or deformation.
- 5.2. Install the 18650 battery into the battery compartment on the bottom of the housing, observing polarity: red mark — plus, silver — minus.
- 5.3. Connect the charging unit to the socket on the front panel of the device and charge the battery to full charge (charging time — at least 5 hours).
- 5.4. Insert a TF memory card up to 32 GB into the slot on the housing; without the card, it is not possible to take photos or record video.
- 5.5. Carefully wipe the lens and screen with the soft cloth included in the kit to remove dust and packaging residue.
- 5.6. Press and hold the power button on the side panel for a few seconds to turn on the device. An image or menu will appear on the screen.
- 5.7. If the device does not turn on, check whether the battery is sufficiently charged and whether it is inserted correctly according to polarity.

6. Operating Procedure

6.1. Basic operations

- Press and hold the power button for a few seconds to turn the device on and off.
- Use the OK button to switch between modes: photo shooting, video recording, file viewing.
- Use the Up and Down buttons to navigate the menu; use the OK button to confirm your selection.
- Use the Menu button to open the settings for changing the shooting parameters.

6.2. Positioning the object for observation

- Place the object on the specimen stage, centered.
- If necessary, secure it with the clamping arms to prevent shifting.

- Use the focusing wheel to gradually adjust the stage height until a sharp image is obtained.

6.3. Adjusting illumination and zoom

- Use the brightness wheel to set the optimal level of LED illumination so that the image is visible but not overexposed.
- Use the zoom wheel to select the desired magnification from 10× to 1500×; keep in mind that image quality may decrease at higher digital zoom levels.

6.4. Photo and video recording

- Press the photo/video button to take a picture or start recording video.
- Photos are automatically saved in JPG format; video recordings — in AVI format on the memory card.
- During recording, a duration timer is displayed on the screen.

6.5. Finishing the work

- Press and hold the power button for a few seconds to turn off the device.
- Turn off the device before removing the memory card or disconnecting the cables.
- Keep the device in a dry, dark place at room temperature.

7. Care, Maintenance and Troubleshooting

7.1. Cleaning

- Wipe the lens and screen with a soft lint-free cloth or a special optical wipe.
- If there is contamination, slightly dampen a cloth with distilled water, then wipe dry.
- Do not use paper tissues, rags, or coarse materials — they will scratch the surface.
- Wipe the housing with a dry clean cloth.

7.2. Periodic inspection

- Check the battery condition monthly; if operating time decreases significantly, consider replacing it.
- Make sure the screen and lens remain clean and undamaged.
- The device does not require lubrication, calibration, or other maintenance operations by the user.
- In case of significant damage to the screen, lens, or housing, contact an authorized service center.

7.3. Possible malfunctions and methods of their elimination

Symptom	Possible cause	User actions
The instrument does not switch on	Battery is discharged; incorrect polarity	Charge the battery; make sure it is installed correctly (red mark — plus)
Screen remains black or dark	Battery is discharged; lens is not focused	Charge the device; press the focus button to achieve sharp focus

Symptom	Possible cause	User actions
Image is unclear or blurred	Lens is dirty or wet; incorrect distance to the object	Wipe the lens with a cloth; focus using the wheel
Problems connecting to a computer or TV	Cables are not connected correctly; incorrect input channel on the TV	Check the security of the cable connections; select the correct video input (HDMI, AV) on the TV
The battery discharges quickly	Intensive use of LED illumination; cold ambient temperature	Reduce the brightness; charge in a warm place; consider purchasing an additional battery

8. Storage and Transportation Conditions

- Store the device in a dry place away from direct sunlight at a temperature not below +5 and not above +40 °C and humidity not exceeding 80%.
- Do not leave the device in hot cars, close to heating radiators, or on sunny windowsills.
- Store the device in a protective case or the original packaging to prevent mechanical damage.
- Keep the sockets, battery compartment cover, and cables together with the device.
- For transportation, use the original packaging or a rigid protective case.
- Do not place heavy objects on the packaging.
- Before long-term storage (more than a month), it is recommended to remove the battery from the device and store it separately in a cool place.
- The storage period before commissioning is unlimited provided that the stated requirements are observed.

9. Warranty Obligations

- 9.1. The warranty period of operation of the product is 12 months from the date of sale specified in the warranty card.
- 9.2. The manufacturer guarantees that the product conforms to the declared technical specifications provided that the transportation, storage and operating rules set out in this passport are observed.
- 9.3. During the warranty period, defects of the product that have arisen through the fault of the manufacturer are remedied free of charge. The method of remedy (repair, replacement of a component or replacement of the product) is determined by the service center.
- 9.4. Warranty service is provided on presentation of a correctly and completely filled-in warranty card and of a document confirming the fact and the date of purchase.
- 9.5. The warranty does not cover cases where the malfunction is caused by:
 - mechanical damage, in particular cracks, chips and deformation of the housing and of the components of the product;

- violation of the operating, storage or transportation rules set out in this passport;
- ingress of liquid or foreign objects into the product, and also the action of insects and animals;
- independent disassembly, repair or modification of the product, in particular repair at unauthorized workshops;
- use of the product other than for its intended purpose;
- force majeure circumstances (fire, flood, earthquake, etc.).

9.6. The warranty does not cover the natural wear of the coating and of the appearance of the product, nor consumables.

10. Product Disposal

- The product must not be disposed of together with unsorted municipal waste. This is indicated by the marking in the form of a crossed-out container on the product or its packaging.
- After the end of the service life, hand the product over to a collection point for the corresponding waste or to an organization holding the appropriate permit.
- Hand over the packaging elements (cardboard, polymer materials) to the corresponding streams of recyclable materials.

Contacts

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Conditions of use and storage of the product

The product is intended for educational work in general secondary education institutions and is used only under the control and supervision of a teaching staff member; the recommended age of students — from 10 years, that is, students of grade 5 and of higher grades. Keep the product in a dry, clean and ventilated room at a temperature from +5 to +40 °C and relative air humidity up to 80 % without condensation, separately from heat sources and out of direct sunlight, moisture and dust. Use the product exclusively for its intended purpose and do not allow drops, impacts or other mechanical damage. If you notice damage, a crack or any malfunction, stop working with the product immediately and inform the teacher or the responsible person of the educational institution; repairing the product on your own is prohibited.

WARRANTY CARD

Name:	Digital microscope
Product model:	LABOTRIX MICRO D2
Serial number:	
Date of sale:	
Warranty period:	12 months from the date of sale
Trading organization:	
Signature of the seller:	

The goods have been received in working order, without visible damage, complete, and have been checked in my presence. I have no claims regarding the quality of the goods; I have read and agree to the operating and warranty service conditions.

Full name of the buyer _____

Telephone of the buyer _____ Signature of the buyer _____

Dear Customer!

Thank you for choosing Labotrix products. After-sales service of this product is provided in accordance with the regulations of the company and the legislation of the country of sale. So that we can serve you quickly and without unnecessary formalities, check that this warranty card is filled in correctly at the moment of purchase and keep it together with the payment document throughout the entire warranty period. When applying for repair, hand the product over to the seller or to the service center together with the filled-in card.

Procedure for applying

1. The right to free warranty service of the product is valid for 12 months from the date of sale specified in the warranty card. Within this period, components that have failed because of a manufacturing defect are repaired or replaced at no cost to the buyer.
2. Before applying, make sure that the malfunction is not caused by the reasons listed in section 9 of this passport and, if possible, use the table of possible malfunctions in subsection 7.3.
3. After the end of the 12-month warranty period, repairs are performed on a paid basis; the cost of the work and of the spare parts is determined depending on the nature of the malfunction.

Grounds for refusal of warranty service

The company reserves the right to refuse free service or to perform the work on a paid basis if at least one of the following circumstances is established:

- absence of the warranty card, its incomplete or corrected completion, and also the absence of a document confirming the purchase;
- non-conformity of the serial number of the product with the number specified in the card, or damage to the factory marking;
- traces of independent disassembly, repair or modification of the product;
- damage caused by violation of the operating rules, connection to an unsuitable power source or external mechanical impact;
- damage as a result of force majeure circumstances.

Service Records

Date of entry	Description of the malfunction	Work performed	Position, signature, full name of the responsible person