



BCM-1/BCM-2

Cell culture imager

Instruction manual



This instruction manual is for the operation guide, troubleshooting and maintenance to the BCM series Live Cell Microscope Imaging System. Please study this manual thoroughly before operating, and keep it with the instrument. The manufacturer reserves the rights to the modifications by technology development. On the basis of operation ensured, technical specifications may be subject to changes without notice.

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1. Design purpose and precautions

- BCM series Live Cell Microscope Imaging System Designed for cell culture, routine cell examination and basic cell analysis, It can be placed in a cell incubator, a super clean table or a standard laboratory table.

Caution

★ Before using, please remove the supporting screw at the bottom of the machine with a special tool and plug the hole with the provided plug.



- To set up the system initially, we recommend that you place BCM on the lab bench.
- If you intend to place in the incubator, check in advance for cable ports on the rear of the incubator housing. Please guide the cable through this port.
- Make sure the cable is not damaged during installation.

Connection Settings

- 1) Please connect USB3.0 cable to the appropriate interface on your computer;
- 2) Please connect DC power wire to the power adapter;
- 3) Please connect power cord to the power adapter.



Power cord

USB3.0 cable of the BCM

DC power wire

Power Adapter

2. System overview

| | BCM-1 | BCM-2 |
|------------------------|---|---------------------------------------|
| Dimensions | (W) × (D) × (H): 220×264×240mm | |
| Transmitted light | 3W 627nm Red LED | |
| reflected illumination | None | 3W 525nm Green LED, 3W 485nm Blue LED |
| Lamp source | Software control | |
| Stage | Fixed stage, compatible with all kinds of culture bottles | |
| Objective | 10× Infinity plane semi-apochromatic contrast objective | |
| Z-axis | Electric, Automatic focus, manual focus knob | |
| Camera | 5.0MP CMOS USB3.0 Black and white camera | |
| Software | Photo, Video recording, Time-lapse photography | |
| Others | A tablet can be mounted on top | |

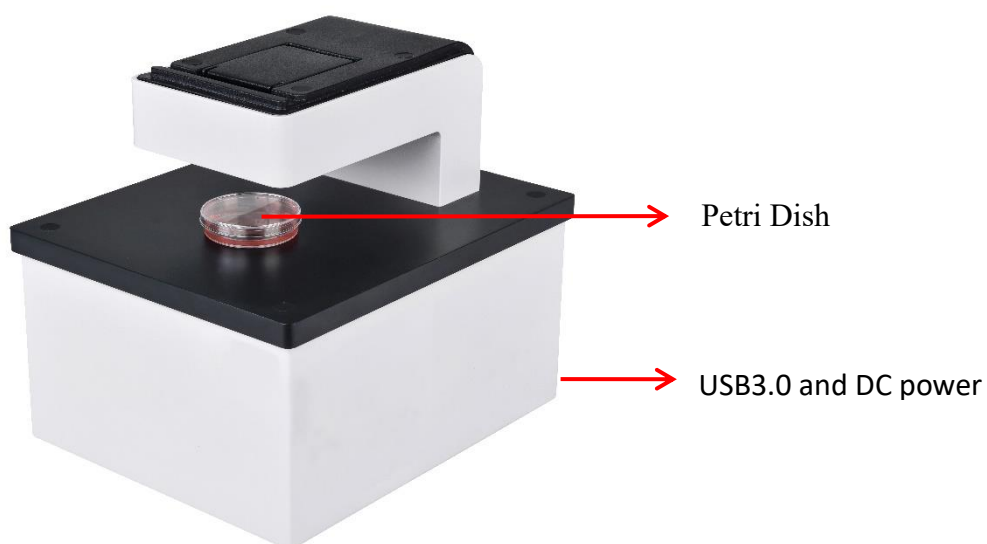


Figure 1

3. Supported control devices

- ★ Supported system platforms: Windows 64 bit Win7, Win8, Win10
- ★ Supported operating languages: 1) Chinese, 2) English

4. Install wizard

4.1 Minimum system configuration requirements

In order to ensure the normal operation of the equipment, please make sure that your computer meets the system minimum.

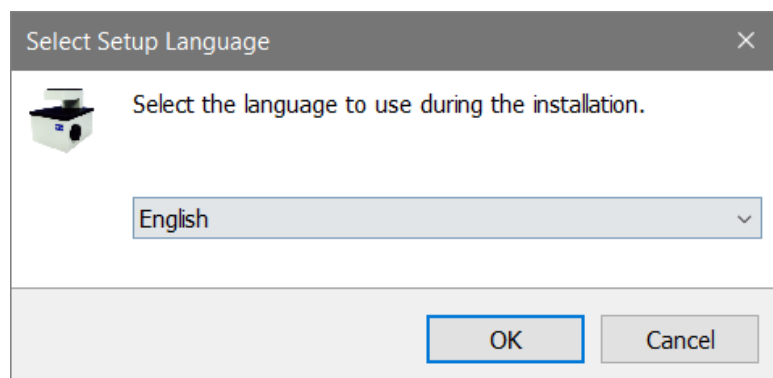
Configuration:

- Monitor: 24 bits true color or higher (32 bits recommended), resolution ratio: 1600×900 or 1920×1080;
- CPU≥2.0GHz;
- Memory≥2048MB (≥4096MB recommended), video memory≥512MB
- USB3.0;
- More than 10GB of hard disk space left

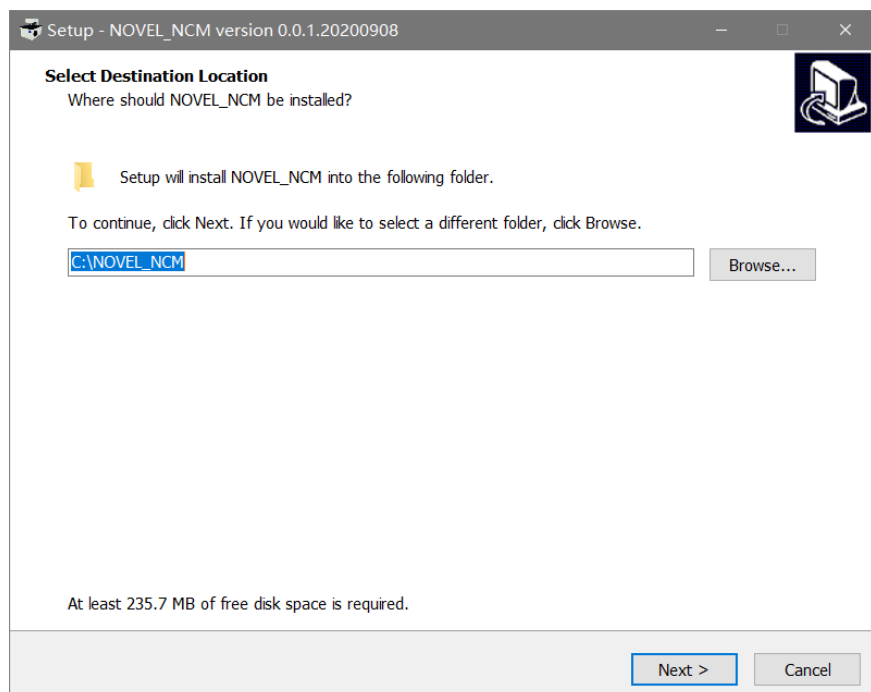
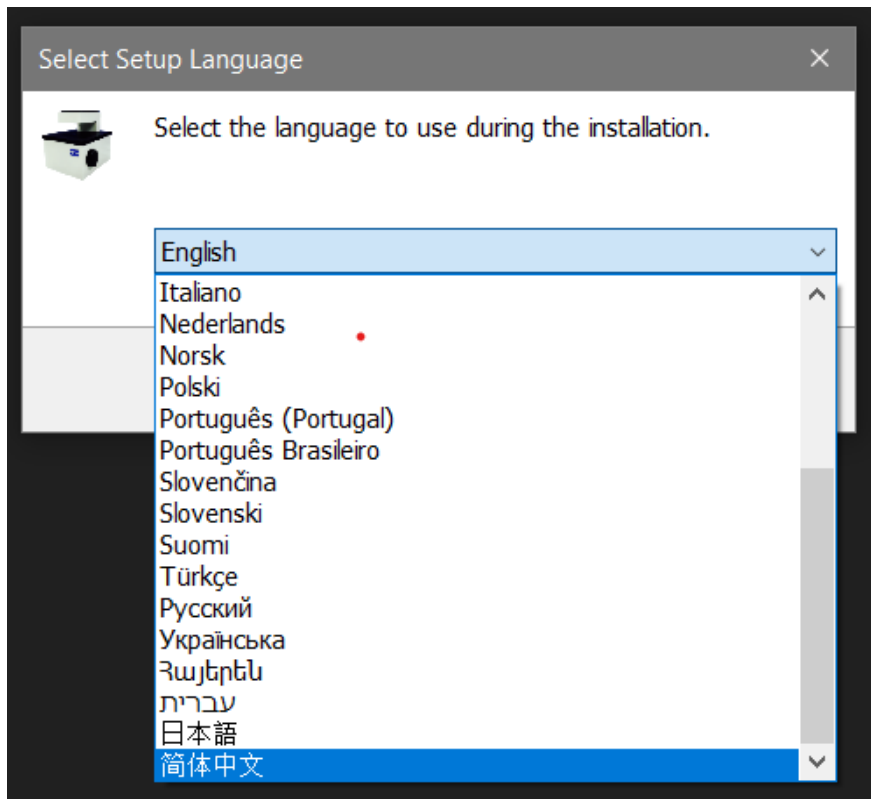
4.2 Wizard

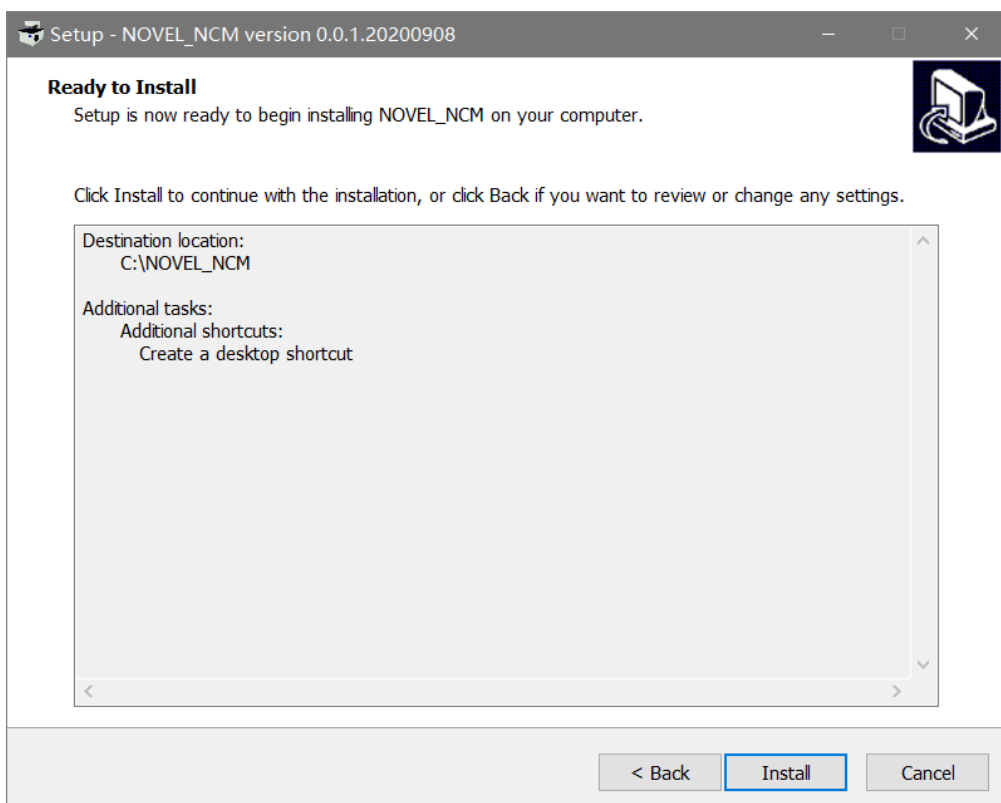
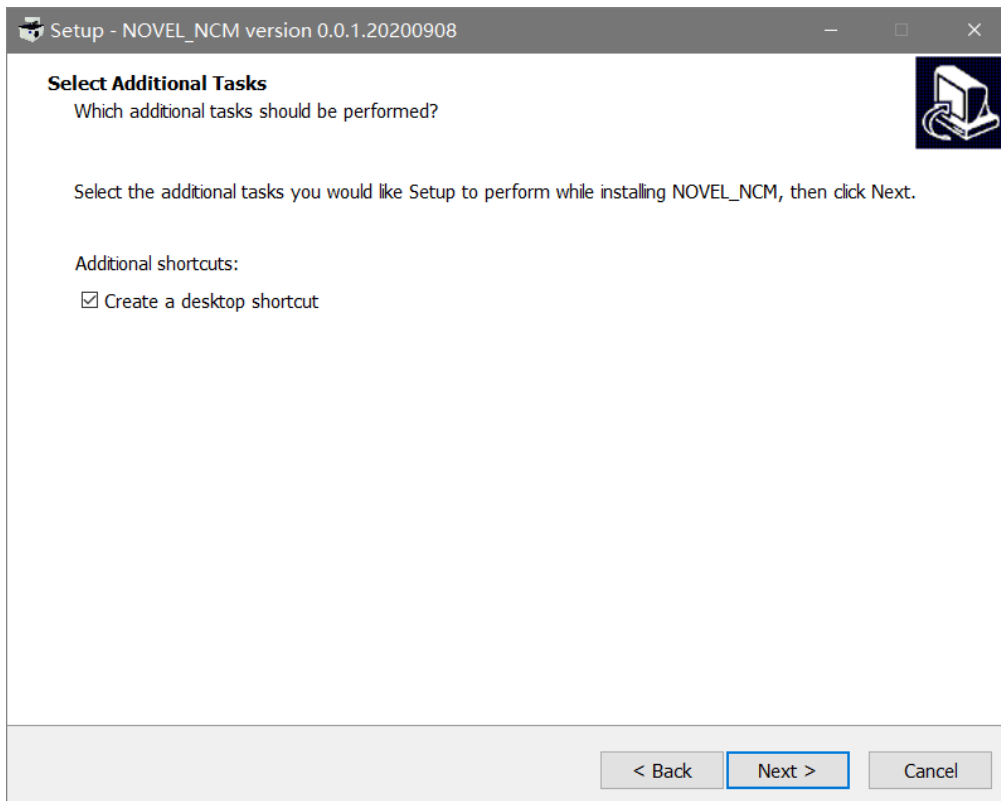
Double click to install software, in following figure.

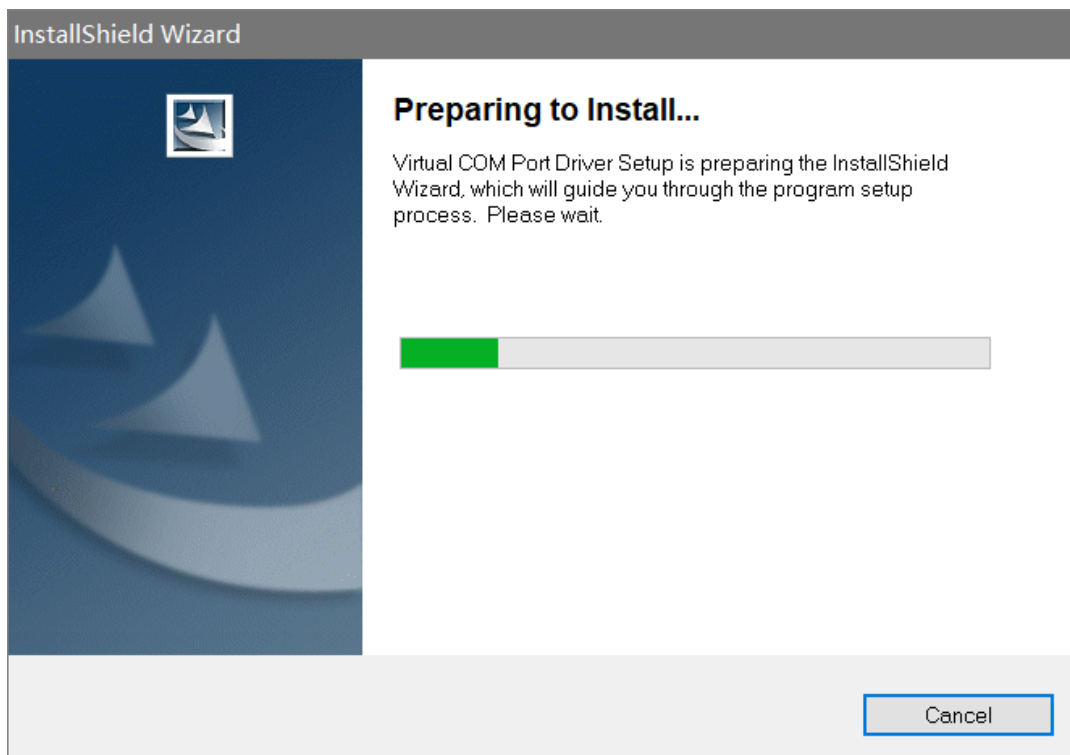
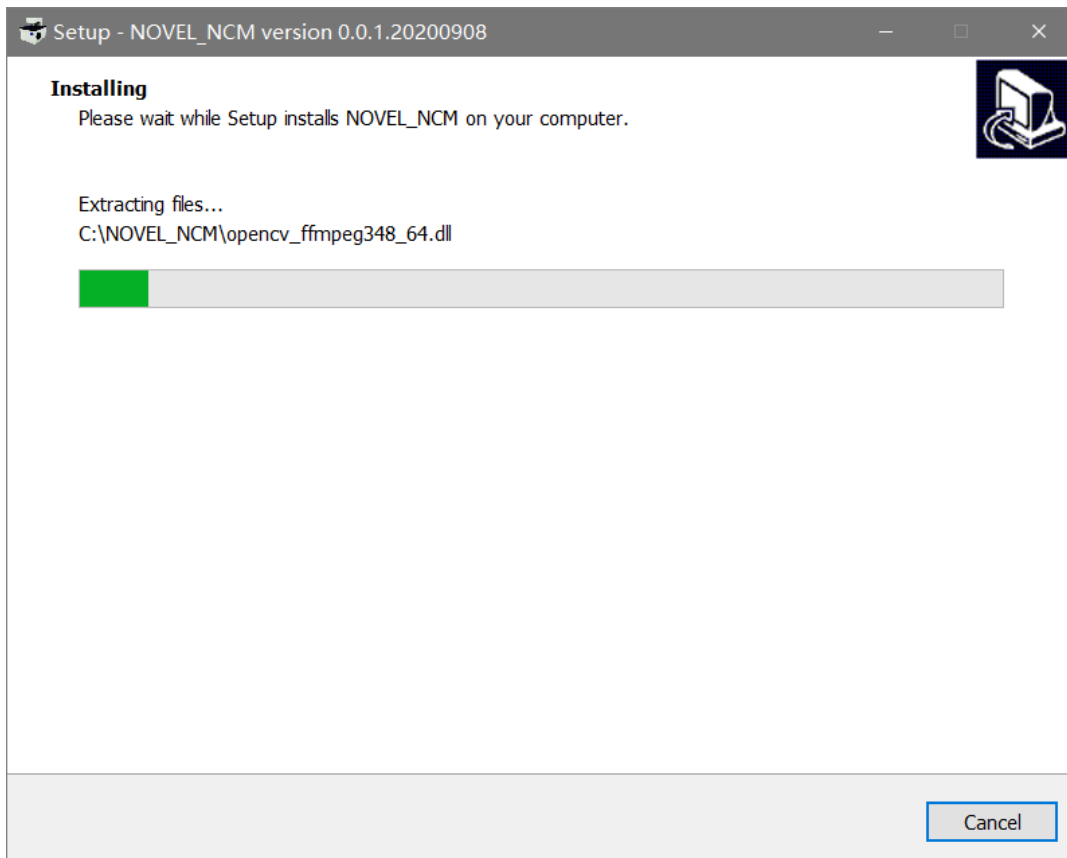
You just need to click the corresponding button, and then follow the prompts to complete the corresponding installation. Once installed, you can use the camera.



Select the appropriate language, the language here is only for the installation process language, after installation, you can select the required language interface in the software for operation.

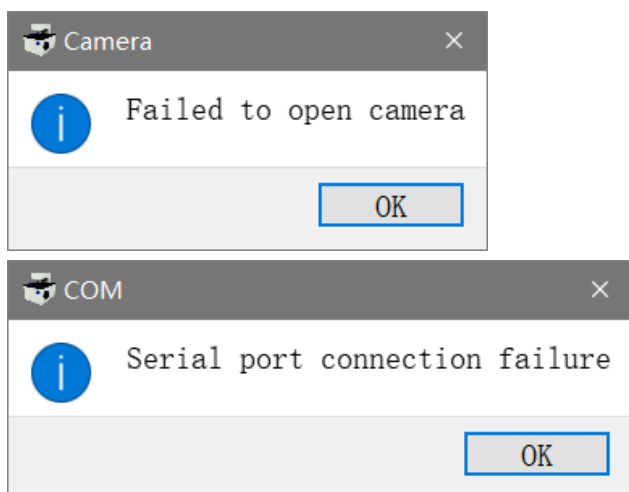






The software can only be used if it matches the camera. If the camera is not detected or the camera driver is incorrect, the correct video device will not be selected and the software cannot be opened.

After installing the software, make sure that the USB interface at the back of the BCM is connected to the computer with the USB3.0 cable (distinguish between the camera and the computer). At the same time, make sure that the microscope is in working state, and then open the software. If the BCM is not properly connected to the computer, or if the BCM is not powered, a window will pop up when the software is opened.



5. Use

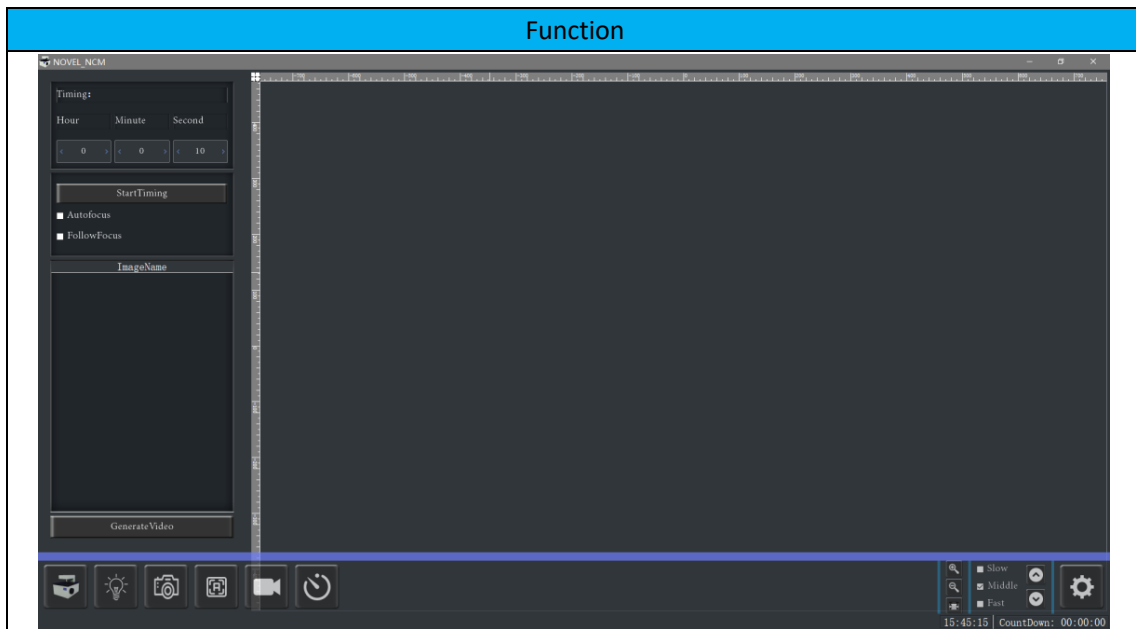
5.1 Start

Double click on the following icon to run NOVEL_NCM.

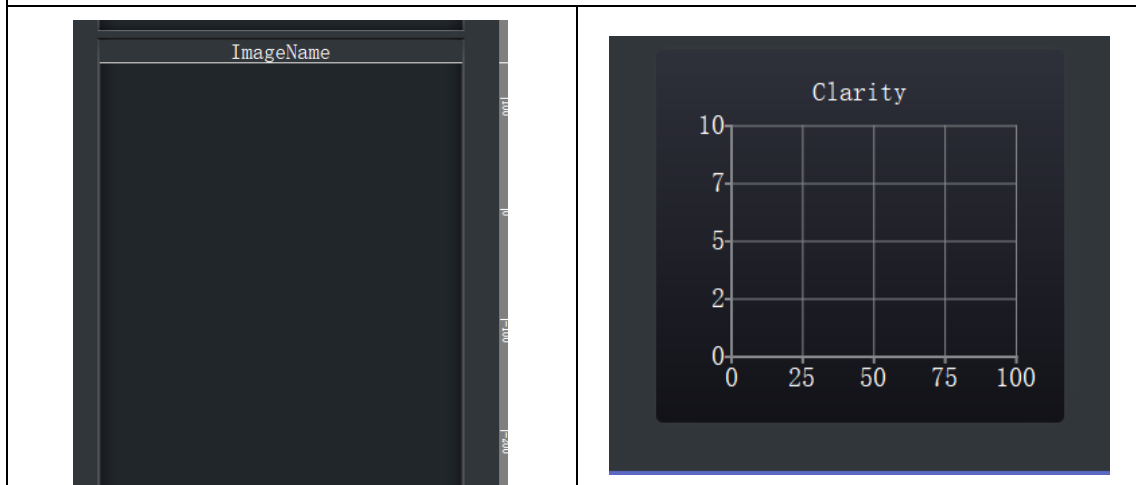


6. Interface function description

6.1 Function area name




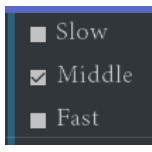
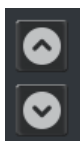
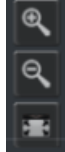
Move the mouse pointer to the picture, and the mouse wheel can adjust the image clarity

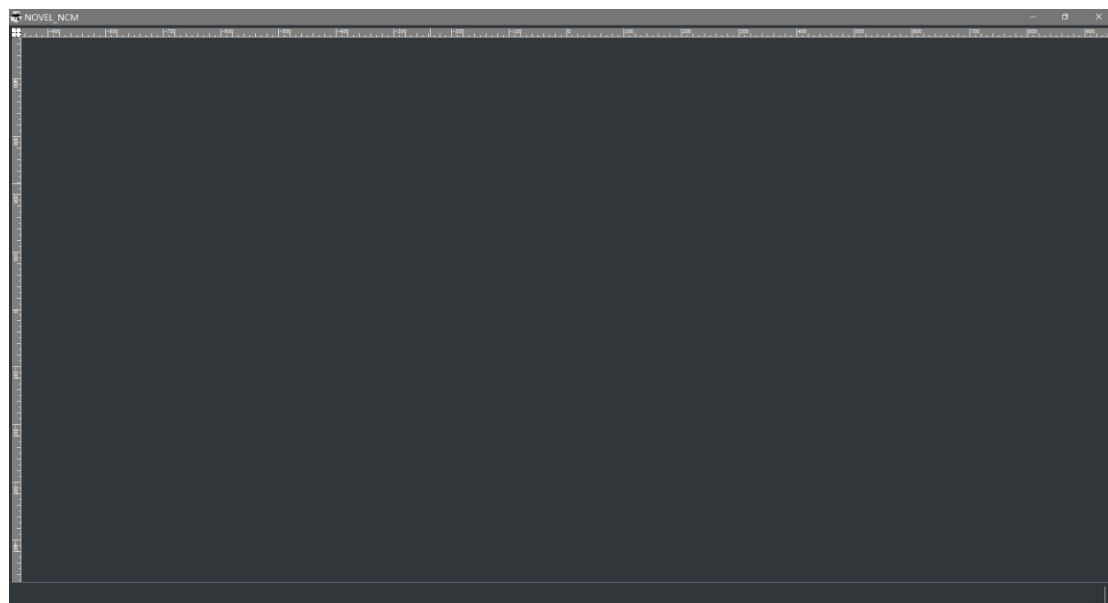


Store image

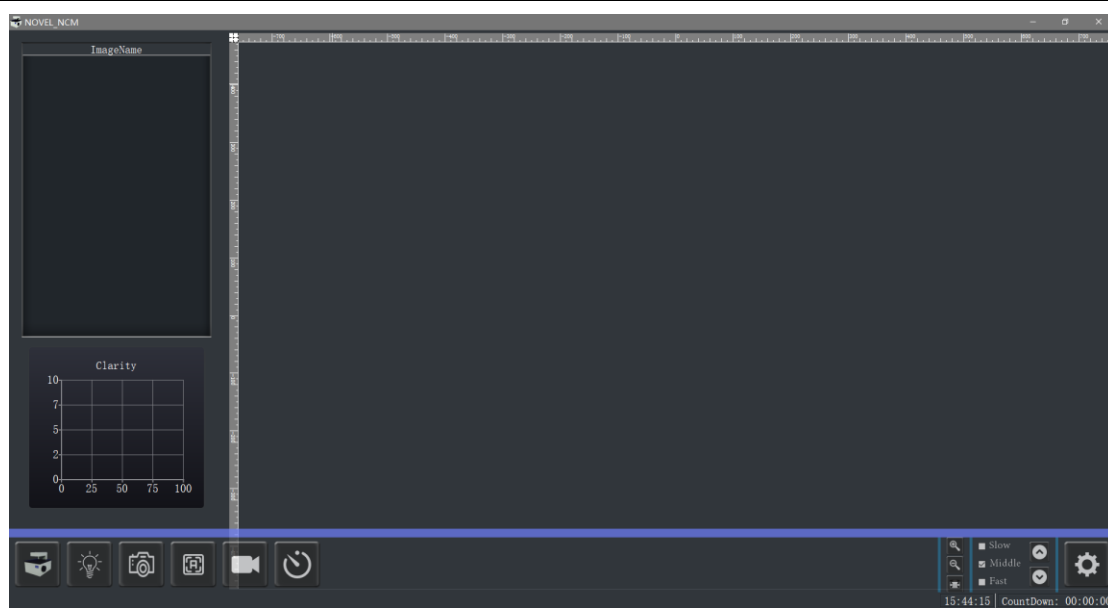
image resolution

| | | | | | |
|----------------|------|-------|-----------------|-------|--------------|
| | | | | | |
| Main interface | Lamp | Photo | Automatic focus | Video | Time setting |

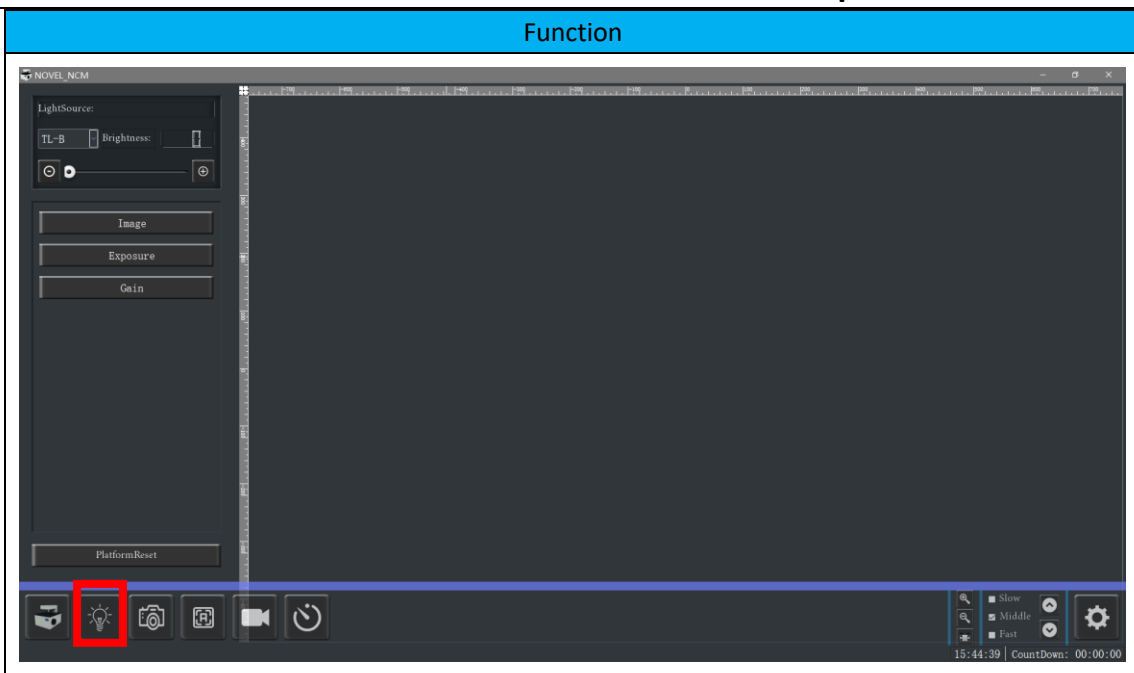
| Function | | | |
|---|---|---|---|
|  |  |  |  |
| System setting | Focus speed | Focus | Zoom in and out |



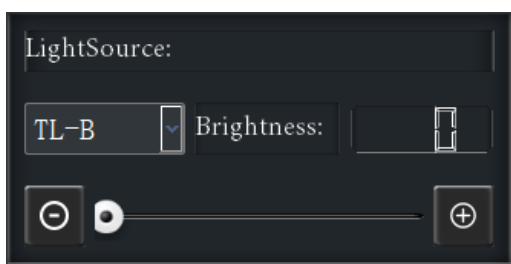
Double-click the display window to switch to the display interface, and double-click the display window to switch to the functional interface



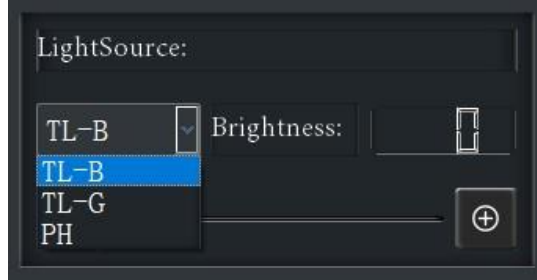
In the state of the display interface, the mouse moves to the lower side to activate the toolbar



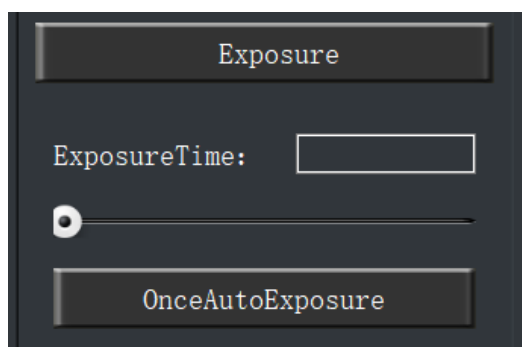
Light source



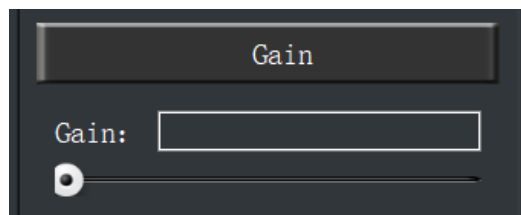
left to reduce the brightness, right to increase



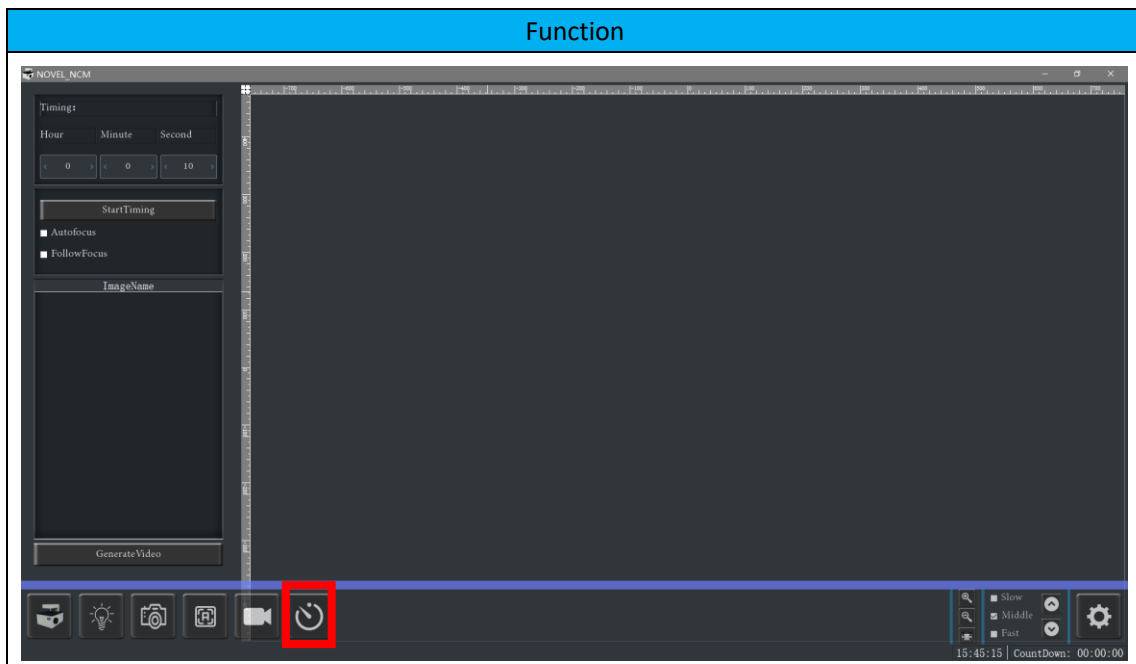
Switching light sources



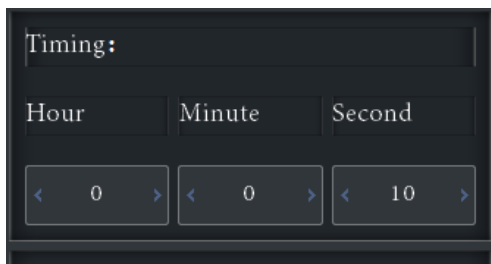
left to reduce time of exposure, right to increase



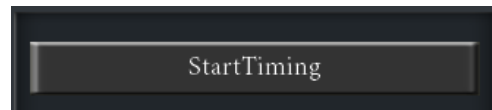
left to reduce the gain, right to increase



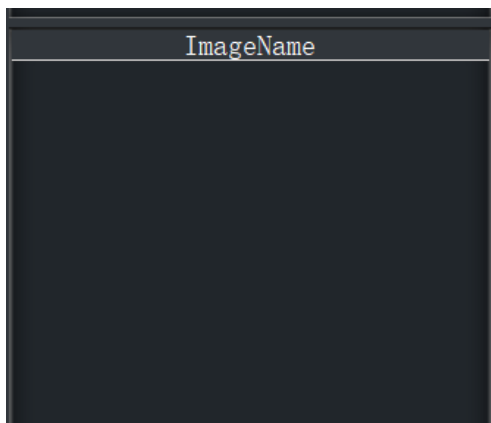
Timing



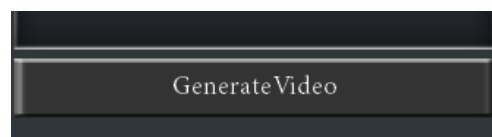
Setting Time interval



Start



Store image display



Generate video

| Function | |
|-----------|----------|
| | |
| Setting | |
| | |
| Path file | Language |

7. Caution

Cut power before cleaning and maintenance.

The NOVEL_NCM should be cleaned after each use, and the optical elements should be kept clean.

7.1. Clean

Under fluorescence imaging, the residual fibers and dust will produce unwanted background fluorescence.

Clean coated parts!

Dust and loose dirt particles can be removed with a soft brush or lint-free cotton cloth.

Clean dirt with low concentration soap solution, petroleum ether or ethanol when necessary.

To clean coated parts, use a linen or leather cloth coated with one of these substances.

Caution!

Thinners containing acetone, xylene, or nitrogen can damage NOVEL_NCM, therefore are banned.

First test the cleaning solution of the unknown ingredient in a less obvious area of the equipment to ensure that the coating or plastic surface is not frayed or etched.

After-sales service:

Within 36 months from the date of delivery, we will provide free warranty and replacement parts for the microscope which can not work because of product quality problem, in the absence of human factors.

We provide a lifetime maintenance of the microscope, and provide a price discount for long term out of warranty.

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