



Guangzhou Micro-shot Technology Co., Ltd

**MG-120**

**Four-channel LED light source  
User Manual**



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**MG-120, four-channel LED light source**

## Thank you sincerely for purchasing our products

This instrument is a precision optical instrument, although the design of our products provide the highest safety for your use. However, the incorrect use method or the neglect of this use manual may cause personal injury and property damage. For your safety and ensure the service life and correct daily maintenance of the instrument, please read the use manual carefully before using the instrument.

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### Please pay attention

In this user manual, the safety tips are indicated by the following symbols. Be sure to follow the following symbols to ensure the correct and full operation.



Warning

Ignoring this symbol may cause personal injury or instrument damage!

Note

The suggestion of ignoring this sign may affect the effect of microscopic observation.

Tips

Tips for users on microscope operating techniques skills



Pay attention to environmental protection

## Safety tips



Warning

### 1. Decomposition is strictly prohibited

Do not remove any other parts except the removable part mentioned in this manual. Otherwise, it may reduce the instrument performance, cause electric shock, injury and instrument damage. For any fault, please contact the supplier.



Warning

### 2. input voltage

Please confirm that the input voltage is consistent with the supply voltage in your area. If not, please do not use the product, and please contact the supplier. If the product uses the wrong input voltage, it can cause a short circuit or a fire, which can damage the product performance.



Warning

### 3. Four-channel LED light source should be protected from high temperature, moisture-proof and foreign body

In order to prevent short circuit or other faults, please do not use it in high temperature and humid environment for a long time. The suitable working environment temperature is  $10^{\circ}\text{C}\sim 30^{\circ}\text{C}$ , and the relative humidity is 20%~80% ( $25^{\circ}\text{C}$ ).

Note

### 4. Suitable placement

This product is a precision optical instrument, if used or stored improperly, will cause instrument damage or adverse effects on its precision. Consider the following conditions when choosing the place to use it:

※. Avoid placing the microscope in direct sunlight, vertical below indoor lighting, and other bright places.

※. The suitable working environment temperature is  $10^{\circ}\text{C}\sim 30^{\circ}\text{C}$ , and the relative humidity is 20%~80% (at  $25^{\circ}\text{C}$ ). Do not place the product in a place with high temperature, humidity and accumulated dust for a long time, otherwise the glass surface will be fog or mildew, accumulate dust, etc., so as to damage the coated glass

layer and shorten its service life.

Note

### **5. Instrument handling**

This product is a precision optical instrument and has a heavy weight. Be careful when handling. Strong impact and brutal operation are strictly prohibited, otherwise it will cause damage to the instrument.



### **6. Environmental protection**

Please classify the waste generated in the process of packaging and use, such as carton, foam, plastic, lighting, battery and so on and properly treatment, to protect the environment!

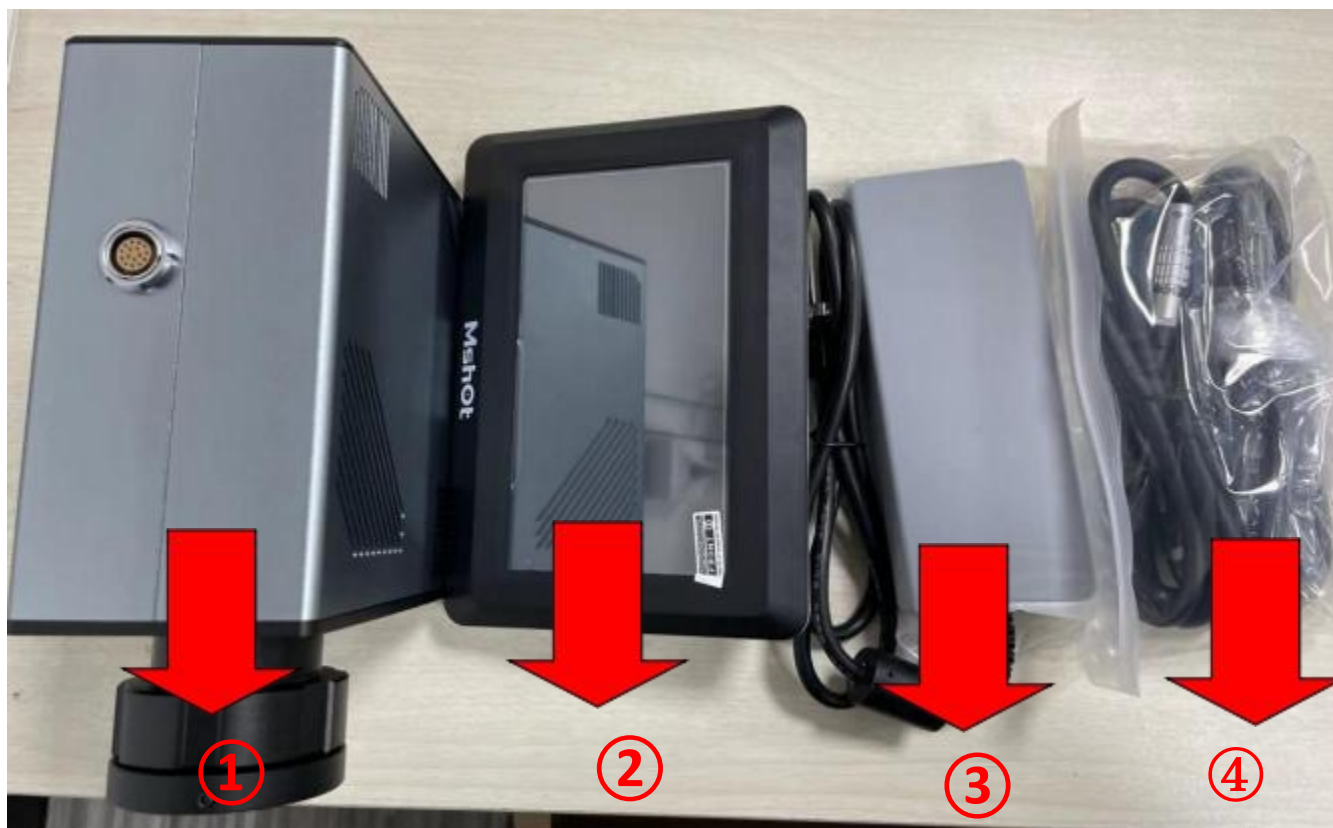
# Catalogue

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## **I. Product profile**

**The four-channel LED light source is an LED light source system integrated with 4-channel LED lamp beads. Compared with foreign COOL-LED, it has higher brightness and higher luminous efficiency. The spectrum covers commonly used dye areas, and various wavelength bands from ultraviolet to near-infrared are available. Can be used with fiber optics. Turns on and off, plug and play, no preheating required. Super long life of more than 20,000 hours. It can realize single-channel control, quantitative control, or 4-channel control; it can be adapted to Olympus, Leica, Nikon, Zeiss and other common domestic fluorescence microscopes.**

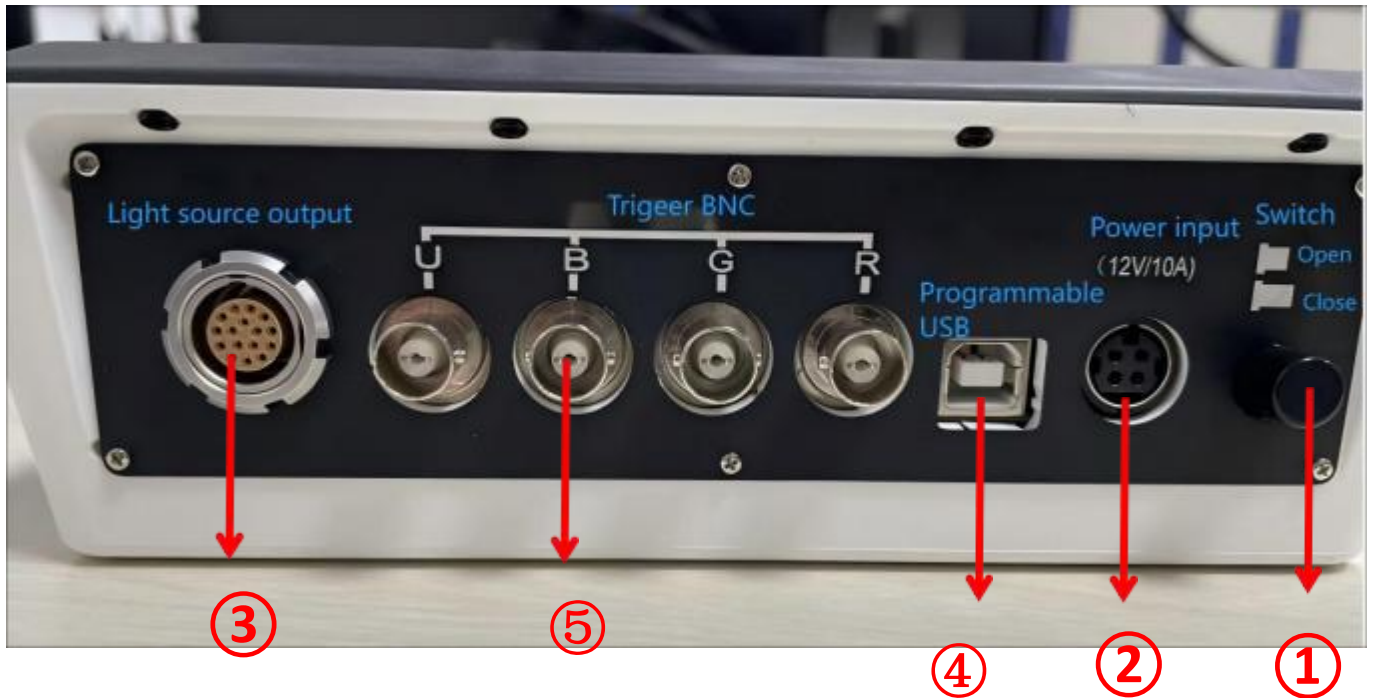
## II. product formation



- ①.LED light source
- ②.Touch controller
- ③.Power adapter
- ④.16-core aviation cable



### III. Touch-control controller interface



① .Switch: ON / OFF

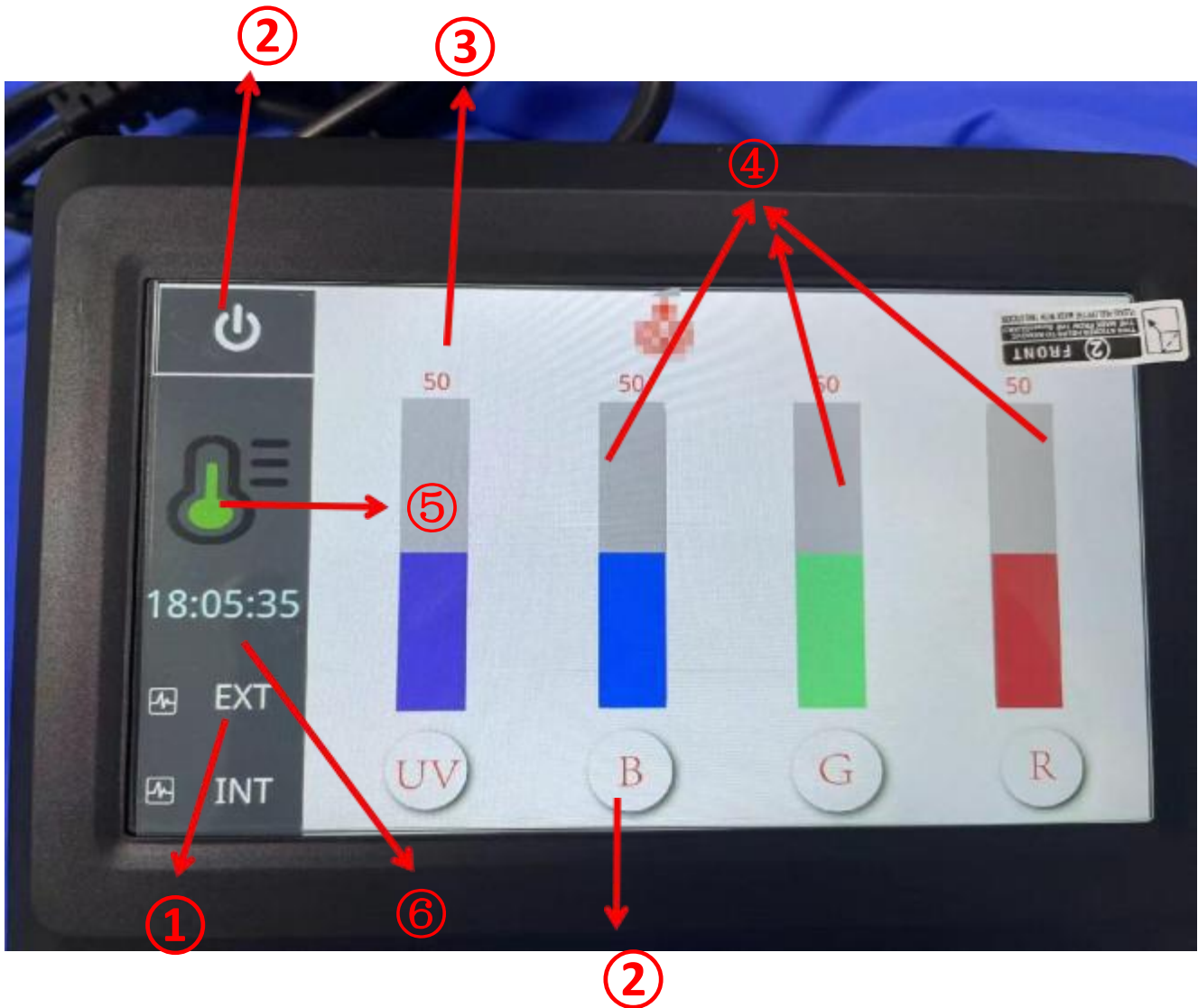
② . Power interface: 12VDC IN

③ . LED interface: connect to the LED light source;

④ . USB interface: connect to the computer, controlled by the software

⑤ . BNC interface: four independent (R \ G \ B \ UV) external trigger signal input

## IV. Controller interface



① . mode selection:

INT — in the background to set parameters in this mode



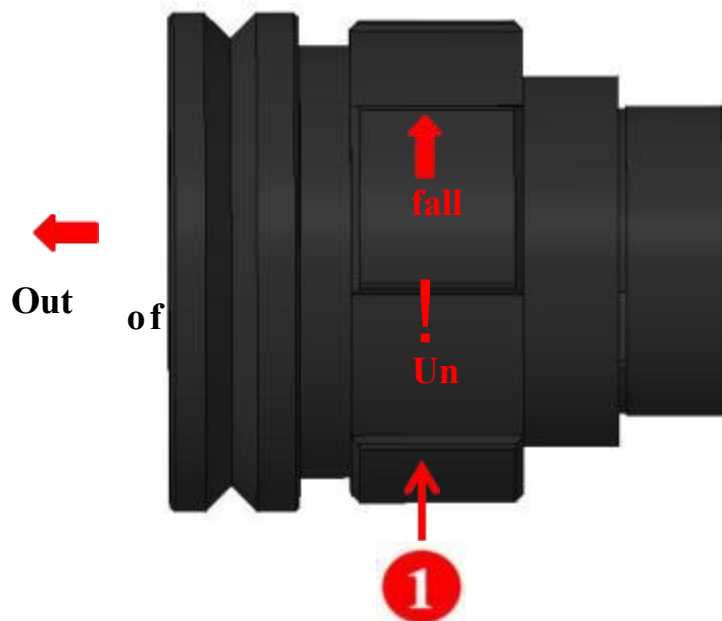
EXT — external trigger pulse dimming, this mode requires access TTL signal through the BNC interface

- ②. Bright / out switch
- ③ . Brightness display / setting: touch the corresponding area, pop up the keyboard to input the brightness ratio



- ④ . Brightness slider bar: touch the corresponding area, drag the slider bar to adjust the brightness ratio
- ⑤. Temperature working state shows that green represents normal, red represents abnormal
- ⑥ .Date is shown

## V.Zoom setting



- ① . Zoom ring: the lamp head is equipped with a zoom device, by rotating the zoom ring, can adjust the lens focal length and achieve 4-9° zoom
- ② . Rotate above the diagram, the spot becomes smaller, rotate below the diagram, the spot becomes larger

Note: In the middle of the zoom adjustment, there may be light source imaging, which needs to be adjusted according to the irradiation distance and the size of the object until the spot is uniform.