MF-BGUV-LED

User Manual


Primo Star

Mufti-wavelength LED epi-fluorescence illumination adopts long working life LED as light source. It makes a conventional microscope in infinity optical system to a energy saving, high efficiency epi-fluorescence microscope. The microscope is easy to operate and durable with fluorescence attachment on the basis of maintain bright field observation function.

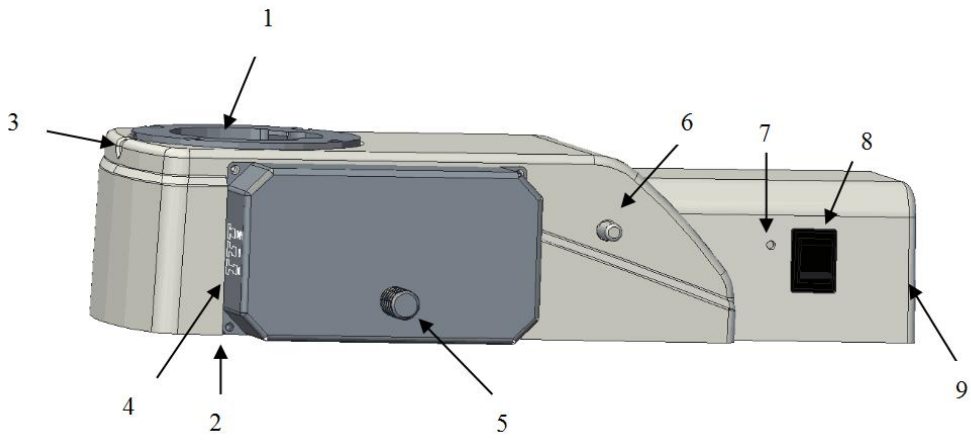
Ⅰ.Standard specification

Excitation LED lamp color	High efficiency excitation	Excitation filter	Dichroic mirror	Emission filter
Blue	470-475nm	460-490nm	>500nm	>520nm
Green	530-535nm	510-550nm	>570nm	>590nm
UV	365nm	330-380nm	>400nm	>420nm

Optional filter specification:

Filter	High efficiency excitation	Excitation filter	Dichroic mirror	Emission filter
Royal blue	450-455nm	420-490nm	>500nm	>520nm
Blue (NB)	470-475nm	435-515nm	>500nm	490-580nm
Green (NB)	530-535nm	480-570nm	>560nm	535-655nm

Ⅱ.Components



1. Upper interface 2. Lower interface 3.Eyepiece tube set screw 4. Excitation filter transfer identification
5. Excitation lever 6. Brightness adjusting knob 7.Blue indicator lamp 8. Power supply 9.DC power interface

Components description

1.Upper interface - Used to install on microscope
2.Eyepiece tube set screw - Fix epicentre tube with illumination.
3.Excitation filter transfer identification - Signal chosen excitation filter.
4.Excitation lever - Transfer filter cubes (including light source).
5.Brightness adjusting knob - Used to control LED light source brightness.
6.Blue indicator lamp - Show circuit work in order.
7.Power supply - Open and close electricity.
8.DC power interface - Input 12V/2A direct current.

III. Installation and operation instruction

The MF-BGUV-LED fluorescence illumination works well with various brand microscope, take sample of PrimoStar microscope to introduce its installation steps:

1. Take apart components, including epi illumination body, power adapter, screw driver, spare set crew of eyepiece tube, take down microscope observation tube as image 1:

Image 1 Image 2 Image 3

2.Insert in the LED fluorescence illumination body stably to microscope host dovetail as image 2, twist the screw on microscope to set the illuminator. Put on microscope head and fix the illumination with microscope host by screw driver as image 3.

3. Joint power adapter with power line with DC adapter seat, power on to see if blue signal lamp is power on. Twist brightness knob to get suitable light source brightness according to sample needs as image 4 and image 5.

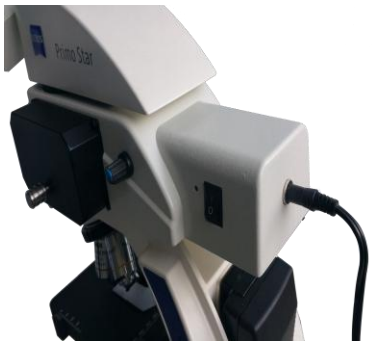


Image 4

Image 5

Image

4. Get down microscope transmitted light condenser position to the lowest, and minimize the condenser diaphragm to reduce spray lights disturbing as image 6.

5. When using bright field observation, change excitation filter cube to UV/O position and close the LED fluorescence illumination power.

IV.Trouble shooting

No.	Trouble	Solution
1.	Field of view is not complete, parts area light missed.	1. Check excitation lever, if it is pushed or drawn in place. 2. Illumination body upper and down interface should in perfect position with microscope body and eyepiece tube . 3. Check eyepiece position.
2.	Field of view is over bright and cover sample.	1.Fluorescence observation should be proceed under dark surroundings, avoid array light come into the machine light path (eyepiece, camera adapter and other adapters which does not have light barrier). 2.If the microscope is trinocular head, please cover the trinocular tube by a black paper without reflected light feature, when it does not connect with camera. 3.Check if the microscope transmitted light for bright field has been closed (bright field illumination must be closed when doing fluorescence). 4.Adjust microscope condenser position (to low position),

		condenser aperture diaphragm （ to smaller). If possible, use a black paper without reflect light to cover illumination system aperture diaphragm (the positions is between microscope bottom and condenser).
3.	Field of view is not clear and fringe	Change microscope observation to bright field to confirm image is clear.
4.	Can not be focused	Change microscope observation to bright field to check if it is work well, focusing system has been adjusted to correct position.
5.	No light	1.Twist brightness control knob, each lever position,illumination body position and objective position.

Attention

1. The LED light source brightness can be adjusted according to sample fluorescence excitation needs. It is advised do not get up brightness to max to protect lamp.

2.When observation fluorescence, it is better to avoid light from eyepiece, and get down illumination condenser to the lowest position. If there is still spray light in eyepiece field of view, user can take a black barrier plate to cover the condenser to protect the condenser mirror to reflect light.

3. During fluorescence observation in order to protect sample fluorescence from cancellation after long time lighting excitation, when there is no need to see sample, it is better to minimize the LED fluorescence illumination light brightness or close off directly.

4. Bright field observation requires change the LED fluorescence illumination lever to UV/O position, then close off the illumination power directly.

5. Please keep the LED fluorescence illumination put on stably and balanced, or it may lead light not even.

6. It is strictly to use 12V 2A requested power adapter, the manufacture does not take responsibility if the machine is damaged because of using not proper power adapter.