



# **User Manual**

## **IVYXBL-20 LED Transilluminator**



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## **Preface**

Thank you for purchasing the IVYXBL-20 LED Transilluminator. This user manual covers the functions and operating procedures of this device. Please read this manual carefully and keep it in a safe place.

## **Inspection**

When opening the packing box for the first time, please check carefully to ensure that it has not been damaged during transit and is not missing any accessories. Email [support@ivyxscientific.com](mailto:support@ivyxscientific.com) if you encounter any issues. We will answer within 24 hours to help you.

## I - Safety Information

Before using this device, please read this manual carefully to ensure a safe operation.



Only use a grounded circuit to power this device.



When turning on the light source, do not stare at the beam.



Keep away from liquids. During use, do not touch the device with wet hands or spill liquids on any part of the device to prevent electric shock.



Before cleaning or maintenance, be sure to disconnect the power supply



Do not use the in areas with potentially explosive gases or near flammable materials.

## **II - Product Information**

### **1. Introduction**

The IVYXBL-20 LED Transilluminator is a high-quality LED blue light transmission device, used for the observation of nucleic acid and protein gel stains without the risks of UV light. It can be used with a variety of nucleic acid-safe dyes to achieve perfectly clear bands.

### **2. Product features**

- **High Quality LED light:** Blue 470nm LED light-emitting module has high brightness, long lifetime, and low power usage.
- **Amber filter cover:** Cover filters the intense blue light and only lets the emission light through, allowing observation and gel-cutting without protective light filtering goggles.

- **Foldable imaging hood:** Creates a mini darkroom to record your results with a quick snapshot from your phone, tablet or camera.
- **No harmful UV rays:** UV light is a health hazard. Prolonged exposure to UV light can also damage DNA samples and compromise the integrity of samples to be used for downstream applications, such as subcloning.

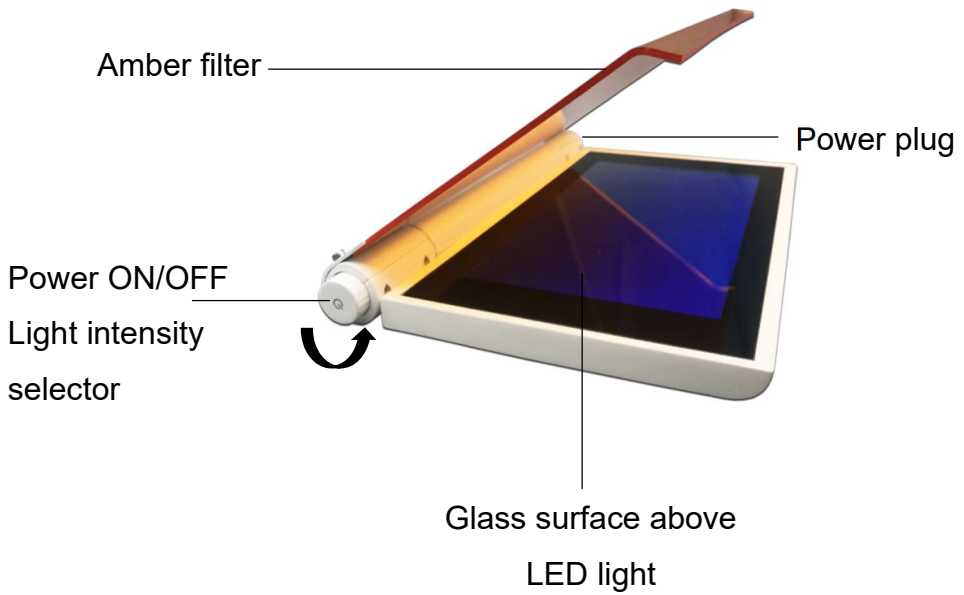
### **3. Operating Environment**

- Place in a clean, dry, ventilated, and non-corrosive surface and avoid direct sunlight.
- Temperature between 0 and 40°C (32 to 104°F)
- Keep a minimum distance of 10 cm (4 inches) around the device.
- Connect to standard AC outlet with voltage fluctuations not to exceed  $\pm 10\%$  of the normal value

## 4. Technical Parameters

Size (W × L × H)	265×195×40 mm (10.4x7.6x1.5 in)
Observe area (W × L)	200×120 mm (7.8 × 4.7 in)
Weight	1 kg (2.2 lbs)
Input voltage	100-240Vac, 50 / 60 Hz
Input current	1A
LED source	Built-in LED blue light
LED lifespan (hour)	>30,000h
Wavelength (nm)	470
Storage temp	25°C
Working temp	5- 40°C
Automatic shutdown (minute)	5
Filter	Amber filter

### III. Components





## **IV. Operation Instructions**

### **1. Preparation**

- 1) Unpack the outer package and carefully take out the components.
- 2) Remove the covering foam and place the LED transilluminator on a steady surface. Make sure to place it horizontally. The environment should be clean, dry, ventilated, non-corrosive, and avoid direct sunlight.

### **2. Operation**

- 1) After electrophoresis is complete, carefully place the gel or sample on the glass surface.
- 2) Lower the Amber filter cover to block out the intense light.
- 3) Plug in the power then press the knob on the left side to turn on the LED light.

- 4) Turn the same power knob clockwise to increase the LED light intensity, counterclockwise to decrease it.
- 5) Observe and/or cut the gel through the amber filter. You may use the included foldable imaging hood to ensure a dark environment.
- 6) After observing the sample, press the knob again to turn off the device.
- 7) Use rubbing alcohol to clean the glass surface after each use.

## V. Troubleshooting

Problem	Possible cause	Solution
Low sensitivity	Wavelength mismatch	Check the excitation and emission wavelengths of fluorescent dyes. Excitation should be around 470nm.
Automatic shutdown	Light on for over 5 mins	Press the power button to turn the light on again
High background or no image	Low sample concentration	Check sample concentration

## **VI. Maintenance**

Regular maintenance of this device is necessary to ensure normal operation and to prolong its service life.

- Make sure to disconnect the power supply and unplug from the outlet before starting any maintenance.
- Avoid direct contact with any liquids. Ensure that no liquid gets inside the case to prevent a short circuit.
- To clean, use a soft sponge or towel with a mild solvent or rubbing alcohol to gently wipe the glass surface and light shield. Do not use corrosive liquids or detergents as they could damage the surface. Do not use a rough sponge or towel.
- Clean the device regularly, ideally after each use.
- When not in use, this device should be stored in its original box to prevent dust or moisture accumulation.

## VII. Product Support



This product and all products sold by IVYX Scientific are covered by a one-year warranty against defects in materials and workmanship. If you encounter issues with our product, please contact us online at [support@ivyxscientific.com](mailto:support@ivyxscientific.com). We aim to answer within 24 hours and will do our best to help you out. If we are unable to fix your problem, we will send you a replacement unit free of charge or a full refund.

## Attachment A - Packing list

No.	Item	Unit	Qty	Note
1	Main Case	pcs	1	
2	Power Adapter	pcs	1	
3	Dark Room	pcs	1	
4	Gel Cutting Blade	pcs	1	

Date:

## Attachment B - Test report

Item	LED Transilluminator	Model	IVYXBL-20	
No.	Item	Procedure	Standards	Results
1	Basic function	Visual inspection	Valid	<input type="checkbox"/> Pass
2	Appearance	Visual inspection	Valid	<input type="checkbox"/> Pass
3	Continuous Working Conditions	Operation	72 hours Not defective	<input type="checkbox"/> Pass
Test result				
QC		Sign		