

SAFEVIEW-MINI2 TRANSILLUMINATOR

Catalogue No. SAFEVIEW-MINI2



Instruction Manual

Packing List

- BluView Transilluminator × 1
- Instruction Manual × 1

Signed by:

Date:

Cleaver Scientific is liable for all missing or damaged parts / accessories within 7 days after customer received this instrument package. Please contact us immediately regarding this issue. If no response within such time period from consignee party, that will be consignee party's whole responsibility.

Table of Contents

Packing List	2
Warning.....	4
Introduction.....	7
Overview	7
Features.....	7
Component Guide	8
Product Specification	9
Installation Instruction	10
Operation Instruction.....	12
Operating.....	13
Documenting the Gel.....	15
Troubleshooting & Maintenance	16
Warranty	17

Warning

The SAFEVIEW-MINI2 Transilluminator has been tested and found to comply with the limits for the CE regulation. Also, it is RoHS compliant to deliver confident product which meets the environmental directive. These limits are designed to provide reasonable protection against harmful interference when the instrument series is operated in a commercial environment. This instrument series used together with power supply unit generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this instrument series in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. It is strongly recommended for the user to read the following points carefully before operating this equipment.

1. Read and follow the manual instructions carefully.
2. Do not alter the equipment. Failure to follow these directions could result in personal and/or laboratory hazards, as well as invalidate equipment warranty.
3. Use a properly grounded electrical outlet with correct voltage and current handling capacity.
4. Disconnect from power supply before maintenance and servicing. Refer servicing to qualified personnel.
5. Never use this instrument series without having the safety cover correctly in position.
6. Do not use the unit if there is any sign of damage to the external tank or cover. Replace damaged parts.
7. Do not use in the presence of flammable or combustible material; fire or explosion may result. This device contains components which may ignite such materials.
8. Refer maintenance and servicing to qualified personnel.
9. Ensure that the system is connected to electrical service according to local and national electrical codes. Failure to make a proper connection may create fire or shock hazard.
10. Use appropriate materials and operate correctly to avoid possible hazards of explosion, implosion or release of toxic or flammable gases arising from overheated materials.
11. The unit shall be operated only by qualified personnel.

Safety Information

Use high level of precaution against any electrical device. Before connecting the electrical supply, check to see if the supply voltage is within the range stated at the rating label, and see to it that the device be seated firmly. Place the unit in a safe and dry location; it must NOT touch the surrounding. Follow the safety precautions for chemicals / dangerous materials. If needed, please contact qualified service representative or info@cleaverscientific.com

Caution:

The LED lights of the Transilluminator may induce macular degeneration upon prolonged exposure, especially in those prone to such problems (e.g. people with fair complexion and blue eyes, nutritional or endocrine defects or those who are aging).

Environmental Conditions

Ensure the instrument is installed and operated strictly under the following conditions:

1. Indoor use only
2. $\leq 95\%$ RH
3. 75 kPa – 106 kPa
4. Altitude must not exceed 2000 meters
5. Ambient to 40°C operating temperature
6. Pollution degree: 2
7. Mains supply voltage fluctuations up to $\pm 10\%$ of the normal voltage

Avoiding Electrical Shock

Follow the guidelines below to ensure safe operation of the unit.

BluView Transilluminator has been designed to utilize shielded wires thus minimizing any potential shock hazard to the user. CSL Ltd recommends against the use of unshielded wires.

To avoid electrical shock:

1. In the event of solution spilling on the instrument, it must be dried out for at least 2 hours and restored to NORMAL CONDITION before each operation.
2. Never connect or disconnect wires loading from the power jacks when the red indicator light of power switch is on.
3. WAIT at least 5 seconds after stopping a run before handling output leads or any connected apparatus.
4. ALWAYS make sure that your hands, work area, and instruments are **clean** and **dry** before making any connections or operating the power supply.
5. ONLY connect the power cord to a properly grounded AC outlet.

Avoiding Damage to the Instrument

1. Do not attempt to operate the device if damage is suspected.
2. Protect this unit from physical damage, corrosive agents and extreme temperatures (direct sunlight, etc.).
3. For proper ventilation and safety concerns, keep at least 10 cm of space behind the instrument, and at least 5 cm of space on each side.
4. Use high level of precaution against the damages on the unit.
5. Do not operate the unit out of environmental conditions addressed above.
6. Prior to applying any cleaning or decontamination methods other than manufacturer's recommendation, users should check with the manufacturer's instruction to see if the proposed method will damage the equipment.

Equipment Operation

Follow the guidelines below to ensure safe operation of the unit:

1. NEVER access dangerous chemicals or other materials to prevent possible hazard of explosion and damage.
2. Do not operate the unit without lids or covers to prevent possible hazards.
3. A temporary conductivity caused by condensation might occur even though this series is rated Pollution Degree 2 in accordance with IEC 664.

Symbol

Symbols used on BluView Transilluminator are explained below.



Indicates disposal instruction.

DO NOT throw this unit into a municipal trash bin when this unit has reached the end of its lifetime. To ensure utmost protection of the global environment and minimize pollution, please recycle this unit.

Introduction

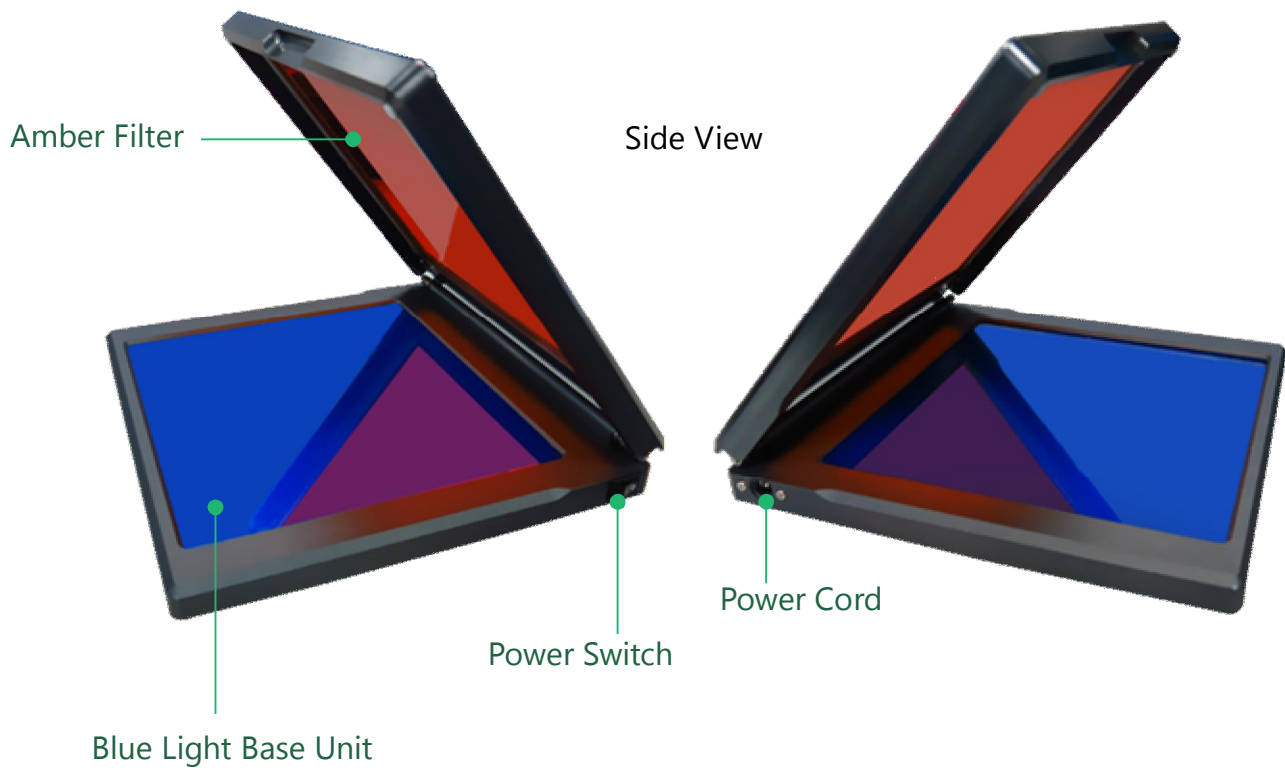
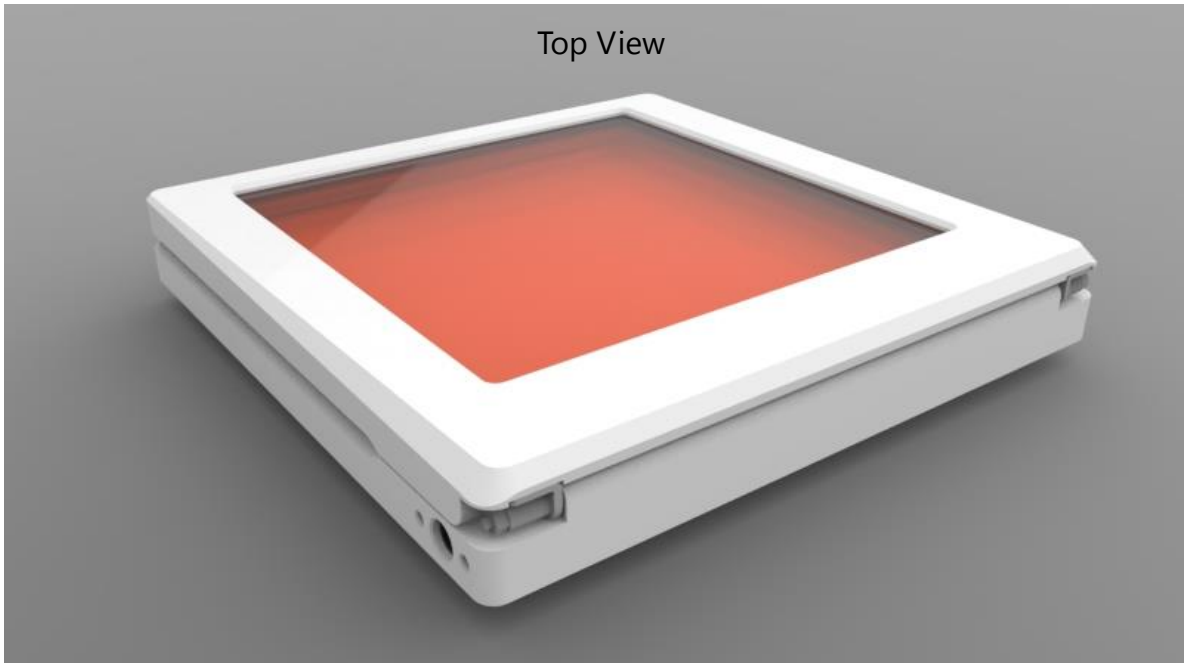
Overview

The SAFEVIEW-MINI2 Transilluminator uses the harmless blue LED lights to replace the aggressive UV lights, and allows you to directly view the experiment result without wearing any UV protection equipment. With its compact size and light weight, the transilluminator occupies little of your lab bench and is easy to move from lab to lab.

Features

- Extremely light weight in aluminum alloy casing.
- Compact size to save your bench space.
- Easy installation and operation.
- Harmless blue LED lights allow users to observe the experiment directly without any UV protection equipment.

Component Guide



Product Specification

Construction Material	Aluminum Alloy
Dimension (W × L × H)	200 × 200 × 37.1mm
Gel Platform Size	153 × 153 mm (The maximum gel size: 150 × 150 mm)
Weight	Approx.1.5kg
Blue Light Wavelength	470 nm
Blue Light Source	20W
Illuminator Base Design	Flat Bed
Power Adaptor	12VDC
Adaptor Power Rating	AC Input: 100 – 240V~, 50/60Hz, 2A DC Input: +12V/5A, 60W Max.
Power	Auto shut-off, approx. 6 minutes

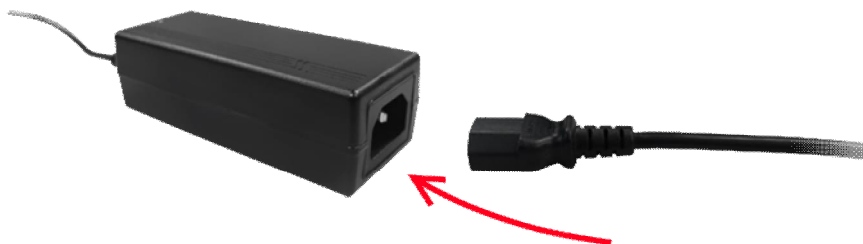
Installation Instruction

The Transilluminator is a fully-assembled product. Place it on a flat, level surface; then you can start up the device once you connect the power cord to AC power. The following instructions show you the correct way of installing the power adaptor.



- ◀ Place the transilluminator on the flat and level surface.

- ▼ Insert one ends of the power cord to the power adaptor.

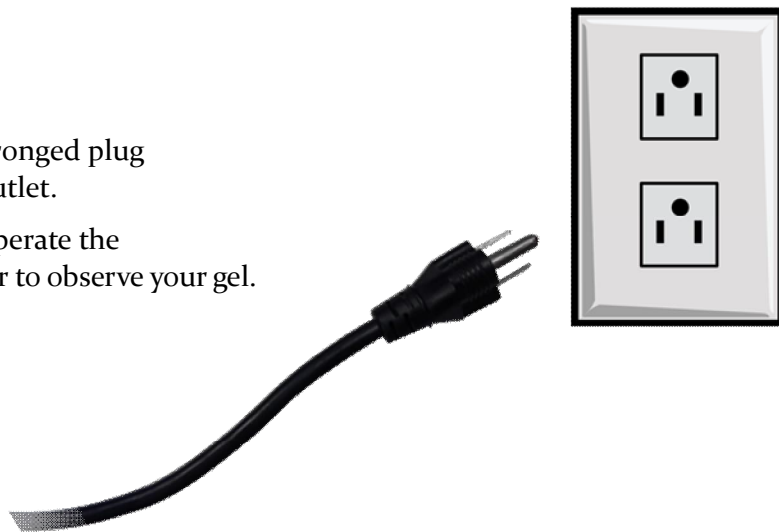


- ▶ Plug the cord of the power adaptor into the transilluminator.



- ▶ Insert the three-pronged plug into the electric outlet.

Then you can operate the transilluminator to observe your gel.



Operation Instruction

Before using:

To have a better result when documenting with the blue light as lighting source, the recommended stain selection guide table is provided below, choose the appropriate dye to have the gel stained:

Nucleic Acid Stain	Performance	Experimental Protocol		
		Pre-staining	Post Staining	Sample Staining
SYBR® GREEN I (DNA)	Excellent	✓	✓	✓
SYBR® GREEN II (RNA)	Excellent		✓	✓
SYBR® Gold	Excellent	✓	✓	
Midori Green Direct	Excellent			✓
Hydra Green™ Safe DNA Dye	Excellent	✓	✓	
HD Green™ DNA Stain	Excellent	✓	✓	
Novel Juice	Excellent			✓
SafeView DNA Stain	Well	✓		
SYBR® Safe	Well	✓	✓	
Midori Green	Well	✓	✓	
Midori Green Advanced	Well	✓	✓	
GelGreen™	Well	✓	✓	
GelRed™	Well	✓	✓	
Ethidium Bromide	NR	✓	✓	
Serva DNA Stain Clear G	NR	✓	✓	
HealthView™	NR	✓		

Once the gel is ready, follow the steps below to operate the device and analyze your experiment result.

Note:

This selection guide serves as a reference only. For the best staining procedures and stain spectrums please refer to manufacturer's protocol/user guide.

Operating

Make sure the device is installed correctly; then you can start up the transilluminator to observe your experiment result.

- ▶ Lift up the upper casing first.



- ◀ Place the gel^{*1} on the center of the gel platform.

***Note (1):**

You'll need to have the gel stained and run the electrophoresis before put it onto the transilluminator.

Gel size should be under 150 × 150mm and 10mm in thickness.





◀ Close the upper casing before you turn on the blue light.

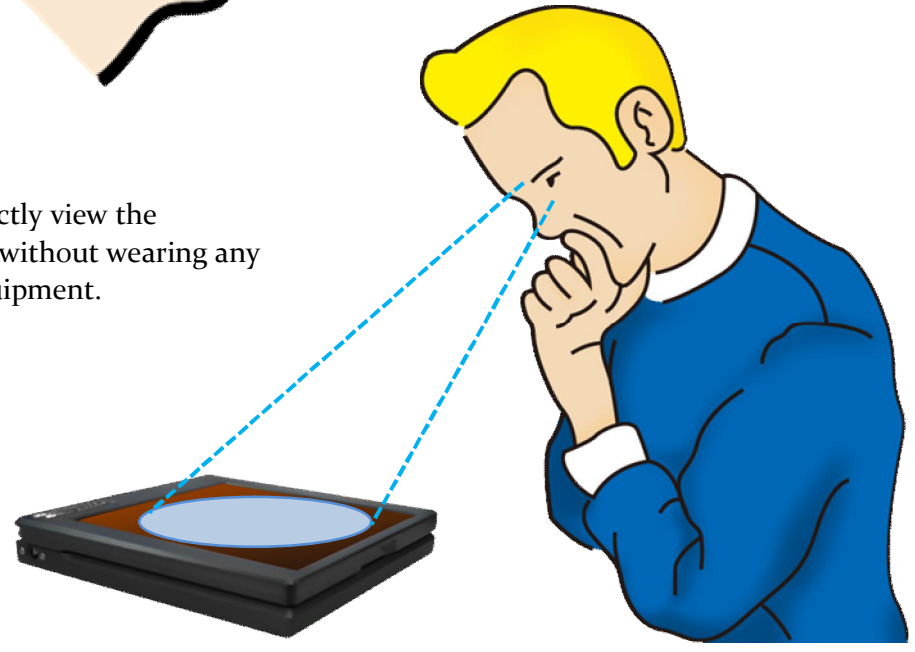


◀ Switch on the power^{*2}.



***Note (2):**
The transilluminator will automatically shut off after powered on over approximately 6 minutes. Switch off the power; then turn on again to activate the blue lights.

▶ Then you can directly view the experiment result without wearing any UV protection equipment.



Documenting the Gel

You can adapt our MS Imager System to BluView Transilluminator for documenting the experiment result. Connect the Imager System to the electric outlet. And cover the transilluminator with the hood; then operate the camera to document your gel.









- ★ The details about operating the Imager System please refer to the related instruction manual.

Troubleshooting & Maintenance

Many operating problems may be solved by reading and following the instructions in this manual accordingly. Some suggestions for troubleshooting are given below. Should these suggestions did not resolve the problem, contact Service Department of CSL Ltd or a local distributor for further assistance. If troubleshooting service is required, please include a full description of the problem.

Troubleshooting Guide

Problems	Possible Causes
 Why won't the blue light light up?	<ul style="list-style-type: none"> You did not connect the power, or connect it wrongly. You did not turn on the power switch.
 Why can't I see the DNA/RNA bands clearly under the blue light?	<ul style="list-style-type: none"> You use the wrong dye. You did not flip-open the upper casing (amber filter) when using MS Imager System.

Maintenance

Wipe clean the device with a damp, soft cloth after use of BluView Transilluminator for daily maintenance. Do not use corrosive detergents or solutions to clean the body, amber filter and gel platform.

Warranty

Cleaver Scientific Ltd warrants apparatus of its manufacture against defects in materials and workmanship, under normal service, for **one year from the shipping date to purchaser**. This warranty excludes damages resulting from shipping, misuse, carelessness, or neglect. Consumable parts are not covered by our warranty. Our liability under the warranty is limited to the receipt of reasonable proof by the customer that the defect is embraced within the terms of the warranty. All claims made under this warranty must be presented to Cleaver Scientific within one year following the date of delivery of the product to the customer.

Manufacturer

Cleaver Scientific Ltd

Address

Unit 41,
Somers Road Industrial Estate
Rugby, CV22 7DH
United Kingdom

T/ 0044(0) 1788 565300

F/ 0044(0) 1788 552822

E/ info@cleaverscientific.com