

abx795001

Dual LED Transilluminator Gel Documentation System

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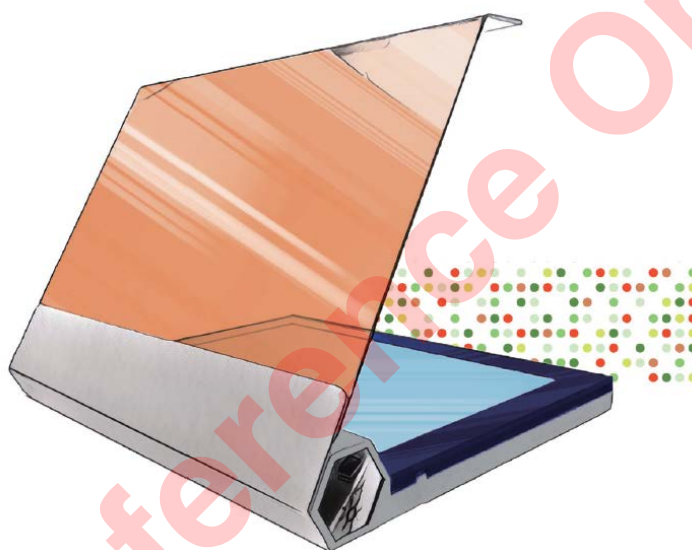
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1 Preface

1.1 Introduction

Abbexa's Dual LED Transilluminator Gel Documentation System, abx725001, contains dual light sources (white light and blue light) for observing and analyzing nucleic acids and proteins. It is suitable for post-observation applications such as gel cutting and data imaging and filing.



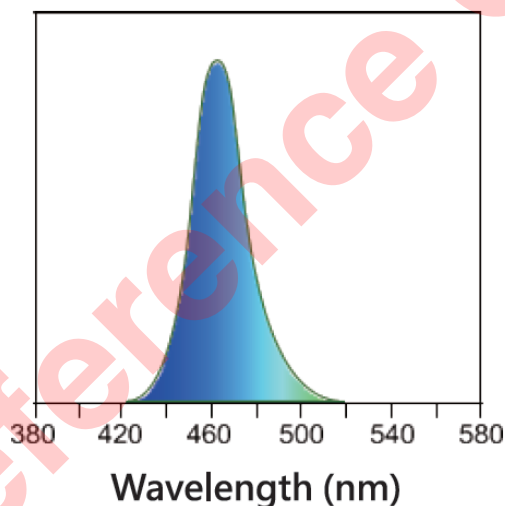
1.2 Features

- Dual LED light sources (white light and blue light) allows broad range of applications
- Bottom-up LED illumination prevents interference from reflective lights
- Adjustable light intensity (3 levels) for achieving the best image quality
- Automatically powers off when unused
- Hinge-free filter cover magnetically attaches to the base unit, allowing easy opening, closing and removal
- Can be powered using a power bank (not included) for portability

1.3 Modes

1.3.1 Blue Light Mode

The Blue Light Mode uses 470 nm LED light as the excitation light source. It is suitable for observing qualitative and quantitative nucleic acid or protein experiments using fluorescent staining reagents. It is compatible with Abbexa's staining reagents (abx299713 and abx299721) and other fluorescent staining reagents which have excitation maxima within 400 nm – 450 nm such as SYBR® Gold Nucleic Acid Gel Stain, SYBR® Green I Nucleic Acid Gel Stain, SYBR® Green II RNA Gel Stain, SYPRO™ Orange Protein Gel Stain, SYPRO™ Ruby Protein Gel Stain, Coomassie Fluor™ Orange Protein Gel Stain, GelStar™ Nucleic Acid Gel Stain, and more.



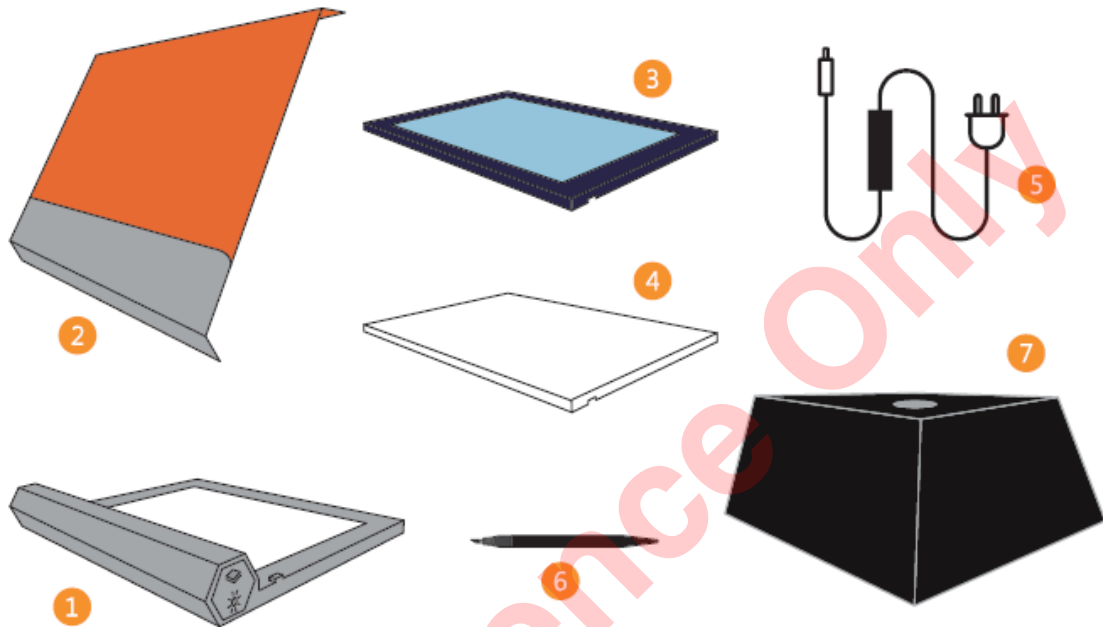
Excitation and emission spectra for Dual LED Transilluminator Gel Documentation System.

1.3.2 White Light Mode

The White Light Mode uses white LED light as the excitation light source. It is suitable for observing and imaging SDS-PAGE gels that are stained with Coomassie Blue or Silver. This mode can also be used for viewing X-ray films, multi-well plates and more.

2 Installing the device

2.1 Kit components

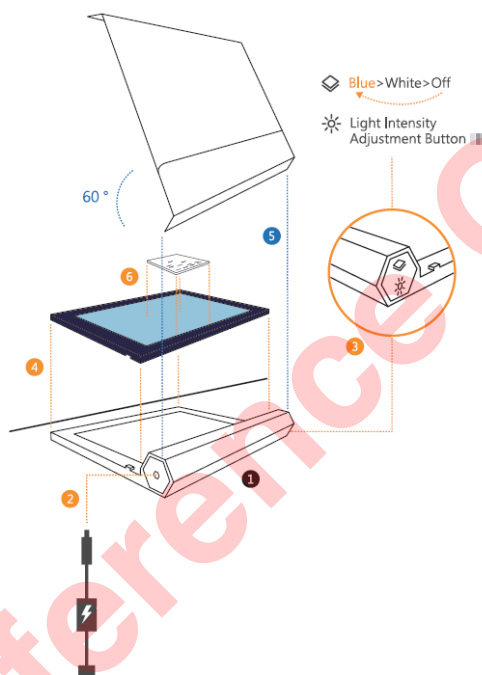


1. Dual LED Transilluminator Base
2. Amber Filter Cover
3. Blue Uniform Plate with Glass
4. White Uniform Plate
5. Power Cord
6. Gel-cutting Knife and Replacement Blade
7. Mini-Darkroom

3 Operating the device

3.1 Blue Light Mode

3.1.1 Gel Cutting

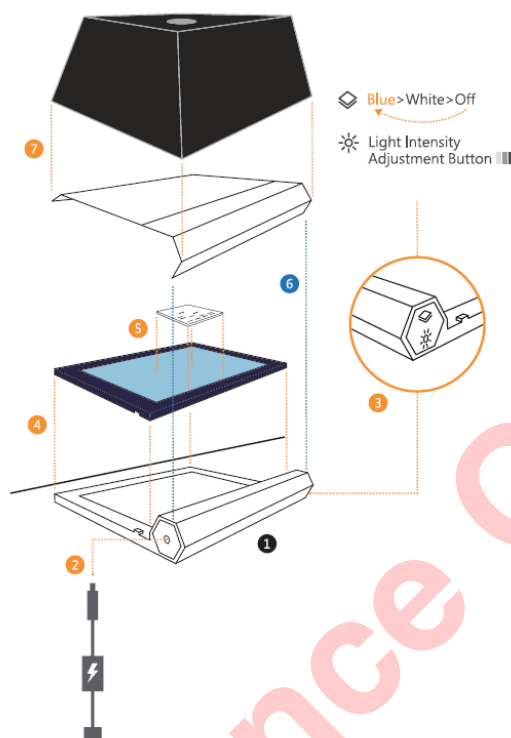


1. Place the Transilluminator on a level operational bench, with enough space around the unit to allow air to circulate and to prevent overheating.
2. Connect the power cord to the power socket.
3. Press the ON / OFF button once to switch to Blue Light Mode.
4. Place the blue filter (including the scratch-proof glass) in position.
5. Position the amber filter at an angle of 60 degrees to magnetically connect it with the base of the transilluminator.
6. Place the gel sample in the transparent glass area of the blue filter.
7. The gel can now be observed and cut as required.

Note: The unit will automatically power off after 5 minutes. If this occurs, press the ON /OFF button again to switch on the unit once the LED indicator light is off.

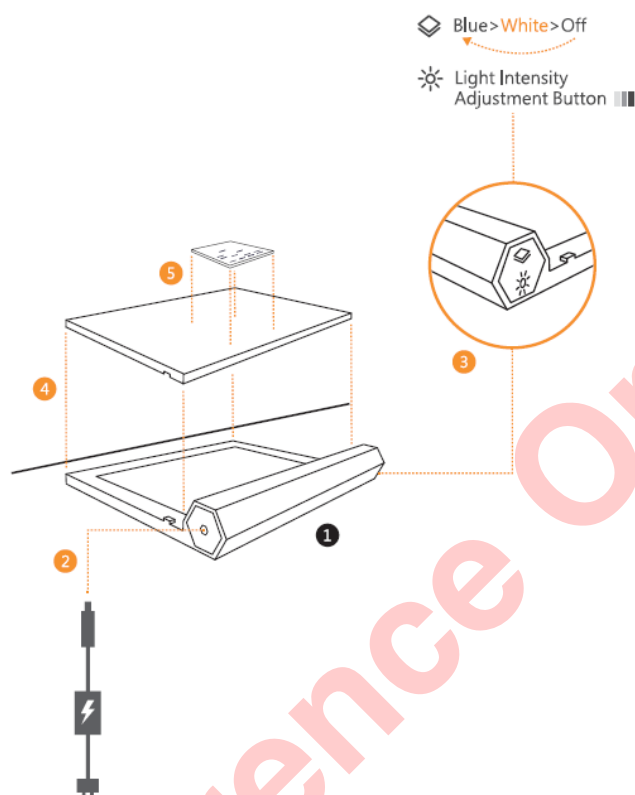
8. Adjust the light intensity by pressing the Light Intensity Adjustment button.
9. After use, turn the transilluminator off by pressing the ON / OFF button twice.
10. Use a clean and wet cotton cloth to wipe the surfaces of the transilluminator and filter.

3.1.1 Imaging



1. Place the Transilluminator on a level operational bench, with enough space around the unit to allow air to circulate and to prevent overheating.
2. Connect the power cord to the power socket.
3. Press the ON / OFF button once to switch to Blue Light Mode.
4. Place the blue filter (including the scratch-proof glass) in position.
5. Place the gel sample in the transparent glass area of the blue filter.
6. The gel can now be observed and cut as required.
- Note:** The unit will automatically power off after 5 minutes. If this occurs, press the ON /OFF button again to switch on the unit once the LED indicator light is off.
7. Position the amber filter at an angle of 0 degrees to magnetically connect it with the base of the transilluminator.
8. Place the Mini-Darkroom on top of the amber filter. The gel can now be observed and imaged as required.
9. Adjust the light intensity by pressing the Light Intensity Adjustment button.
10. After use, turn the transilluminator off by pressing the ON / OFF button twice.
11. Use a clean and wet cotton cloth to wipe the surfaces of the transilluminator and filter.

3.2 White Light Mode



1. Place the Transilluminator on a level operational bench, with enough space around the unit to allow air to circulate and to prevent overheating.
2. Connect the power cord to the power socket.
3. Press the ON / OFF button twice to switch to White Light Mode.
4. Place the white filter in position.
5. Place the gel sample, X-ray film or other sample in the white filter area.
6. The sample can now be observed and cut as required.

Note: The unit will automatically power off after 5 minutes. If this occurs, press the ON / OFF button again to switch on the unit once the LED indicator light is off.

7. Adjust the light intensity by pressing the Light Intensity Adjustment button.
8. After use, turn the transilluminator off by pressing the ON / OFF button once.
9. Use a clean and wet cotton cloth to wipe the surfaces of the transilluminator and filter.

4 System maintenance and troubleshooting

4.1 Safety precautions

- Personal protective equipment (PPE) such as gloves and goggles are recommended, particularly if carcinogenic or toxic reagents are used.
- The cutting blade is sharp. Care should be taken to avoid accidental cuts.
- Do not immerse the unit in liquid or pour liquid over it.
- Do not use the unit if there is damage observed.

4.2 Routine maintenance

- After use, the transilluminator unit, frame and filter glass should be cleaned using a damp cloth. The cloth should not be too wet.
- Only use a soft cotton cloth with water, mild soap or a non-abrasive cleaning liquid to clean the instrument. Using abrasive reagents may damage the instrument.
- If any reagents or any corrosive substances are spilled on the instrument, immediately wash with a wet cloth and water.
- Good operating practice may extend the life of the product.
- When replacing the blade, unscrew the silver handling part of the knife counterclockwise from the head part. Push out the head part's blade-holding section. Remove the old blade, and insert the replacement blade into the X-shaped blade insertion hole. Place the silver connector back into the original position, and then screw tight the head part with the silver handling part clockwise.

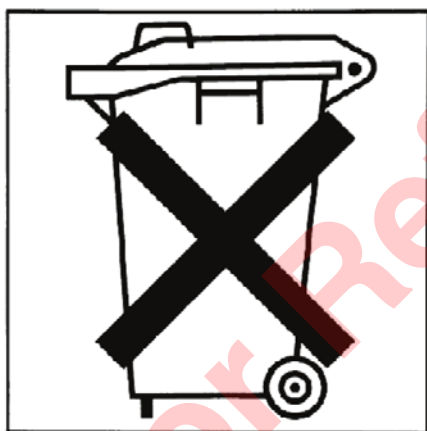
4.3 Troubleshooting

- Low sensitivity
This may be caused by insufficient sample concentration or the fluorescent staining reagents used do not have excitation maxima within 400 nm – 450 nm.
Solution: Adjust the light intensity or increase sample concentration; use different fluorescent reagents.
- No sample observed under Blue Light Mode.
This may be caused by selecting the incorrect light source.
Solution: Ensure that Blue Light Mode is selected, and not White Light Mode.

5 Specification parameters

Size (L x W x H)	220 x 185 x 30 mm
Gel viewer size (L x W)	180 x 120 mm
Input voltage	100-240 V (A/C), 50/60 Hz
Input current	20 W
Storage temperature	25 °C
Automatic power-off time	5 minutes
LED source	LED white light and blue light
LED life (hours)	> 30,000
Emission maxima (nm)	470
Filter type	Amber (580 nm)

6 Product disposal



This symbol indicates that the product is planned for use in a country complying with the Waste Electrical and Electronic Equipment EU Directive, 2012/19/EU. This symbol indicates that the product must not be disposed of with unsorted municipal waste. It is the product user's responsibility to correctly dispose of the waste equipment by handing it over to an authorised facility to decontaminate the waste equipment from biological, chemical and/or radiological hazards prior to disposal.

7 Warranty statement

This product is warranted to be free from defects in material and workmanship for a period of one (1) year from date of purchase. The product will be duly repaired upon prompt notification in compliance with the following conditions:

- This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in this instruction manual.
- This warranty does not cover damage caused by accident, neglect, misuse, improper service, natural forces or other causes not arising from defects in the original material or workmanship.
- This warranty does not cover any incidental or consequential damages, commercial loss or other damages from the use of this product.
- This warranty is invalidated by any non-factory modification, which will immediately terminate all liabilities on us for the products or damages caused by its use. The customer shall be responsible for the product or use of products, as well as any supervision required for safety.
- If the product must be returned to the distributor, the customer is responsible for ensuring the product is suitably packed. The customer is also responsible for any shipping charges that may arise.
- This warranty is only applicable to the original purchaser.
- This warranty is only valid if it is registered with the supplier within 30 days from the purchase date.

Some regions or states do not allow limitation on the length of implied warranties or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights. This warranty is given expressly in lieu of all other warranties, expressed or implied.

The purchaser agrees that there is no warranty of merchantability or of fitness for any intended purpose and that there are no other remedies or warranties, expressed or implied, which extend beyond the description on the face of the agreement.

Products received without proper authorisation will not be entertained. All items returned for service should be sent by prepaid postage in the original packaging or other suitable carton. The package must be suitably padded to avoid damage in transit. We will not be responsible for damage caused by improper packaging.