B-BOX™ Blue Light LED epi-illuminator

Catalogue No.: VE0100

Operator's Manual

Ver. 1.3.2

Product check list

VE0100   B-BOX™ Blue Light LED epi-illuminator

VE0101   Adapter, AC 100-240V, 50/ 60 Hz, 1.8m Power Cord

VE0102   Multi-angle Filter Plate (0°, 30°, 60° and 90°) for B-BOX™, Acrylic,

               Amber Color, 154 x 194 (mm)

VE0103   B-BOX™ shades

Operator's Manual and Warranty Certificate

Patents Pending

Contents

A. Introduction

The SMOBiO B-BOX™ Blue Light LED epi-illuminator is designed to meet the needs of a light and compact bench top illumination unit for visualizing electrophoresis. B-BOX™ features light-emitting diodes or LED light modules which emit high intensity blue light of 470nm wavelength, while emitting a minute amount of heat. B-BOX is compatible with non-Ethidium bromide (EtBr), fluorescent DNA and protein dyes. B-Box offers an unparalleled level of detection sensitivity and protection of DNA and protein samples from UV damage.
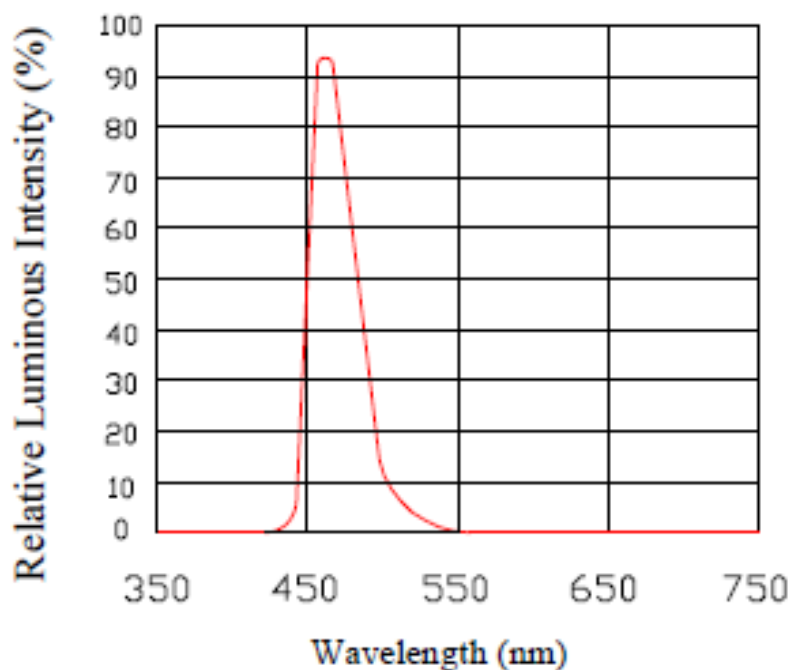

B. Important Safety Information

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- * Staring directly into the LED without protective Eyeware or a filter plate may cause damage to the retina; proper safety measures or protocols must be always be followed/applied.
- * The working area is water tight, but B-BOX™ is not waterproof. Do not submerge or pour excessive amounts of liquid onto the B-BOX™ epi-illuminator.
- * High intensity, low-heat LED modules emit only a small amount of heat during operation. However, as a precaution, the B-BOX epi-illuminator should be placed in a well-ventilated area with enough vertical clearance for airspace at the baseplate while (in use or being used).

# C. Description and Specifications

- Overall dimension (mm): 201.4 x 200 x 38 (D x W x H)
- Viewing area (mm): 158 x 96 (D x W)
- LED wavelength (nm): 470

- Number of LED Units: 72 PCS Super Flux LED
- LED life span (470 nm), up to 50,000 hours
- Power : DC 12 Volt, 0.72 Amp
- Electrical Requirements: AC 100~240V, 50/60 Hz (Adapter)
- Weight (kg): 0.95 (Net Weight)

Multi-angle Filter plate

LED modules

Working Area
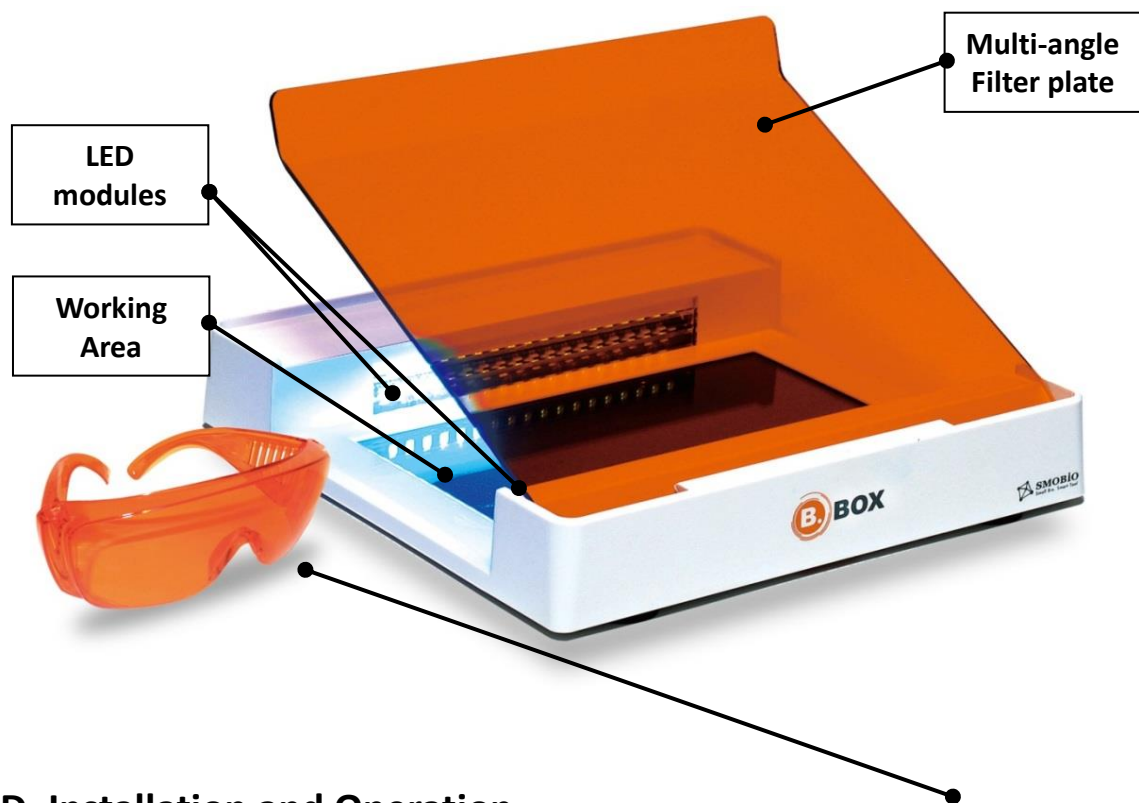
D. Installation and Operation

Carefully unpack the B-Box Blue Light LED epi-illuminator. The epi-illuminator should be placed on a dry horizontal surface following the important safety measures previously outlined in section B. Before operation the B-BOX Blue Light Epi-illuminator must be plugged into a compatible power source as specified in section C. When operating the epi-illuminator, place the gel on top of the working area after all excess liquids, staining, or destaining solutions have been sufficiently drained. The included **B-BOX shades** (protective eye goggles/shades) or the filter plate must be used when the LED module set is in use. Gel cutting may be performed directly on top of the glass surfaced working area. The filter plate is available as a four-angled design for storage at 0 (degrees), visualization at 30 and 90 degrees, and for gel cutting at 60 degrees)
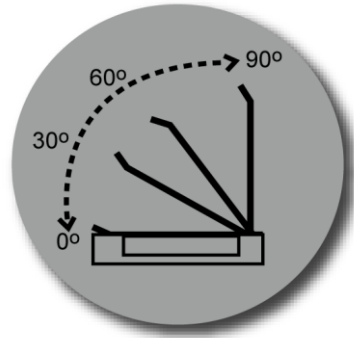
Caution!!!

- Do not place any heavy objects on the filter place or bend it forcefully.
- Avoid contact with rough surfaces.
- Avoid using organic solvents such as isopropanol or ethanol while cleaning the illuminator.
- For desired cleaning results use a mild detergent and deionized water.
- Do not submerge the illuminator into any liquid solution.
- Do not exert excessive pressure on the working area or any part of the B-BOX unit.
- The B-Box Blue Light LED epi-illuminator is compatible with the following fluorescent dyes:
- FlouroalStain Fluorescent Staining dyes+ (we may say signifies a SMOBiO product or an SMOBiO product)

- FluorolStain Fluorescent Staining Dyes from SMOBiO
- SYBR Green I/II
- GFP
- SYBR Safe/Gold
- SafeView
- Midori Green Advanced
- Gel Red/Green
- HealthView
- SERVA DNA Stain Clear G
- EZ-Vision

E. Warranty information

The B-BOX™ Blue Light LED epi-illuminator is warranted against defects and workmanship for one year. Any defect which occurred within the warranty period will be repaired. Any defective part will be replaced by SMOBiO without charge. The following circumstances the warranty will not be covered under warranty:

- *The warranty was not registered or no proof of purchase exists.
- *Improper user error.
- *Unauthorized modification and replacement of parts by an unauthorized party.
- *Damage caused by substituting alternative parts supplied by an unauthorized party.
- *Damage caused by accident or misuse. (the same as 2nd one)
- *Damage caused by disaster. (fire?)
- *Corrosion caused by the use of improper solvents or samples.

F. Trouble Shooting

G. Listed below are possible problems with recommended solutions. If you cannot resolve the problem, please call or e-mail SMOBiO, Inc. support@smobio.com or contact your Distributor.

| Problem	Causes	Solutions
Leakage of the working area	• Excessive pressure being applied to the surface or improper use of organic solvent in cleaning.	• Contact your local distributor for service.
Malfunctioning LED modules	• LED Modules are not working correctly.	• Contact your local distributor for service. Do not attempt to replace parts of the B-Box Blue Light LED epi-illuminator. Replacing any parts will void the warranty of the product.
High background	• Increased background signal. Contaminants within the electrophoresis running buffer may cause local deposition of staining material on the gel resulting in undesired background signals.	Sufficiently drain DNA or protein gel prior to visualization to reduce background signal. Thoroughly drain off running buffer, or give it a quick rinse with deionized water. Refer to the manufacturer's instruction manual for the dye being used. •

H. Ordering Information

VE0100	B-BOX™ Blue Light LED epi-illuminator, DC 12 Volt, 0.72 Amp
	Complete Set Includes: VE0101, VE0102, VE0103 and Operator's Manual
VE0101	Adapter, AC 100-240V, 50/ 60 Hz, 1.8m Power Cord
VE0102	Multi-angle Filter Plate (0°, 30°, 60° and 90°) for B-BOX™, Acrylic, Amber Color, 154 x 194 (mm)
VE0103	Goggles, Amber Color

I. Related Products

DM1160	FluoroBand 50 bp Fluorescent DNA Ladder, 500 µl
DM2160	FluoroBand 100 bp Fluorescent DNA Ladder, 500 µl
DM2360	FluoroBand 100 bp+3K Fluorescent DNA Ladder, 500 µl
DM3160	FluoroBand 1 KB (0.25-10 kb) Fluorescent DNA Ladder, 500 µl
DM3260	FluoroBand 1 KB Plus (0.1-10 kb) Fluorescent DNA Ladder, 500 µl
DM4160	FluoroBand XL 25 kb Fluorescent DNA Ladder, Broad Range (up to 25 kb), 500 µl
DL5000	FluoroDye DNA Fluorescent Loading Dye (Green, 6X), 1 ml
DL5001	FluoroDye DNA Fluorescent Loading Dye (Green, 6X), 1 ml x 5
DS1000	FluoroStain DNA Fluorescent Staining Dye (Green, 10,000X), 500 µl
DS1001	FluoroStain DNA Fluorescent Staining Dye (Green, 10,000X), 500 µl x 5
PS1000	FluoroStain Protein Fluorescent Staining Dye (Red, 1,000X), 1 ml
PS1001	FluoroStain Protein Fluorescent Staining Dye (Red, 1,000X), 1 ml x 5
TP1260	ExcelTaq Fluorescent 5X PCR Master Mix, 200 Rxn

Distributed by:
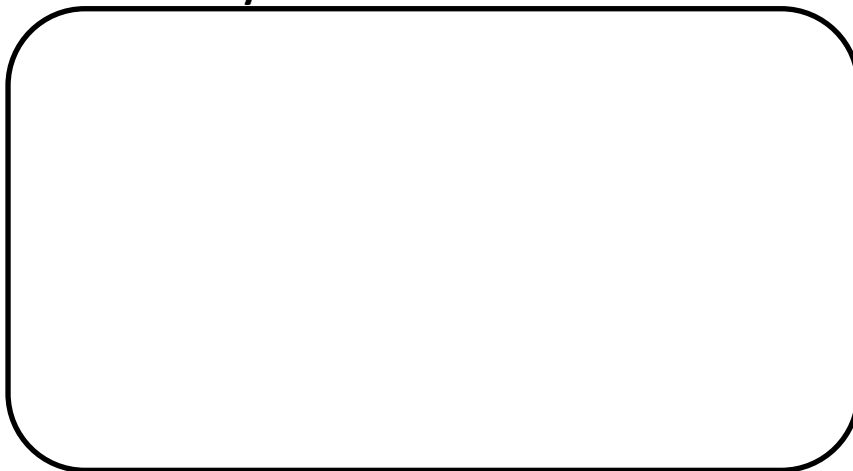
Manufactured by SMOBiO, Inc.
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SMOBiO
Small Bio, Smart Tool
www.smobio.com