

B-BOX™ Blue Light LED epi-illuminator

Catalogue No.: VE0100

Operator's Manual

Ver. 1.3.1



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**BOCA
SCIENTIFIC**

Checking List

- VE0100 B-BOX™ Blue Light LED epi-illuminator
 - VE0101 dapter, AC 100-240V, 50/ 60 Hz, 1.8m Power Cord
 - VE0102 uliti-angle Filter Plate (0°, 30°, 60° and 90°) for B-BOX™, Acrylic,
Amber Color, 154 x 194 (mm)
 - VE0103 Goggles, Amber Color
- Operator's Manual and Warranty Certificate

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Patents Pending



B-BOX™,



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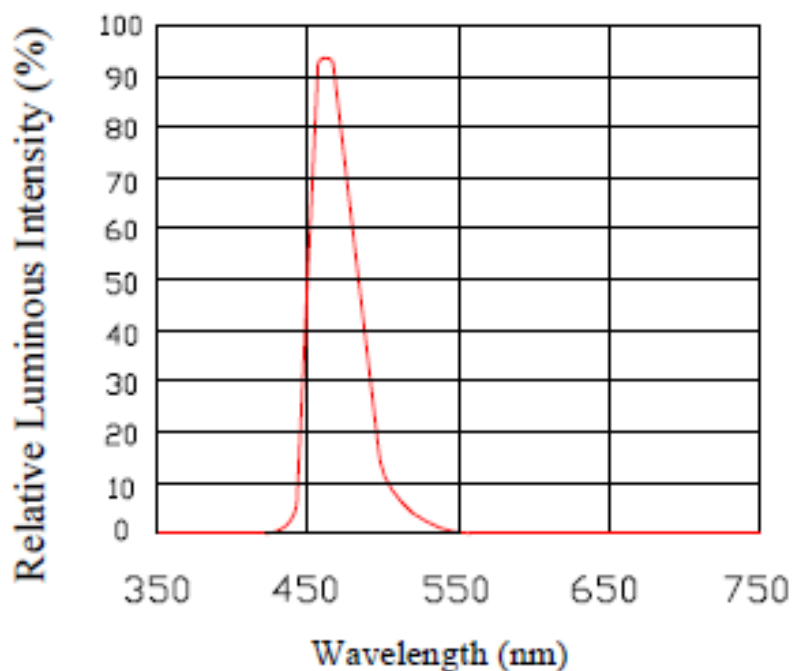
SMOBiO, Inc.

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A. Introduction

The SMOBiO B-BOX™ Blue Light LED epi-illuminator is designed to meet the need of a light and compact bench top illuminator for visualizing electrophoresis products. The B-BOX™ features light-emitting diode (LED) blue light modules which emit high intensity blue light of 470 nm wave length while emitting only minute amount of heat. The B-BOX™ is compatible with non- Ethidium bromide (EtBr) fluorescent DNA and protein dyes, offering an unparalleled level of detection sensitivity and protection to the DNA/protein sample from UV damage.

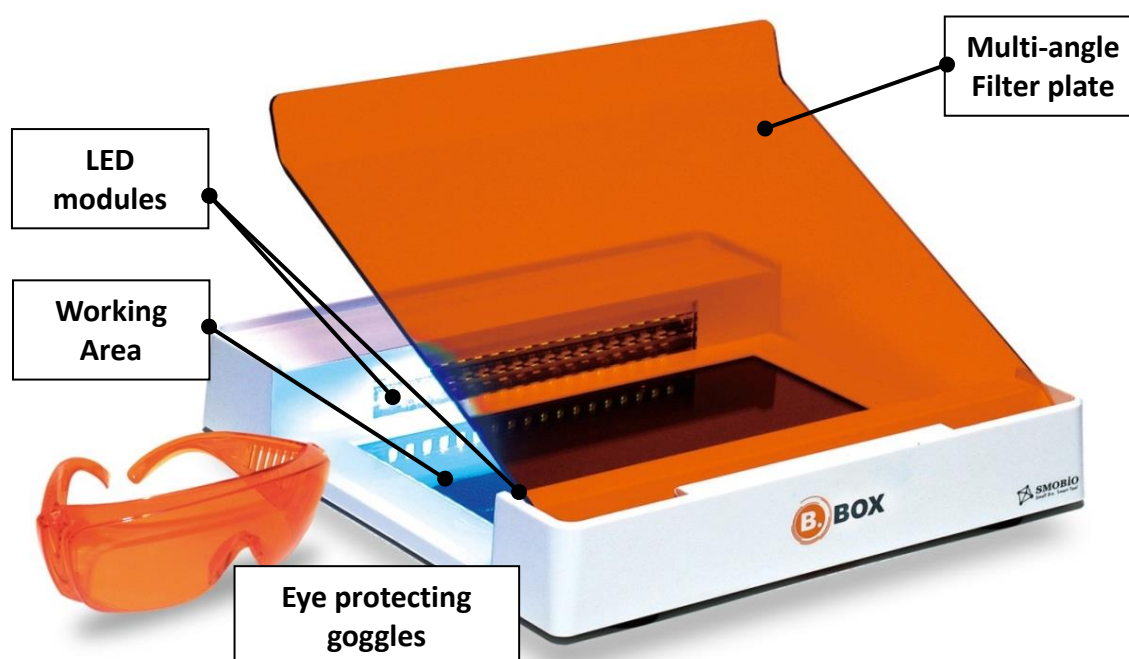


B. Important Safety Information

- Although the 470 nm blue light do not cause physiological damage as do the UV light, but staring directly into the LED without protective eyewear or filter plate may cause damage to the retina, proper safety measure must be applied.
- The working area is water tight but the B-BOX™ is not water proof, do not submerge or pour excessive amount of liquid onto the B-BOX™ epi-illuminator.
- The high intensity, low-heat LED modules emits only a small amount of heat during operation, however, as precaution, the B-BOX™ epi-illuminator should be placed at a well-ventilated area with sufficient vertical clearance of air space at the base plate while using.

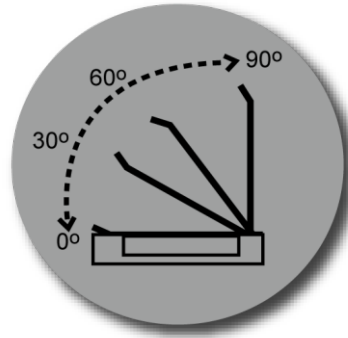
C. Description and Specifications

- Overall Dimension (mm): 201.4 x 200 x 38 (D x W x H)
- Viewing Area (mm): 158 x 96 (D x W)
- Wavelength of LED (nm): 470
- Number of LED Unit: 72 PCS Super Flux LED
- Long life time of LED light source (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)



D. Installation and Operation

Unpack the B-BOX™ Blue Light LED epi-illuminator gently. The epi-illuminator should be placed on a dry horizontal surface with safety measures mentioned above straightly followed. Before operation, the B-BOX™ Blue Light epi-illuminator must be connected to a compatible power source as specified in Section C of this booklet. When operating the epi-illuminator, place the gel on top of the working area after excess liquid staining or destaining solution is sufficiently drained. Eye-protecting goggles or filter plate must be applied when the LED modules are being turned on. Gel cutting can be performed directly on top of the glass surface. The filter plate is a four-angle design optimised for imaging and storage at 0°, visualisation at 30° and 90°, and gel cutting at 60°.



Caution!!!

- *Do not place heavy object on the filter plate or bend it forcefully.*
- *Avoid contact of the filter plate's viewing surface with rough surfaces.*
- *Avoid organic solvent such as isopropanol or ethanol while cleaning the illuminator.*
- *Recommended use of 1% bleach or mild detergent and deionized water for cleaning.*
- *Do not submerge the illuminator into any liquid solution.*
- *Do not exert excessive pressure on the working area.*

The B-BOX™ Blue Light LED epi-illuminator is compatible with fluorescent dyes such as:

- ExcelStain fluorescent 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

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E. Warranty policy

The B.BOX™ Blue Light LED epi-illuminator is warranted against defects and workmanship for a period of one year. Any defect which occurred within the warranty period will be repaired or defective part replaced by SMOBiO without charge. However under the following circumstances the warranty will be specifically excluded:

- User failed to register for warranty or unable to provide proof of purchase
- Improper usage by the user
- Unauthorised modification and replacement of parts by an unauthorised party
- Damage caused by substituting alternative parts supplied by an unauthorised party
- Damage caused by accident or misuse
- Damage caused by disaster
- Corrosion caused by improper solvent or sample

F. Trouble Shooting

Listed below are possible problems, as well as recommended solutions.

| Problem | Causes | Solutions |
|-----------------------------|--|---|
| Leakage of the working area | <ul style="list-style-type: none">• Excessive pressure being applied to the surface or improper use of organic solvent in cleaning. | <ul style="list-style-type: none">• Contact the local distributor for services. |
| Malfunctioning LED modules | <ul style="list-style-type: none">• If the LED modules is not working properly. | <ul style="list-style-type: none">• Do not attempt to replace parts of the B-BOX™ Blue Light LED epi-illuminator which will nullify the warranty of the product. Contact the local distributor for services. |
| High background | <ul style="list-style-type: none">• Excessive background may be caused by residual staining material.• Contaminants within the electrophoresis running buffer may cause local deposition of staining material on the gel resulting in undesired background signals. | <ul style="list-style-type: none">• Sufficiently drain the DNA or protein gel prior to its visualization or briefly destain the gel can greatly reduce background signal.• Thoroughly drain off running buffer or a quick rinse with deionized water.• Refer to the manufacture's instruction manual of the dye |

G. Ordering Information

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|--------|--|
| 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 |

H. Related Products

| | |
|--------|---|
| DM1160 | FluoroBand 50 bp Fluorescent DNA Ladder, 500 µl |
| DM2160 | FluoroBand 100bp Fluorescent DNA Ladder, 500 µl |
| DM2360 | FluoroBand 100bp+3K Fluorescent DNA Ladder, 500 µl |
| DM3160 | FluoroBand 1KB (0.25-10kb) Fluorescent DNA Ladder, 500 µl |
| DM3260 | FluoroBand 1KB Plus (0.1-10kb) Fluorescent DNA Ladder, 500 µl |
| DM4160 | FluoroBand XL 25kb Fluorescent DNA Ladder, Broad Range (up to 25kb), 500 µl |
| DL5000 | FluoroDye DNA Fluorescent Loading Dye (Green, 6X), 1ml |
| DS1000 | FluoroStain DNA Fluorescent Staining Dye (Green, 10,000X), 500 µl |
| DL5000 | FluoroDye DNA Fluorescent Loading Dye (Green, 6X), 1ml |
| DL5001 | FluoroDye DNA Fluorescent Loading Dye (Green, 6X), 1ml 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 |

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