



Mini-Transilluminator

Instruction Manual

Catalog Numbers

170-3738

through

170-3745

and

170-7530

through

170-7532

Important

Read these instructions before operating your Mini-Transilluminator to familiarize yourself with its operation.

Warranty

The Mini-Transilluminator is warranted against defects in materials and workmanship for 1 year. If any defects occur in the instrument during this warranty period, Bio-Rad Laboratories will repair or replace the defective parts at its discretion without charge. The following defects, however, are specifically excluded:

- Defects caused by improper operation.
- Repair or modification done by anyone other than Bio-Rad Laboratories or an authorized agent.
- Use of spare parts supplied by anyone other than Bio-Rad Laboratories
- Damaged caused by accident or misuse.
- Damaged caused by disaster.
- Corrosion caused by improper solvent or sample.

This warranty does not apply to parts listed below:

- Fuses
- Replacement bulbs

For any inquiry or request for repair service, contact Bio-Rad Laboratories. Inform Bio-Rad of the model and serial number of your instrument.

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Section 1 Introduction

Bio-Rad's Mini-Transilluminator provides a uniform and intense source of ultraviolet light (radiation) in a compact package. Its special design emits a high intensity excitation UV wavelength for back-illumination of transparent fluorescent materials.

The 302 nm UV back-illumination emitted by the Mini-Transilluminator provides a highly sensitive method to detect double-strand nucleic acids that have been labeled with fluorescent dyes such as ethidium bromide or acridine orange. Single strand nucleic acids may be detected, but with lower sensitivity. The 302 nm wavelength (see Note) provides an excitation wavelength more sensitive for nucleic acid visualization than other 365 nm models.

NOTE: Though Bio-Rad refers to the mid-range UV wavelength as 302 nm, others refer to this region as 300 nm or 312 nm. The spectral output of all these regions is the same.

Section 2 Safety Information

Caution

The ultraviolet Mini-Transilluminator is a powerful source of UV radiation that will cause damage to unprotected eyes and skin. Before operating the unit, be sure all personnel in the area are properly protected.

It is preferable that the Mini-Transilluminator be installed and operated in a darkroom where access and exposure is limited while the unit is in operation.

Each Mini-Transilluminator is shipped with a UV blocking protective cover (except 17-7530, 170-7531, and 170-7532). Even though this cover blocks the ultraviolet radiation emitted by the unit, UV protective eye wear should be worn as well.

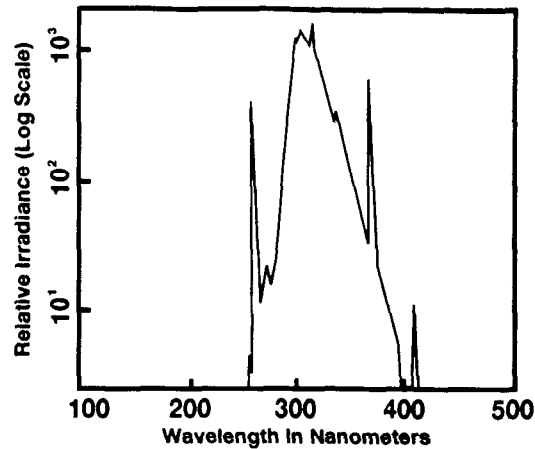
Section 3 Product Specifications

Physical Dimensions

Width	13.25"	33.7 cm
Depth	9.50"	24.1 cm
Height	4.75"	12.1 cm

Part Number	Wavelength	Nominal Volt/Hz/Amp	Filter Size	Number of Lamps	Intensity
170-3737	302 nm	120/60/0.72	20 x 20 cm	6 x 8 W	Anal/Prep
170-3738	302 nm	220/240/50/0.62	20 x 20 cm	6 x 8 W	Anal/Prep
170-3745	302 nm	100/50-60/0.85	20 x 20 cm	6 x 8 W	Anal/Prep

Section 4 Ultraviolet Spectral Output



302 nm

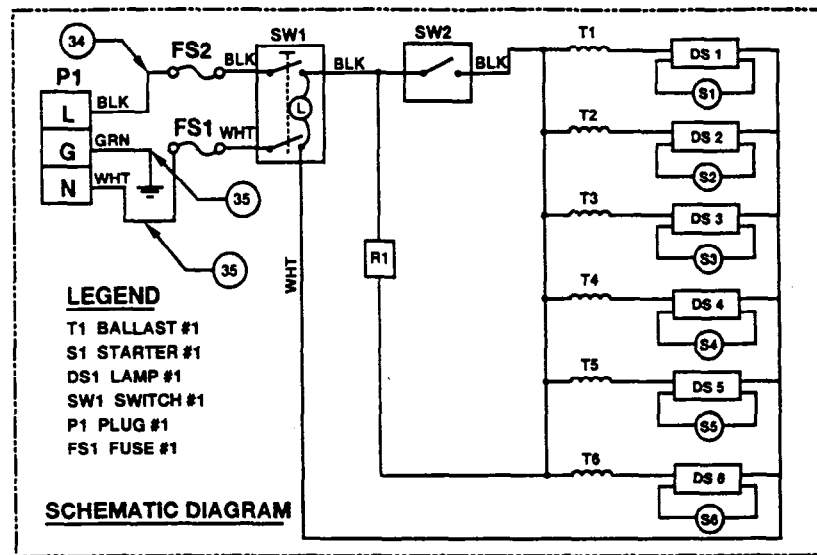
Section 5 Operation

1. Place the Mini-Transilluminator on a level work surface. Be sure that an air space exists between the bottom of the unit and the work surface. This space allows proper air circulation through the unit.
2. Plug the female end of the power cord into the Mini-Transilluminator. For 220/240 volt models, insure that the proper configuration of male connector or plug has been properly connected to the power cord.
3. Plug the male end of the power cord into a properly grounded electrical outlet. The proper voltage of the Mini-Transilluminator is found on the product information label.
4. The Mini-Transilluminator comes equipped with a UV blocking protective cover unless associated with Bio-Rad's CCD UV Gel Documentation System with hood. If this cover is not in place or has been removed, do not operate the unit without replacing the cover. If the cover is missing, a UV blocking protective face shield must be worn to avoid injury. UV blocking eye wear should be worn even with the cover in place to avoid accidental UV exposure.
5. Place the gel/sample on the filter area. Wear gloves to avoid contact with the gel and staining agent.
6. Press the on/off (I/O) switch to on (I).
7. The I/O switch should glow and the UV lamps within the unit should be glowing beneath the filter after a momentary flickering during the start period.
8. The Mini-Transilluminator is uniquely designed with an intensity control device offering both analytical and preparative mode settings. In the analytical mode, the Mini-Transilluminator provides nanogram level sensitivity. In the preparative mode, it is possible to spend 10 minutes or longer cutting out a band with minimal photo nicking of the DNA fragment.

9. After viewing/photographing the sample, turn the unit off (O).
10. Clean the unit surface with a damp soft cloth or sponge. Never use abrasive cleaners, as this will damage the UV filter surface.

Section 6 Maintenance, Repair, and Technical Assistance

Bio-Rad offers technical support for all of its products. If you have any questions about the product's use, operation, or repair, call your local Bio-Rad office. In the U.S. call 1-800-424-6723 (800-4BIORAD).



Wavelength Schematic

Section 7 Changing the UV Lamps

1. Disconnect the Mini-Transilluminator from the electrical supply.
2. Remove the filter cover.
3. Carefully twist the UV lamps from their sockets.
4. Fit with the proper replacement tubes. Refer to Section 9 for ordering information.

Section 8 Cleaning the Mini-Transilluminator

The painted surfaces and filter areas of the Mini-Transilluminator should be cleaned with water, soap, and a sponge or cloth towel. Never use abrasive cleaners, solvent based cleaners, or scouring pads.

Always disconnect the Mini-Transilluminator from electrical power prior to cleaning.

Section 9 Systems, Accessories, and Replacement Parts

Catalog Number	Product Description
170-3745	Mini-Transilluminator, 100 VAC
170-3737	Mini-Transilluminator, 120 VAC
170-3738	Mini-Transilluminator, 220/240 VAC
170-3742	Standard Documentation System, 120 VAC, includes Mini-Transilluminator, 120 V, DS-34 camera, standard electrophoresis hood, deep yellow DS-34 camera filter
170-3746	Standard Documentation System, 100 VAC
170-3747	Standard Documentation System, 220/240 VAC
170-3743	Wide/Long Documentation System, 120 VAC, includes Mini-Transilluminator, 120 V, DS-34 camera, wide/long electrophoresis hood, deep yellow DS-34 camera filter
170-3748	Wide/Long Documentation System, 100 VAC
170-3749	Wide/Long Documentation System, 220 /240 VAC
170-3739	Standard Electrophoresis Hood, 5" x 7" (12.7 x 17.8 cm)
170-3740	Wide/Long Electrophoresis Hood, 6" x 9" (15.2 x 22.9 cm)
170-3741	DS-34 Camera
170-3744	Deep Yellow DS-34 Camera Filter
170-3643	Gel-Scoop, for transporting gels
170-3751	Mini-Transilluminator Fluorescent Lamp, 302 nm
170-7530	Mini-Transilluminator, 100 V without UV blocking cover
170-7531	Mini-Transilluminator, 120 V
170-7532	Mini-Transilluminator, 220/240 V
100-1157	Mini-Transilluminator Filter Assembly, 20 x 20 midrange, 8 watt
100-1161	Mini-Transilluminator Starter
100-1153	Mini-Transilluminator Ballast, 120 VAC, preheat, 8 watt, 6
100-1154	Mini-Transilluminator Ballast, 220/240 VAC, preheat, 8 watt, 6
100-1155	Mini-Transilluminator Ballast, 100 VAC, preheat, 8 watt, 6
90-2330 100-1158	1 Amp Fuse for Mini-Transilluminator, 5 x 20 mm, 6
100-1159	Mini-Transilluminator Protective Cover
100-1160	Mini-Transilluminator Friction Hinge, 2

For replacement parts or components not shown here, call Bio-Rad technical service or your place of purchase. Please have the model number available when you call.

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